



## LEARNING BRIEF: Lessons from Water Security and Resilience Activities in the Sahel

JULY 2023

### INTRODUCTION

This brief outlines key findings and recommendations from the study commissioned by PRO-WASH<sup>1</sup> and the USAID TerresEauVie Activity, part of the Resilience in the Sahel Enhanced (RISE II) Project on water security and resilience. The study captured lessons learned from groundwater, water security, water governance, and water resilience studies, with recommendations targeting municipal, regional, and national decision-makers and all stakeholders in current and future programs. The study was carried out by Hydroconseil and took place between August-November 2022. The study draws from the experience in 25 communes (or municipalities) in Niger and 15 communes (or municipalities) in Burkina Faso. The project explored three themes:

- Theme 1: Learning from hydrogeological studies conducted in Niger and Burkina Faso;
- Theme 2: Water security, local water committees, and watershed management in Burkina Faso; and
- Theme 3: Locally negotiated solutions for the protection of natural resources to improve water security in Niger and Burkina Faso.

<sup>1</sup> The Practices, Research, and Operations in Water, Sanitation, and Hygiene (PRO-WASH) Associate Award was an initiative funded by USAID's Bureau for Humanitarian Assistance (BHA) and led by Save the Children (2018-2023). PRO-WASH aims to provide support to implementing partners in order to strengthen the quality of WASH interventions through capacity strengthening, knowledge sharing, and applied WASH research opportunities.

## METHODOLOGY

The study used secondary data analysis, document review, stakeholder interviews, Focus Group Discussions (FGDs), and workshops, including with government and private sector stakeholders. A total of 63 stakeholders participated in the interviews for all three themes, and 41 stakeholders participated in the stakeholder workshops in Niger and Burkina Faso. Table 1 below summarizes the study methodology and stakeholder engagement.

TABLE 1: Overview of the methodology by theme

	THEME 1	THEME 2	THEME 3
<b>Number of interviews conducted</b>	Niger: 12 (12 men)  Burkina Faso: 11 (ten men; one woman)	Five interviews with seven stakeholders, and two FGDs, one with six participants and the other with five participants (a total of 18 participants altogether)	Niger: seven individual interviews (seven people altogether)  Burkina Faso: four individual interviews and two group discussions (15 people altogether).
<b>Types of stakeholders</b>	Representatives of project managers, service providers, academics, municipal contracting authorities, Regional Directorate of Water and Sanitation, representatives of municipalities, and USAID TerresEauVie	The interviewees were representatives of the municipalities, members of the local water committees, representatives of the Regional Directorate of Water and Sanitation, and a representative of the Water Agency. The group discussions were held with USAID and TerresEauVie staff, representatives of the local water committees (“Comité Local de l’Eau” or CLE), the Directorate of Water and Sanitation agents and the Water Police, <sup>2</sup> and representatives of the beneficiary municipality.	Niger: Project managers, municipal project management staff, village chief, and management committee members in Niger  Burkina Faso: Project managers, representatives of municipalities, local water committees, agents of the Directorate of Water and Sanitation, and a representative of the Water Agency
<b>Dates</b>	Interviews were held from October 5-13, 2022. A Stakeholder workshop was held on November 23, 2022.	Interviews were held from October 24-28, 2022 and the group discussions were held on October 25 and November 2, 2022.	Interviews were held between October 18 and November 17, 2022 in Niger, and interviews and group discussions were held between October 24 and November 8, 2022 in Burkina Faso.

<sup>2</sup> The Water Police was established in Burkina Faso in 2008 in accordance with the 2001 law on water management. It oversees the actions of various services responsible for enforcing water legislation and comprises officers and agents of judicial police, state services responsible for water, health, and the environment. The Water Police are responsible for enforcing water legislation in all public and private water bodies and ecosystems in Burkina Faso. It has administrative police powers for control, monitoring, and surveillance, and judicial police powers to investigate and prosecute water-related offenses.

	THEME 1	THEME 2	THEME 3
<b>Documents Reviewed</b>	Groundwater reports	Documents on institutional frameworks and water security and governance.  Documents describing the local water committees, actions undertaken by USAID TerresEauVie in Integrated Water Resource Management (IWRM), and success stories compiled by USAID TerresEauVie.	Documents describing the local conventions in Niger and local land charters in Burkina Faso, including on the approach and strategy of TerresEauVie, the adoption of local governance in both countries, and success stories compiled by TerresEauVie.

