

# APPLYING WASH SYSTEMS APPROACHES IN FRAGILE CONTEXTS

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**We welcome thoughts and feedback on this paper.** Please send these to [w.tillet@aguaconsult.co.uk](mailto:w.tillet@aguaconsult.co.uk).

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## ACRONYMS

<b>ACF</b>	Action Contre la Faim / Action Against Hunger	<b>LIF</b>	Low-Income Fragile
<b>CAR</b>	Central African Republic	<b>LIS</b>	Low-Income Stable
<b>CARE</b>	Cooperative for Assistance and Relief Everywhere	<b>LRRD</b>	Linking relief, rehabilitation and development
<b>CERF</b>	Central Emergency Response Fund	<b>NFI</b>	Non-Food Item
<b>CLTS</b>	Community Led Total Sanitation	<b>NGO</b>	Non-Governmental Organisation
<b>CSO</b>	Civil Society Organisation	<b>OCHA</b>	Office for the Coordination of Humanitarian Affairs
<b>DAC</b>	Development Assistance Committee	<b>ODA</b>	Official Development Assistance
<b>DFID</b>	Department for International Development	<b>ODI</b>	Overseas Development Institute
<b>DRC</b>	Democratic Republic of Congo	<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>FSM</b>	Faecal Sludge Management	<b>PEA</b>	Political Economy Analysis
<b>GTO</b>	German Toilet Organization	<b>PPP</b>	Public Private Partnership
<b>GWC</b>	Global WASH Cluster	<b>SDF</b>	Sustainable Development Goals
<b>HDN</b>	Humanitarian – Development Nexus	<b>SSI</b>	Sustainable Services Initiative
<b>HRP</b>	Humanitarian Response Plan	<b>SWA</b>	Sanitation and Water for All
<b>IASC</b>	Inter Agency Standing Committee	<b>WASH BAT</b>	WASH Bottleneck Analysis Tool
<b>IDP</b>	Internally Displaced Person	<b>WASH</b>	Water, Sanitation & Hygiene
<b>INGO</b>	International NGO	<b>WFG</b>	Water for Good
<b>JSR</b>	Joint Sector Review	<b>WHH</b>	Welthungerhilfe
<b>KPI</b>	Key Performance Indicator	<b>WSP</b>	Water & Sanitation Programme (World Bank)
<b>LCCA</b>	Life Cycle Costs Analysis		





### 3. CASE STUDIES OF APPLYING WASH SYSTEMS APPROACHES IN FRAGILE CONTEXTS

This section provides a selection of practical case studies from various organisations and from various fragile contexts. These have been written by the individual organisations themselves, and present not only what they did, but also their experiences and reflections in the process.

The selection of case studies that this paper presents was based on those suggested by the contributing authors, and while efforts were made to obtain contextual and thematic diversity, there was not a specific methodology for selection.

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# ACTION AGAINST HUNGERS RESPONSE TO WATER POINT FRAGILITY IN NORTHEASTERN NIGERIA

## CONTEXT

In Northeastern Nigeria, low levels of state services and limited community resources have been further depleted by 9 years of violent conflict: it is estimated that no less than 75% of the WASH infrastructure in the Northeast has been destroyed due to conflict (HNO 2017). According to the Humanitarian Needs Overview (HNO 2019) 3.6 million people require immediate assistance related to WASH. Action Against Hunger has been working in Yobe State since 2010, and Borno State since 2014. Our WASH interventions focus on enhancing access to sanitation, behaviour change and construction and rehabilitation of water supply schemes for IDPs and host communities. This case study describes how fragility is affecting sustainability in Northeast Nigeria, and how Action Against Hunger is adapting its approach.

## SERVICE AND SYSTEM ASSESSMENTS

Action Against Hunger has constructed and rehabilitated several hundred water points and trained water point user committees. These works were for communities with large numbers of Internally Displaced Persons (IDPs) and were completed with short-term

donor funding and almost no longer-term follow-up. Systematic institutional gaps within the Local Government Areas (LGAs) or at the State level were identified as an issue, but not addressed. In 2018 we revisited all 208 water points in both States (146 in Yobe State and 62 in Borno) in order to assess water point functionality, acceptance by communities and water user committees' capabilities to maintain them. The overall water point functionality rate was 84% (details in table below).

But behind this relatively high rate lie serious challenges which will almost certainly affect rural water supply in the medium-term. The Action Against Hunger survey was based upon Water Safety Checklists, Water Quality Analyses and Focus group discussions with users and WASH committees. The results indicated that low access to spare parts and well-trained mechanics are significant barriers to continuous functionality and is further hampered by the security situation. The water demand is directly impacted by the influx of new refugees, which affects the installations beyond normal wear and tear. Fuel availability and maintenance were clearly an issue for generator-powered systems, and therefore Action

Against Hunger decided to fully transition to solar power. However, water user committees of handpumps or solar systems also face serious (financial) challenges to operate the facilities, and several water points were found to be re-contaminated since they were handed over to local committees despite extensive training on maintenance.

All these issues prompted the team to look at the wider (institutional) environment and budget for a governance study to analyze the water supply system. Therefore in 2019 Action Against Hunger conducted a more thorough analysis of gaps and opportunities at national, State and local levels. The study identified a large number of diverse actors involved in the WASH sector, both with public and private sector entities. Although the State keeps the main responsibility for water resources management planning, Borno State does not have any legal framework relating to water resources management. In terms of public budgetary allocation, the low level of investment in the sector cannot match the rapid population growth. All stakeholders are requesting higher budgetary allocations to upgrade and rehabilitate and there is limited

		HANDPUMP	SUBMERSIBLE PUMP (Generator)	SUBMERSIBLE PUMP (Solar)	TOTAL
YOBE	Not functional	29% (n=2)	6% (n=2)	13% (n=13)	12% (n=17)
	Functional	71% (n=5)	94% (n= 34)	87% (n=90)	<b>88%</b> (n=129)
BORNO	Not functional	83% (n=5)	75% (n=3)	15% (n=8)	26%(n=16)
	Functional	17% (n=1)	25% (n=1)	85% (n=44)	<b>74%</b> (n=46)

**Table 1:** Functionality survey of Action Against Hunger water points. N refers to the sample size (e.g 5 hand pumps were functional in Yobe state)

<sup>1</sup>The WASH Governance Study objective was to inform the most appropriate ways for AAH to strengthen and/or assist local authorities and public institutions, in their respective domain of competence. The study consisted of: a. Analysis of the institutional and regulatory framework; b. Assessment of the capacity and political mobilization of existing institutional actors to ensure longer-term sustainability of the WASH interventions; c. Identify opportunities, interests, coordination mechanisms and synergies that stakeholders may have with AAH's WASH program in Borno





**ACTION  
AGAINST  
HUNGER**



PHOTOS BY SEBASTIEN DUJINDAM FOR AAH 2018

maintenance of water points. When works are completed urban supply schemes are prioritized due to political economy, inaccessibility and instability of rural LGAs. There is no mechanism to tap into domestic resources for WASH financing and a lack of cost recovery mechanisms. While the private sector is expected to play a growing role (per national and state level policy), it appears to be almost absent from sector coordination meetings in Borno State. On the other hand, the main WASH Governance stakeholders lack the understanding and skills of the private sector. There is also a lack of a WASH accountability, and the level of monitoring and evaluation in the sector is weak.

### **ACTION AGAINST HUNGER'S RESPONSE TO DELIVER MORE SUSTAINABLE SERVICES**

The water point review allowed Action Against Hunger to assess functionality and lead to a focus on system strengthening approaches. Action Against Hunger has adapted its approach focused around the 'building blocks'.<sup>2</sup>

At the monitoring level, Action Against Hunger is now mapping all its past and current water points to develop an asset database in mWater and enable the continued monitoring of functionality.

At the institutional level and following the Governance study recommendation Action Against Hunger is trying to facilitate an open-ended inter-ministerial Water Governance Roundtable in Borno State, including key public agencies, LGA representation



and a series of observers (civil society organizations, development partners and the private sector). This would be used as a hub to gradually review the status of the WASH system's building blocks. In addition, Action Against Hunger is committed to prepare a capacity building plan with LGAs, the Rural Water Supply and Sanitation Agency (RUWASSA) and the Borno State Environmental Protection Agency (BOSEPA) to address the identified gaps and challenges, with a focus on regular water quality monitoring, complete water point mapping and surveying, and longer-term support to water user committees on operation and maintenance. Finally, Action Against Hunger has an advocacy project including exchange visits between WASH Boards to support local government's role in supporting and overseeing WASH services in Yobe.

