

Identifying Key Preparedness and Response Gaps of Drought and Water Scarcity Response Actors

October 2023 | Iraq

CONTEXT & RATIONALE

The effects of climate change and environmental degradation in Iraq are becoming increasingly apparent.¹ The drought has caused displacement and loss of livelihoods at least since 2018.² The political instability, closure of camps, and the deactivation of clusters, including the Water, Sanitation, and Hygiene (WASH) cluster, have hindered the coordination and response efforts to mitigate the impact of drought. To address this, the REACH Initiative and Action Against Hunger (ACF), with funding from USAID's Bureau for Humanitarian Assistance (BHA), have formed a Water Scarcity Community of Practice (WS CoP) to bring together stakeholders involved in drought response.

REACH conducted an assessment to evaluate the readiness and knowledge of these actors regarding drought and water scarcity in Iraq. The assessment findings aimed to inform the gaps in information, logistics, coordination, policy, and human resources to enhance response capabilities and support decision-making. Additionally, the assessment findings will aid ACF in developing and implementing drought preparedness and disaster risk reduction training to address part of these gaps.

METHODOLOGY OVERVIEW

This assessment employed a quantitative approach through primary data collection, utilizing a structured online survey administered to all participating members of the WS CoP. The survey design drew inspiration from prominent frameworks, including the [Drought Risk Reduction Framework and Practices](#), and the [Sendai Framework for Disaster Risk Reduction](#). Additionally, the survey was tailored to address the unique aspects pertinent to this assessment in alignment with ACF's programmatic needs, adapting the five priorities³ originally outlined in the [Hyogo Framework for Action 2005-2015](#).

The survey's primary focus was to assess various key characteristics of the actors involved, including their knowledge of policies, proficiency in drought monitoring and prediction, coordination abilities, knowledge management practices, drought risk factors reduction, mitigation measures implementation and emergency response preparedness. The survey was distributed online to all participants of the WS CoP for their completion. For more information, please see the [Terms of Reference](#).

1 IOM Iraq, Drivers of Climate Induced Displacement: [Climate Vulnerability Assessment](#), October 2023

2 Norwegian Refugee Council (NRC), [Iraq's drought crisis and the damaging effects on communities](#), 2021

3 The five priorities outlined by the Hyogo Framework For Action (2005-2015) to build resilience of nations and communities to natural hazards are: governance, risk identification, assessment, monitoring, and early warning, knowledge management and education, reducing underlying risk factors, and preparedness for effective response and recovery.

KEY FINDINGS

67%

of CoP respondents reported not having tools for drought/water scarcity risk assessments

80%

of CoP respondents reported bilateral coordination with stakeholders working on water scarcity issues

69%

of CoP respondents reported not having minimum contingency stock of WASH NFI kits available in mission for emergency response

INTRODUCTION & DEFINITION

Water scarcity is a recurring condition characterized by inadequate water availability, whether on a seasonal, annual, or multi-annual basis. It occurs when the demand for water consistently outstrips the natural capacity of river basins to sustainably supply it. This scarcity can be quantified by examining the ratio of renewable freshwater resources to water withdrawal or consumption. Additionally, water scarcity is not solely limited to the quantity of water; it can also stem from water quality issues, notably pollution from various sources, which reduce the availability of clean water.

Drought, on the other hand, represents a transient reduction in average water availability, typically driven by factors such as insufficient rainfall. Droughts are generally viewed as natural phenomena and can manifest anywhere in Europe, regardless of the region's typical rainfall patterns or the time of year. The impact of droughts is often exacerbated in regions with limited water resources or inadequate water resource management, leading to a disjunction between water demand and the natural system's capacity to provide water ⁴.

Key Messages

- **Limited Awareness:** The assessment reveals an awareness gap among the CoP members, with only 35% of respondents being informed about local and national policies addressing drought and water scarcity mitigation and response. Strengthening awareness and communication is crucial for effective responses.
- **Capacity Development Gap:** Nearly half of the respondents (49%) said they did not engage in any capacity development training related to water scarcity or drought preparedness and response. This highlights the need for targeted training initiatives to enhance preparedness and response capabilities.
- **Lack of Assessment Tools:** A substantial 67% of respondents reported that their organizations do not have pre-established drought and water scarcity risk assessment tools. Developing and implementing such tools can inform the development of resilience-building strategies and interventions.



