People in Need

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Why Anticipatory Action Matters:

Lessons from Anticipatory and Emergency Drought Responses in Angola

June, 2025

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Acknowledgement

We would like to sincerely thank Anna Nejedlá, Alberto Clerici, and Emanuela Macková for their helpful insights and support in shaping the study's design and methodology. Special thanks go to Tereza Suchánková for coordinating the work around the study and for compiling and finalizing the report.

We also thank Ludovina Jambela Nunda, Gift Zuze and Pedro Mucano for their valuable insights that helped to adapt and contextualize the data collection tools. We also appreciate their effort in organizing and supervising the data collection in the field, and conducting field observations. Our thanks also go to the data collectors for their dedicated work and commitment throughout the data collection process.

In particular, we thank all the local authorities and soba for their openness and collaboration, the members of GAS, Zeladors, and all other community members who generously gave their time to share insights and experiences. Their willingness to engage with us and provide thoughtful responses has been invaluable to the depth and relevance of this work.

Finally, we would like to thank the START Network for their financial contribution, which made it possible to carry out this study.

List of acronyms

AA	Anticipatory Action
CERF	Central Emergency Response Fund
CFRM	Community Feedback and Response Mechanism
ER	Emergency Response
FGD	Focus Group Discussion
GAS	Grupo de Água e Saneamento (Water and Sanitation Group)
IPC	Integrated Food Security Phase Classification
KII	Key Informant Interview
MEAL	Monitoring, Evaluation, Accountability and Learning
MoGeCa	Modelo de Gestão Comunitária de Água (Community Water Management Model)
NI	No Intervention
PCM	Problem Classification Matrix
PIN	People in Need
PDM	Post-Distribution Monitoring
SAM	Severe Acute Malnutrition
U5	Under five (children aged below five years)
WASH	Water, Sanitation and Hygiene
WV	World Vision

Executive summary

In 2024, Angola experienced its most severe drought in over four decades, largely driven by the 2023/2024 El Niño event. The southern provinces – Huíla, Cunene, and Namibe – were especially affected. In response to early warnings, People in Need (PIN) and World Vision International (WVI) activated anticipatory action programming through the START Fund Alert 833 in Humpata and Chibia municipalities in Huila province. This intervention was later followed by an emergency response implemented by PIN and funded by the UN Central Emergency Response Fund (CERF) in the same municipalities but different communities.

This study was designed to evaluate and compare the effectiveness, impact, and sustainability of these two distinct humanitarian approaches—anticipatory action and emergency response—implemented under similar conditions in Humpata and Chibia municipalities, Huíla Province. A third group of communities that received no external support served as a comparative control. The study further explores the functionality of rehabilitated water schemes, the performance of local water management structures, and ongoing community needs.

The research applied a quasi-experimental design with purposively selected communities across three intervention types: Anticipatory Action (AA), Emergency Response (ER), and No Intervention (NI). A total of 12 communities were selected for comparison. Data were collected using a mixed-methods approach, including a household survey, structured observations, key informant interviews and focus group discussions. Data collection was carried out over two phases in May and June 2025

Communities that received anticipatory action demonstrated improved outcomes across a number of key indicators compared to both ER and NI groups. These included lower diarrhoea prevalence in children under five (21% in AA areas vs. 24% in ER and 33% in NI).

Households in AA communities consistently reported better resilience to the effects of drought:

- 74% consumed two or more meals per day during peak drought months, compared to 73% (ER) and 54% (NI)
- 73% of AA households avoided livestock losses, compared to 67% (ER) and 62% (NI)

Subjective perceptions of impact also reflected these patterns: only 23% of AA respondents described the drought's effect as moderate to severe, versus 32% in ER and 36% in NI communities. Community members specifically credited early access to water and hygiene resources with helping them cope during the worst months.

93% of AA respondents considered the intervention timely and helpful, compared to 85% in ER areas. Communities viewed May to July 2024 as the ideal window for drought-related interventions. AA was implemented within this timeframe; ER began later, in August.

At the time of this assessment (May 2025), 88% of the 40 observed water points were functional. Users expressed high satisfaction with water access improvements, however, sustainability challenges persist. Pump theft and mechanical damage of pumps were the most common causes of non-functionality. Water management structures were found to have low financial and technical capacities, and they lacked follow-up support.

Only 10 of 34 surveyed water management structures regularly collected water fees. Few kept financial records, and only 47% (AA) and 32% (ER) passed a basic post-training knowledge test.

Community engagement in water scheme management varied significantly. While some GAS groups organized regular meetings, many failed to ensure transparency or inclusive participation. Women's roles in decision-making remained limited. FGDs revealed that many women felt excluded from key decisions—such as fee setting, rules of use, or water access for laundry—despite bearing the primary burden of water collection and household care.

The findings of this study indicate that anticipatory action can play a critical role in mitigating the impacts of climate-induced crises, particularly when implemented ahead of peak shock periods. In the context of the 2023/2024 El Niño drought in southern Angola, the anticipatory intervention delivered through the START Network yielded comparatively more positive outcomes than the CERF-funded emergency response.

1 Introduction

1.1 Background on drought context in Angola

In 2024, Angola experienced its **worst drought in over four decades**, with southern provinces—particularly Huíla, Cunene, and Namibe—suffering the most severe impacts. The 2023/24 **El Niño event** began impacting Angola in late 2023, peaking between January and March 2024. During this period, Angola recorded rainfall deficits exceeding 50% in the worst-affected southern provinces[1]. This drought followed several consecutive poor rainy seasons, marking the sixth year of below-average precipitation in southern and eastern Angola.

By late 2024, between 1 and 1.5 million people in these regions were acutely food insecure (IPC Phase 3 or worse), with some agency estimates reaching up to 2.8 million people in need of humanitarian food assistance[2]. The nutrition situation was equally alarming: stunting prevalence nationally was estimated at 43.6%, and in southern provinces, admissions for severe acute malnutrition (SAM) among children under five rose sharply[3].

Drought also severely compromised water access—about 1.2 million people faced water scarcity, and up to 80% of water points in southern Angola were non-operational, exposing communities to unsafe water sources, poor hygiene, and heightened risk of waterborne diseases[4].

The **START Network fund**, activated in June 2024, was designed to implement anticipatory action ahead of the most severe impact of droughts and El Niño. It allowed People in Need (PIN) and World Vision (WV) to take early action based on forecasts, and to target vulnerabilities before they escalated into a full-blown crisis. The goal was to mitigate the negative effects of the anticipated crisis on the food security of vulnerable communities.

In parallel, and in response to the challenges imposed by the 2023/24 El Niño-induced drought, a 3 million USD **UN Central Emergency Response Fund (CERF)** was allocated in July 2024 to provide food security, nutrition, and WASH services to drought-affected population in Huíla and Cunene provinces. Unlike the START Network anticipatory project, the CERF intervention was reactive and focused on addressing the humanitarian needs caused by the crisis.

[1] FAO (2024). *Angola: El Niño Impact Assessment. Available online : https://openknowledge.fao.org/server/api/core/bitstreams/1d9273d9-4c3a-4627-9b87-b12400511461/content*

[2] FEWS NET (2024). Dry season conditions place pressure on acutely food insecure households. Available online: https://fews.net/southern-africa/angola/key-message-update/august-2024

[3] OCHA (2024). *Angola Response Dashboard. Available online: https://www.unocha.org/publications/report/angola/angola-response-dashboard-december-2024*

[4] OCHA (2024). *Angola Response Dashboard. Available online: https://www.unocha.org/publications/report/angola/angola-response-dashboard-december-2024*

1.2 Objectives of the study

The aim of this study is to assess the effectiveness, impact, and sustainability of the anticipatory action intervention implemented jointly by People in Need (PIN) and World Vision (WV) under START Fund Alert 833 in Angola, and to compare its outcomes with the situation in communities that received traditional emergency response under the CERF-funded project implemented by PIN, and in communities that received no external support whatsoever.

Specific objectives:

1. To assess the effectiveness, impact and sustainability of the anticipatory action in improving community resilience to drought, by comparing its outcomes with the outcomes of the CERF emergency intervention, as well as with the situation in areas that received no intervention, with a focus on access to water, hygiene practices, and health outcomes;
2. To assess the ongoing needs of communities following project implementation, with a focus on community ownership of activities and identification of areas where additional support may be required;
3. To evaluate the sustainability and functionality of WASH infrastructure and community-based water management structures supported through anticipatory action and emergency response interventions;
4. To generate evidence and lessons learned for strengthening future anticipatory action programming.

1.3 Brief summary of interventions implemented

This study presents a comparative analysis of two distinct humanitarian intervention approaches—anticipatory action and emergency response—implemented in response to the same drought crisis in Huíla province, Angola. The anticipatory intervention was funded through the START Network, while the emergency response was supported by the Central Emergency Response Fund (CERF). Despite targeting different communities, both interventions were carried out in the same municipalities of Humpata and Chibia, providing a unique opportunity to examine their relative effectiveness under similar contextual conditions.

While both interventions primarily aimed to address immediate needs with limited focus on long-term sustainability, this study - conducted one year after the initial drought alert - explores the sustainability of outcomes from both response types. The findings are expected to help develop better strategies to make future anticipatory and emergency responses more sustainable in similar contexts.

START Fund Alert 833: Anticipatory action to mitigate impacts of El Niño in Southern Angola	CERF: Integrated Response Emergency Life-Saving Intervention to El Niño Emergency in Southern Angola
The "*Anticipatory action to mitigate impacts of El Nino in southern Angola*" was a 60-day project, running from June to August 2024. The project was implemented by PIN in the municipalities of Humpata and Chibia in Huíla Province together with implementing partner WV. This project was designed as anticipatory action, to address the impacts of the El Niño-induced drought, in particular food insecurity, prior to it reaching its peak. By focusing on ensuring access to safe drinking water through the rehabilitation of water points and the distribution of WASH kits, the project aimed to mitigate the anticipated increased food insecurity and health risks. Key activities: • Formation and training of water and sanitation groups (GAS), including refresher training on waterpoint management – More than 100 persons trained in total • Waterpoint rehabilitation (8 in Humpata, 10 in Chibia) • WASH sit distribution to 2,180 households • Health and hygiene awareness raising campaigns in communities	The Integrated Response Emergency Life-Saving Intervention to El Niño Emergency in Southern Angola was a five-month project, running from August to December 2024, aimed at addressing the severe water crisis exacerbated by the ongoing drought linked to El Niño and other climatic factors. The project was implemented by PIN in the municipalities of Humpata and Chibia in Huíla Province, Angola, where drought has severely affected water access, agriculture, food security, and public health. The project's main objective was to provide life-saving water services to drought-affected communities while simultaneously strengthening local capacities in water management. The project also focused on empowering communities through the formation and training of Water and Sanitation Groups (GAS). Key activities • Formation and training of water and sanitation groups (GAS), including refresher training on waterpoint management - 103 persons trained in total, 47 in Chibia and 56 in Humpata • Waterpoint rehabilitation and monitoring (24 in total, 11 in Humapata, 13 in Chibia) • Social mobilization and awareness campaigns on health and hygiene

2 Methodology

2.1 Study design and approach

This study employed a quasi-experimental comparative design to assess the effectiveness of anticipatory action intervention by comparing its outcomes with the outcomes of the emergency response as well as with the situation in communities that received no intervention.