At the resource level, Action Against Hunger is finalizing a groundwater assessment with the objectives to develop a comprehensive monitoring plan for groundwater in Northeastern Nigeria to support sustainable groundwater abstraction in the longer term. This was developed in response to the findings of the functionality study (several dry boreholes (affecting 4 out of 13 hand pumps in table above) and bilateral discussion with an international donor. The assessment consists of the compilation of all data sources into a GIS system, an analysis of the geology and development of a simplistic conception model, and the development of monitoring plan.

<sup>2</sup>Using the nine building block framework used by IRC



# THE “ECONOMIC APPROACH”: LIFE-CYCLE COSTING IN A FRAGILE CONTEXT DEMOCRATIC REPUBLIC OF THE CONGO

## WASH SYSTEMS AND THE DRC WASH CONSORTIUM

DRC is a fragile state: vast, poor, and socio-politically unstable, where rapid-onset crises compound chronic developmental issues. It is more often a site of emergency interventions than development work. While strong national and local WASH systems are a long way off, the need for WASH services is immediate and ongoing. In this context, the DRC WASH Consortium (2013–2019) was led by Concern Worldwide with ACF, ACTED, CRS, Solidarités International, and funded by UK Aid, benefitting 656,000 people in 612 communities across 7 provinces. The Consortium worked to strengthen different parts of the WASH system – local and national government, private sector, and other actors – while emphasising working with communities systems to be as self-sufficient as possible. This self-sufficiency focus was designed to build long-term community leadership with minimal external support.

## THE “ECONOMIC APPROACH” FOR 3 LEVELS OF FINANCIAL SELF- SUFFICIENCY

The “Economic Approach” was developed as a way for WASH Management Committees to take ownership of their WASH services, by preparing them to take on the ongoing technical and management costs of maintaining their water point. These costs were presented as 3 defined levels of financial self-sufficiency: Level 1, covering ongoing operations and minor maintenance of the water point; Level 2 which factors in future major repair costs; and Level 3 which also prepares for full rehabilitation of the water point at the end of its life-cycle.

## BUSINESS PLANS BALANCING COSTS WITH REVENUES

WASH Management Committees developed business plans with strategies for revenue streams to cover these costs. Most collected contributions from households – fixed monthly fees, or payments on volume of water used. Often, they chose to offer exemptions to the most vulnerable households. Many committees also set up small commercial activities to support the management of the water point, creating additional revenue without over-burdening household finances. In all cases, they measured their success against the 3 Levels of financial self-sufficiency at the centre of the Economic Approach.

## LIFE-CYCLE COSTING SUSTAINING SERVICES

When the approach was designed, there was no precedent in DRC showing whether life-cycle costing would work in such a fragile context. However, a full two thirds of communities supported by the Consortium reached financial self-sufficiency. Others had revenue streams in place but hadn’t yet reached a defined level of financial self-sufficiency. This result was even stronger in communities which diversified revenue sources, and undiminished when communities offered exemptions from payments for the most vulnerable. Analysis showed similar results irrespective of community demographic composition or economic status. This suggests that the approach of promoting self-reliance was appropriate to the levels of vulnerability present and to communities’ coping mechanisms. Results also seem promising in the longer term. Revisiting a sample of communities two years after the intervention showed 89% of water points were still in use, and most were still managed by a committee collecting funds.





### **STRENGTHENING SYSTEMS IN A FRAGILE CONTEXT**

Working in a fragile state, the DRC WASH Consortium found systems we could build and strengthen in communities. Development actors, even in fragile contexts, can successfully design and implement WASH interventions to focus on longer-term services and not only short-term achievements. Adopting the life-cycle cost approach, or variations of it, is feasible even in a fragile context like rural DRC, and shows an example of how development actors can work towards longer-term services by strengthening systems.

# STRENGTHENING WASH SYSTEMS IN SOMALILAND: AN EXAMPLE FROM WELTHUNGERHILFE'S SUSTAINABLE SERVICES INITIATIVE

## CONTEXT/ RATIONALE

The Republic of Somaliland is a self-declared state, internationally considered to be an autonomous region of Somalia, with a population of around 4 million. It is semi-arid, drought prone, and is recovering from a civil war, which ran from 1988–1991. It is environmentally and economically fragile, with the Somaliland shilling often affected by inflation. Somaliland is relatively more secure than its conflict-affected neighbour (Somalia), however the sector is relatively 'projectised' and 'humanitarian' in nature, with sector coordination falling within the wider Somalia WASH Cluster, and with cyclical humanitarian responses to droughts, which undermine longer-term strategic planning and development activities in the WASH sector.

The capacity and recurrent budgets of the Ministry of Water Development (MoWRD) and Ministry of Health Development (MoHD) is very low, particularly at the regional and district levels. Water-related policy and governance legislation has, for over a decade, promoted decentralisation, however in the water sector, this been slow to materialise. In the context of relatively limited government capacity and other contextual factors, NGOs and development partners, have become accustomed to designing and delivering programmes directly themselves, often with only tokenistic involvement of central and local government structures. This, and the projectized approach to WASH programming, is failing to build and strengthen the systems that are needed to move Somaliland from cyclical humanitarian responses, to longer-term development programming, and sustainability of services<sup>1</sup>.

## AIM OF THE PROJECT/ INTERVENTION:

As part of a wider (global) initiative of WHH, WHH introduced the Sustainable Services Initiative (SSI)<sup>2</sup> to Somaliland in 2019. The objectives of this are to strengthen and evolve the programming that WHH does in Somaliland to maximise the sustainability prospects they have, and; to help WHH to have a more catalytic impact on strengthening sustainability of WASH services across the country, by engaging in broader systems strengthening.

## THE INTERVENTION:

To kick this off, WHH's technical partner, Aguaconsult, undertook an in-country mission in April 2019. This included a participatory review of WHH Somaliland's project activities, leading to a series of recommendations on how they could adapt their programming<sup>3</sup>.

In this first visit, a sector-level workshop was also held, which sought to engage key stakeholders on discussing sustainability issues, review the status of the WASH system (through

a building block analysis process), and to identify actions that should be undertaken (some of which to be supported by WHH) to address areas of systemic weakness.

A second in-country visit was undertaken in February 2020, which included national and regional-level systems strengthening workshops. In the national workshop, the systemic gaps identified in the 2019 workshop were re-appraised, progress to past workshop actions reviewed, and new actions identified. One key outcome of this workshop was the agreement to establish a sector-level Systems Strengthening Task Force – a sub-group of the Sector Working Group – to be led by MoWRD (with close support from WHH and other actors like UNICEF and CARE), who would be mandated to operationalise and report-back on the agreed workshop outcomes. Another was to 'pilot decentralisation' and regional-level systems strengthening in two of the five regions, with WHH offering to support the process in Awdal, and CARE supporting Togdheer, and for these 'pilot' regions to allow testing of wider frameworks developed at national level (e.g. monitoring frameworks) before upscaling.

**Figure 1:**  
Building block scores for various regions in Somaliland (scoring done by participants)

	INSTITUTIONS	FINANCE	SDM INFRASTRUCTURE	REGULATION & ACCOUNTABILITY	MONITORING	WATER RESOURCES MANAGEMENT	PLANNING	LEARNING & ADAPTION	TOTAL SCORE
SCORE (EASTERN REGIONS)	8	1	3	4	3	3	3	1	26
SCORE (MARODIJEH)	5	4	3	5	2	3	2	2	26
SCORE (AWDALL)	9	2	5	2	2	6	3	1	30

<sup>1</sup>Available data suggests that access to improved water sources stands at just 42% (22.5% in rural areas) (MoPND 2016), and a Somaliland-wide survey of water points by FAO/SWALIM found functionality rates of rural water schemes of around 50%.

<sup>2</sup>The Sustainable Services Initiative (SSI) is an internal initiative of Welthungerhilfe (WHH), supported technically by the German Toilet Organisation and Aguaconsult. It seeks to strengthen WHH's capacity to implement sustainable WASH programming, and also aims to contribute to the global sector debate on systems strengthening. It provided funding for the development of this fragility paper.

<sup>3</sup>These included, for example: developing a more meaningful relationship with government at national and regional levels, and involving them across the programme cycle; seeking to institutionalise project activities and structures within government-recognised structures (such as linking hygiene promoters to local health centers); and making the capacity development package provided to small town water supply service providers more comprehensive, covering aspects such as financial management, accountability, and non-revenue water management.

# Sustainable Services Initiative



German  
Toilet  
Organization



A regional-level workshop was also held in Awdal Region, to review the strength of the system at that level, identify actions to strengthen it, and discuss how some of the national-level systems strengthening action points could be operationalised at the regional level.