[Drought in Kuri Jam village, Sinjar district, Ninewa governorate. August 2021. Source: NRC: Iraq's drought crisis and the damaging effects on communities.](#)

⁴ Source: European Commission: https://environment.ec.europa.eu/topics/water/water-scarcity-and-droughts_en

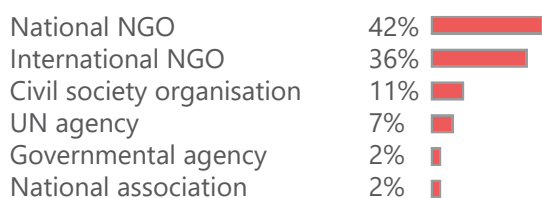
1. Key Characteristics

The first assessed aspect of the WS CoP respondents focused on key characteristics. These characteristics included human resources, financial capacity, working coverage, education level, gender level, date of foundation, and projects related to water scarcity. The assessment aimed to gauge the preparedness of individual members and the CoP as a whole to address water scarcity issues in Iraq. Human resources were evaluated to assess expertise and experience. Financial capacity was considered to understand the resources available for investments. Working coverage indicated the geographical reach of the members. Education level reflected the knowledge and understanding of water scarcity. Gender level assessed diversity and inclusivity efforts. Date of foundation provided insights into experience and longevity. Projects highlighted the focus and impact of their initiatives. Collectively, these key characteristics serve to inform planning and coordination efforts within the WS CoP.

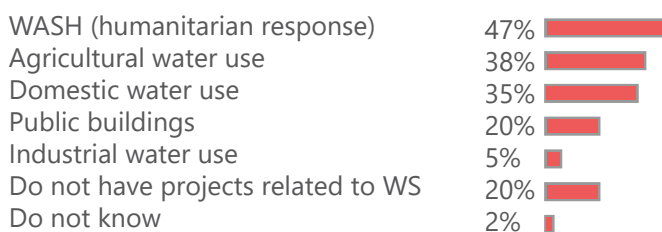
Most of the CoP members reported that they were staff within NGOs, with national NGOs representing 42% and international NGOs comprising 36% of the respondents. However, governmental agencies (2%) and national associations (2%) collectively represent a smaller portion of the CoP.

Reported fields of projects related to WS within the CoP indicates a primary focus on WASH in humanitarian response, accounting for 47% of the members' projects. agricultural water use follows closely representing 38% of the projects.

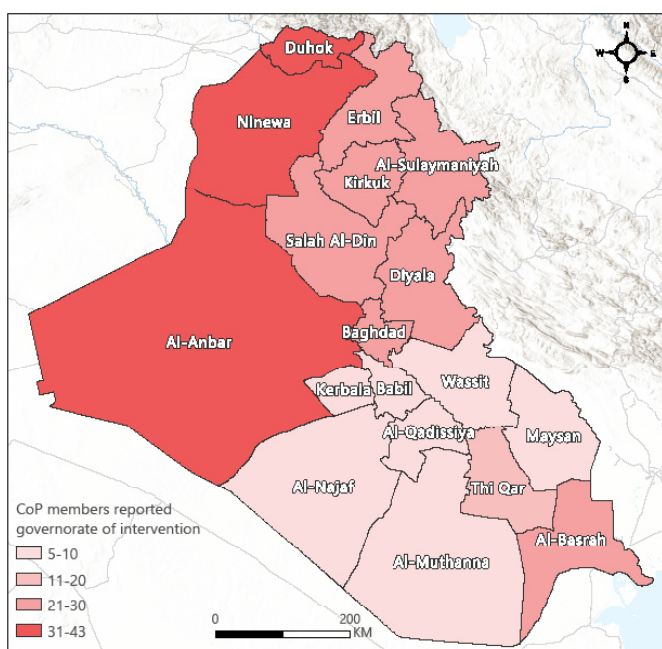
% of WS CoP respondents who reported organisation type:



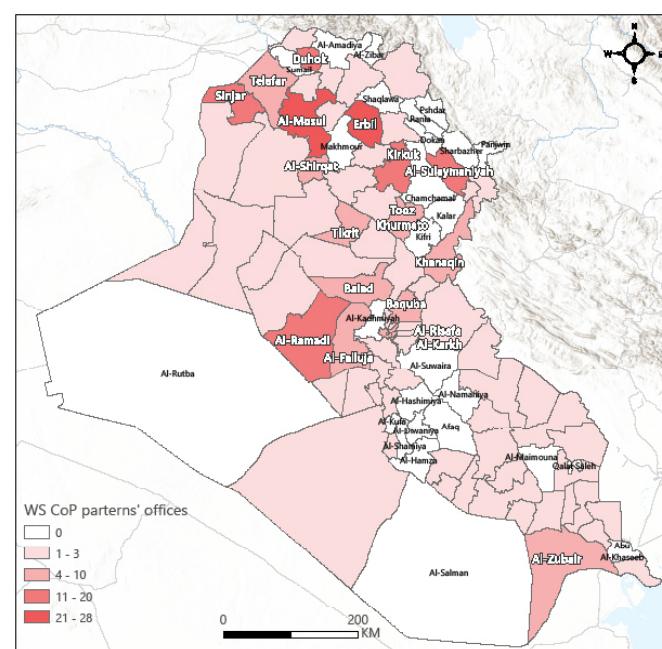
% of WS CoP respondents who reported type of WS related project fields:*



WS CoP respondents who reported having interventions in each of Iraq's governorates:*



WS CoP respondents who reported locations of their offices:*



* Question allowed multiple selection.

