

Research Terms of Reference

River Basin Management Stakeholder Network Analysis

WASH Assistance

11AQL 1J5 LBN2202

Lebanon

February 2023

Version 1

IMPACT Shaping practices
Influencing policies
Impacting lives

1. Executive Summary

Country of intervention	Lebanon						
Type of Emergency	<input type="checkbox"/>	Natural disaster	<input type="checkbox"/>	Conflict	<input type="checkbox"/>	Other	
Type of Crisis	<input type="checkbox"/>	Sudden onset	<input type="checkbox"/>	Slow onset	<input type="checkbox"/>	Protracted	<input checked="" type="checkbox"/> Economic
Mandating Body/ Agency	EU-MADAD Fund						
IMPACT Project Code	11AQL 1J5 / LBN2202						
Overall Research Timeframe	November 2022 – May 2023						
Research Timeframe	1. Pilot/ training: November 2022			6. Preliminary presentation: At Consortium workshop, date TBC			
	2. Start collecting data: February 27th 2023			7. Outputs sent for validation: April 30 th 2023			
	2. Data collected (minimum sample): March 17 th 2023; end of data collection (for lagging stakeholders): March 20 th			8. Outputs published: May 10 th 2023			
	4. Data analysed: March 31 st 2023			9. Final presentation: TBD if useful			
	5. Data sent for validation: March 31 st 2023						
Number of assessments	<input checked="" type="checkbox"/>	Single assessment (one cycle)					
	<input type="checkbox"/>	Multi assessment (more than one cycle) <i>[Describe here the frequency of the cycle]</i>					
Humanitarian milestones	Milestone			Deadline			
	<input type="checkbox"/>	Donor plan/strategy			-- / / --		
	<input type="checkbox"/>	Inter-cluster plan/strategy			-- / / --		
	<input type="checkbox"/>	Cluster plan/strategy			-- / / --		
	<input checked="" type="checkbox"/>	NGO platform plan/strategy			May/June 2023		
<input checked="" type="checkbox"/>	Other (Specify): Consortium			May/June 2023			
	Audience type			Dissemination			

Audience Type & Dissemination <i>Specify who will the assessment inform and how you will disseminate to inform the audience</i>	<input checked="" type="checkbox"/> Strategic <input checked="" type="checkbox"/> Programmatic <input type="checkbox"/> Operational <input type="checkbox"/> [Other, Specify]		<input type="checkbox"/> General Product Mailing (e.g. mail to NGO consortium; HCT participants; Donors) <input checked="" type="checkbox"/> Cluster Mailing (Education, Shelter and WASH) and presentation of findings at next cluster meeting <input checked="" type="checkbox"/> Presentation of findings (e.g. at HCT meeting; Cluster meeting) <input type="checkbox"/> Website Dissemination (Relief Web & REACH Resource Centre) <input type="checkbox"/> [Other, Specify]	
Detailed dissemination plan required	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
General Objective	To understand key stakeholder relations around three river basins in Lebanon, namely those in Mount Lebanon (Al-Ghadir), North Lebanon (Al-Ostuan) and the Beqaa (Al-Assi) in order to better inform the catchment area management plans, the RBM workshops and the implementation of relevant measures as to roles, responsibilities and barriers around river basin management.			
Specific Objective(s)	a. Identify the key stakeholders at river basin level b. Understand the relations between key stakeholders c. Understand the roles and responsibilities of each stakeholder, and to what extent these are being fulfilled d. Understand where there may be tension between different stakeholders with regards to roles and responsibilities e. Understand the impediments to achieving and implementing a sustainable river basin management plan f. Identify key stakeholders to target when implementing sustainable river basin management plans			
Research Questions	a. Who are the stakeholders at the river basin level? b. What are the relationships between them? c. How do the key stakeholders view their roles and responsibilities? d. How do the key stakeholders view other stakeholders' roles and responsibilities? Are there tensions between stakeholders in their roles, on paper or in practice? e. What is impeding the implementation of a sustainable river basin management program? f. Who are the main stakeholders (influence, network, persuasive/institutional power, centralised position) to target when implementing sustainable river basin management plans?			
Geographic Coverage	Al-Ghadir river basin in Mount Lebanon Al-Ostuan river basin in North Lebanon Al-Assi river basin in the Beqaa.			
Secondary data sources	'Mapping and Assessing Water Resource Related Interactions in the Bekaa' (Unpublished research) 'Reclaiming Riparian Landscapes: The Case of Al-Ghadir River in Southern Beirut' (Thesis, September 2020) 'Water as a Tool for Defusing Socio-Political Tension' (Unicef, Search for Common Ground, AUB)			
Population(s)	<input type="checkbox"/>	IDPs in camp	<input type="checkbox"/>	IDPs in informal sites