**A summary of the agreed outcomes of the 2020 workshops is presented below:**

## NATIONAL LEVEL AGREED OUTCOMES

- » Deepen decentralisation through functional/fiscal transfer, and using 1-2 regions as 'testing grounds'
- » Establish a 'Systems Strengthening Task Force', and create online library of key documents
- » Develop WASH services (and infrastructure) ongoing monitoring framework, with process for ongoing updating the asset inventory
- » Register all water service providers, strengthen mechanisms for ongoing support, and for service regulation

## REGIONAL LEVEL AGREED OUTCOMES

- » Establishing MoWRD-led WASH coordination and learning platform, with strong linkage to national working group
- » Strengthening functional capacity of MoWRD (and MoHD) at regional level to fulfil their defined mandates
- » Establishing and operationalising post-project ongoing monitoring process
- » KPI setting, capacity building, regulation and performance monitoring of all urban water service providers in region
- » Legally registering and ongoing building capacity for rural water committees

Following these workshops, WHH identified the clear need to take a collaborative approach, developing strategic partnerships, to help the government and wider sector to drive forward these actions. A series of meetings were held with key sector-level stakeholders, such as UNICEF, CARE, MoWRD and MOH. Follow-up meetings were held wherein these external agencies supported MoWRD and MOH focal persons to present these outcomes to their Ministers, to ensure wider (political) buy-in not only for the strengthening of the system, but also for the decentralisation that operationalising these outcomes would require.

### THE RESULTS:

Whilst there have already been significant shifts in the modus operandi of WHH WASH programming in Somaliland, following recommendations of the first visit, it is still very early in the process to talk of 'results' regarding the national and regional level systems strengthening work. However, at this early stage, the process has already helped broaden the perspectives of many stakeholders in the WASH sector in Somaliland (on sustainability issues), gained the interest of the (Somaliland) WASH Cluster, and has significant interest from and backing from MoWRD at the national and regional levels.

### LESSONS LEARNED:

- » No single entity (e.g. WHH) can address all systemic issues. Strategic partnerships with influential sector actors (in this case CARE and UNICEF) are essential to have a consolidated voice to Government. Undertaking joint analysis and co-defining action plans with such partners helps align organisations behind a common vision.

**Figure 2: Sector participants in a systems strengthening workshop in Hargeisa in February 2020, identifying priority actions to strengthen different 'building blocks' (credit -Will Tillett)**

- » Institutional (government) commitment key, but in a fragile context with weak capacity and regularly changing Ministers, the success and progress can be down to individual personalities in Government, which is vulnerable to risks of staff turnover.
- » Fragility and periodic humanitarian activities can cause discontinuity in longer-term efforts. Institutionalising the systems Task Force as a sub-group reporting to the WASH Cluster is strategic to strengthen humanitarian-development nexus. The linkage will likely also help in the future process of trying to align NGO actors to emerging government-led processes, such as a sector-wide monitoring framework.
- » Undertaking systems analysis in fragile contexts reveals a huge number of issues, which can be overwhelming! There is a need to prioritise issues, and distil to a number of manageable actions within a first year, and identify 'low hanging fruits'<sup>4</sup>.
- » Advocating for decentralisation, particularly in resource-poor settings, and particularly decentralisation of water-related functions especially in a water-scarce country, can be challenging.



<sup>4</sup>In this case, there had just been a nationwide water point asset inventory survey undertaken, so it was timely to use the question of 'how to update this data though monitoring?' as an entry point to for systems strengthening, focussing on the 'monitoring' building block, which is very weak in Somaliland.

# STRUCTURING, PLANNING AND MANAGEMENT OF THE WATER SECTOR IN ITURI, DR CONGO

AUTHORS: HARALD VAN DER HOEK, LIEVEN PEETERS

## DRINKING WATER MANAGEMENT IS NEGATIVELY IMPACTED BY FRAGILITY

The Province of Ituri, since 2015 recognised as a separate Province in DR Congo, is characterised by several aspects of fragility: a weak central government, nascent decentralisation combined with limited resources and capacities, a multiplicity of laws and institutions with often overlapping and sometimes conflicting mandates, weak or absent financial institutions, frequent flaring up of violence, internal and cross-border population displacements and since 2018, the Ebola epidemic. In this context, civil society and faith-based organisations have taken up a key role in basic service provision and the defence of the population's rights. For more than 30 years, Join For Water and its local partner NGO CIDRI<sup>1</sup> have been constructing piped water supply systems and supported their Community based Management Committees (CMCs), thus providing sustained access to more than 500,000 people. The CMCs are autonomous structures, whose members are accountable to and elected by the community, that manage the operation and maintenance of the water supply systems, some of them for more than 30 years.

## THE SAGE PROCESS AS AN ANSWER

The CMCs have played a tremendous part in the maintenance and functionality of water systems in a very difficult context with initial support from CIDRI, but often needing permanent support to improve and professionalise the management of their water systems. The newly installed SAGE platform is a means to provide this support and stimulate exchange and learning between CMCs. SAGE as an umbrella organisation composed of CMCs that on one hand supports them in professional management and on the other hand represents them in the water sector group. Support is given to the CMCs in financial and technical management and a warehouse is operated and managed for committees to buy spare parts. In December 2015 a new national water law was approved, which provides for the first time a comprehensive legislative reference and lays down the rules of responsibility for the public service of water and sanitation and the transfer of water supply services to the provincial and local administration. Its principles now offer clarity on the roles of all stakeholders, how to bring the CMCs into compliance, by applying for a civil society organisation status<sup>2</sup>, and provides a legal context on how to establish and recognise this SAGE platform.

Representation in the water sector group has been important to not only influence provincial decision making, since the sector group ultimately answers to the governor, but discuss issues relating to governance and sustainability beyond the direct programme with different and important stakeholders.

## ASSESSMENT, SECTOR STRUCTURING, CAPACITY BUILDING

The EU-funded SAGE project implemented in Ituri by Join For Water and CIDRI between 2014 and 2019 aimed at creating the umbrella organisation SAGE for the CMCs and the provincial water sector group composed of provincial and local authorities, state services, international and national NGOs, civil society and faith-based organisations, and media, who would design and oversee the implementation of the provincial WASH strategy. At the beginning of this process, an assessment of all drinking water points in the whole Province was executed by CIDRI with help from Join For Water and supervised by the WASH sector group, and served as an instrument for identifying priorities in capacity support to CMCs and to develop the Provincial WASH sector plan. This WASH sector plan for the Ituri Province is the first of its kind in DR Congo and provides strategic orientations for decision makers to improve sustainable, inclusive access to drinking water.

CMCs' technical, financial and administrative capacities were strengthened, and a reference manual was developed that helps them and their umbrella SAGE to improve management. To improve the water service, a professionalisation fund was set up within SAGE<sup>3</sup>, to which CMCs could submit their own proposals. During the project, two new piped water supply systems were built in areas where high population pressure had brought severe difficulties for the proper functioning of existing water supply schemes. The most common investment was to construct a kiosk, hosting a number of taps, operated by an individual working on commission.

<sup>1</sup>CIDRI = Centre d'Initiation au Développement Rural en Ituri

<sup>2</sup>The national water law allows for community management of water supply systems on the condition that the committees apply to be recognised as civil society organisations, having statutes, internal regulations, general assembly and governing board

<sup>3</sup>This was mainly set up to access infrastructure investments, e.g. the construction of water kiosks that allow for partnerships with private operators, who manage those kiosks by selling water at a tariff determined by the CMC, but can further increase their income by selling other consumables.



# Join For Water

COMMUNITY  
MANAGEMENT  
COMMITTEE OF  
"KPANDROMA"  
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A multi-stakeholder approach was used, and a steering committee was put in place, uniting representatives of provincial and local authorities, deconcentrated state services, civil society, church and media.

## UNINTENDED EFFECTS

The new water law foresees for CMCs to develop their own constitution and legal structures. During their existence several CMCs were dependent of other legal entities, such as faith-based organisations, and this new situation created the dilemma for them to either go fully independent or stay linked with these entities (whom often also showed a rather protective response, because for them the management of a drinking water scheme is a profitable business).

The population itself, led by the CMCs united in SAGE showed real ownership and determination when obstacles would occur. Coordinating under this representative umbrella not only helps in coordination but gives them a legal platform to participate and influence provincial discussions. For example, when exemptions for import of materials delayed and disputes over ownership of water sources occurred, they put pressure on the provincial Governor to overturn this situation.

As the process evolved the interaction and engagement created new dynamics and brought actors closer together. This change of mentality of the actors is perhaps the most promising result, on which other actions in the future can be built.

Interest among CMCs for the professionalisation fund was high, but not all projects could be awarded. This created disappointment and extra efforts were needed to ensure the engagement of all CMCs.