Thirty-five percent of the WS CoP respondents reported that their organizations have dedicated less than \$ 100K for water scarcity which comprises 16% of the total organization budget, However, only 2% of the respondents reported an amount between \$1M-3M for water scarcity which is equal to 13% of their total budget.

Forty-three per cent of the WS CoP respondents reported having 3-10 full time female employees, and 24% reported having more than 10 female employees, while only 2% reported not having full time female employees. In terms of male membership, 29% of respondents reported having more than 10 full time male employees, and 24% reported having from 3-10 full time male employees, while only 2% reported not having full time male employees.

% of WS CoP respondents that reported their total and WS-related budgets for the year of 2023:

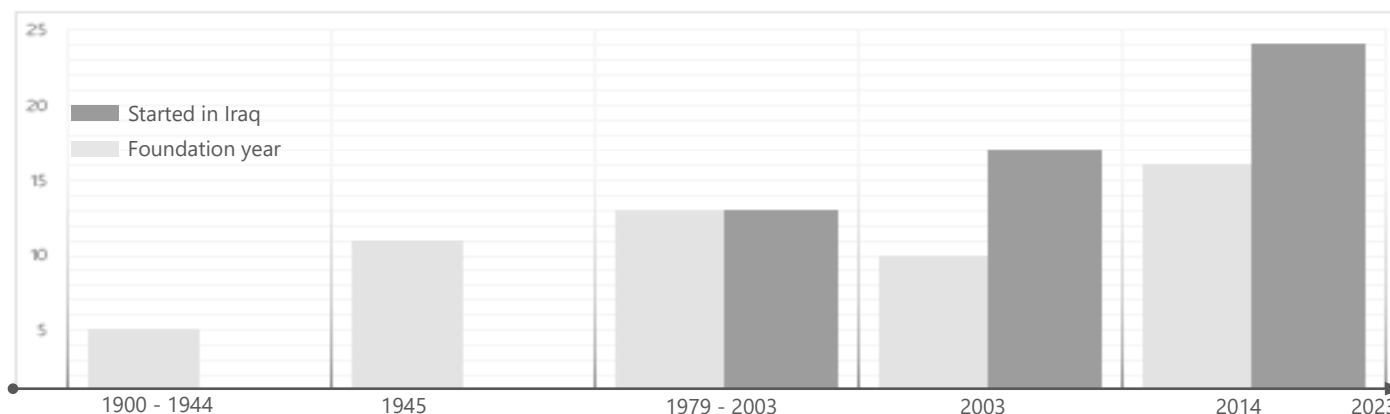
Budget amount	Total organisation's budget	Total budget specified for water scarcity ⁵
Less than \$ 100K	16%	35%
\$ 100k – 500K	14%	21%
\$ 500K – 1M	11%	12%
\$ 1M - 3M	13%	2%
\$ 3M – 10M	15%	5%
More than 10M	2%	0%
Don't know / prefer not to answer	29%	25%

% of WS CoP respondents that reported their human resources demography:

Number of employee	Full time female	Full time male	Part time female	Part time male
Do not have	2%	2%	33%	27%
1-2	0%	5%	24%	22%
3-10	43%	24%	18%	25%
11-30	24%	31%	2%	4%
More than 30	24%	29%	7%	4%
Do not know	2%	4%	11%	13%
Prefer not to answer	5%	5%	5%	5%

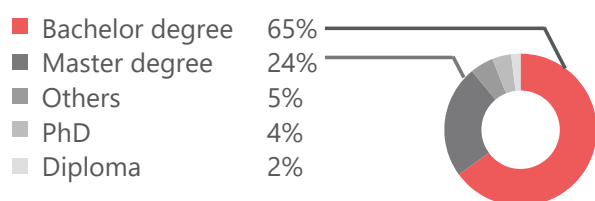
The majority of the respondents reported 2014 as their organizations' foundation year (16) and presence in Iraq (24). However, one of the respondents reported 1900s as the period of foundation and presence in Iraq.