Three distinct community groups were considered for comparison:

- Group A: Benefited from Anticipatory Action interventions (START Network)
- Group B: Received Emergency Response assistance (CERF)
- Group C: Did not receive any form of intervention

A mixed-methods approach was applied to ensure a comprehensive understanding of community experiences. Quantitative data were gathered through structured surveys and structured observations, while qualitative insights were obtained via focus group discussions (FGDs), key informant interviews (KIIs), and field observations.

In addition, participatory methods, such as visual mapping exercises and problem classification matrix, were employed to engage community members actively in the data collection process and to enrich contextual understanding.

Furthermore, data triangulation was applied throughout the analysis process. Findings from different data collection methods and respondent groups were cross-checked to ensure validity. In cases where discrepancies were identified, such as different findings between household survey responses and community narrative on hygiene practices – these were highlighted and discussed in the report.

Data collection was organized in two distinct phases, with findings from the first phase used to inform and guide the second.

- **Phase 1 – May 2025:** The first phase focused primarily on the technical assessment of rehabilitated water schemes and the survey with water management structures (GAS). In addition, a limited number of FGDs and KIIs were conducted. These qualitative activities targeted two types of water schemes: those that were functioning well and those that were facing operational challenges. The goal was to identify early lessons and inform the approach for the second phase.
- **Phase 2 – June 2025:** The second phase concentrated on household surveys, focus group discussions (FGDs), and key informant interviews (KIIs). This phase aimed to generate comparative data from communities that received different types of intervention—anticipatory action, emergency response, or no intervention, and to collect additional data related to sustainability of water schemes.

2.2 Data collection methods

Household survey

The household (HH) survey targeted three distinct groups of respondents to enable a comparative analysis of the effects of different types of humanitarian interventions:

1. Beneficiaries of Anticipatory Action (AA)
2. Beneficiaries of Emergency Response (ER)
3. A control group from communities not covered by any intervention (No Intervention – NI)

Target population: Only women were selected as respondents for the **HH** survey. This decision was based on the content of the questionnaire, which included questions related to water access and child health. In most households, women are primarily responsible for water collection and are therefore best positioned to provide accurate information on water-related issues. Similarly, women were considered the most knowledgeable respondents for questions concerning the health of children.

Sampling strategy: A stratified sampling approach was used to ensure balanced representation across the three intervention modalities (AA, ER, NI) and the two target municipalities—Humpata and Chibia. A total of 12 communities were purposively selected for the survey. The selection was guided by predefined criteria, including:

- Functionality of the rehabilitated water point
- Intervention modality received
- Extent of project implementation (full package of activities)
- Degree of remoteness

The sample was equally distributed. A third of respondents were drawn from each intervention group (AA, ER, NI). At the same time, 50% of respondents were from Humpata municipality and 50% from Chibia municipality.

A random selection method was used at the community level to select respondent households. Due to the absence of household lists in villages, enumerators applied systematic selection, where every Xth household was chosen. For sparsely populated villages with household being far apart from each other, enumerators applied water point-based selection, where every Xth woman arriving at the water point was approached for an interview. The “X” was set up by the data collection supervisor and was decided based on the relationship between total number of households using the water scheme and our desired sample per community.

The household survey included a total of 540 respondents, with 180 women from each intervention group. The sample was evenly distributed across two municipalities, with 270 respondents from Humpata and 270 from Chibia. Data collection took place in 12 villages and in each village, 45 women were surveyed.

The table below lists the villages in Humpata and Chibia municipalities selected for the household survey.

Municipality	Type of intervention	Comuna	Village	Implementation by
Humpata	ER	Humpata Sede	PA Hongo-	PIN
	ER	Palanca	Tchindingui	PIN
	AA	Humpata Sede	Ntamana	PIN
	AA	Caholo	Tchalawa	PIN
	NI	Sede	Chanina	x
	NI	Batabata	Sede	x
Chibia	ER	Chibia Sede	Escola Tchipa	PIN
	ER	Chibia Sede	Mahula Hangue	PIN
	AA	Capunda	Tchima	WV
	AA	Chibia Sede	Nkhombota/Chaungo	WV
	NI	Sede	Nonchima	x
	NI	Jáu	Kahoca	x

Profile of respondents: The average age of respondents was 34.8 years, with ages ranging from 16 to 76. The majority of women were married (56%), followed by single (26%). A smaller proportion were widowed (11%) or separated (6%).

In terms of educational background, more than half of the respondents (54%) had never attended school and were illiterate. About 19% started but did not complete primary education, while 13% successfully completed primary school.

On average, each household had 6.58 members, consisting of approximately 1.4 children under five, 2.6 children aged 5 to 17, 2.4 adults aged 18 to 59, and 0.2 elderly persons.

Survey with GAS

A structured questionnaire was administered using the KOBO platform to members of the Water Management Structures (GAS). The survey focused on assessing the capacities of GAS members, their cooperation with communities and local municipalities, as well as their technical and financial management practices.

The intended sample size was 42 respondents- one representant from each water management structure responsible for a rehabilitated water point. However, the final sample achieved was 34. The shortfall was due to the unavailability of some representatives at the time of data collection and restricted access to certain water schemes during the rainy season.

Structured observations

Structured observations were conducted using a questionnaire administered through the KOBO platform. The tool focused on assessing the current condition of water schemes rehabilitated under both the Anticipatory Action (AA) and Emergency Response (ER) interventions. Observations specifically targeted the operational status and maintenance conditions of each scheme.

The planned sample included all 42 rehabilitated water schemes. However, observations were completed at 40 sites. Two water points located in Chibia municipality were inaccessible due to heavy rainfall and poor road conditions at the time of the assessment.

Focus group discussions (FGDs)

A total of 24 FGDs were conducted using 5 different FGD tools, tailored to explore community perspectives on water access, seasonal challenges, and intervention impacts. A full list of all FGDs conducted is available in Annex A.

Tool	Focus	Number of FGDs	Number of participants	Gender of participants
FGD with community members – Phase 1	To understand the perspectives of water users about waterpoints rehabilitated under START/CERF projects	8	68	Women
FGD with community members – Phase 2	To understand the impact of drought, access to water and different urgent needs faced by communities	4	32	Women
Barrier analysis	To identify obstacles faced in using of safe water for drinking	4	28	Separate groups for men and for women (to ensure gender-specific variations are captured)
Problem classification matrix	To understand key issues faced by women in communities	6	42	Women
Seasonal calendar	To capture the major events such weather patterns, disease prevalence and major economic activities over the past 12 months	2	12	Mixed groups

Each session was facilitated by a team of two: one facilitator and one note-taker. Where participants consented, discussions were also audio-recorded to support the accuracy and completeness of documentation.

Key informant interviews (KIIs)

A total of 23 key informant interviews were conducted using 4 different KII tools, each tailored to the type of respondent. A complete list of interviews conducted is provided in Annex B.

Each KII was conducted by a team of two: one facilitator and one note-taker. With the consent of participants, audio recordings were made to ensure accurate documentation and facilitate later analysis.

Tool	Number of KIIs	Focus
KII with GAS / Zelador – Phase 1	8	To explore management practices and community engagement
KII with local authorities	6	To understand institutional perspectives and support mechanisms
KII with GAS / Zelador – Phase 2	4	To explore water scheme usage over time, women's participation in water management, and perceptions of community resilience to drought
KII with health staff	5	To gather insights on health-related impacts and community needs

2.3 Data collection organization

Use of digital tools: Quantitative tools, including the GAS survey, household survey, and structured observations of water schemes, were administered digitally using KOBO Collect on tablets. Structured observations were carried out by a technically qualified member of People in Need (PIN) staff, ensuring an accurate assessment of the functionality of each water scheme. The GAS and household surveys were conducted by a team of nine trained data collectors (five women and four men), working under the supervision of the PIN MEAL Manager.

Language: The survey tools were developed in Portuguese. When necessary, data collectors translated the questions orally into local languages to ensure respondent understanding. For the qualitative components, printed questionnaires were used. Each FGD or KII was facilitated by a two-person team comprising one facilitator and one note-taker. With the consent of participants, these sessions were also audio recorded. In communities where Portuguese was not widely spoken, discussions were conducted in local languages with the support of a translator.

Training of data collectors: Prior to data collection, a comprehensive training was organized for the data collection team. The training was held from May 22 to May 26, 2025, and covered topics such as the objectives of the study, techniques for conducting surveys and interviews, appropriate translation of questions, obtaining informed consent, and avoiding common errors during fieldwork. The training also introduced the use of KOBO on mobile devices and reviewed essential ethical guidelines, including the PIN Code of Conduct and core humanitarian principles.

Pilot testing: Following the training, a pilot test of the household survey was conducted on May 27, 2025, in a selected community. This allowed the team to identify and implement minor adjustments to the questionnaires, improving its clarity and contextual relevance before full-scale data collection began.

2.4 Ethical considerations

All data collection activities in this study were conducted in accordance with ethical principles, with particular attention given to gender sensitivity, confidentiality, and informed consent.

Informed Consent: All data collectors received guidance on the importance of ethical conduct, including respecting confidentiality and securing informed consent. Before each interview, respondents were given a brief explanation of the survey's purpose, how their data would be used, and their rights as participants. Informed consent was obtained verbally prior to participation. Respondents were clearly informed that their participation was voluntary and that they could decline to answer questions or discontinue the interview at any time without any consequences.

Confidentiality: To protect participants' privacy, the study avoided collecting personally identifiable information whenever possible. The views and responses of individuals were treated with discretion, and no identifying information was included in the reporting of findings. All data were analysed and presented in an aggregated format to ensure that no respondent could be identified.