<i>Select all that apply</i>	<input type="checkbox"/>	IDPs in host communities	<input type="checkbox"/>	IDPs [Other, Specify]		
	<input type="checkbox"/>	Refugees in camp	<input type="checkbox"/>	Refugees in informal sites		
	<input type="checkbox"/>	Refugees in host communities	<input type="checkbox"/>	Refugees [Other, Specify]		
	<input type="checkbox"/>	Host communities	X	River basin stakeholders: Municipalities, CSOs, ministries, unions, governors, members of parliament, LNGOs, Water Establishments (WEs), Universities, agriculture extension centre (MoA local representation), farmers/farmers associations, industries, mukhtars, political parties.		
Data collection tool(s)	<input type="checkbox"/>	Structured (Quantitative)	X	Semi-structured (Qualitative)		
	Sampling method		Data collection method			
Semi-structured data collection tool (s) # 1 <i>Select sampling and data collection method and specify target # interviews</i>	<input checked="" type="checkbox"/> Purposive <input type="checkbox"/> Snowballing <input type="checkbox"/> [Other, Specify]		<input checked="" type="checkbox"/> Key informant interview (Target #): min. 30/RB <input type="checkbox"/> Individual interview (Target #):_ _ _ _ _ <input type="checkbox"/> Focus group discussion (Target #):_ _ _ _ _ <input type="checkbox"/> [Other, Specify] (Target #):_ _ _ _ _			
Data management platform(s)	X	IMPACT	<input type="checkbox"/>	UNHCR		
	X	Partner's SharePoint				
Expected output type(s)	<input type="checkbox"/>	Situation overview #: _ _	X	Report #: 1	<input type="checkbox"/>	Profile #: _ _
	X	Presentation (Preliminary findings) #: 1	X	Presentation (Final) #: 1	<input type="checkbox"/>	Factsheet #: _ _
	<input type="checkbox"/>	Interactive dashboard #: _	<input type="checkbox"/>	Webmap #: _ _	<input type="checkbox"/>	Map #: _ _
	<input type="checkbox"/>	[Other, Specify] #: _ _				
Access	<input type="checkbox"/>	Public (available on IMPACT website and other humanitarian platforms)				
	X	Restricted (bilateral dissemination only upon agreed dissemination list, no publication on IMPACT or other platforms)				
Visibility <i>Specify which logos should be on outputs</i>	IMPACT, PANDA					
	Donor: EU-MADAD					
	Coordination Framework: HawkaMaa					
	Partners: GVC-WW & LebRelief & ACTED					

3. Rationale

2.1 Background

Although Lebanon is in a fortunate hydrological position as compared to the rest of the Arab region,¹ due to poor water governance and limited capacity to mobilize public financing in the sector, many residents are excluded from reliable and affordable services to meet their basic needs. With the current average coverage of the water network at around 79%,² most of the water users are experiencing interruptions in supply – 20% of users receive water daily, averaging at 6 and 13 hours per day from public and non-public sources respectively.³ When it comes to water governance structure, strategic planning, capital investment, and service provision responsibilities are scattered among various players with weak coordination. Implementation of the reform Law 221 introduced in 2000, according to which water service provision is entrusted with four financially and administratively autonomous regional Water Establishments (WE), is still incomplete, with unresolved mandatory overlap and discrepancies between legal and de facto responsibilities. This has contributed to institutional uncertainty and has weakened the accountability line between policy-maker (Ministry of Energy and Water (MoEW)), service providers (WE), and user (communities) with adverse effects on the functionality and efficiency of water infrastructure. As a result, Lebanon's water distribution systems suffer significant losses, and Unaccounted For Water (UFW) was estimated at around 48% as per the 2012 National Water Sector Strategy.⁴

This current research will be conducted as part of a three-year EU-MADAD funded program and consortium to improve water service delivery and governance in Lebanon, with the overall aim of improving access to sustainable WASH services for host and refugee communities.