## LESSONS LEARNED

The collaboration between different type of actors in the WASH sector group was a rather new experience in this context. At the starting point there was a certain level of mistrust towards authorities, who had a reputation of being notoriously corrupt, but as the process evolved the interaction and engagement created new dynamics and brought actors closer together. This change of mentality of the actors, either being CMCs joining SAGE or different stakeholders united in the WASH sector group, overcoming mistrust from the past and building mutual respect and willingness to cooperate, is perhaps the most promising result, on which other actions in the future can be built.

Most CMCs took the initiative to reorganise according to the new law, even if they had affiliated with other legal entities in the past. Other CMCs remained cautious and opted to monitor the evolution before making a final choice.

A process focussing only on structuring of the water sector would have been too theoretical and abstract for the CMCs. Therefore, the investments in infrastructure alongside the other steps taken motivated the CMCs to fully participate in the process and the creation of the SAGE.

The creation of SAGE is a long process which is not yet finished. Although the structure exists and its constitution has been legally registered, it cannot yet function fully autonomously. Support, regressive over time, by a third organisation will still be necessary.

# DEVELOPMENT OF FAECAL SLUDGE MANAGEMENT IN TAMATAVE, MADAGASCAR

AUTHORS: HARALD VAN DER HOEK, FRANCESCA ROSSI

## GENERAL CONTEXT

Madagascar has been plagued by political and resulting economic crises since its independence. This has led to the destruction of its socio-economic-political fabric. The situation was exacerbated by two consecutive coups in the early 2000s. Although there are some improvements since 2010, politics are dominated by an urban elite fending for its own interest instead of alleviating the plight of the population, corruption is rampant and environmental degradation occurs at alarming rates. Madagascar is among the poorest countries in the world with 75% of the population living on less than \$1.90 per day (in purchasing power parity). The country's human capital index ranking is among the lowest worldwide and Madagascar has the world's fourth highest rate of chronic malnutrition (World Bank, 2019). By 2030, Madagascar may be one of four fragile countries, where the extreme poor will be mostly concentrated, the other three being Nigeria, DR Congo and Tanzania (OECD, 2018). Madagascar is one of the African countries most severely affected by climate change impacts and experiences an average of 3 cyclones per year (World Bank, 2019).

Although legislation and policies have been put in place during the last 20 years, the decentralisation process is hardly advancing. Bearing the responsibility for providing access to drinking water and sanitation services, municipalities have scant resources to execute their tasks. The development of the private sector and public services continues to be hampered by the strong involvement of the urban elite in the actions of already weak state institutions. Small and medium enterprises face multiple challenges that are particularly hard to overcome because of their size. Among these challenges are a lack of assets or asset destruction, a lack of infrastructure, macroeconomic instability, weak public institutions, complex land ownership rights, corruption, and security. SMEs also have trouble accessing credit. Local authorities and institutions face difficulties in mobilising financing and domestic resources leaving them

chronically underfunded. This is further complicated by low levels of absorption capacity at their level (OECD, 2018).

## THE WASH SECTOR

According to the 2017 JMP report, in 2015, basic access to drinking water was 51%, below the Sub-Saharan average of 55%. For sanitation the situation was even bleaker, over the last 15 years open defecation rate has been on the increase. Access to basic sanitation was less than 17% in urban areas in 2015. 70% of diseases in Madagascar come from consumption of unsuitable water and lack of hygiene. As a result, there are 3.5 million missed school days a year. A recent World Bank study (October 2019) showed that \$ 174 million are lost annually because of the lack of adequate sanitation services.

## TAMATAVE AND ITS SANITATION SITUATION

Tamatave is Madagascar's second city, with a population of more than 300,000. Join For Water started its activities in 2006 by improving the access to hygienic family latrines for disadvantaged households. It is not only a matter of building toilets but of working on the whole FSM chain – access to the toilet, disposal of excreta and treatment before returning to the natural environment – and this issue translates into a sanitary challenge for the city. Tamatave having sandy soil and a high groundwater table, deep pits are not an option and toilets need to be emptied frequently, and rather than dumping its faecal sludge the city must treat it. The treatment is important because 50% of the population (for lack of service from the drinking water system) draws on the groundwater not only for its domestic activities but also for its drinking water.

In Tamatave the density of the habitat represents a challenge to carry out emptying. Drainage trucks often cannot access latrines (especially the 'tinettes' = buried oil barrels) because of the narrow lanes and distance to roads in some areas of the city. In these cases, it is observed that households out of necessity ended up burying the sludge

in yards. These practices are disastrous from a health and environmental point of view because the superficial disposal without treatment is at risk of dispersion by heavy rains.

## EMPTYING SERVICE AND TREATMENT PLANT

**FSM was confronted with two main challenges:**

- » **Socioeconomic:** The main objective was to create an emptying service also accessible to the low income families. Due to the extreme and chronic poverty, the financial resources of most clients are limited. Also the institutional and legal constraints for using an emptying service is low (no legal framework from the local government and therefore the traditional emptying (meaning emptying in own garden) is tolerated). There is also a cultural taboo around sludge and its visible handling (most traditional emptying is done in a hidden way).
- » **Technical:** disordered urbanisation, urban density and narrow and poorly maintained roads sometimes make it difficult to access family latrines of different and often defective types. Sludge is often undigested and difficult to extract.

During a two-year action-research phase Join For Water tested different alternatives to offer an adapted and affordable service: for example a rickshaw and wheel cart with a gulper hand pump and collection points for 15 gallon containers was not viable; the service that seemed to be the most sensible is a combination of manual emptying and hand/mechanical pumping with mechanised transport (depending on accessibility, a motor cultivator with a 1 T trailer or a tractor with a 5 T trailer or a 4 m3 slurry tanker are used.) Considering the cultural sensibility a lot of effort was put into promotion and visualisation of the service showing the professional behaviour of the emptying operators (adapted equipment and protective clothing).



# Join For Water

After the test phase, Join For Water helped to incubate a local entrepreneur (constructor of toilets) to set up the private emptying service, Clean Impact, between 2016 and 2018 with the ambition of achieving universal access to the service and innovation by proposing a solution for all the milestones of the sector – whatever the type of habitat and latrines – and as part of an experimental approach with CNEAGR<sup>1</sup> to develop a simple and low-cost treatment technique, planted humification beds, that can potentially receive 8% of the city's sludge. The city council participated in the treatment technology choice and the design of the emptying service and facilitated the process, provided office space for Clean Impact and the land for the treatment plant. This was largely due to the personal interest of the local Director of Urbanisation. Twenty years before, the local authority had been running a sludge service directly, which they were not able to maintain. Therefore there was an interest in setting up a private service since the city council did not want to run the service by themselves. The local government is owner of the treatment plant and the approved emptying service provider pays an annual fee (1000 €) for its use, which allows the technical department of Tamatave to follow up the emptying service. Join For Water invested in emptying and transport equipment and construction of the treatment plant. At first, the equipment was loaned to Clean Impact (the company had to set aside depreciation costs), but when in 2018 Join For Water closed its activities in Madagascar the assets were transferred to the company.

Clean Impact collected after 2 years of activity around 700m<sup>3</sup> of sludge per year serving 12,500 people, and obtained a profit margin of 3% showing vulnerability to operational perturbations and external shocks: half of the clients are low income families and the emptying service is one of the first activities that will be cancelled when in need for money. Since the service does not have the capacity to serve the whole population and the local government has not been able to develop a legal framework, traditional emptying is still tolerated.

To improve rentability Join For Water added in 2019 a slurry tanker to the equipment in order to be able to serve bigger clients and to assure a continuing activity and income. This has increased the collected sludge volume by +57% (from 700 m<sup>3</sup> to 1100 m<sup>3</sup> in 2019) and resulted in a profit margin of 6.3%. The city council has handed over the

management of the treatment plant to Clean Impact, that has interest to ensure the quality of the sludge to protect the plants. The sludge emptying service is regulated on 3 levels: the company is authorised by the regional government to work in Tamatave; an environmental permit from the national environmental organisation for the local authority and a service delegation contract between the city council and the company. Treated sludge sample analysis showed a diminution of helminth eggs: disinfection is on average 85% on all layers of humus (after 2 years or 2/3 of planned treatment period) and volume reduction is 82–87%. A further rest for 6 months outside the beds assures a safe use in agriculture. However cultural resistance for its use remains high. Actually, the treatment basins are not yet filled (filling is at a much slower rate than planned – transformation in the basins is much higher than estimated) but the end product will be used in the parks and green areas of the city. There has also been contact with a nearby soap factory (using palm oil from their own palm plantation) for the treated sludge to be used as fertiliser. However, they ask for a safety certification that no institute delivers in Madagascar (since the treatment plant is the first of its kind in Madagascar the legal framework is not yet developed).