Number of WS CoP respondents who reported dates of their organisations' foundation and presence in Iraq:

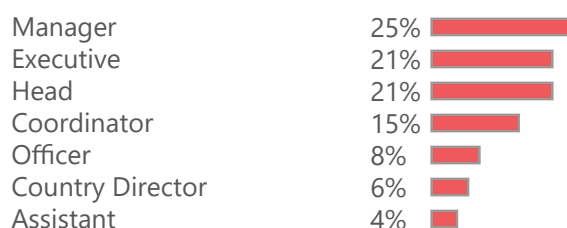


In terms of academic qualifications, 65% of the respondents reported having a bachelor degree. Moreover, 67% of the respondents reported that they held managerial positions within their organisations.

% of WS CoP respondents by level of academic qualifications:



% of WS CoP respondents by reported position:



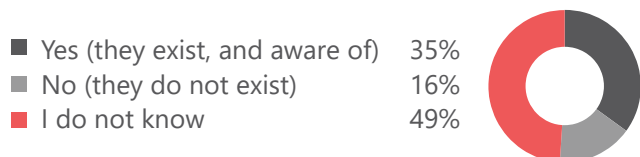
⁵ This question was a subset of those who reported having one or more projects related to Water Scarcity.

2. Policies and governance

Ensuring a comprehensive understanding of the impact of water scarcity on communities is an essential responsibility for national, regional, and international governments, as well as political leaders. It is crucial for them to acknowledge the hardships faced by individuals and families whose livelihoods are vulnerable to water scarcity. Governments often prioritize immediate and rapidly evolving issues, inadvertently overlooking the gradual onset of water scarcity. However, when water scarcity reaches a critical point, finding effective solutions becomes increasingly challenging. Therefore, it is important to integrate the development of drought resilience into long-term planning and policy considerations, making it an indispensable component of strategies addressing agriculture, water management, food security, and hazard risk management. Additionally, the response community and CoP members must be well-informed about these policies and actively utilize them to respond effectively to water scarcity. Thus, the assessment placed significant emphasis on evaluating their knowledge and familiarity with these policies within their local and national contexts.⁶

Only 35% of the respondents reported awareness about existing local and national policies on drought/water scarcity mitigation and response. However, 16% of the respondents said that such policies did not exist, while 49% of the respondents said they did not know if such policies existed. Notably, respondents from eight national NGOs and five international NGOs said they were aware of local and national policies on WS/drought mitigation and response.

% of WS CoP respondents who reported their awareness about local and national policies:



Out of the WS CoP respondents surveyed, 35% reported being aware about the available policies. These individuals were then requested to share the specific policies they were aware of. Here is the compiled list they provided:

1. The National Environmental Strategy, available online under this [link](#). However, this document is being currently updated and is expected to have a new version in the future.⁷
2. The Nationally Determined Contribution of Iraq (NDC), available online under this [link](#).
3. Ministry of Water Resources Law No. 50 of 2008, available online under this [link](#).

The fact that only 35% of WS CoP respondents were aware of the existing policies on drought/water scarcity mitigation and response is concerning, particularly as these members are expected to play a crucial role in responding to water scarcity issues.

While there may be various reasons contributing to this situation, a small number of members (three) have emphasized that despite the presence of policies, they are not effectively implemented. The mere existence of policy documents without robust enforcement and subsequent monitoring by the government can result in insufficient attention given to them, leading to a lack of awareness among stakeholders.

Given these findings, it is recommended that the stakeholders take proactive measures to strengthen policy enforcement through the newly established government-led WASH Working Groups. Additionally, the implementation of Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) indicators should be considered to effectively monitor the application of these policies. This will help ensure their effective implementation and create greater awareness among stakeholders.

⁶ UNCCD - Drought Resilience, Adaptation and Management Policy (DRAMP) Framework, June 2018, Center for Climate and Energy Solutions - Resilience Strategies for Drought, October 2018.

⁷ United Nations Development Programme (UNDP), [Updating Iraq's National Environmental Strategy and Action Plan](#), October 2022.

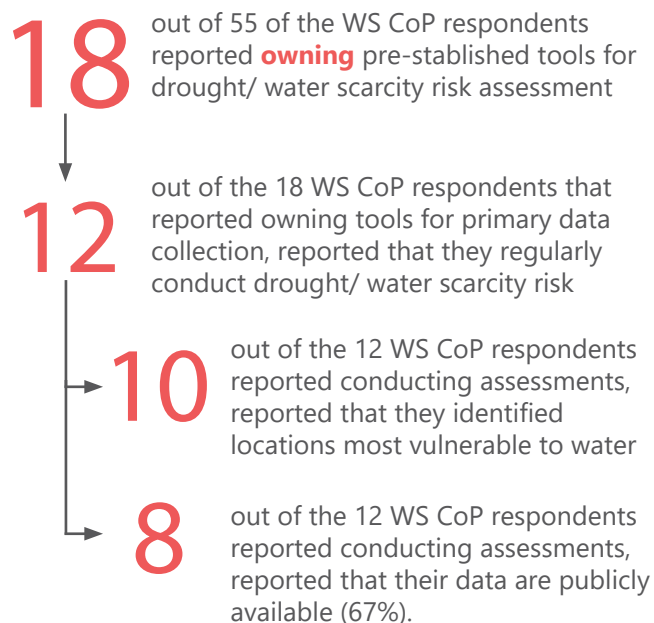
3. Water scarcity risk identification, impact assessment, and early warning