There are a host of different stakeholders active in and around river basin management (RBM) in Lebanon. Previous studies and experiences have shown that tensions between these different stakeholders can hinder the successful implementation of long-term, sustainable projects.

2.2 Intended impact

One of the main challenges facing conflict resolution and resource governance in Lebanon is identifying the stakeholders who are prominent and constantly at the core of conflict resolution and establishing strong and effective communication and collaboration channels among these key stakeholders. To this end, identifying and analyzing these channels of collaboration, i.e. networks is a first step. Networks, in this, are characterized by trust, reciprocity, common values, and a structural connection that can foster resilience and facilitate coordinated community action needed for change.

In mapping stakeholder relations around river basins, the research seeks to contribute to strengthening management and accountability structures, thereby bolstering institutional capacity and the functionality and efficiency of water infrastructure in Lebanon. In this it seeks to inform the Water Wise workshops conducted by the Consortium actors (ACTED, LebRelief and GVC-WeWorld) and inform the review of the WE management plans the Consortium as a whole (aforementioned partners and Action Against Hunger and Solidarite Internationale) seeks to undertake. Further, it aims to help identify 'champions' from among the stakeholders to support the improvement of WASH services in Lebanon.

To keep in mind that the operational context in Lebanon has changed dramatically since this activity was first conceived: WEs, and government institutes in general, have lost resources (funding, human resources) as a result of the protracted financial crisis and lack of political stability. In their places (I)NGOs have taken a more prominent role and the public's trust in government and government services has decreased further.

¹ 789 m3 of water per capita per year as of according to the estimates of Food and Agriculture Organization of the United Nations (2017).

² 79% calculated as water users connected as compared to relative total HHs; regionally varying from 96% in Beirut to 55% in the North (Oxfam and Triangle, 2017, Feasibility Assessment for Water Service Provision to Informal Tent Settlements (ITS) in Lebanon: A case Study of North Beqaa).

³ Le Borgne, Eric, and Thomas J. Jacobs. 2016. "Lebanon: Promoting Poverty Reduction and Shared Prosperity." World Bank, Washington, DC.

⁴ Varying between 40% in BML, and 52% in the South. Partners' experience shows that this could be estimated at up to 70% in some water schemes.

4. Methodology

3.1 Methodology overview

This research activity consists of Key Informant Interviews (KIIs) with two components:

- A quantitative component that is the stakeholder network analysis outlined below (nine close-ended questions to be analysed using R)
- A qualitative component that consists of key informant interviews discussing challenges, roles and ways forward in water resource management (four open-ended questions at the end of the quantitative component)

A stakeholder network analysis (SNA) questionnaire is developed to investigate how stakeholders in and around the three river basins in Mount Lebanon (al-Ghadir), North Lebanon (Al-Ostuan) and the Beqaa (Al-Assi) interact or work together to manage the river basins and the water resources within these. The questionnaire includes 10 close-ended questions dedicated to identifying the connections between stakeholders and the frequency of their interaction. Four open ended questions are included in the questionnaire to drive discussion around changing roles, key challenges around water resource management, barriers and potential ways forward.

Sampling follows a mix of predetermined stakeholders and snowballing, based on the implementing partners' experience and networks. The key informants are approached in-person where feasible, or via telephone or email communication where this is not an option.

The questionnaire aimed to identify and assess the frequency of contact among stakeholders regarding

1. Water supply, quality, and network maintenance
2. Advocacy
3. Water-related conflict resolution
4. Risk management
5. Knowledge information and technical exchange
6. Funding

The SNA allows for the identification of gaps or unfavorable patterns in water resource management networks, which can be addressed in project frameworks.