## LESSONS LEARNED

The market for FSM exists for all types of latrines, and a profitable operation can be built, though many challenges remain:

- » Management of Clean Impact needs to be further strengthened;
  - » Regulation is lacking (latrine type, emptying conditions, treatment) and, if put in place, local authorities need to be assisted in implementing;
  - » Subsidy is needed for the lowest class, which is most difficult and expensive to serve: this has been achieved using standardised tariffs: the low income families have a 20% discount for emptying 200 l (equivalent to a “tINETTE”) although in reality the emptying cost is estimated as double of the normal fee of 24 euros. On the other hand, investments were made to enhance productivity in emptying for the bigger customers allowing the real cost to be a lot lower than the normal fee charged. This has allowed to assure access to the service for the low income families (around 50% of the actual clients). Clean Impact could be tempted to increase its profit margins by abandoning its service to low
- income families. However, besides its own commitment to serve these families, it is also conditioned in their agreement with the city council which monitors compliance;
- » Initial investment is a constraint for start-ups and they have trouble accessing credit, thus needing external support. By incubating a new enterprise, it is protected from initial financial risks and by incorporating depreciation in the business model, it can replace equipment in the future. Extending this pilot to the rest of Tamatave would require considerable investment again in emptying and transport equipment, and treatment facilities. It is not realistic to assume that Clean Impact or local authorities would have the resources to invest and external support would be necessary;
  - » Local authorities are chronically underfunded and have insufficient technical capacities to operate the treatment plant. Its lease to Clean Impact, has improved the management of the treatment plant and provided the necessary funding to the local authorities to monitor Clean Impact's performance;
  - » Clean Impact's long-term presence and financial sustainability with a significant volume of business and market share might be ensured by:
  - » A project linking it to the city council for the collection of solid waste increasing Clean Impact's revenue. The city council will then have to reflect on how to finance this new sector and lay the foundations of a municipal tax that will lead to investments for liquid and solid sanitation to increase impact in the sanitation of the city;
  - » The operator could market a watertight pit latrine that would facilitate hygienic emptying;
  - » Extra investment in equipment (for emptying service) and treatment capacity;
  - » Acceptance of local government and potential users of biosolids produced in the treatment plant to be developed to increase revenue for Clean Impact.

<sup>1</sup>Centre National de l'Eau, de l'Assainissement et du Génie Rural



# SUSTAINABLE SANITATION FOR DISPLACED AND HOST POPULATIONS IN MYANMAR

## CONTEXT/RATIONALE:

Faecal Sludge Management (FSM) service provision only exists in the two main cities of Yangon and Mandalay; this has left people in townships across the country reliant on concrete-lined pits or septic tanks. In two areas, Waingmaw and Myityina, the sanitation situation was an issue for two populations – Internally Displaced People (IDPs) living in long term camps, and people in Myityina and Waingmaw townships. Following set-up of the camps, NGOs had established a sustainable sanitation system of desludging, recognising the long-term nature of the camp. However, this service was only available to those living in the camps and, by nature, was free of charge and therefore reliant on short-term donor funding. This difference in service offering caused tensions between IDPs and the township.

Oxfam assessed the sanitation needs, both immediate and future, in the two townships looking at the needs of households, businesses, schools and health centres. It was found that desludging services were required by 90% of the population in Waingmaw and 75% in Myityina. The extent of the needs was based on an average sludge accumulation rate of 40 litres per person per year. This would mean that the Township Development Authority (TDA) would have to desludge over 2,000 truckloads (7m<sup>3</sup>) per year, equivalent to 167 truckloads per month and almost six per day. In contrast, the TDA had one functional 7m<sup>3</sup> truck which undertook up to four trips per day, making current capacity around one third of the future demand requirement – all requiring safe disposal.

Neither population had access to an inclusive sustainable system that could grow with the population demands over the next ten years. Oxfam decided to explore a programme that looked at an affordable and expanded sanitation service providing faecal sludge management to both populations. The need to engage with the TDA was the initial priority, to enable their buy-in and agreement to take ownership of the planning and service provision for the future. Using the demand needs

and economic analysis, Oxfam held discussions with the TDA to share with them the potential in running an affordable system, generating revenue whilst incorporating health and safety policies, proper waste disposal and efficient operations.

The approaches planned would represent an innovation in the context of Myanmar, where no State authorities currently have such systems and where such approaches have not previously been used.

## THE INTERVENTION:

A significant portion of the programme involved advocacy and influencing of the TDA to prioritise investments in sanitation, managing an efficient and safe service at an affordable price. To demonstrate the potential, an exposure visit was arranged to a municipality in Bangkok that had set up and managed a provisional sanitation service. The trip was a success.

The advocacy work undertaken was based on analysis that Oxfam and Ernst and Young provided, having collected information on immediate and future needs, the economic profiles of those that would use the service and the cost benefit analysis of a functioning and safe sanitation service. The ambition was to develop a sanitation service delivery model based on commercial approaches, cost reflective tariffs and targeted subsidies to ensure inclusion.

To achieve this, several issues were identified. Firstly, how to effectively support the construction of a treatment plant for safe disposal of the faecal waste, which had traditionally been dumped in areas outside the township. Budgets by TDAs were created on a yearly basis and so a modular plan was developed that allowed for expansion and construction to be implemented in stages. Secondly, understanding the skill set and needs across the TDA meant technical support was required. A desludging technical working group was established with the municipality and WASH cluster (UNICEF), also involving all NGOs delivering desludging services to IDP camps. This group provided technical support and momentum to the

plans and ensured that needs across the two contexts were balanced. Thirdly, a tiered pricing system was discussed and agreed that considered the economic status and potential of the different users. This pricing acknowledged the difference between pits and septic tanks, households and businesses, and provided a subsidy model for the poorest.

## THE RESULTS:

Progress to date has shown that in Myitkyina it is financially viable to run an improved and sustainable service. Practical changes that do not require a new budget, such as health and safety and Standard Operating Procedures (SOPs) have already been implemented.

Health and safety training for desludging workers was jointly organised with the TDA and included participation from several other government departments (including Occupational Health). This has led to a shift in how workers carry out desludging, with protective equipment now being worn and good practice protocols mostly followed. To formalise such practices, a workshop on the SOPs was held with the municipality and Ministry of Health where they were guided to self-create FSM guidance, which does not currently exist for any municipalities in Myanmar but that is common practice in other countries. Additionally, a feedback system has been introduced whereby households receiving desludging services from the TDA complete a feedback card including questions on price, professionalism and safety, and leave it in a sealed box on the desludging truck for later review.

The advocacy work raised the importance of sanitation within the TDA. As a result, various aspects of the system were understood and therefore adopted. This included understanding the market and financing mechanisms for an affordable and economically sound service, and professionalising the process including the role of regulation and accountability and planning within the budgetary cycles.



OXFAM

Despite the increase in importance, the pricing model has not changed. This is largely due to individuals benefiting from the status quo. However, despite this, Myitkyina is likely the most advanced township in Myanmar now in relation to awareness and thinking on FSM issues, and sets an example for other townships.

### LESSONS LEARNT:

FSM services for IDPs and the township has increased in importance and is now seen as a priority area requiring investment and change. This shift is the result of a long and trusted relationship between the TDA and Oxfam, and the support of the technical committee run by UNICEF. The analysis provided the basis for discussions, showing that FSM could be profitable and affordable, safely managed, inclusive and sustainable.

Understanding and working with the different motivations of the stakeholders was important. For the TDA, the motivation in revenue generation while ensuring an inclusive service was of interest. For the people that ran the service, the approach increased the respect they received as the service was more reliable and it guaranteed a safer working environment.

Working with partners from Ernst and Young as well as NGOs and UNICEF helped to keep momentum in the project and provide the technical evidence and support for the plans. Working with Ernst and Young specifically gave gravitas to the economic analysis that was presented to the TDA. Working with UNICEF provided the project a boost both technically and in reach by broadening out the discussions beyond one organisation to a wider group.

The exposure visit to Bangkok was particularly effective as an advocacy and influencing tool – this showed the TDA what was possible, demonstrating the ambition. Advocacy was also a key component of the approach as sustainability rested in the TDA's ability and willingness to lead and own the outcomes.

The programme, however, did not manage to unpick all of the vested interests in the service as it stood. Financial sustainability and success do require transparency and accountable

budgeting, though a number of different people and groups currently benefit from the status quo and the time and dedication needed to address and reform this was beyond the life of the programme as funded. This challenge is a key hurdle to achieving the ambition of an affordable, inclusive, revenue generating and safe FSM service.