Gender Sensitivity: Gender-sensitive approaches were integrated throughout the study. Female enumerators were available to conduct interviews with women when necessary, especially in communities where cultural norms required gender-matching between respondents and data collectors. Separate FGDs were also held for men and women to ensure open dialogue.

2.5 Limitations

Non-randomized study design: The study employed a quasi-experimental design with purposively selected communities. Although efforts were made to ensure comparable contexts across groups (AA, ER, NI), there is a chance that differences between groups were caused by other factors, not just the type of intervention.

Absence of baseline data: The study did not have access to baseline data for the targeted communities. As a result, it was not possible to compare pre- and post-intervention conditions over time. This limits the ability to attribute changes solely to project activities.

Limited access to stakeholders: Due to repeated cancellations and scheduling conflict, the study team was unable to conduct interviews with key representatives from the municipal administration. This restricted the ability to capture the perspective of local government actors involved in oversight, repair, and sustainability planning over water schemes.

Constraints in accessibility: Some areas, particularly in Chibia municipality, became inaccessible due to heavy rains and poor road conditions during the data collection period. This led to a slightly reduced sample of water point observations and GAS interviews compared to the initial target.

Limited availability of secondary data: The study faced challenges in accessing relevant secondary data for the target areas, including information from government institutions, health facilities, and administrative records. As a result, the analysis relied primarily on primary data collected through the study's own tools. The absence of secondary health and nutrition data limited opportunities for external validation and trend comparison over time.

3 Contextual overview

3.1 Management of water schemes in rural and peri-urban areas of Angola

MoGeCa stands for "Modelo de Gestão Comunitária de Água" (Community Water Management Model). It is Angola's official national policy and practical guide for sustainable community management of water supply, developed as part of the government's "Água para Todos" (Water for All) program[5]. The MoGeCa guide promotes the involvement of local communities in the planning, construction and ongoing management of water points. Its main goal is to ensure the sustainability and operational effectiveness of rural and peri-urban water supply systems by fostering cooperation between communities, local authorities, and water companies. The guide provides practical tools and training materials to help communities organize, operate, and maintain water services efficiently and equitably.

GAS stands for "Grupo de Água e Saneamento" (Water and Sanitation Group). These are community-level groups formed in areas with boreholes, wells or other water schemes. The primary role of GAS is to manage water points collectively, to ensure maintenance, fair access, and local problem-solving. GAS structures are a core component of the MoGeCa model, and they enable community participation and local ownership for water services. GAS are typicaly composed of 4 elected community members that hold following positions: Coordinator, Treasurer, Secretary, and Social Mobilizer.

Some water points are managed solely by a single Caretaker (locally known as Zelador). This type of management is simplified, and usually used in areas with limited community organization or capacity. Zeladors are typically appointed by local authorities, however, they can also be selected by the community, they can inherit the role, or the role can be assigned to individuals with basic technical skills. Zeladors are responsible to handle day-to-day operational tasks, and they are often remunerated for their position. Unlike GAS, Zeladors usually do not engage in community mobilization, financial planning or participatory decision-making.

Data from the household survey indicate that across all surveyed communities irrespective of municipality, adult women are primarily responsible for fetching water in the majority of households (91%). Girls also play a significant role, with 41% of households reporting their involvement. In contrast, boys contribute to water collection in only 14% of households, while adult men do so in just 4%.

3.2 Overview of seasonal trends

To understand seasonal dynamics in the targeted communities of Humpata and Chibia municipalities, a participatory tool known as the Seasonal Calendar was employed. Data were gathered for the previous 12 months, focusing on trends related to food security, water availability, and health conditions. These seasonal patterns specifically reflect the period from May 2024 to April 2025. The findings are time-bound and should be

[5] Ministério da Energia e Águas (MINEA), República de Angola. (2014). Guia MoGeCa: Modelo de Gestão Comunitária de Água. Luanda: MINEA. Available online: https://www.unicef.org/angola/relatorios/modelo-de-gestao-comunitaria-de-agua-mogeca

interpreted in the context of that particular year, which was heavily shaped by the El Niño climatic event and its related impacts.

The lean season reached its peak just before the arrival of the rains. From August onwards, communities in both municipalities experienced severe shortages of food and water.

	2024								2025			
	M	J	J	A	S	O	N	D	J	F	M	A
Climate patterns												
Rainy season												
Dry season												
Drought												
Livelihood activities												
Planting season												
Harvest season												
Food security												
Food surplus												
Food shortage												
Water shortage												
Health												
Diarrhoea												
Acute malnutrition												

While the Seasonal Calendar data indicate June to August as the driest months in terms of rainfall, community narratives suggest that the consequences of the drought—particularly hunger and livelihood stress—peaked from August through December. According to the KIIs with community leaders, the drought was characterized by prolonged periods of scarce rainfall, leading to the collapse of rainfed agriculture, depletion of drinking water sources, and livestock water shortages. Agricultural loss was identified as the most significant impact, with cascading effects on food security, nutrition, and income.

Based on the KIIs with local authorities, households were largely unprepared for the drought, primarily due to the protracted nature of drought cycles, lack of early warning, and lack of resources. During the drought, households used different coping strategies to deal with the lack of food and water. Many people migrated to nearby towns or provinces in search of work, better living conditions, or to access water and food. Some relocated temporarily to work on irrigated plots owned by others near water sources. Others opened small businesses or sold vegetables and small animals to earn an income. A few households with gardens or access to irrigation were able to continue some food production.

4 Key findings

4.1 Effectiveness, impact, and sustainability of anticipatory action

This chapter synthesizes and triangulates quantitative and qualitative data obtained through KIIs with GAS members and health workers, FGDs with women in communities, and household survey across 12 selected communities.

The table below provides a comparative overview of key indicators across the three intervention models e.g. anticipatory action, emergency response, and no intervention.

Indicator	Anticipatory action	Emergency response	No intervention
Hygiene knowledge			
% of respondents knowing at least 3 causes of diarrhoea	16%	17%	12%
% of respondents knowing at least 3 key moments of hand-washing	15%	15%	11%
Hygiene practices			
% of households treating water from surface water sources	27%	21%	14%
% of respondents who washed their hands with soap or ash in at least 3 out of 5 critical occasions in the past 2 days	17%	11%	7%
% of households using only safe water sources for drinking during current season	60%	52%	56%
Health			
Diarrhea prevalence in children U5	21%	24%	33%
Coping with drought			
% of households experiencing shortage of water for drinking during the drought	28%	47%	33%
% of households that did not experience any water shortages during the drought	43%	23%	37%
% of households with ≥2 meals per day during the worst weeks of the drought	74%	73%	54%
% of households losing more than a half of harvest due to drought	7%	16%	23%
% of households with no livestock loss during the drought	73%	67%	62%
% of households perceiving drought impact on their household as moderate to extreme	23%	32%	36%
Timing of intervention			

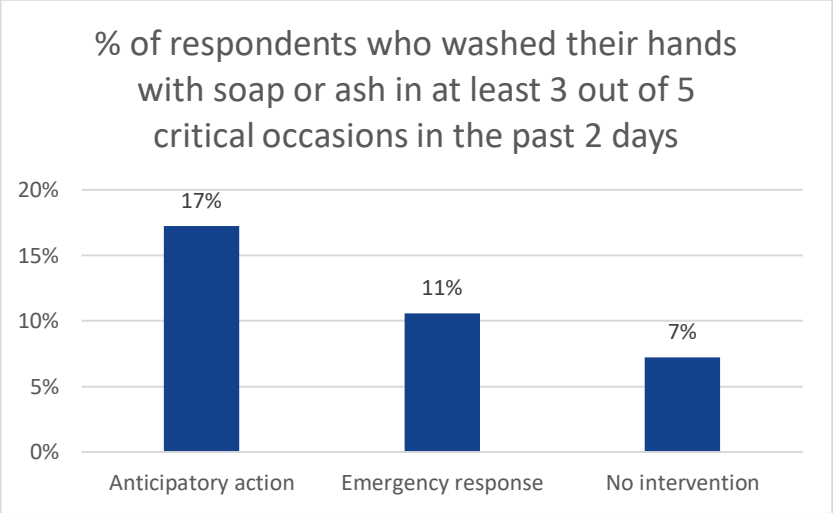
% of respondents perceiving the intervention as timely	93%	85%	n/a
Implementation period	15.6.2024 – 15.8.2024	1.8.2024 – 31.12.2024	n/a
Ideal timing for intervention according to the community	May to July 2024		

4.1.1 Hygiene knowledge and practices

Knowledge of critical hand hygiene moments remains limited in all areas. Only 15% of respondents in both AA and ER communities were able to identify at least three key moments for handwashing, such as before eating or after using the toilet. In NI areas, this percentage was slightly lower, at around 11%.

Availability of handwashing stations at the household level was highest in AA areas, where 9% of respondents reported having a designated handwashing place at home. In comparison, only 4% of households in both ER and NI areas had such a facility.

When asked about handwashing practices, 17% of AA respondents said they had washed their hands at three or more key moments with soap or ash within the last two days. This rate was lower in ER areas (11%) and even lower in NI zones (7%).

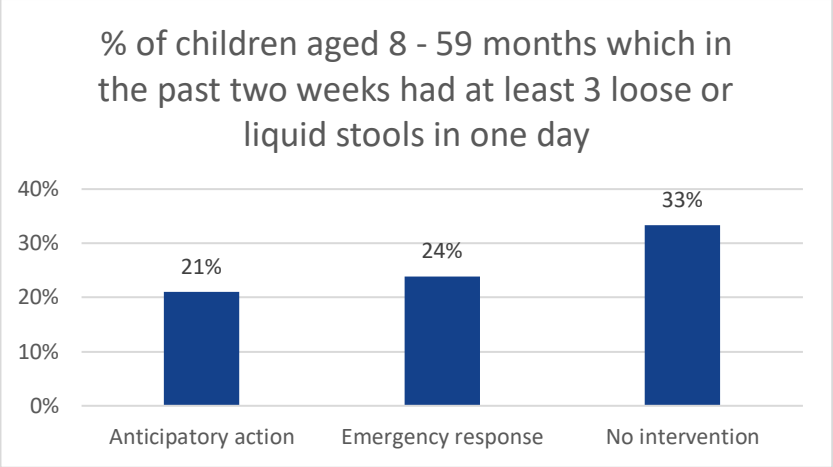


Overall, AA communities showed slightly better knowledge and practices related to hygiene, especially in handwashing practice and access to safe water. However, the levels of awareness and practice across all zones remain low.