See below for more details on methodology:

'SNA is comprised of a set of methods used to visualize and examine the structure of social relationships in any given group (Tucker, 2017; Ehrlich & Carboni, 2005). It provides a matrix that shows the existence, type and/ or quality of interactions between pairs of people or nodes (Ehrlich & Carboni, 2005). An analysis of stakeholder networks looks beyond the attributes of individuals to examine the relations amongst actors in general; how actors/ organizations are positioned within a network; and how they fit in a greater scheme. Unlike other forms of analysis in the social sciences, SNA assumes that actors in a network are all interdependent and, as such, provides unique insights to the interactions between actors in a system and how that would affect their relationships. SNA is used to investigate each stakeholder's degree of impact in a network, their influence on each other's behavioral patterns and the network's level of interconnectivity, group cohesiveness, and caching. The network framework is analyzed using graph hypotheses, and social network concepts such as those described below. Centralization measures such as: degree, closeness, betweenness, and eigenvector, are effective metrics highlighting different themes and interactions. For example, stakeholders with a high centrality degree are connected to a high number of stakeholders within their network.' ([Water-Energy Nexus of Water and Wastewater Services in Lebanon](#), page 8)

Example measures in the SNA:

Density	<i>Calculated as the number of observed network connections a point has out of the maximum number of connections that could exist within the network. It is an indication of how closely connected actors within a network are to each other. Each stakeholder that maximizing its connection-potential elevates the density scores for the entire network. Normally the density of a network is a maximum of 1 in a reciprocated network, and a minimum of 0 in a disconnected network.</i>
Degree Centrality	<i>Centrality is measure of the degree to which an actor is embedded in the network. Degree centrality represents the number of edges relating to a particular node. Stakeholders with high degree centrality (more connections with others) are more likely to have access to information, funding, and data sharing.</i>
Closeness Centrality	<i>The path with the least number of intermediary nodes between a node and every other node in the network. Closeness represents the ease of passing/ accessing information between stakeholders. Stakeholders with high closeness can have faster and easier access to/spread of information, and communication with other stakeholders.</i>
Betweenness Centrality	<i>The number of other vertices that must pass through a specific node to reach their final path. Stakeholders with high betweenness centrality act as 'pivot points of knowledge flow in the network'. They connect different stakeholders together, and usually have multidisciplinary knowledge</i>
Eigenvector Centrality	<i>The degree of connection to other important vertices. Stakeholders linked to other influential stakeholders in the network (such as stakeholders with high authority or power, and are more likely to influence project outcomes, policy reforms, or implementation). The Eigenvector centrality shows the degree of connection to other important vertices or nodes; stakeholders linked to other influential stakeholders in the network for example stakeholders with high authority or power, are more likely to influence project outcomes, policy reforms, or implementation.</i>

3.2 Population of interest

The Geographical area assessed includes the areas in which the Consortium actors are operating under the EU-MADAD funded program. The population assessed includes those with administrative and/or functional responsibilities under the reform Law 221 introduced in 2000, i.e. those who are responsible for the implementation of a sustainable river basin management programme.

As this is a stakeholder mapping exercise, specifically focused on relations and responsibilities, only those stakeholders which are key to river basin management will be included in this study.

3.3 Secondary data review

A secondary data review will be undertaken looking at all existent material and research pertaining to WASH infrastructure in Lebanon, and more specifically at water-resource related interactions. By providing an overview of the current state of WASH infrastructure, public and stakeholders' perceptions of WASH facilities/infrastructure and by giving insight into relations around WASH, the secondary data review will (1) serve to identify areas of contention among WASH stakeholders, and (2) map gaps in current management schemes to be explored further through qualitative data collection and analysis.

See below an initial list of information sources to be consulted:

- 'Mapping and Assessing Water Resource Related Interactions in the Bekaa' – This is an example of a similar study undertaken in the Beqaa (Unpublished research)
- ['Water as a Tool for Diffusing Socio-Political Tension'](#) (UNICEF, 2022)

- Community Perception Research undertaken by the Consortium partners – Insight into the perceived state of infrastructure and relations across Lebanon, including around the river basins (to be published)
- Existing data on the WASH sector in Lebanon, acquired from the [WASH cluster website](#)
- Research published by [LEWAP](#) (Lebanese Water Actors Platform) including:
 - [‘Groundwater Governance in the central Bekaa’](#) (IWMI, USAID 2017)
 - [‘Water Policies and Politics in Lebanon: Where is Groundwater?’](#) (IWMI, USAID 2016)

3.4 Primary Data Collection

Consortium partners LebRelief, ACTED and GVC-WW will be collecting data in their respective areas of intervention. A preliminary timeline is to be confirmed in discussion with the consortium partners.