A final lesson of the process was to understand the levels within which budget decisions were taken, since the TDA are reliant upon those higher up in power to allocate budgets. Advocacy and influencing of these actors was, and will continue to be, key to ensuring that investment is allocated for improvements, such as for the treatment plant and additional disposal trucks.

# ALTERNATIVE MANAGEMENT MODELS AND SYSTEMS STRENGTHENING IN HUMANITARIAN SETTINGS- UGANDA

Globally there are 20.4 M refugees within UNHCR's mandate and the majority (78%) are in protracted situations of five years or more with some displacements lasting over forty years<sup>1</sup>. Recognizing this reality UNHCR and its partners are looking to shift as quickly as possible from humanitarian relief to development programming. This approach is in alignment with the Global Compact for Refugees and Comprehensive Refugee Response Framework which has objectives of easing pressure on the host communities and enhancing refugee self-reliance. Within the WASH sector this shift requires reevaluating the service delivery models that are applied. During acute emergency phases UNHCR and partners focus on providing life-saving support-often through costly and temporary infrastructure or services (e.g. water trucking, community latrines), targeting sphere standards, and working through international NGOs and donors. As time passes the objective is to evolve to cost effective and sustainable services linked to durable infrastructure and higher

service levels (e.g. national standards) provided through locally appropriate service delivery models. Considerable achievements in making the transition from humanitarian to development programming have been made in Uganda.

In the last three years over one million refugees have fled to Uganda, making it the third largest refugee-hosting country in the world<sup>2</sup>. The Government of Uganda has been very progressive in its response to these challenges and in March 2017, issued a declaration reaffirming Uganda's commitment to promote refugee self-reliance and inclusion in the country's development planning. This represents a fundamental shift in approach to service delivery to refugee settlements, linking the traditional humanitarian response to long-term development. For WASH this means transitioning from the conventional service delivery approach to one that includes the governance and institutional structures and operating policies and procedures used by the Ugandan water authorities. The aim of

this transition is to ensure that the basic human rights to water and sanitation are met for refugees and individuals in the communities that host them, while at the same time understanding the right to work and pay for additional quantity of water for productive uses.<sup>3</sup>

## ALTERNATIVE SERVICE DELIVERY MODELS FOR REFUGEE SETTLEMENTS:

WASH services in refugee camps and settlements are currently managed by UNHCR and its partners, but under this approach will be transitioned to the either the National Water and Sewerage Corporation or one of the 6 Umbrella Authorities for Water and Sanitation. Both the NWSC and the Umbrella Authorities operate under a performance contract with the Ministry of Water and Environment (MWE), receiving technical and financial support from MWE. Financial support comes in the form of subsidies to expand coverage, particularly in areas with underdeveloped commercial markets. The table<sup>4</sup> summarizes the

	UMBRELLA AUTHORITIES	NWSC
<b>FORM</b>	private companies	government parastatal
<b>GOVERNANCE</b>	General Assembly (of scheme members) appoints 11-member Executive Committee responsible for management oversight of the company.	Board of Directors, appointed by MWE submits quarterly financial and performance reports
<b>OPERATIONAL FRAMEWORK</b>	Combination of direct management of schemes and management contracting to Private Operators. Organizational Structure includes a Secretariat responsible for management functions and scheme / branch offices that are responsible for daily system operation.	All water supply areas are under direct management by NWSC. Head Office responsible for governance and overarching supervision. Management function is delegated to Area offices with some functions devolved to Branch level.
<b>ASSET OWNERSHIP</b>	MWE owns infrastructure and gives custodianship of the assets to UAs	NWSC owns infrastructure.

<sup>1</sup>UNHCR (2019) *Global Trends in Forced Displacement 2018*. <https://www.unhcr.org/globaltrends2018/>

<sup>2</sup> *ibid*

<sup>3</sup>MoW (2019) *Water and Environment Sector Response Plan for Refugees and Host Communities in Uganda*. <https://data2.unhcr.org/en/documents/download/75623>

<sup>4</sup>Kobel, D (2020) *Water System Assessment and Service Transfer in the Uganda Districts Hosting Refugees*. Joint Publication WB and UNHCR



**LEFT:** A woman collects water at Bidibidi refugee settlement in Yumbe district of Northern Uganda. © UNHCR/ Jiro Ose **RIGHT:** Solar power delivers clean water to South Sudanese refugees' doorstep. © UNHCR/ Michele Sibiloni



key differences in the two service delivery models. The decision on which Authority will take control of service delivery of a specific settlement is done through a collaborative process with the MWE.

The first phase of the transfer process involves mapping the key stakeholders, clarifying their roles and responsibilities, delineating the geographic area to be transferred (i.e. "gazetting"), and carrying out a comprehensive assessment of the physical infrastructure and operational performance to understand the investment requirements. The second phase consists of: upgrading infrastructure, training and capacity building of the Water Authority staff, and gradual handover of operations. It is expected that this phase will be the longest, with the duration dependent on each context. During the third phase the Authority assumes full responsibility of service delivery including legal custody of all assets and responsibility for billing and financial management.

### LESSONS LEARNED TO DATE

To date, a complete transfer process has been carried out in Rwamwaja settlement located in Kamwenge District. This settlement hosts 71,707 people or 5% of the refugee population in the country (UNHCR, 2020). The process began in September 2017 and concluded in February 2020 when the NWSC took full custody of the services. A number of important lessons were identified:

- » **Political will** is a necessary condition to facilitate this process. Support from the MWE as well as the Prime Minister's Office and interest on behalf of the Authorities to take over the services.
- » **Timeline:** Must follow thorough administrative and technical procedures as well as proper community engagement.
- » **Stakeholder Coordination:** Considering range of stakeholders (public /private, humanitarian / development) it is important that roles and responsibilities are clear and coordination and transparency are prioritized.
- » **Life-cycle costs:** to be sustainable the full costs of service delivery must be recognized and a financial model established. This requires understanding ability and willingness of users to pay as well as the cost of operating the systems, and any subsidies that will be provided.
- » **Participatory Processes:** It is important to engage with refugees and host communities throughout the process and ensure mechanisms for feedback and "consumer voice".
- » **Continued system strengthening** is needed to facilitate the handover of the 200 water supply systems in the country currently serving refugees.

Although work is still underway to transfer ownership of the remaining water schemes to the Uganda Water Authorities, there is promising preliminary results. This work represents an important effort in the triple nexus linking humanitarian responses to development and peace building programming by recognizing the social and economic value of water, while also incorporating concerns for climate change, environmental protection, gender and the needs of the poor and vulnerable.

# WATER FOR GOOD: CENTRAL AFRICAN REPUBLIC CASE STUDY

## CONTEXT/ RATIONALE

### COUNTRY CONTEXT

In the Central African Republic (CAR), fragility fundamentally stems from the lack of development. CAR is considered to be among the poorest countries in the world and ranks 188th out of 189 countries in the Human Development Index (HDI 2017). Since its independence in 1960, CAR has struggled to effectively deploy a state presence in many parts of the country, and has never developed fundamental infrastructure. The vast majority of its citizens have been locked in poverty, facing cyclical political upheaval. In 2012, the most recent civil war descended into an unprecedented conflict that has taken various forms of ethnic, sectarian, and inter-communal violence. There has been a successful transition to a civilian, democratically elected government. However, insecurity and violence continue. Today, nearly half of the country's population is in need of humanitarian assistance and only 40% of the rural population has access to an improved water source, which is among the most urgent needs. The UNOCHA estimates of water access present an optimistic view, with over 50% of the population having access (UNOCHA 2019); our 18-month in-depth study of water access in one prefecture found that only 7% of the population have access to water services that meet the definition of JMP Basic access on the SDG service ladder (WFG 2019).

This context of low state capacity and extreme underdevelopment hinders effective water and sanitation services, and results in a particularly weak WASH system. The government ministries and agencies are almost entirely dependent on foreign assistance, and therefore struggle to build and sustain capacity. The private sector faces a combination of security risks, an episodic humanitarian supply-driven approach to investment in new water access, few existing water points, and a fragmented supply chain, which together create a prohibitive business environment for local service delivery.

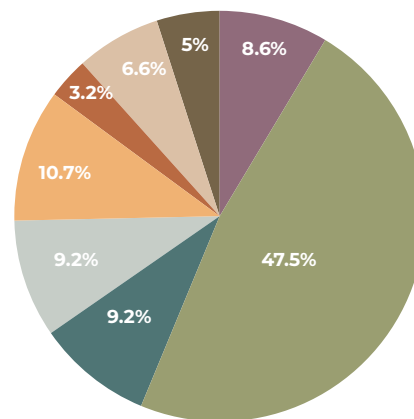
### WATER FOR GOOD'S CAPACITIES AND HISTORY IN CAR

Within this context, Water for Good was established in 2004 after a civil conflict, when a foreign-owned for-profit borehole drilling company sought to exit the sector and, instead of selling the business, transferred the assets and local staff to the new non-profit entity that would become Water for Good. Therefore, from the beginning, Water for Good had the capacities and structure of a proxy private water services provider. At that point, Water for Good also provided hand pump maintenance services in a small area on an ad hoc basis. Communities could pay a small monthly fee to local, professional technicians to keep newly drilled wells functioning over the longer-term.