To reduce water scarcity risk and promote resilience, it is essential to acquire knowledge about hazard occurrence, potential effects, and the vulnerabilities associated with affected individuals and activities. Risk assessment methodologies can provide valuable insights into specific trends, vulnerabilities, and impacts in water scarcity-prone areas. It is recommended to develop standardized approaches and indicators tailored to local needs for defining and assessing risks related to water scarcity. Additionally, it is essential to enhance water scarcity monitoring capabilities and early warning systems.⁴

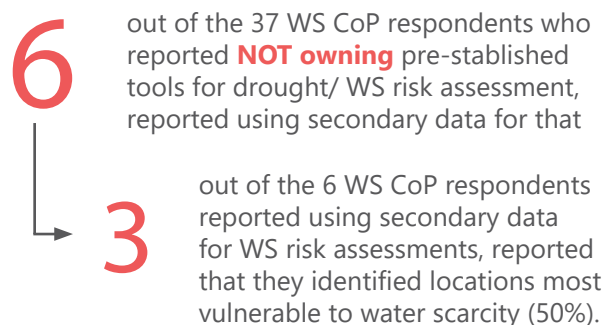
Gaining a comprehensive understanding of the physical characteristics of water scarcity hazards, their impacts, and the underlying vulnerabilities is essential. Equally important is effectively communicating these dangers to develop informed measures for mitigating and preparing for water scarcity. This knowledge forms the bedrock for reducing the adverse effects of water scarcity and contributing to the development of resilient societies.

As part of this assessment, the evaluation includes the availability of knowledge on water scarcity among WS CoP respondents, the presence of assessment tools, the utilization of secondary sources, the identification of vulnerabilities, and the accessibility of early warning systems. These aspects collectively contribute to a comprehensive understanding of the water scarcity landscape and guide the formulation of effective strategies and interventions.

WS CoP respondents who reported owning assessment tools, conducting assessments, identified vulnerable location, and sharing data:



WS CoP respondents who reported using secondary data for WS assessments, and identified vulnerable location:

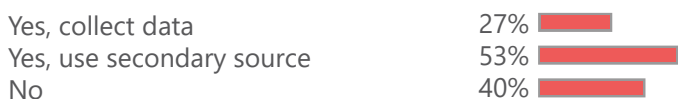


The secondary sources reported by the 6 WS CoP respondents as their source for WS assessments are:

- Assessments developed by Iraqi National Center of Water Resource Management and cannot be shared.
- REACH water scarcity data (Precipitation change analysis).
- Directly shared emails by the UNICEF.
- Running Dry: water scarcity threatens lives and development in Iraq. [Click here.](#)
- Gender and Water Dynamics in Iraq. [Click here.](#)
- Diagnostic report on access to water and natural resource management in a context of climate change. [Click here.](#)
- also was reported that various online sources are utilized.

Fifty-three percent of the respondents reported having access to and utilizing secondary sources to monitor and predict drought, while 27% reported gathering primary data. However, 40% of the respondents indicated that they neither collect primary data nor have access to secondary data. Notably, eight national NGOs and two civil society organisations said they conduct assessments and collect primary data.

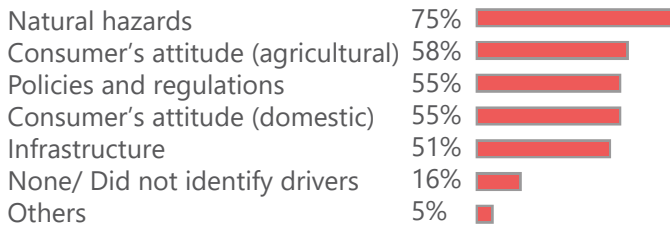
% of WS CoP respondents who reported that they collect data and/or have access to secondary data sources to monitor and predict drought:*



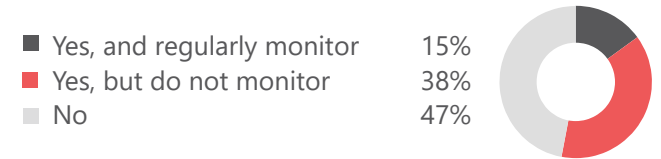
* Question allowed multiple selection.