These findings are in contrast with FGD discussions in AA and ER areas, where both men and women were highly persuaded about the importance of hygiene. Handwashing and the use of safe, potable water were identified as essential hygiene practices by both groups. Treating water with bleach was reported by women to be a common practice, especially when using water from rivers or other unsafe sources. Men also noted the positive effect of hygiene promotion campaigns, particularly on behaviours like handwashing and keeping water points clean. Women reported that they are now more consistent in treating water with bleach and maintaining cleanliness at home.

4.1.2 Reported health outcomes

Water quality and hygiene are closely linked to health outcomes, particularly in the context of diarrheal diseases and malnutrition. From the household survey data, we observe that the prevalence of diarrhoea in children under 5 over the two weeks preceding the survey was slightly lower in AA areas (21%) compared to ER areas (24%), and significantly lower compared to NI areas (33%).

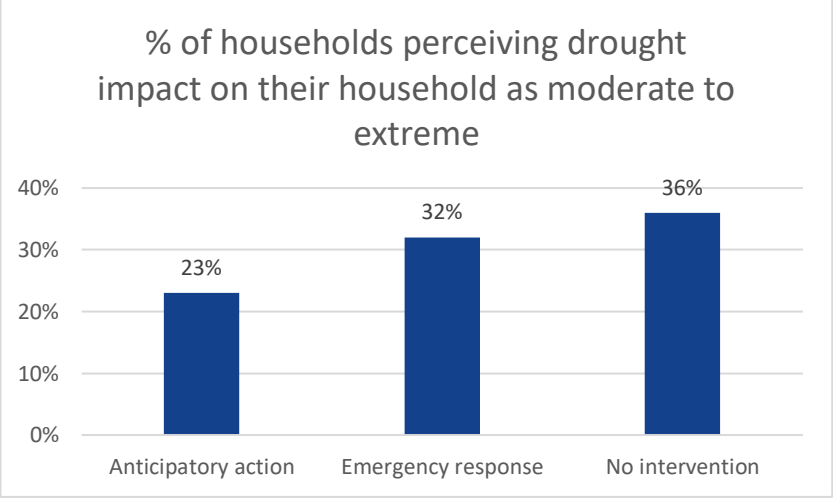


Cholera- a more severe and often fatal waterborne disease- was reported in 5 cases from NI communities, compared to just 1 case each in either AA and ER communities in the past 6 months.

KIIs with health workers confirmed these findings. Across all three intervention types, malaria, acute diarrhoea, and respiratory infections were the most common illnesses, especially during the rainy season. However, the intensity and recurrence of these diseases were higher in NI communities, with health workers noting no visible change or reduction in disease burden due to the absence of interventions.

4.1.3 Resilience and preparedness to drought

Perceived resilience was assessed by asking respondents how severely the drought had affected their households. Noticeably fewer surveyed households perceived having faced moderate to extreme drought impact in AA communities, compared to those in ER or NI communities, irrespective of the municipality.

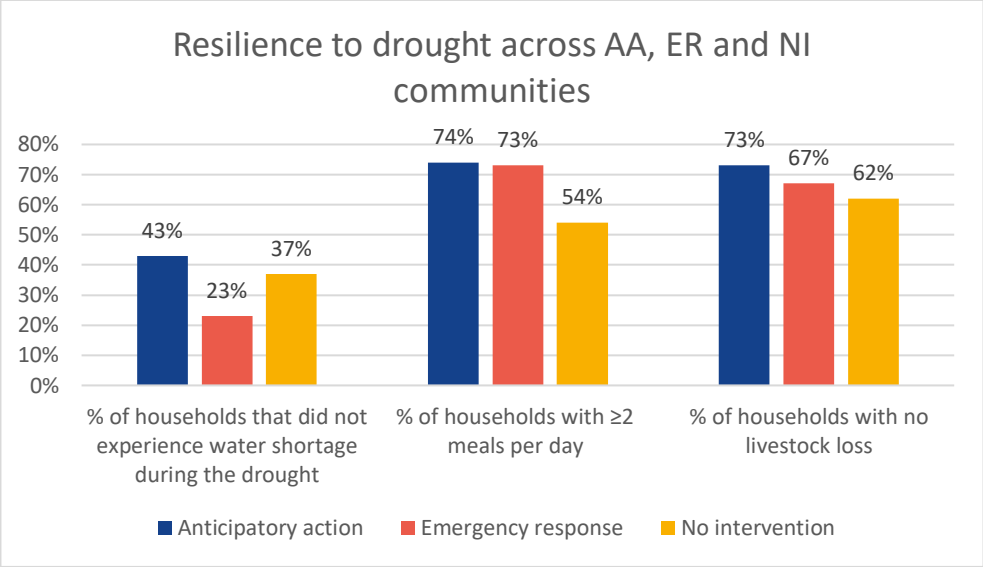


Food security during the worst weeks of the drought served as another indicator of household resilience. In AA areas, 74% of households were able to consume two or more meals per day. This proportion was nearly equal in ER communities (73%), but far lower in NI communities (54%), where nearly half of households managed just one or fewer meals per day.

Livestock preservation during the drought was another important metric. In AA areas, 73% of households reported no loss of livestock, compared to 67% in ER and 62% in NI areas.

Qualitative feedback from FGDs and KIIs complements the survey findings. Women in AA communities repeatedly stated that rehabilitation of water points allowed them to maintain basic needs and reduce reliance on distress strategies such as selling assets or skipping meals. Conversely, women in ER areas expressed regret that the support did not arrive early enough to avoid hardship.

The chart below visualizes key indicators of resilience: food security, harvest and livestock loss. The pattern is clear—AA communities consistently exhibit stronger resilience markers than ER or NI communities.



4.1.4 Appropriateness and timing of interventions

In the last drought, 28% of AA households experienced water shortages compared to 47% in ER. The reasons for this include the earlier timing of AA interventions, greater system resilience, and better community awareness around water conservation.

According to household survey results, 93% of respondents in AA communities reported that the assistance they received—primarily in the form of water scheme rehabilitation—was both timely and highly useful. These respondents emphasized that the intervention arrived before the drought's peak, allowing households to store water, maintain hygiene, and sustain some degree of normalcy. Only 2% viewed it as late but still helpful, and 6% were unsure.

In comparison, ER interventions were seen as very useful by 85% of respondents. However, 8% believed that the support came too late to be fully effective, and 7% expressed uncertainty.

This positive evaluation was echoed in KIIs with local authorities from villages such as Chahungo (Chibia municipality) and Tchalawa (Humpata municipality), covered by anticipatory action. Respondents confirmed that the rehabilitation of water schemes occurred ahead of the crisis peak. This was seen as critical in easing the burden of water collection, especially as traditional sources such as lagoons and ponds began to dry up. One local official described the assistance as “well-timed,” noting it prevented households from having to travel long distances during the driest months.

Focus group discussions further emphasized these points. Women in AA communities emphasized the benefits of early planning and preparedness, noting that the rehabilitated systems were operational well before severe drought impacts were felt.

Conversely, participants in ER zones expressed a desire for quicker implementation and noted that assistance, while welcome, often arrived during the peak of the hardship, when damage had already occurred. For example, in Tchipa (Chibia municipality), a respondent explained that by the time assistance arrived, households had already begun migrating due to water scarcity. The situation was already critical, and the delayed support was therefore less impactful.

However, not all ER interventions were perceived negatively. In Tchindingue (Humpata municipality), the rehabilitation of water points occurred just before the situation turned severe. The timing was thus viewed as appropriate and helpful, coming at a moment when rivers and other alternative water sources had already dried up. The new system helped mitigate what could have been a more intense crisis.

Across all KIIs with local authorities, there was a consistent recommendation: drought-related support must precede the crisis peak. Based on the opinion of local authorities, the ideal timing for assistance was between May and July 2024, which would provide sufficient time for communities to plan and adapt.

4.2 Sustainability and functionality of rehabilitated water schemes

This chapter examines the current status of 40 out of the 42 water schemes rehabilitated between June-December 2024 under either the START Network-funded anticipatory action and the CERF-funded emergency response intervention. A mixed-methods approach was employed, combining structured observations and surveys with GAS and Zeladors, as well as FGDs with community members and KIIs with water management representatives, and local authorities.

The objective of this chapter is to assess both the sustainability and operational functionality of water, sanitation, and hygiene (WASH) infrastructure, along with the performance of the community-based water management structures that were supported through the aforementioned interventions.

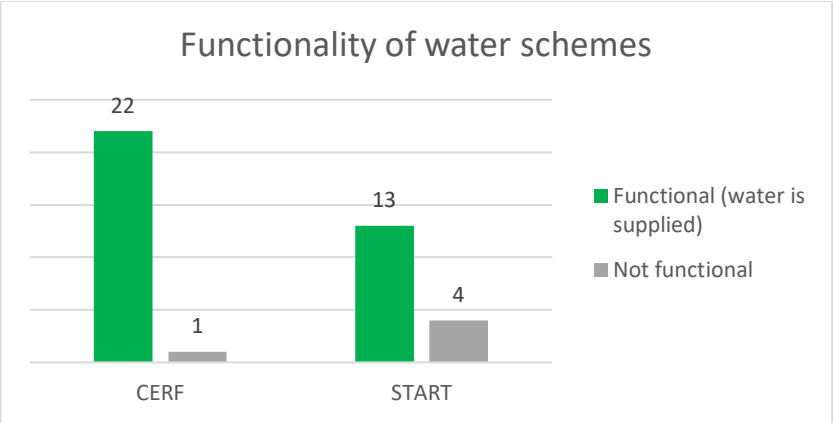
Although anticipatory and emergency interventions are typically implemented with limited focus on long-term sustainability, this assessment aims to understand the condition of the rehabilitated water schemes six or more months after project completion. Specifically, the study explores whether short-term interventions- ranging from two to six months in duration- can yield sustainable outcomes, and identifies the factors that contribute to such results. These insights will inform future programming by highlighting practices and strategies that can enhance the long-term impact of short-duration WASH interventions.

4.2.1 Functionality status

PIN and WV rehabilitated a total of 42 water schemes in Humpata and Chibia municipalities, under the START Network-funded anticipatory action (18 water schemes) and the CERF-funded emergency response (24 water schemes). The majority of these rehabilitated schemes consists of a borehole equipped with a solar-powered pump, connected to a reservoir and multiple tap stands. In one case, an electric pump was used, and in another, a manual pump was installed.