Over time, Water for Good has set out to professionalize and scale both the drilling capacity and the reach of local technicians that provide preventative maintenance services through a circuit-rider maintenance model.<sup>1</sup> The drilling operations of Water for Good now have 3 rigs, and recently incubated and spun off a locally-owned for-profit drilling company. In 2011, Water for Good integrated electronic field reporting for all activities. This dramatically increased transparency of all operations, but had a particular impact on maintenance services. The maintenance teams complete on-site electronic reports during each service visit, generating GPS and photo-verification monitoring data for all the water points within its program.

The circuit-rider model maintenance services aims to complete two visits per year per water point and now covers 9 of the 16 prefectures. This is a geographic area larger than Uganda, reaching over 1,775 unique rural handpumps that serve over 880,000 water users. Communities' handpumps are systematically visited, and communities can opt out if they prefer other forms of servicing. In 2019, 32% of participating communities made financial contributions to the maintenance service. In 2019, 95% of participating pumps were functional when teams departed after each visit.<sup>2</sup>

### MAINTENANCE SERVICES



- USA INDIRECT SUPPORT COSTS — 5.0%
- CAR INDIRECT SUPPORT COSTS — 6.6%
- OTHER DIRECT COSTS — 3.2%
- VEHICLE DEPRECIATION — 10.7%
- DIR SALARIES — 9.2%
- SHIPPING/CUSTOMS — 9.2%
- SPARE PARTS — 47.5%
- DIR TRAVEL — 8.6%

### 2019 REVENUE

COMMUNITY PAYMENTS	\$19,920
RESTRICTED GRANT FUNDING	\$180,844
WATER FOR GOOD FUNDING	\$366,428

### RATIONALE

Going forward, Water for Good recognizes the value of its approach to building proxy-private sector service delivery capacity for both drilling and maintenance services because it is financially sustainable and increases capacity. This capacity and the monitoring data can be catalytic for systems-building in the sector, but needs to be more institutionalized with the government and coordinated with the humanitarian sector.

<sup>1</sup>Circuit-rider models employ professional technicians to complete routine preventative maintenance and repair services across a network of water points, with predetermined routes, aka 'circuits' (RWSN 2019).

<sup>2</sup>Interactive map of the maintenance service area with all pumps, last known functionality, and links to visit reports: [waterforgood.org/map](http://waterforgood.org/map)

## AIM OF THE PROJECT INTERVENTION

Water for Good seeks to strengthen the wider WASH system in CAR for sustainable water services, and to increase access to reliable, basic water services. It is doing this by focusing investment and integration of services with regional government structures in one Focus Region, the prefecture of Mambéré-Kadéï, with a population of just over 461,000 people who predominantly live in rural areas (70%). This approach, focused on district-wide planning, and delivering maintenance services that water users demand, is consistent with the principles of a leading water and sanitation knowledge community, Agenda for Change.<sup>3</sup> The outcomes of our strategy in Mambéré-Kadéï will provide a model for the expansion of services to all by 2030, consistent with UN Sustainable Development Goal 6.1.



**Pump technician providing maintenance in a rural community**

### THE INTERVENTION

Water for Good is focusing the vast majority of new water infrastructure investment in the prefecture of Mambéré-Kadéï, in order to achieve universal basic access for all and increase our economies of scale to deliver efficient professional maintenance services. A baseline needs assessment was completed to determine the population and existing water infrastructure in the region and estimate the level of investment in new water infrastructure that would be required to achieve universal basic

access. This data serves as the basis for a collaboratively-developed Prefecture-Wide Plan for water access and services from 2018 - 2030. It will also contribute toward a model for universal and reliable water access that demonstrates what is possible in addressing a complex problem in an extremely low-development, fragile state.

In tandem, Water for Good has been initiating new, more responsive and agile maintenance service models in Mambéré-Kadéï, seeking to improve services, increase demand, and increase local cost-recovery for operations and maintenance services, and has been communicating findings to district and national authorities.

## RESULTS

Providing consistent preventative maintenance and professional repair services has not only kept a high level of pump functionality, the electronic data collection method embedded into the program has enabled data-based planning to build more responsive services with adapted financial schemes for communities.

In the focus region of Mambéré-Kadéï, roles and responsibilities of all the different stakeholders have been clarified and ongoing coordination has become more systematic. Water for Good closely cooperates with prefecture authorities to ensure quality services, clear communication, their integral involvement in community training and post-construction monitoring of well-committee management.

### LESSONS LEARNED

Years of working in such a fragile environment has taught many lessons. Systemic change can only begin with reliable data to drive planning, financing, and to identify weaknesses that need to be addressed in the realms of legislation, roles of institutions and how humanitarian actors can collaborate.

While seemingly impossible to create a stable service delivery in such a country, the circuit-rider model has brought reliable access to clean water for hundreds of thousands of people even at the height of armed conflicts. The country's economic environment is unfavorable for the supply chain of spare parts. There have been many attempts to build locally-run procurement systems, but the complex and onerous nature of purchasing parts from international



water for good

providers has caused these initiatives to fail and cause local artisan repairmen to halt their services. Given this environment, Water for Good's ongoing financial support, vertical integration of the supply chain with monitoring and services, has proven necessary to keep systems working.

Ongoing presence and working in a very weak WASH sector over the years has revealed how urgent it is to develop a coherent roadmap that can allow the government and development agencies to focus on achieving SDG 6 while providing a development framework for the humanitarian sector to deliver elements of the system, essentially infrastructure and behaviour change campaigns.

The multiple actions that are currently coordinated at a WASH Cluster level are not synonymous with collective action around one common roadmap. Currently, it is rather the emergency sector that has set a standard of fragmented actions that leave little room for development organizations to work collectively, and effectively on a systemic roadmap.

The overall environment of the country, its remoteness and lack of infrastructure will continue to severely affect the sustainability of the WASH sector, and requires development organizations to remain heavily involved at all levels to keep infrastructure from failing over time. Such an environment requires stakeholders to do what they can to involve local actors at all levels in the most practical ways to build in-country knowledge and capacity.



<sup>3</sup>Water for Good joined the Agenda for Change as full members in 2016.

<sup>4</sup>Water for Good is following up on the initial needs assessment to complete a full LifeCycle Cost analysis chapter.

# STRENGTHENING WASH SERVICES IN PROTRACTED CRISES: THE YEMEN H2O PROJECT<sup>1</sup>

## CONTEXT

The protracted humanitarian crisis in Yemen affects 80% of the population, or 24 million people, who require humanitarian assistance to avert famine and to meet basic needs. Ongoing conflict since March 2015 has caused significant damage to essential infrastructure, including urban water and sewerage systems, and caused a deterioration in rural water/sanitation conditions, contributing to cholera and diphtheria outbreaks. Many government staff, including those who work in water utilities and in sanitation management, have gone unpaid, contributing to poor service provision. Experienced humanitarian actors face significant implementation challenges in this context, where conflict, limited access, and political negotiations can cause significant delays in delivering critical assistance. Humanitarian actors and approaches have dominated the international response for more than five years—averting further loss of life and livelihoods, but largely unable to contribute to the long-term, foundational structures needed for rebuilding and resilience.

**H2O Yemen's Approach:** In this context, CARE Yemen challenged itself to think critically about the short- and long-term WASH needs, and to develop a strategy that bridges humanitarian and development approaches. With funding from USAID Yemen, CARE currently implements the H2O Yemen project—addressing WASH service provision and systems strengthening in eight conflict-affected districts within the Governorates of Sana'a and Taiz. This project started in late 2018 and will continue through 2022.

The objectives of the H2O Yemen project are to support vulnerable, conflict-affected Yemenis in rural and urban areas to: (1) improve access to safe water, sanitation, and hygiene services; (2) strengthen WASH institutions and service providers to operate and manage WASH systems; and (3) to conduct

research and pilot testing of methods to improve cost recovery and water efficiency and conservation. Other anticipated impacts of the project are reduced incidence of cholera and diarrheal disease, and improved reliability and ongoing use of water and sanitation systems.

H2O Yemen aims to incorporate context-appropriate systems strengthening approaches in a protracted crisis. CARE deliberately sequenced the project approach—addressing immediate water and sanitation access needs in the first year; focusing on management and maintenance of water and sanitation systems in year two; and incorporating learning and research elements in year three.