Three-quarters of the respondents reported natural hazards as key drivers and/or exacerbating factors of water scarcity in high-risk communities. Other respondents reported various other factors such as consumer’s attitude - agriculture (58%), policies/regulations and consumer’s attitude - domestic (55%), and infrastructure (51%). The majority of the respondents (47%) reported not regularly monitoring water levels within their areas of intervention with existing/potential water scarcity/drought.

% of WS CoP respondents who reported key drivers and/or exacerbating factors of water scarcity in high-risk communities:*



% of WS CoP respondents who reported having and regularly monitoring a list of available water sources within their areas of intervention with existing/potential water scarcity/ drought?



- ↓
- Others, as reported by CoP members, include:
- Increasing population
 - Intra-boundary regulations
 - Water quality degradation/ salinity

Understanding water scarcity hazards, vulnerabilities, and effectively communicating these risks is essential for developing informed mitigation and preparedness measures to promote resilience and reduce the impact of water scarcity.

Notably, the findings indicate that a considerable number of WS CoP respondents lack the necessary tools for assessments, and only a small portion of them engage in assessments and data sharing. This limited involvement hampers the CoP’s understanding of water scarcity and inhibits the development of appropriate response programs.

In order to address this challenge, it is recommended to establish a dedicated task force comprising a diverse range of stakeholders, including response partners, academia, government entities, and community authorities. This collaborative effort will focus on developing a comprehensive online tool specifically designed for water scarcity assessments and indicators. By utilizing this tool, all CoP members will have the opportunity to contribute their expertise and insights, ultimately creating a unified mapping of Iraq’s water scarcity severity index. This interactive platform will greatly enhance the effectiveness of programming efforts throughout the country.

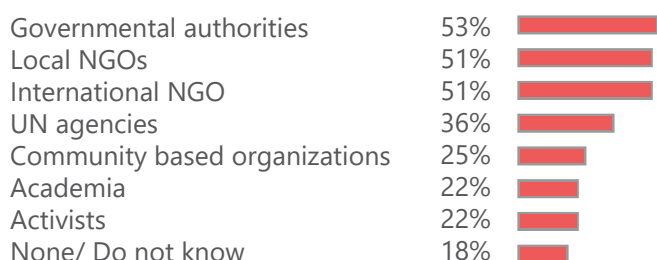
Additionally, the tool may be potentially integrated into the the REACH dashboard, ensuring a cohesive and streamlined approach to water scarcity management.

* Question allowed multiple selection.

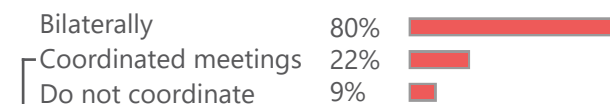
4. Drought and water scarcity coordination and awareness

Effective coordination and stakeholder awareness are crucial for utilizing knowledge and facts related to water scarcity. It is not enough to simply possess information; it needs to be well-coordinated and disseminated among all relevant parties. Coordinating the issues of drought and water scarcity and its response is essential to ensure an effective and efficient response without duplication of efforts. Furthermore, the gathered facts, responses, lessons learned, and success stories should be shared with all stakeholders to enhance their awareness. This knowledge-sharing and awareness-building process enables continuous improvement in programming and response, leading to better resilience and more efficient actions. Hence, this assessment also encompassed evaluating the WS CoP respondents approaches to coordination and awareness-building. Notably, more than 50% of the WS CoP respondents reported awareness about stakeholders working on WS issues. Additionally, up to 80% of the WS CoP respondents reported having bilateral coordination systems with the WS response stakeholders.

% of WS CoP respondents who reported awareness of stakeholders involved in addressing WS issues within their respective areas of intervention:



% of WS CoP respondents who reported coordination systems with the WS response:

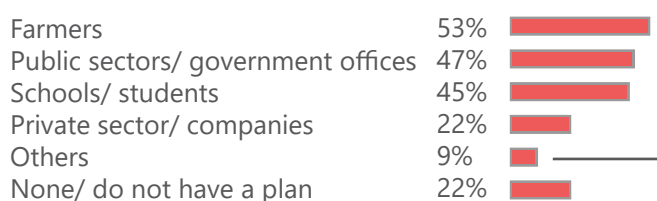


The coordination bodies reported by the CoP members:

- ABC, Agriculture and water coordination group, led by PWG.
- Al-Naseem Network for the protection of Climate and Environment, led by FAO
- Cholera Higher Committee.
- Governmental meeting with ministries of water resources and environment.
- Water Scarcity CoP, led by ACF and REACH.
- WASH Working Groups, led by government.