Boreholes with solar pumps are a suitable solution for targeted rural areas because the region receives strong and consistent sunlight throughout the year. This allows the pumps to operate reliably without depending on fuel or electricity from the grid. Solar-powered systems are also easier to maintain and manage locally, which helps communities keep them functional over time.

Out of 40 water schemes observed, 35 were found functional (defined as ‘supplying water’) and 5 were found damaged, in majority in AA communities.



The main causes of non-functionality included the theft of critical components, particularly pumps (2 pumps in AA communities), followed by damages caused likely by attempts to theft, children playing on the facilities or construction of other infrastructure nearby, which accidentally affected the water scheme.

Users are highly satisfied with rehabilitated water schemes. In FGDs, they expressed high satisfaction with the water supply after rehabilitation, noting that they now have access to clean and safe water. Some participants mentioned that the water point is now closer to their homes, which decreases the time burden on women and girls when fetching water. There were no expressed differences between respondents in AA or in ER communities.

4.2.2 Management arrangements of water schemes

During the project implementation period, PIN and WV primarily focused on establishing Water Management Committees (GAS) within communities, in line with the MoGeCa framework.

At the time of this assessment, out of a total of 40 water schemes, 12 were managed by single Zeladors, 18 by GAS groups composed of four members, 6 by incomplete GAS groups, and 4 by other actors. In the case of the AA communities, which included 17 assessed water schemes, 9 were managed by a single Zelador, 7 by a GAS group, and 1 by another actor. For the ER communities, 3 schemes were under the management of single Zeladors, 17 by GAS groups, and 3 by other actors.

The data indicate a gradual shift in the management structures of water schemes in time:

1. The number of active GAS members tends to decrease over time.
2. For five water schemes, GAS has transitioned to other management structures (e.g., a single caretaker (Zelador), communal technicians, or community leaders).
3. GAS positions are generally voluntary and not remunerated. In about half of the water schemes managed by single Zelador, the position is paid.
4. The number of female members in water management structures also tends to decrease over time.

The table below provides comparison of findings related to water schemes managed by single caretaker (Zelador) and by GAS, that arose from FGDs and KIIs. The data suggest that water scheme management by a single Zelador may offer greater sustainability; however, this often comes at the expense of broader community involvement and participation.

Water schemes managed by single Zelador	Water schemes managed by GAS
• Zeladors are more likely to regularly collect water contributions. All money collected is usually handed over to the municipality • Minor repairs are done faster • Community participation (e.g. defining price, decision over money) practically non-existent • Strict rules regarding operating hours and payments • If household cannot afford to pay, they resort to drinking water from an unsafe water source	• More challenging management, especially when it comes to collecting payments, conducting maintenance, or addressing breakdowns • Cases of GAS collecting water fees regularly are less frequent • Repairs take longer because money is hardly available • Municipal follow-up seems to be limited

Women's involvement in the management of water resources varies across communities, but in most cases, their roles remain limited, both in scope and influence. According to observations conducted as part of this study, 14 out of 40 visited water schemes had no women involved in management at all – including the majority of water schemes managed by single Zelador. On the other hand, the remaining 26 water management structures included women in their composition, with 14 of them having women make up half or more of the members.

This declining presence over time was attributed by GAS respondents to lack of remuneration, societal norms that undervalue women's leadership, and practical challenges such as household responsibilities. For illustration, one female GAS member remarked during a KII that:

"Sometimes men do not listen to us or make fun of us. They say this is not our place"

Further KIIs with GAS members suggest that the cultural and societal barriers include high rates of illiteracy among women, cultural norms that discourage women from speaking in the presence of men, and restrictions from male family members, especially husbands, who may not permit women to take part in public affairs.

In communities where water management was controlled by men, women participating in focus group discussions reported that their involvement was minimal—mainly limited to cleaning duties and financial contributions. They expressed a sense of exclusion from decision-making processes. Several women clearly stated their desire to be more actively involved in the management and decision-making related to water resources.

4.2.3 Capacities of GAS and Zeladors

To assess the knowledge level of GAS members and water point Zeladors, a brief test was administered. The questionnaire consisted of eight questions based on the key topics covered during training sessions delivered by PIN and World Vision in either the START Fund AA or CREF ER projects. A total of 34 individuals involved in water point management participated in the assessment. With the passing threshold at +5 correct answers out of

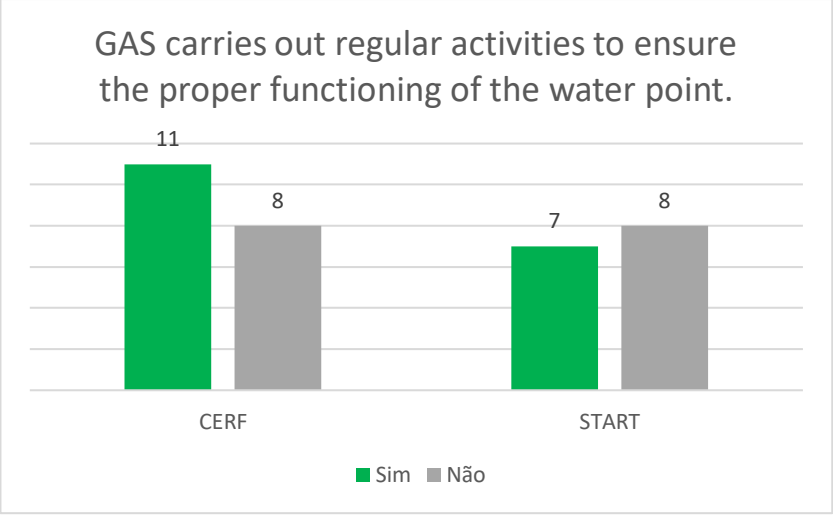
eight, results showed that 32% of respondents from CERF-supported sites and 47% from START-supported sites passed the test. These results suggest that while some level of knowledge has been retained, there is space for further continuous support and trainings.

Among the 34 respondents in the GAS survey, 33 reported that their most recent training was delivered by PIN and WV (e.g. under either the AA or ER interventions of 2024). Only one GAS group indicated having received additional training later from the municipal administration.

The majority of GAS members and Zeladors expressed a lack of confidence in their ability to manage water schemes effectively. Specifically, 26 out of 34 respondents felt they did not have sufficient technical knowledge (10 out of 15 for AA and 16 out of 19 for ER), and 22 out of 34 reported limited skills in financial management (11 out of 15 for AA and 11 out of 19 for ER). The majority of the respondents that lacked confidence in technical and financial management were located in Chibia municipality.

4.2.4 Maintenance and prevention of damages

Based on survey findings, some water management structures carry out regular activities to ensure the proper functioning of the water point. This is done regularly by 18 out of 34 GAS and Zeladors. Findings from FGDs with community members and KIIs with GAS and Zeladors indicate that their responsibilities are confined to tasks such as controlling access, cleaning the water point, monitoring its use (especially preventing children form damaging equipment), and ensuring hygiene at the site. They can also perform community mobilization, report problems to the administration, and organize repairs or fundraising efforts when needed.



Structured observations of 35 functional water schemes showed that 14 had clean and well-maintained surroundings, while 21 had grass around the site and appeared to be less regularly maintained.

Out of 40 observed water schemes, 38 were equipped with some form of physical protection, such as fencing, intended to prevent damage and theft. Most of the water points were also monitored either by an assigned guard or by an individual located nearby who oversees the site.

The capacity of GAS and Zeladors to manage these systems remains limited. Most of them lack technical skills, financial management knowledge, and do not actively involve the wider community in decision-making or maintenance processes. Additionally, they do not have access to basic toolkits needed for carrying out minor repairs.

4.2.5 Repairments of damages

In the last 6 months, 7 out of 40 water points stopped working for a certain period of time. The time duration they did not (have not) worked varies from 1 to 16 weeks, with an average of 6 weeks.

Observations and community testimonies confirmed that when boreholes ceased to function, users were often forced to revert to rivers and unprotected wells. FGDs revealed that community members are aware of the health risks linked to drinking river water and some of the use water, as they learnt during the training provided by PIN and WV, and they use purification tablets.

The majority of GAS and Zeladors lack the tools, spare parts, or the technical knowledge required for basic repairs. Only one management strucure reportedly maintained a stock of spare parts, and most did not possess toolkits.

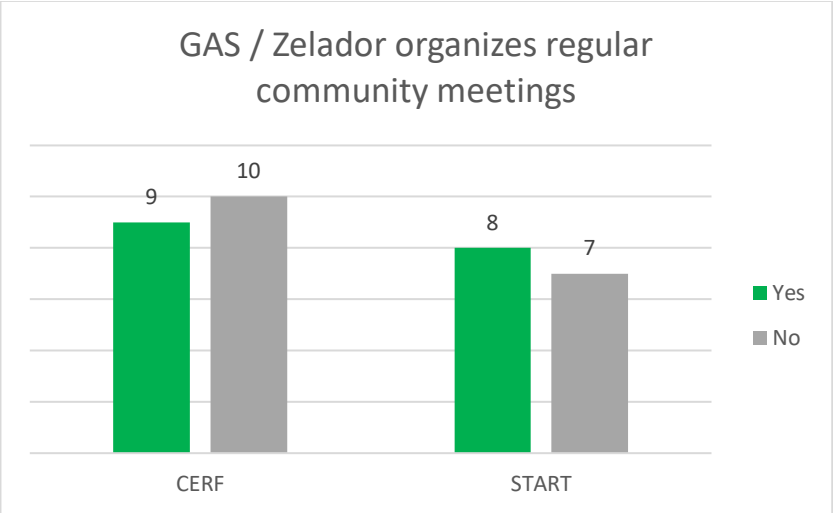
Common minor issues include broken taps or doors caused by misuse or children playing. These repairs are often delayed awaiting community contributions, but some basic maintenance was done locally.

In cases of major damage to water schemes, more substantial repairs were, or are expected to be, covered by the municipal administration. However, in most instances, it remains unclear who is ultimately responsible for financing the repairs. Spare parts are generally not available at the local level, which further complicates the repair process. According to GAS and Zelador respondents, delays are primarily due to the limited availability of municipal technicians.