Sampling will be purposive via pre-identified stakeholders. These stakeholders will have been identified through the Community Perception Research as well as via the outreach efforts, contextual understanding and implementing partners (ACTED, GVC-WW and LebRelief), who will be implementing activities in the chosen areas prior to the launch of this research activity.

An overview of relevant stakeholders is as follows (minimum 30 in total per river basin):

Stakeholders	Number
Municipalities	TBC – depends on partner outreach efforts
CSOs	TBC
Ministries	TBC
Unions	TBC
Governor	TBC
Members of Parliament	TBC
LNGOs	TBC
Water Establishments	TBC
Agriculture extension centre (MoA local representation) farmers/farmers associations	TBC
Industries	TBC
Mukhtars	TBC
Political parties (where relevant)	TBC

Enumerator training and tool revision will be undertaken by IMPACT, as well as data monitoring and cleaning. Monitoring of enumerators will be done by the Consortium partners. Once data collection is complete, data processing and analysis will be done by the IMPACT assessment officer.

3.5 Data Processing & Analysis

Data will be shared using the Consortium’s SharePoint as agreed upon by the Consortium and following the Data Sharing Agreement signed by all Consortium members. Data monitoring and cleaning will be undertaken by IMPACT following the IMPACT quantitative data cleaning guidelines and the IMPACT data cleaning minimum standards for the quantitative data.

Qualitative data will be cleaned and analysed following the IMPACT data processing and analysis for qualitative data guidelines and according to the qualitative data minimum standards.

Quantitative data will be analysed using R, which allows for a visual representation of stakeholders in and around the RBs, and allows for the calculation of the above-described parameters. The script for data analysis will be developed by the IMPACT DBO and AO in-country.

Qualitative data will be shared via interview notes (where interviews did not take place in person) which will be translated by the assessment officer or one of the senior field officers in country. This, alongside enumerator debriefs, will then be fed into a data saturation and analysis grid for analysis. From this, themes and stakeholders's main roles should become apparent. Once analysis has been conducted, IMPACT will organise a workshop with the Consortium partners to discuss preliminary results.

3. Roles and responsibilities

Table 2: Description of roles and responsibilities

Task Description	Responsible	Accountable	Consulted	Informed
Research design	IMPACT Senior Assessment Officer	IMPACT Research Manager	IMPACT HQ – RD unit; Consortium partners (ACTED, GVC-WW and LebRelief) Consortium partners (ACTED, GVC-WW and LebRelief)	Consortium members (all others); CC; IMPACT HQ – PANDA
Supervising data collection	IMPACT Senior Assessment Officer	IMPACT Research Manager	IMPACT HQ – Research Unit (data); Consortium partners (ACTED, GVC-WW and LebRelief)	CC; IMPACT HQ – PANDA
Data processing (checking, cleaning)	IMPACT Senior Assessment Officer	IMPACT Research Manager	IMPACT HQ – Research Unit (data); Consortium partners (ACTED, GVC-WW and LebRelief)	CC; IMPACT HQ – PANDA
Data analysis	IMPACT Senior Assessment Officer	IMPACT Research Manager	IMPACT HQ – Research Unit (data); Consortium partners (ACTED, GVC-WW and LebRelief)	Consortium members (all others); CC; IMPACT HQ – PANDA

<i>Output production</i>	IMPACT Senior Assessment Officer	IMPACT Research Manager	IMPACT HQ – Reporting unit; Consortium partners (ACTED, GVC-WW and LebRelief)	Consortium members (all others); CC; IMPACT HQ – PANDA
<i>Dissemination</i>	IMPACT Senior Assessment Officer	IMPACT Research Manager	IMPACT HQ – Reporting unit; Consortium partners (ACTED, GVC-WW and LebRelief); Consortium advocacy FP	Consortium members (all others); CC; IMPACT HQ – PANDA
<i>Monitoring & Evaluation</i>	IMPACT Senior Assessment Officer	IMPACT Research Manager	Consortium partners (ACTED, GVC-WW and LebRelief); Consortium partners	Consortium members (all others); CC; IMPACT HQ – PANDA
<i>Lessons learned</i>	IMPACT Senior Assessment Officer	IMPACT Research Manager	Consortium partners (ACTED, GVC-WW and LebRelief);	Consortium members (all others); CC; IMPACT HQ – PANDA