Farmers were identified by 53% of respondents as the number one priority group to work with on awareness activities to maximize water savings.

% of WS CoP respondents that reported their identified groups of audience to work with for water conservation and awareness activities to maximize water savings.*



The "Others" reported by CoP members included:

- Activists.
- Community, through radio broadcasts.
- Households compains, in communities, infrmal settlements, and camps.

The considerable bilateral coordination reported by WS CoP respondents regarding water scarcity issues highlights the attention this topic garners. However, there is a notable imbalance between the attention received and the corresponding efforts made. This discrepancy leads to deprioritization of the issue and associated redundant initiatives. Given the current standing of the WS CoP as the primary and active platform for coordinating this matter, it is highly recommended to sustain and expand its reach to engage a wider array of stakeholders.

Furthermore, caution should be exercised when considering transferring this responsibility to other authorities unless they possess proven expertise in effectively and efficiently coordinating this complex issue.

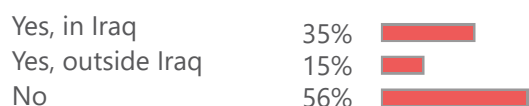
* Question allowed multiple selection.

5. Risk factor reduction and mitigation measures

The goal of reducing underlying factors and implementing mitigation measures is to decrease or eliminate vulnerability to water scarcity and promote resilience in societies. Reducing underlying factors involves preparing communities and enhancing their ability to respond effectively to water scarcity. This can be achieved through activities such as knowledge dissemination, capacity building, and implementing projects before water scarcity occurs. On the other hand, mitigation refers to the process of lessening the adverse impacts of water scarcity and related issues. It focuses on identifying response strategies in the event of water scarcity. These measures can overlap with the actions taken to reduce underlying factors. For example, enhancing agricultural water management practices in advance can be viewed as an approach to reduce underlying factors, while constructing emergency desalination plants during water scarcity serves as a risk mitigation measure ⁸.

In summary, reducing underlying factors and implementing mitigation measures are interconnected stages of water scarcity preparedness and response. Therefore, in this section, the actions taken by CoP members to reduce underlying factors and the identified and taken action of mitigation measures are presented together.

% of WS CoP respondents who reported having dedicated staff to the water scarcity issues in Iraq or outside the mission.*

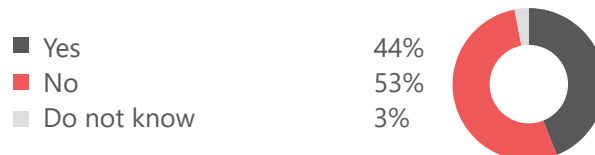


% of WS CoP respondents who reported having dedicated staff, reported that advocacy is part of the team or the tasks of that staff:



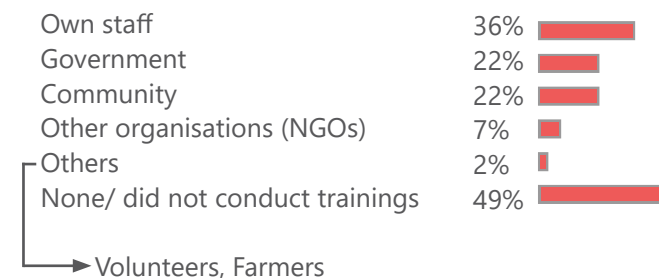
More than half of the respondents (53%) reported no available identified water scarcity Information, Education, and Communication (IEC) materials in their organizations.

% of WS CoP respondents who reported availability of identified IEC materials in their organizations.



Almost half of the respondents indicated that they had not carried out any capacity development training for water scarcity or drought preparedness and/or response with any parties involved.

% of WS CoP respondents who reported having conducted capacity development trainings on WS /drought preparedness and/or response to any of the following:*



While a notable percentage of respondents (59%) reported lack plans or actions for various aspects of water management and project implementation, a significant proportion (53%) reported having plans/ Bill of Quantities (BoQs) in place.

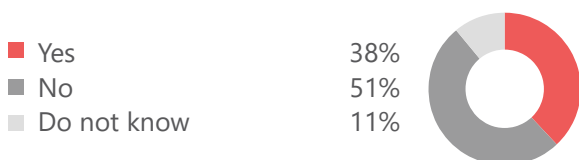
% of WS CoP respondents who reported carrying out / have plans and BOQs to establish drought-resilient projects:*

Project status	WS and domestic water supply systems and management	Irrigation systems and agriculture water management
Performing	18%	18%
Have plans	40%	53%
Neither	59%	35%