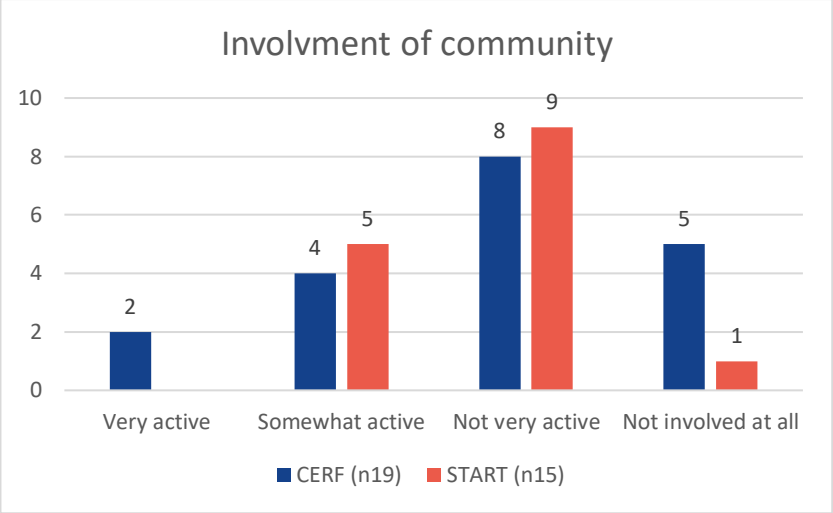
4.2.6 Community involvement in decision-making

The ways in which GAS and Zeladors engage with their communities vary significantly across locations. While some organize regular community meetings to discuss water management issues, others hold meetings infrequently or not at all. In the GAS survey, about half of the committees reported organizing regular community meetings. These were mostly held on a monthly basis. When meetings do occur, they mostly focus on operational issues such as repair schedules or usage rules. Financial management and financial balances seem to be rarely discussed with the community. Participants from Mercado (Humpata municipality) expressed concern about the lack of transparency and exclusion:

"*We were never called to a meeting. We don't know where the money goes.*"



GAS and Zeladors from 11 water schemes describe their communities as active, whereas remaining communities are described as not very active or not involved at all in the decision-making over the water scheme. Some GAS members expressed frustration with lack of community cooperation, and asked for the continuous support in mobilizing residents and conducting joint sensitization meetings to encourage proper use and respect for water schemes.



During FGDs, community members in two villages perceive that they were not included enough in the planning or design phases of water system rehabilitation. They think that this lack of participation contributed to various design shortcomings, such as water points lacking protective fencing, limited capacity of tanks, and site locations selected without local consultation.

Women in FGDs perceive that their specific needs were also not adequately addressed during the design process and during current management of the water schemes. Women are primarily responsible for collecting water for drinking and for household tasks such as washing clothes. However, in some cases, they must walk long distances to access areas suitable for washing clothes, as they are not permitted to use the rehabilitated water schemes for this purpose. Additionally, the management of water points is predominantly handled by men, which may result in limited responsiveness to women's concerns or in their needs not being taken seriously. As one woman explained:

"I wanted to wash [clothes] and offered to pay, but the Zelador refused."

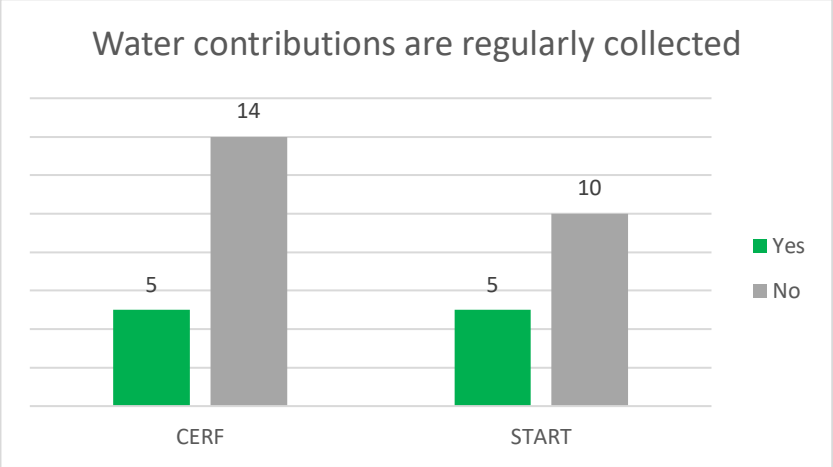
In FGDs conducted with women water users, a consistent theme was the lack of involvement in water-related decision-making. Four of the eight FGDs with community members indicated that women were consulted on GAS member selection, contribution schemes, or operational rules. For example, in the FGD held in the community of Mercado, a woman stated:

"We were not asked about the price We just found the payment system in place."

In practice, community engagement often occurs through intermediaries such as traditional community leaders (sobas) or village coordinators. While this can be culturally appropriate in some contexts, it can also perpetuate existing power imbalances and limit the direct voice of women and poorer households in governance processes.

4.2.7 Community contributions towards operations and maintenance

While some communities contribute financially and attend meetings, others show limited involvement. According to the survey, 10 out of the 34 water management structures interviewed reported that they regularly collect water contributions from community members. In 18 of the 34 surveyed sites, households continued to use rivers and other unsafe water sources for drinking. This is mainly because, as explained during FGDs by women, these sources are always accessible during current rainy season, with no opening hours, and are located close to people's homes.



A major challenge highlighted by water management structures that do collect fees is the inconsistent payment by households. Some members of the community contribute regularly, while others do not, which undermines the overall collection system.

FGDs in communities like Laplace (Humpata municipality) and Mucua (Chibia municipality) revealed that women were aware about the benefits of using safe water for drinking and they were willing to contribute, but rather in cases of minor repairs:

"If something breaks and it's small, we would contribute. Waiting for the municipality takes too long."

Among the GAS and Zeladors that do collect water contributions, nine reported doing so on a monthly basis, two on a weekly basis, and one indicated daily collections. Interestingly, water schemes managed by Zeladors appear more likely to ensure regular fee collection compared to those managed by GAS groups.

While eight management structures reported storing funds with a designated treasurer, 1 with Zelador and 2 with municipal administration, others were reporting that they have no funds to store.

Many GAS and Zeladors had unclear or non-existent financial tracking systems. Only ten GAS and Zeladors reported maintaining financial records of the collected fees, which may point to a gap in financial transparency and accountability. Out of them, five management structures were able to state the actual balance of their operation and maintenance funds, with reported amounts ranging from 400 to 10,000 Kwanza. Notably, two of these reported balances exceeded 6,000 Kwanza—an amount that should be sufficient to cover minor repairs.

According to the household survey results, in the AA and ER communities, households that contribute financially typically pay around 200 Kwanza per month. However, about one third of respondents reported not paying at all. Among the 245 respondents who do pay, 22 stated that they are unable to afford water at this price, while 114 reported experiencing minor difficulties in having enough cash to cover the monthly water fees.

4.2.8 Municipal support and oversight

Engagement with the municipal administration varies across sites. While some communities receive regular visits and support, others report no follow-up from technical teams after the intervention. According to the survey, only 10 out of the 40 rehabilitated water schemes had received a visit from the municipal administration following rehabilitation. These visits were evenly distributed between the START Fund and CERF-funded interventions.

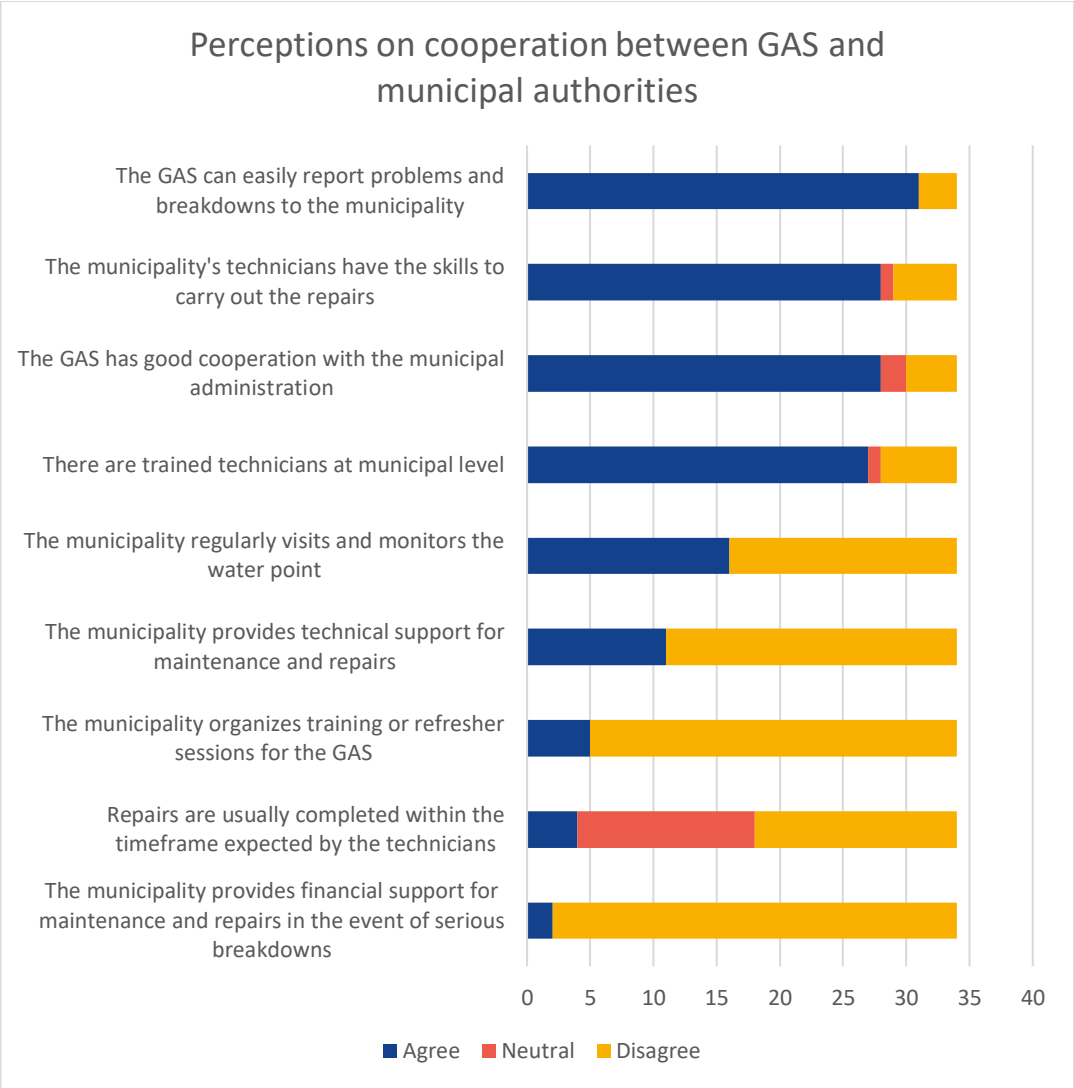
GAS members interviewed in key informant interviews echoed this sentiment. In many cases, the only technical guidance received was during the initial training provided by implementing organizations such as PIN or World Vision.