Following the interviews for each theme (summarized in Table 1 above) and a preliminary analysis of results, USAID TerresEauVie arranged two final learning workshops to bring together stakeholders to further discuss and refine the results. The workshops dug deeper into the issues discussed during interviews for each theme. These final learning workshops were held on November 22, 2022, in Ouagadougou, Burkina Faso, and on November 23, 2022, in Niamey, Niger. A total of 23 participants attended the workshop in Burkina Faso and 18 participants attended in Niger.

## KEY FINDINGS

Across the three themes, several cross-cutting findings emerged. These include:

- Effective and inclusive knowledge and information sharing, including on groundwater conditions, is important. Currently, knowledge and information are not always available to all stakeholders—for example, local level organizations do not have access to hydrometeorological information and data.
- Lack of funds and inadequate technical expertise inhibit the implementation of better water resource management.
- Collaboration and cooperation between stakeholders are vital to the successful functioning of local level water management organizations, which in turn underpin integrated water resource management initiatives.
- Collaboration should build on and work within the context of existing institutional and legal arrangements.
- Awareness-raising, communication, and dissemination of results are important to the success of local level organizations tasked with water resource management.

Key points and findings from each of the three themes are summarized below based on the literature reviews, interviews, FGDS, and the final stakeholder workshops.

### THEME 1: LEARNING FROM HYDROGEOLOGICAL STUDIES CONDUCTED IN NIGER AND BURKINA FASO

In 2021, USAID TerresEauVie finalized studies on groundwater potential in 18 communes of Niger encompassing 15 in the Zinder region and three in the Maradi region. Additionally, studies were conducted in three communes of Burkina Faso, while studies in eight additional communes are still ongoing. The studies emphasized stakeholder involvement and included municipalities, regional directorates, the WASH cluster, RISE II partners, and the

Directorate of Studies and Information on Water—the ministry responsible for water in Burkina Faso. This included regional workshops for Niger and a national workshop for Burkina Faso. USAID TerresEauVie sought not only to assess how decision-makers at municipal, regional, and national levels utilized or could utilize these studies to enhance investment targeting and groundwater management but also to provide guidance to other organizations interested in conducting similar studies to maximize their usefulness.

## Successes

- Stakeholders considered the available hydrogeology reports to be of good quality, including those addressing groundwater contamination.
- An important outcome of the hydrogeological studies was the establishment of groundwater databases and thematic maps which provide information on the water points that didn't exist at the communal level before.
- While local and regional stakeholders considered wide dissemination of the hydrogeological reports important and satisfactory, stakeholders at central levels of administration (e.g., government ministries in charge of water or other ministries linked to groundwater management) were not always aware of the results of these reports, despite involvement from some actors at this level. For instance, Burkina Faso's General Directorate for Water Resources helped organize the national sharing workshop and the Directorate of Studies and Information about Water was involved in the groundwater study technical committee. Participants in the workshop also recommended sharing key information with other ministries such as Agriculture, Livestock, Environment, Education, Health, etc.
- In Niger, involving teacher-researchers and students in study implementation and data collection was seen as important. Indeed, they are considered the guarantors of knowledge and scientific rigor, strengthening skills of future generations. They are often involved in validation committees/project monitoring and are at the heart of a network of specialized players. Academics are typically driven by the motivation to publish their work, which often results in greater motivation and rigor.

## Challenges

- Long-term monitoring systems including infrastructure condition, water quality monitoring, and groundwater level monitoring are significantly limited or non-existent in some areas. For example, in Burkina Faso, the Directorate of Studies and Information on Water only has about 20 piezometers throughout the country. These monitoring networks play a crucial role in collecting the necessary data to assess risks related to water contamination and long-term drought.
- Various stakeholders highlighted the difficulty in accessing data and technical information. Practical barriers include difficulties with certain software applications and the absence of user-friendly functional platforms for easy data access and utilization.
- A gap exists between the recommendations provided in the hydrogeological reports, the implementation of concrete action plans, and the long-term monitoring of actions.
- Several key barriers hinder the effective implementation of recommendations and the utilization of conclusions. These barriers include a lack of local expertise, particularly at the communal level, security concerns, and

inadequate financial resources. Additionally, poorly delineated roles and responsibilities among different stakeholders is a significant issue.