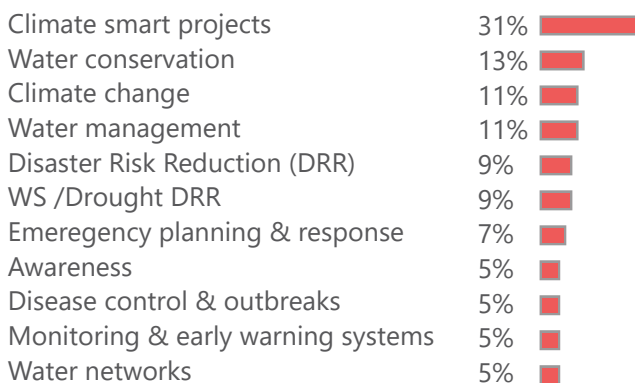
⁸ Global Water Forum: Strategies for countries to mitigate the risks of extreme water scarcity and dependency in a sustainable way, January 2016.

51% of CoP respondents claimed their organizations did not identify WS/drought mitigation and response methods. Almost one-third of the respondents reported climate smart projects as a suggested training activity for their organizations.

% of WS CoP respondents who reported the identification of WS/ drought mitigation and response measures by their organisations:



% of WS CoP respondents who suggested training activities:*



The presence of dedicated staff among a significant number of WS CoP respondents, committed to addressing (WS) and advocating for its importance, is a positive aspect worth highlighting. It is encouraging to observe that some members have taken the initiative to provide training in this field to their staff and other stakeholders, although such efforts are not yet widespread. This indicates a growing awareness among WS CoP respondents regarding the critical nature of the issue and the need for informed action.

However, recent reductions in funding has severely constrained their ability to formulate plans and execute projects aimed at tackling water scarcity. This financial setback has posed significant challenges in their endeavors.

The limited number of WS CoP respondents who were able to identify effective mitigation measures can be attributed to the lack of assessment tools, which have hindered their capacity to identify suitable solutions.

To overcome these obstacles, it is important to address the funding constraints and ensure adequate resources are available to support WS CoP respondents in their efforts to combat water scarcity. Additionally, emphasis should be placed on the development and provision of assessment tools, which will empower WS CoP respondents to accurately assess the situation and implement effective strategies. Therefore, it is crucial for donors and high-level authorities to recognize and emphasize that climate change and water scarcity in Iraq are humanitarian needs separate from the conflict-based response that has been the focus in past decades. Donors should give due consideration to this matter and take proactive measures to mitigate displacement before it escalates to a critical level.

* Question allowed multiple selection.

6. Emergency response

The emergency response aspect of the report is distinct from the drought disaster risk reduction framework that inspired it. It was specifically requested and designed by ACF to assess the ability and readiness of CoP members to respond to emergency situations that may arise as a result of water scarcity. For instance, the assessment aimed to determine how prepared CoP members are to respond if a situation similar to the one that occurred in Basrah in 2018 were to happen again.⁹ It also aimed to evaluate their readiness to address challenges such as massive displacement. To fulfill this purpose, all CoP members were provided with a set of 10 questions related to their awareness and preparedness for responding to such scenarios.

While a substantial proportion of respondents have identified emergency rosters for water scarcity response (58%) and are officially registered in drought-prone areas (82%), there is room for improvement in areas such as having predefined formats or SOPs for external emergency communications (34%) and trained WASH teams for water scarcity response (29%). Additionally, the organization's capacity to conduct market assessments for cash programming (35%) and maintain minimum contingency stock of WASH NFI kits (25%) appears to be areas that warrant attention.

	Question	Yes	No	Don't know
1	Does your organisation have predefined formats / SOPs for external emergency communications?	34%	27%	4%
2	Does your organisation have identified emergency rosters to respond to water scarcity?	58%	29%	13%
3	Does your organisation have WASH team trained on water scarcity emergency response? (activity adaptation, roles and responsibilities, policies)	29%	62%	9%
4	Does your organisation have specific water-borne disease outbreak response SOPs in place?	56%	42%	2%
5	Does your organisation have a mapping of financial service providers active in the country?	47%	40%	13%
6	Is your organisation officially registered with the government/local authorities in areas of potential/existing drought?	82%	15%	4%
7	Does your organisation have an analysis of emergency supply needs and an emergency supply chain strategy defined and implemented?	33%	55%	13%
8	Does your organisation have up to date market assessments and opportunities for cash programming identified?	35%	51%	15%
9	Does your organisation have minimum contingency stock of WASH NFI kits available in mission?	25%	69%	5%
10	Does your organisation have the updated potential partnership / referral priorities in the event of a water scarcity emergency?	36%	55%	9%

ABOUT REACH

REACH Initiative facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT).

⁹ Global Citizen, [More Than 100,000 Iraqis Were Hospitalized Due to Unsafe Drinking Water in 2018](#), 2019.