Even in areas where communication lines were reportedly open, the responsiveness of municipal technicians was limited by resource constraints, including a lack of transport and tools. Observers noted that even when issues were reported, delays in action often stemmed from unavailability of municipal staff or lack of budget for spare parts and repairs.

The lack of follow-up by municipal authorities has deeper implications. Communities feel abandoned once a project concludes, undermining morale and the willingness of volunteers to remain active in GAS roles. This was summed up by a GAS member who stated:

“Don’t just come during the project. Return to see how things are going.”

As part of the survey, GAS members and Zeladors were asked to what extent they agreed with a series of statements related to their cooperation with the municipal administration. These statements are presented in the figure below.



GAS groups and Zeladors generally reported a positive relationship with the municipal administration. They expressed confidence in their ability to communicate with the municipality and indicated that they are able to report problems and breakdowns with relative ease.

However, despite this open line of communication, many GAS members and Zeladors felt that the municipality does not provide adequate technical support. According to respondents, municipal technicians rarely conduct routine monitoring visits to the water points. Furthermore, there is a widespread perception that the municipality does not offer financial assistance for repairs in the event of serious breakdowns.

4.3 Ongoing community needs

This chapter synthesizes findings from FGDs with women in communities, KIIs with local authorities, a participatory problem classification matrix (PCM) exercises conducted with women's groups, and a household survey administered to 540 households. The purpose of this post-intervention assessment is was identify ongoing community needs and priorities.

4.3.1 Water access

Access to water was identified as one of the most urgent needs in all data sources. Women emphasized the importance of adding more water taps and increasing the size of storage tanks. These improvements would help ensure enough water for all households and reduce the distance they must walk to collect it.

Barrier analysis on the use of safe water sources for drinking

A brief barrier analysis was conducted to identify the main **factors that encourage or prevent people from using safe water sources for drinking**. The aim was to better understand community behaviours and challenges related to hygiene and water use. Separate focus group discussions (FGDs) were held for men and women. Each group responded to a set of 12 questions designed for barrier analysis. There were doers as well as non-doers represented among the respondents.

In the past 12 months, the use of potable water has increased according to the respondents in AA and ER areas. This is mostly due to the rehabilitation of local water supply systems.

Overall Perception of Safe Water Use
Community members practice using safe water to some extent but often rely on unsafe sources because the main water points do not supply enough of water for all. The main motivation for using safe water is to avoid diseases, particularly cholera. Both men and women see the use of safe water as essential for good health. Women especially highlight its role in preventing childhood illness.

The perceived advantages of using safe water include:

- Disease prevention
- Reduced need for medical treatment
- Lower spending on treatment chemicals

The main challenges include:

- Inadequate water supply
- Lack of latrines
- Inconsistent availability of water treatment materials

Despite these challenges, there is no significant resistance to using safe water within the community. Both men and women suggest that increasing the number of water points and improving maintenance would help. They believe that community leaders and the government should play a stronger role in expanding access to safe water.

KIIs with local authorities echoed these concerns, with male respondents confirming the inadequacy of water infrastructure. In Nkhombota/Chahungo (Chibia municipality) for example, one water collection point already serves 775 households and according to the Zelador, this number will increase to 890 households in the upcoming dry season.

The household survey revealed that 40% of respondents need more than 30 minutes, with 11% spending over an hour, to fetch water. The burden of this time cost primarily falls on women and girls, who are traditionally responsible for water collection.

In addition, women expressed a need for improvements to the design of the water points. They specifically suggested adding laundry facilities near the taps, along with safety measures such as better fencing and lighting at night.

4.3.2 Sanitation

According to the household survey, 88% of respondents practice open defecation, while only 6% have access to improved and private sanitation facilities. This situation poses serious health and safety risks. A common barrier to improving sanitation is the cost of construction materials, especially cement. Latrines built without cement collapse quickly, which discourages families from building them at all.

4.3.3 Food security

Agriculture is the principal source of livelihood across all six assessed communities, often supplemented by small-scale animal husbandry and petty trade.

The Problem Classification Matrix (PCM) highlighted women's dissatisfaction with the limited availability of agricultural inputs. They expressed a need for improved seed stock, fertilizer, and small-scale business funding as a strategy for reducing household vulnerability. The absence of agricultural extension services, credit access, and grant opportunities were additional limiting factors.

4.3.4 Problem classification

Six Problem Classification Matrix exercises were conducted with women's groups across the municipalities of Humpata and Chibia to better understand community-defined priorities. The participatory sessions revealed that the type and severity of needs vary between communities, but several recurring issues were identified. These included limited access to healthcare, potable water, agricultural support, and basic infrastructure.

In Chibia municipality, women identified access to water and healthcare as the most urgent concerns affecting their daily lives and wellbeing. Participants explained that the single water point in their village is insufficient for the growing population. During the dry season, rivers and streams dry up, forcing families—especially women and girls—to walk long distances to collect water. The water collected is often untreated, which increases health risks.

Besides WASH and healthcare, communities across Chibia also cited the following as key concerns:

- Lack of educational facilities, especially secondary schools.
- Insufficient hygiene materials, particularly affecting women.
- Lack of mobile network coverage, limiting communication and access to information.
- Absence of agricultural inputs and funding for small-scale businesses.

In Humpata, community priorities varied depending on location, but most focused on healthcare, livelihoods, and infrastructure. The most frequently mentioned needs included:

- Agricultural support—particularly seeds, tools, and fertilizers—which women viewed as essential for both food security and income generation.

- Lack of functional healthcare. Although a local health post exists, it only operates part of the day and lacks basic medicines and diagnostic tools, requiring families to travel to the municipal center for treatment.
- Absence of electricity. Women linked this to increased insecurity, including theft and sexual violence, as well as difficulties in food preservation and children's ability to study after dark.

These findings differ slightly from the priorities identified in the Key Informant Interviews (KIIs) conducted with local authorities, who were predominantly men. Local authorities placed the highest priority on:

- Borehole drilling and rehabilitation,
- Distribution of seeds and other agricultural inputs,
- Construction of chimpacas and small dams for water retention,
- Establishment of health posts.

In addition to these, local authorities also highlighted the need to improve market access and support income-generating activities as key strategies for building community resilience.

5 Lessons learned & recommendations

This study set out to evaluate the effectiveness, impact, and sustainability of different response modalities to the 2024 El Niño-induced drought in Angola, specifically anticipatory action, early response and no external intervention. Through a mixed-methods comparative approach, the study aimed to identify the added value of anticipatory action by comparing the outcomes across three distinct community groups - those reached through anticipatory action, those supported through emergency response, and those that received no external support.

Lesson learned #1: AA must be triggered with sufficient lead time before the peak of drought impacts, ideally aligned with seasonal climate forecasts, to allow meaningful community preparation and reduce losses. Delays in activation can significantly reduce the effectiveness of AA in protecting livelihoods and preventing harmful coping strategies.

The findings clearly demonstrate that anticipatory action, when implemented prior to the peak of a crisis, can lead to improved outcomes. Surveyed communities that benefited from anticipatory interventions experienced greater access to safe drinking water, fewer livestock losses, and higher food consumption levels during the drought, compared to those that received early response support or no support at all. Furthermore, anticipatory action was perceived by community members as better timed and more responsive to immediate needs. It allowed households to maintain a degree of stability and reduce the use of harmful coping strategies.

Lesson learned #2: Sustainability planning (e.g. training local water committees or linking with municipal systems) must be integrated early within AA timelines, even when there are time constraints. Not ensuring this from the outset can undermine the long-term impact of interventions.

In terms of sustainability, the assessment found that the majority of rehabilitated water schemes remained functional six to ten months after implementation. While technical reliability and user satisfaction were generally high, long-term sustainability remains dependent on several factors. These include the strength of water management structures, availability of spare parts, financial management practices and the level of municipal oversight. These findings did not differ significantly between communities that received anticipatory action, early response or no support.

Lesson learned #3: Inclusive community engagement, including supporting the active participation of women and addressing power dynamics, must be prioritized from the outset of AA to maximize social integration and the overall effectiveness of AA.

The study also highlights the importance of community ownership, especially in areas related to maintenance, financial contributions and decision-making. While many community members, particularly women, expressed a desire for greater involvement, structural and cultural barriers often limited their participation. To be effective, AA must address gender roles and structural inequalities early in the program design, ensuring that women and girls are not only targeted as beneficiaries but supported as leaders in decision-making processes.

Lesson learned #4: The anticipatory rehabilitation of water infrastructure can significantly reduce water stress during peak drought periods, particularly when interventions are well-timed and tailored to the context.

Communities that received anticipatory support experienced improved access to safe water, helping to reduce the physical burden of water collection -especially for women and girls- and lowering reliance on harmful coping strategies. However, the protective effect was strongest where water infrastructure was rehabilitated early enough to provide reliable access before drought impacts intensified. This underlines the importance of aligning technical delivery with drought timelines and community needs.

Lesson learned #5: Anticipatory hygiene promotion requires sustained engagement and culturally adapted approaches to achieve meaningful behaviour change.
While communities receiving AA generally demonstrated awareness of key hygiene practices such as handwashing and water treatment, behavior change was not consistent without ongoing engagement. This limited the impact of WASH-related AA activities despite timely delivery, and highlights the importance of combining both hard, technical support with repeated, context-specific messaging and community-led promotion that align with local norms and customs.

Lesson learned #6: Anticipatory action contributed to preserving people's dignity and decision-making autonomy by enabling timely, proactive choices.
Beneficiaries reported that receiving support before the full onset of the drought allowed them to preserve key assets such as livestock, and avoid negative coping strategies. AA helped households feel more in control, underlining the importance of framing AA not just as a technical intervention but as a tool for preserving agency and dignity.

Overall, this study underscores the potential of anticipatory action to reduce the humanitarian impact of climate-induced shocks when delivered in a timely and context-appropriate manner.

Recommendations

For the START Network

1. **Adjust funding cycles to better match seasonal realities and implementation needs:**
   - Consider longer implementation periods (beyond 60 days) for anticipatory projects, especially when interventions involve infrastructure, local capacity strengthening or behaviour change;
   - Request partners to integrate sustainability and capacity-strengthening efforts into ongoing or planned longer-term (development/resilience) initiatives wherever possible.
2. **Promote AA as a system strengthening approach**
   - Encourage partners to design AA projects that also strengthen local systems (for instance by linking AA projects to existing municipality plans or relevant DRM structures or mechanism);
   - Request partners to integrate AA into broader preparedness and risk reduction strategies or policies.