Responsible: the person(s) who executes the task

Accountable: the person who validates the completion of the task and is accountable of the final output or milestone

Consulted: the person(s) who must be consulted when the task is implemented

Informed: the person(s) who need to be informed when the task is completed

5. Key ethical considerations and related risks

The proposed research design meets / does not meet the following criteria:

<i>The proposed research design...</i>	<i>Yes/ No</i>	<i>Details if no (including mitigation)</i>
... Has been coordinated with relevant stakeholders to avoid unnecessary duplication of data collection efforts?	Yes	
... Respects respondents, their rights and dignity (specifically by: seeking informed consent, designing length of survey/ discussion while being considerate of participants' time, ensuring accurate reporting of information provided)?	Yes	
... Does not expose data collectors to any risks as a direct result of participation in data collection?	Yes	

... Does not expose respondents / their communities to any risks as a direct result of participation in data collection?	No	Due to the sensitive nature of the data, there will be a publication consultation. Further, the saturation grid will not be published. Dissemination is likely to be limited to only implementing partners. Only first names will be stored and all identifiable information will be deleted after the data collection is finalized.
... Does not involve collecting information on specific topics which may be stressful and/ or re-traumatising for research participants (both respondents and data collectors)?	Yes	
... Does not involve data collection with minors i.e. anyone less than 18 years old?	Yes	
... Does not involve data collection with other vulnerable groups e.g. persons with disabilities, victims/ survivors of protection incidents, etc.?	Yes	
... Follows IMPACT SOPs for management of personally identifiable information ?	Yes	

6. Data Analysis Plan

See attached document

7. Monitoring & Evaluation Plan

IMPACT Objective	External M&E Indicator	Internal M&E Indicator	Focal point	Tool	Will indicator be tracked?
Humanitarian stakeholders are accessing IMPACT products	Number of humanitarian organisations accessing IMPACT services/products	# of downloads of x product from Resource Center	Country request to HQ	User_logging	N/A
		# of downloads of x product from Relief Web	Country request to HQ		
		# of downloads of x product from Country level platforms	Country team		
	Number of individuals accessing	# of page clicks on x product from REACH global newsletter	Country request to HQ		

	IMPACT services/products	# of page clicks on x product from country newsletter, sendingBlue, bit.ly	Country team		
		# of visits to x webmap/x dashboard	Country request to HQ		
IMPACT activities contribute to better program implementation and coordination of the humanitarian response	Number of humanitarian organisations utilizing IMPACT services/products	# references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies)	Country team	Reference_log	TBC
		# references in single agency documents			
Humanitarian stakeholders are using IMPACT products	Humanitarian actors use IMPACT evidence/products as a basis for decision making, aid planning and delivery	Perceived relevance of IMPACT country-programs	Country team	Usage_Feedback and Usage_Survey template	TBC
		Perceived usefulness and influence of IMPACT outputs			
		Recommendations to strengthen IMPACT programs			
		Perceived capacity of IMPACT staff			
		Perceived quality of outputs/programs			
Number of humanitarian documents (HNO, HRP, cluster/agency strategic plans, etc.) directly informed by IMPACT products	Recommendations to strengthen IMPACT programs				
Humanitarian stakeholders are engaged in IMPACT programs throughout the research cycle	Number and/or percentage of humanitarian organizations directly contributing to IMPACT programs (providing resources, participating to presentations, etc.)	# of organisations providing resources (i.e.staff, vehicles, meeting space, budget, etc.) for activity implementation	Country team	Engagement_log	X Yes
		# of organisations/clusters inputting in research design and joint analysis			X Yes
		# of organisations/clusters attending briefings on findings;			X Yes