- There is a lack of state intervention at the institutional level to coordinate stakeholders and to ensure that IWRM activities are correctly structured.
- The hydrogeological characteristics of the basement aquifer obstruct the exploitation of water resources, particularly in Niger.
- Varying levels of technical expertise among stakeholders hinders report accessibility. Municipalities have acknowledged their limitations in utilizing certain deliverables, such as thematic maps, due to a lack of technical capacity. Stakeholders identified the dissemination of results and conclusions as an ongoing challenge.

## Recommendations

- The study recommendations primarily emphasize technical hydrogeological aspects in line with the study's framework requirements. However, it is crucial to recognize the importance of investing time and financial resources in addressing the “soft” factors essential for effective groundwater resource management. These factors encompass capacity strengthening initiatives and awareness-raising efforts. Sustained attention should be given to these areas to ensure comprehensive and well-rounded management of groundwater resources.
- To improve accessibility for non-technical readers, including non-technical reports can significantly enhance the understanding and utilization of the results.
- Focus future studies on the practical application of findings including risk management to assist in prioritizing actions and developing strategies. This will require prioritizing risks (such as aquifer contamination, drought, flooding) and developing more focused studies on these issues.
- Involve users in monitoring the resource (e.g., piezometry measurements to be carried out by operators).
- Promote stakeholder networking and facilitate the exchange of information by establishing an online platform or a centralized archive.

## THEME 2: WATER SECURITY, LOCAL WATER COMMITTEES, AND WATERSHED MANAGEMENT IN BURKINA FASO

In Burkina Faso, USAID TerresEauVie has worked extensively at the watershed level, in collaboration with the relevant water agencies. USAID TerresEauVie focused on supporting the Local Water Committees (CLE)—which depend on the water agencies for planning, training sessions, and local coaching—to implement grants related to their planned actions. The program also promoted peer learning through exchange visits to outstanding CLEs. USAID TerresEauVie aimed to assess the extent to which its support has empowered the CLEs as an institution, contributed to the successful implementation of the IWRM policy in Burkina Faso, and helped explore strategies for ensuring the long-term sustainability of the activities undertaken by the CLEs.

## Successes

- The efforts carried out by USAID TerresEauVie were well-regarded by interviewees, who acknowledged their significance in addressing key issues related to water security and IWRM. Interviewees highlighted the activity's

contributions to improving the administrative and financial management of CLEs, supporting the development of action plans, strengthening the institutional role of CLEs, and fostering stronger connections among various actors involved in IWRM institutions.

- Interviewees regard the institutional, legislative, and regulatory framework governing water management in Burkina Faso as clear and well-established.
- Awareness-raising activities for resource users and local communities were repeatedly highlighted as important factors in promoting effective water governance.

### Challenges

- The effectiveness of the institutional framework is hindered by the lack of technical and financial management expertise and the lack of staff resources and funding—particularly at the level of the water agencies and the water police, and for financing CLE activities.
- A lack of understanding of issues at the local level was highlighted as one of the factors blocking the proper functioning of IWRM.

### Recommendations

- Strengthen community involvement to promote acceptance of projects and foster local solutions. This includes maintaining and replicating support for training and strengthening community relays.
- Increase visibility and awareness of CLE activities and roles among users.
- Support CLEs in securing premises and acquiring their own equipment to enhance their visibility, as well as support the implementation of a large-scale water resource protection project to identify degraded land.

## **THEME 3: LOCALLY NEGOTIATED SOLUTIONS FOR THE PROTECTION OF NATURAL RESOURCES TO IMPROVE WATER SECURITY IN NIGER AND BURKINA FASO**

To manage conflicts over natural resources—especially water—USAID TerresEauVie helped communes develop local land charters in Burkina Faso and local conventions in Niger. Local land charters and conventions determine common and consensual rules of resource protection and rational management for the wellbeing of all users. USAID TerresEauVie sought user opinions regarding the support provided for the development and implementation of local land charters and conventions and how effectively these tools managed natural resource conflicts. The inquiry also explored guidance that could be replaced by other structures or organizations that wish to develop or are currently developing these local conventions or local land charters.