3. **Support follow-up and adaptive learning:**
   - Consider funding light follow-up/monitoring phases for AA projects (e.g. 3-6 months after project end) to monitor infrastructure, reinforce community capacity strengthening and address challenges that may have arisen after project end (e.g. infrastructure breakdowns, water committee functioning or disengagement, etc).
4. **Ensure community ownership and inclusion in AA**
   - Along with participatory design, require also to report on inclusive processes and outcomes e.g. female participation, community feedback and its use for improvements, etc.

For the Government of Angola and local authorities

1. **Mainstream emergency preparedness and AA into national and local systems**
   - Integrate emergency preparedness, early warning systems (EWS) and AA in relevant national policies, sectoral strategies and municipal development plans, ensuring integration between national-provincial-municipal levels;
   - Promote joint planning, collaboration and coordination with humanitarian and development actors to maximize synergies, ensure sustainability and exchange of knowledge and expertise.
2. **Strengthen EWS for recurrent severe hazards, in particular droughts**
   - Plan, facilitate and support the development or strengthening of early warning systems for most recurrent and severe hazards including droughts
   - Ensure EWS are timely, accessible and understandable for communities, using appropriate languages, channels and formats;
   - Involve GAS/Zeladors in early warning dissemination and ensure they are equipped to operate as focal points for, or support risk communication and local emergency coordination;
3. **Institutionalize AA and preparedness planning at municipality and community levels**
   - Plan and support the development and implementation of local emergency preparedness plans including clear early action triggers, operational protocols for early action/early response, and ensuring they reflect seasonal risk patterns, especially the timing of peak drought impact (e.g. July-October in Southern Angola)
   - Integrate AA into water scheme planning and management, and drought preparedness by pre-positioning spare parts and repair material
4. **Invest in capacity strengthening of municipal and community level actors**
   - Provide regular training, supervision and support to municipal DRM staff and technicians in risk mapping, preparedness planning, early warning interpretation and communication, and coordination of AA
   - Strengthen and support GAS and Zeladors as frontline actors by delivering refresher trainings and preparedness toolkits covering water scheme management, risk identification, rapid technical assessment and community mobilization;
   - Conduct routine technical monitoring visits to assess the functionality of water schemes, identify risks and support emergency repairs.
5. **Ensure adequate financing for preparedness and AA**
   - Earmark dedicated financial resources in national and municipal plans for preparedness and AA, incl. For capacity strengthening of relevant local staff and community actors (e.g. risk mapping, preparedness, contingency planning

and response), management o fEWS, pre-positioning of essential WASH material for water scheme repairs;

- Ensure municipal budgets for water scheme planning/management include anticipatory concerns including resources for technical controls, for emergency repairs as well as for the continued operation of GAS;

6. **Ensure inclusive participation of women and vulnerable groups**
   - Ensure that women, persons with disabilities and marginalized groups are involved in preparedness planning, risk communication and water governance, including through the meaningfull participation of women in GAS

For PIN Angola

1. **Promote anticipatory action as a core preparedness strategy**
   - Advocate for AA integration into national and municipal disaster risk management plans and strategies
2. **Strengthen engagement of local authorities in AA**
   - Design and implement AA projects jointly with municipal / regional/ national authorities (in addition to communities), ensuring key roles and responsibilities for authorities in the preparedness planning, delivery and monitoring.
   - Provide direct support to strengthen the capacity of municipal authorities during anticipatory activation periods, including via WASH technical oversight.
   - Integrate trainings into AA, focusing on WASH preparedness, risk communication and maintenance of water scheme
3. **Design AA projects for long term functionality**
   - Integrate sustainability measures at the onset of any AA project, for instance linking to local budgets or defining clear handover plans
4. **Support community participation, particularly those of women and girls**
   - Promote inclusive AA programming by facilitating the participation of women in decision-making roles related to water governance and preparedness planning

Annexes

Annex A: Table of focus group discussions (FGDs)

Phase 1

Date	Municipality	Comuna	Community/ village	Participant profile	Gender of participants	Number of participants	Content of the discussions
8.5.2025	Humpata	Sede	Laplace	Community members	Women	11	FGD with water users focused on satisfaction with the water scheme and its management, participation of community members in decision-making, access to safe water and recommendations and lessons learnt. It covered communities with well-functional as well as damaged water schemes.
12.5.2025	Humpata	Sede	Mercado	Community members	Women	10	
13.5.2025	Humpata	Caholo	Missão	Community members	Women	6	
13.5.2025	Humpata	Caholo	Mungolo	Community members	Women	9	
14.5.2025	Chibia	Jau	Nkhavia	Community members	Women	9	
14.5.2025	Chibia	Jau	Tchakhaka	Community members	Women	9	
15.5.2025	Chibia	Capunda	Mucua	Community members	Women	9	
16.5.2025	Chibia	Quihita	Kakuluvalle 2	Community members	Women	5	

Phase 2

Date	Municipality	Comuna	Community/ village	Participant profile	Gender of participants	Number of participants	Content of the discussions
13.6.2025	Chibia	Sede	Chahungo (AA)	Community members	Women	6	FGDs with community members completed information collected during Phase I, and focused on satisfaction with the water scheme, usage of water scheme, inclusion and exclusion of using water scheme, perceptions on resilience of the community, participation of women in decision-making, and security and safety when collecting water
4.6.2025	Humpata	Sede	Tchalawa (AA)	Community members	Women	8	
17.6.2025	Chibia	Sede	Tchipa (ER)	Community members	Women	8	
5.6.2025	Humpata	Sede	Tchindingue (ER)	Community members	Women	10	
18.6.2025	Humpata	Sede	Ntamana (AA)	Community members	Men	7	Barrier analysis: Focus was put on hygiene practices in communities. A special part was dedicated to discuss questions related to boosters and barriers of using safe water for drinking.
18.6.2025	Humpata	Sede	Ntamana (AA)	Community members	Women	8	
10.6.2025	Chibia	Sede	Tchipa (ER)	Community members	Men	6	
17.6.2025	Chibia	Sede	Tchipa (ER)	Community members	Women	7	

Participatory data collection tools

Date	Municipality	Comuna	Community/ village	Participant profile	Gender of participants	Number of participants	Content of the discussions
19.6.2025	Humpata	Caholo	Tchalawa	Community members	Women	8	Problem classification matrix: The aim was to understand principal problems in the community
16.6.2025	Chibia	Capunda	Tchima	Community members	Women	6	
18.6.2025	Humpata	Palanca	Tchindingue	Community members	Women	6	
17.6.2025	Chibia	Sede	Escola Tchipa	Community members	Women	8	
12.6.2025	Chibia	Jáu	Kahoca	Community members	Women	8	
6.6.2025	Humpata	Sede	Tchanina	Community members	Women	6	
6.5.2025	Humpata	Caholo	Tchalawa	Community members	Mixed	6	Seasonal calendar: The aim was to understand occurrence of major events in the past 12 months such as rain season, dry season, prevalence of diseases, hunger etc.
10.6.2025	Chibia	Sede	Mahula Hangue	Community members	Mixed	6	

Annex B: Table of key informant interviews (KIIs)

Phase 1

Date	Municipality	Comuna	Community/ village	Participant profile	Gender of participants	Number of participants	Content of the discussions
8.5.2025	Humpata	Sede	Laplace	GAS / Zelador	Men	3	KIIs with GAS members and Zeladors focused on motivations and responsibilities of persons involved in water management, challenges with management of water schemes, good practices, capacities of GAS members and Zeladors, involvement of community in decision-making.
9.5.2025	Humpata	Sede	Mercado	GAS / Zelador	Women	2	
13.5.2025	Humpata	Caholo	Missão	GAS / Zelador	Men	3	
13.5.2025	Humpata	Caholo	Mungolo	GAS / Zelador	Mixed	3	
14.5.2025	Chibia	Jau	Nkhavia	GAS / Zelador	Mixed	2	
14.5.2025	Chibia	Jau	Tchakhaka	GAS / Zelador	Mixed	4	
15.5.2025	Chibia	Capunda	Mucua	GAS / Zelador	Mixed	4	
16.5.2025	Chibia	Quihita	Kakuluvalle 2	GAS / Zelador	Mixed	3	

Phase 2

Date	Municipality	Comuna	Community/ village	Participant profile	Gender of participants	Number of participants	Content of the discussions
13.6.2025	Chibia	Sede	Chahungo (AA)	Village coordinator	Man	1	KIIs with local authorities such as village coordinators and soba (elderly) focused on the description of drought and its impact, timeliness of the interventions, and on priority needs and obstacles related to WASH, nutrition, food security, livelihoods and health in their community
4.6.2025	Humpata	Sede	Tchalawa (AA)	Soba	Man	1	
17.6.2025	Chibia	Sede	Tchipa (ER)	Village coordinator	Man	1	
5.6.2025	Humpata	Sede	Tchindingue (ER)	Village coordinator	Man	1	
12.6.2025	Chibia	Jau	Cahoca (NI)	Soba	Man	1	
4.6.2025	Humpata	Sede	Tchanina (NI)	Village coordinator	Man	1	
13.6.2025	Chibia	Sede	Nkhombota/Chaungo (AA)	Zelador	Man	1	KIIs with GAS members in Phase II focused on clarifying findings from Phase I related to number of users of water schemes in time, participation of women in water management, and their perception of community resilience to drought
4.6.2025	Humpata	Caholo	Tchalawa (AA)	Zelador	Man	1	
17.6.2025	Chibia	Sede	Tchipa (ER)	GAS member	Man	1	
5.6.2025	Humpata	Sede	Tchindingue (ER)	GAS member	Mixed	1	
9.6.2025	Chibia	Capunda	Tchima (AA)	Village coordinator	Man	1	KIIs with health staff and in their absence with village coordinators were focusing on health issues in communities, including water-borne diseases and acute malnutrition. Moreover, questions were posed on hygiene practices in communities and barriers of adopting them.
18.6.2025	Humpata	Palance	Tchindingue (ER)	Nurse	Woman	1	
17.6.2025	Chibia	Sede	Escola Tchipa (ER)	Nurse	Man	1	
19.6.2025	Humpata	Bata Bata	Bata Bata sede (NI)	Nurse	Man	1	
12.6.2025	Chibia	Jáu	Kahoca (NI)	Village coordinator	Man	1	

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