### Successes

- Beneficiary communities accepted and respected the local level organizations created with the support of USAID TerresEauVie, as beneficiaries set their rules of operation. Local ownership by users of natural resources allows local level organizations to adapt to changes in the climatic, security, or social context.
- The approach and process for drafting charters and conventions in the two countries follows different concepts. In Burkina Faso, an existing state methodology is used, while Niger follows a less regulated process. USAID TerresEauVie helped develop a single national guide for such conventions, which was endorsed by the Ministry of Livestock (the ministry in charge of administrative supervision of rural code). Both countries utilize a participatory approach.

- Stakeholders highlighted the importance of building on existing cultural, historical, and religious relationships within the community and relying on opinion leaders to foster truly representative local level organizations.
- The development process favored by USAID TerresEauVie, including the participation of representatives of different socio-professional strata and communities, is historically and culturally respectful while balancing power relations between user groups. Community leaders coordinating between the different stakeholders helps local level organizations to function properly.
- Local structures, such as radio broadcasts, were key in informing communities about local land charters, conventions, and their management rules. These greatly contributed to the acceptance and effectiveness of these local conventions and management committees, keeping a link with city halls and land tenure commissions.

### Challenges

- Lack of representativeness of local land charters and conventions (developed by external actors with little consultation or few stakeholders present at meetings, cases where some actors are not informed of the management rules defined in their absence).
- Deeply rooted conflicts can make it challenging to develop and respect these charters and conventions.
- The local land charters and conventions are developed by resident stakeholders, preventing nomadic populations from providing input while on the move.

### Recommendations

- Given their newness, it will be important to document lessons learned for future land charters and conventions. Providing long-term support to management committee set-up—whose role is to ensure the application of the charters—may also be needed. Communication and dissemination about the charters and conventions should continue over the long-term.
- Stakeholders underlined the need for effective monitoring and evaluation during the long-term implementation of the charters of local level organizations.
- Due to drought conditions in pastoral areas, climate information should inform adaptive management. It would be useful to consider climate information to inform policies and guidelines (for example, in cases of floods or droughts). However, CLE members and convention stakeholders have little access to hydrometeorological data.

## RECOMMENDATIONS

The following table summarizes the recommendations of the three activities and suggests which of the partners should play a primary (P) or support (S) role in the implementation of each recommendation (i.e., USAID TerresEauVie; Resilience Food Security Activities (RFSAs) and other implementing partners; or USAID/BHA and PRO-WASH).

TABLE 2: Summary of Recommendations

THEME	USAID TerresEauVie	RFSAs and other implementing partners	USAID/BHA and PRO-WASH
<b>Theme 1: Learning from hydrogeological studies conducted in Niger and Burkina Faso</b>			
Develop concrete action plans with well-defined budgets to implement the recommendations presented in the hydrogeological studies, including the involvement of the authorities.	<b>P</b>	<b>S</b>	
Establish communication channels to share the studies.		<b>P</b>	
Advocate for more involvement in coordinating activities and establishing guidelines to structure key activities such as long-term monitoring systems at the ministry level.	<b>P</b>		<b>S</b>
Provide technical training for different stakeholders.	<b>P</b>		<b>S</b>
Popularize and disseminate study results and conclusions to relevant stakeholders.	<b>P</b>		
Focus future studies on the practical application of findings including risk management to help prioritize actions and develop strategies.	<b>S</b>	<b>S</b>	<b>P</b>
Establish long-term monitoring systems including infrastructure conditions, water quality, and groundwater levels. While local stakeholders are key, this may need to be coordinated at the national level. Systems to compile and manage data are also essential.	<b>P</b>		<b>S</b>



THEME	USAID TerresEauVie	RFSAs and other implementing partners	USAID/BHA and PRO-WASH
Involve government authorities in the design and implementation of studies and activities.	<b>P</b>		<b>S</b>
<b>Theme 2: Water security, local water committees, and watershed management in Burkina Faso</b>			
Expand capacity strengthening activities. This could include financial support to IWRM institutions for user training in water resources protection, administrative and financial management, or action planning.	<b>S</b>		<b>P</b>
Support the capitalization of activities through training and targeted capacity strengthening.	<b>S</b>		<b>P</b>
Work within existing institutions and national policy frameworks.	<b>S</b>	<b>P</b>	
Strengthen community involvement in projects to promote acceptance and uncover endogenous solutions through the continuation of activities such as training and capacity strengthening.		<b>P</b>	
Strengthen community volunteers through training and refresher activities to promote day-to-day awareness-raising among the water resource users.	<b>S</b>	<b>P</b>	
Increase support for visibility and awareness of the activities and role of local organizations, in particular through the continuation and replication of multimedia communication campaigns (awareness panels, images, radio campaigns).	<b>S</b>	<b>P</b>	
Support local water committees to acquire office premises and equipment to promote better visibility.	<b>P</b>	<b>S</b>	<b>S</b>

THEME	USAID TerresEauVie	RFSAs and other implementing partners	USAID/BHA and PRO-WASH
If feasible, support the implementation of a large-scale water resource protection project.	<b>S</b>		<b>P</b>
<b>Theme 3: Locally negotiated solutions for the protection of natural resources to improve water security in Niger and Burkina Faso</b>			
Popularize and disseminate information on local level organizations, e.g., through broadcasting on the radio or the distribution of brochures, and in in local languages where possible.		<b>P</b>	<b>S</b>
Strengthen conflict resolution processes in Niger through better documentation and the implementation of local conventions.	<b>S</b>	<b>P</b>	<b>S</b>
Promote collaboration and learning between stakeholders.	<b>P</b>		<b>S</b>
Provide long-term support to the local level management committees including the adoption of annual action plans in Niger.	<b>S</b>		<b>P</b>
Coordinate with other ministries to ensure coherence with other tools such as the Environmental Land Management Guide.	<b>P</b>	<b>S</b>	

## ACKNOWLEDGEMENTS

We thank all stakeholders who took part in the activity, including the government, private sector stakeholders, and the communities in both Niger and Burkina Faso. Most of the work on this brief was completed under the PRO-WASH Award (2018–2023), funded by the USAID Bureau for Humanitarian Assistance (BHA). Final edits to text, graphic designs and formatting were completed under the PRO-WASH & SCALE Award (2023–2027), also funded by USAID/BHA.

## ABOUT PRO-WASH

PRO-WASH (Practices, Research and Operations in Water, Sanitation and Hygiene) was an initiative funded by USAID’s Bureau for Humanitarian Assistance (BHA) and led by Save the Children from 2018 to early 2023. PRO-WASH aimed to improve the quality of activities, strengthen the capacity and skills of USAID/BHA implementing partners in WASH, and improve the level of knowledge and practices around WASH.

## ABOUT PRO-WASH & SCALE

Practice, Research, and Operations in Water, Sanitation, and Hygiene and Strengthening Capacity in Agriculture, Livelihoods, and Environment (PRO-WASH & SCALE) aims to strengthen the design, implementation, and overall effectiveness of key sector-specific interventions. Our work focuses on food and nutrition security activities in emergency, early recovery, risk reduction, and resilience settings. We collaborate with implementing partners (IPs) to enhance the impact, sustainability, and scalability of BHA-funded WASH, integrated water resource management, agriculture, natural resource management, and livelihood activities.

## ABOUT USAID TERRES-EAU-VIE

The USAID TerresEauVie Activity bolsters resilience in 40 rural counties called communes by strengthening social and ecological systems. TerresEauVie focuses on three components: improved water security, enhanced sustainable productive land use, and improved management of shocks, risks, and stresses.

## ABOUT HYDROCONSEIL

Hydroconseil is a consulting firm founded in 1995 in Paris that specializes in improving essential public services for low-income populations in emerging and developing countries.

## RECOMMENDED CITATION

PRO-WASH (2023). Learning Brief: Lessons from Water Security and Resilience Activities in the Sahel. Produced under the PRO-WASH & SCALE Award by PRO-WASH and the USAID TerresEauVie Activity, based on work carried out by Hydroconseil.

## PHOTOGRAPHY CREDITS

Mustafa Saeed / Save the Children

## DISCLAIMER

This learning brief was made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the PRO-WASH & SCALE Award and do not necessarily reflect the views of USAID or the United States Government.

## CONTACT INFORMATION

PRO-WASH & SCALE: [prowashandscale@savechildren.org](mailto:prowashandscale@savechildren.org) | <https://www.fsnnetwork.org/prowashandscale>

USAID TerresEauVie: [Patrick.Cantin@winrock.org](mailto:Patrick.Cantin@winrock.org) | <https://winrock.org/project/improving-resilience-and-water-access-in-the-sahel/>