## INTERVENTIONS

CARE conducted a scenario analysis to understand WASH partners, at government and private sector level, that were still functional in the unstable context. In Yemen, as in other protected crises, it is both feasible and necessary to incorporate long-term thinking, capacity strengthening of and public and private partners, and strengthen linkages between local authorities and community management structures for improving the reach and resilience of WASH.

In coordination with government officials, local WASH organizations, and private sector utilities, CARE is rehabilitating infrastructure and restoring WASH services in conflict-affected areas, piloting Water Smart Agriculture (WaSA) approaches, increasing hygiene practices, and mapping solid waste management systems. Additionally, CARE is working alongside public service providers to restore and improve maintenance and cost-recovery mechanisms.

Working across partners and stakeholders has proven effective at ensuring systems strengthening. A number of these organizations have



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been unable to pay staff salaries and supplies since the conflict started. CARE's engagement has provided a platform to bring different people and organisations together for systems strengthening, whilst also improving relationships and capacity.

CARE is working with local authorities to improve the operational management and payment structures for water systems and securing supply lines. However, in Yemen like many other protracted crises, the ongoing conflict and economic collapse has restricted the ability of many people to pay for services. Therefore, the program encourages payment for minor maintenance and repairs, and has sought alternatives for financial support and livelihood diversification strategies (e.g. income generating activities for women and youth and WaSA). To improve long-term sustainability, CARE also invested in improved water technologies, like solar pumping and water catchment schemes. For sanitation, this has translated into wide-ranging partnerships to improve sewage systems and pipe works, to explore finance mechanisms for household latrines, and to ensure sewage treatment mechanisms are repaired.

<sup>1</sup>The H2o project under which this Case study is developed is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents in this Case study are the responsibility of CARE International in Yemen and do not necessarily reflect the views of USAID or the United States Government.



Water is a scarce resource: Millions of people in Yemen don't have access to clean water. Most water sources have been destroyed and people have less than a glass of water a day to drink. CARE helps by repairing old water sources and building new ones. Until today, CARE provided 1.3 million Yemenis with clean water. © 2017 Eman Al-Awami/CARE



## THE RESULTS

In Yemen, local authorities, communities, and the private sector struggle to maintain even the most basic services after the collapse of infrastructure and public institutions. One year into implementation, H2O Yemen has closely coordinated with the General Authority for Rural Water Projects (GARWSP) to rehabilitate six rural water systems, including three solar pumping schemes in Sana'a. This was accompanied by significant capacity building (e.g. budgeting, regular O&M, water quality analysis), and ultimately led to successful hand over of all systems to local water management committees (WMCs). In coordination with other INGOs and local authorities, CARE rehabilitated sewerage systems in urban Taiz to reach more than 8,000 people with improved services—a significant gap in ongoing programming and source of diarrheal disease and cholera cases. CARE will similarly invest in sewerage repairs, spare parts, and capacity building in urban Sana'a moving forward. Water quality analysis was linked to hygiene promotion and cholera prevention efforts in Sana'a, and shock chlorination of water systems was coordinated with the district general authority for rural water supply project (GARWASP). By providing these resources and capacity building, government staff have been able to re-establish basic WASH services.

H2O Yemen supports the WASH supply chain by strategically linking local suppliers with local authorities during system installation. CARE also engages local technical representatives during system setup, which helps to establish a relationship between these actors and

provides on-the-job technical training. This approach provides a platform for future maintenance, supports the supply chain, and improves trust in service providers. Addressing financial solvency of the WASH systems means understanding issues with both ability and willingness to pay, but also with subsequent management of payments and funds. CARE integrates financial training for WMCs as essential capacity building, not only to improve the service and ensure maintenance but also to increase customer trust through accountability.

## CHALLENGES AND LESSONS LEARNED

CARE continues to adapt to challenges associated with working in a protracted crisis and conflict-affected context:

- » Ensuring sufficient time and space for relationship and trust building: In Yemen, CARE built off the foundational trust from previous projects, but deepened understanding of power dynamics in a changing context and strengthened relationships, particularly with local authorities, to ensure permitting, access, and confidence to deliver essential aid and work in partnership toward long-term development.
- » Significant fluctuations in exchange rates and fuel prices continue to impact project planning, budgeting, and transportation. Adaptability and flexibility on the part of CARE, USAID, and other stakeholders remains key to being effective.
- » Insecurity and conflict have caused implementation delays and significant geographic shifts. This required CARE to work in close coordination with other partners,

USAID, and government to negotiate and adapt to the evolving context.

- » Close coordination with other NGOs revealed a duplication in planned activities for the Taiz urban water network and required CARE to quickly adapt the original project scope and budgets. While challenging in the short-term, this rapid adaptation will ultimately lead to stronger capacity and structures to ensure water and sanitation services.
- » The outbreak of COVID-19 in the country also negatively impacted on programmatic engagements with relevant stakeholders and the timeliness of implementing planned project activities. Although this situation reset the operational dynamics in the country, CARE like many other organizations, had to adapt its operational and implementation modalities accordingly in sync with new rules and protocols put in place by the local authorities.

In many water-scarce settings like Yemen, addressing the critical importance of water for both domestic and productive needs (i.e. how water can add value) is foundational. Investing the time to discuss communities' opportunities, options, and ambitions that depend on water is necessary to broaden the conversation and to work together towards mutual goals and solutions. Using these best practices, and adaptive management, the H2O Yemen project seeks to not only improve WASH access and practices in the immediate and longer-term, but also to improve livelihoods through broader water security initiatives.

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“The construction of the new water tank not only means people now have access to safe, clean water, but also it is a sign that after many years of suffering, the village is starting to be clean and healthy. Before, we used to fetch some water, but it was never enough. Now, we have enough water for our daily chores.” – Beneficiary in Taiz, Yemen



# IMPROVED WASH-SECTOR COORDINATION THROUGH A CONCRETE CLTS-GUIDELINE PROCESS IN SOUTH SUDAN

## CONTEXT/ RATIONALE

The Republic of South Sudan was established in 2011, and had to commence almost from scratch developing government and other structures for its 12 million people. The progress was inhibited by ethnic and political tensions over time, leaving little resources for government-led interventions in the health and WASH sectors. Though a peace treaty was declared in September 2018 the conflict still impacts the stability of the country. In 2020, South Sudan ranked third in the Fragile States Index of the Fund for Peace.

In Feb 2012 the government declared Community-Led Total Sanitation (CLTS) the official approach to achieve open defecation free environments both in rural and urban areas at a time when the rate of open defecation (OD) was particularly high at 77% nationally<sup>1</sup>. Though there were no binding guidelines and actors who adopted the approach started to implement using different modalities, by 2017 OD rates had already decreased to 63%<sup>2</sup>. However, the need for harmonization was shown for example in challenging environments like urban areas, where an approach with subsidies may stand in opposition to the traditional non-subsidy approach. Several attempts to harmonize how CLTS is implemented nationally have not yet resulted in a clear common approach.

The unrests in 2013 and 2016 have delayed WASH-related processes (like policy development and activities of the national technical working group), led to destruction of existing WASH structures and decreased people's willingness to invest in WASH infrastructure on land they feel they may have to flee from again. Despite the challenges, the Ministry of Water Resources and Irrigation (MWRI) is highly driven to improve the WASH sector. This is partly motivated by national commitments to international WASH processes, like Sanitation and Water for All (SWA), the African Ministers Council on Water (AMCOW) or AfricaSan.

## AIM OF THE PROJECT/ INTERVENTION:

MWRI requested Malteser International to support the development of harmonized and applicable CLTS Guidelines for urban and rural areas. To achieve this goal, strengthening of coordination among WASH actors with government at the lead was perceived as a precondition for the common guideline by the project. The two processes complement each other as finalizing the long-started process of developing the CLTS Guidelines in a participatory, sector-wide, government-led process is again an easy entry point to reignite WASH sector coordination. Both improving coordination and setting national guidelines contribute directly to system strengthening.

## THE INTERVENTION:

MWRI supported by Malteser International (MI), UNICEF and GTO conducted two national CLTS Multi-Stakeholder Expert Workshops in 2019 and 2020 in Juba to connect sector stakeholders, exchange knowledge and experiences related to CLTS and, in a participatory manner, develop the National CLTS guidelines. The workshops included a wide representation of governmental and non-governmental stakeholders involved in sanitation interventions in the country.

## THE RESULTS:

Through the facilitated expert workshops, it was possible to (re-) create a momentum around CLTS in South Sudan. An active CLTS sub-group to the national Sanitation and Hygiene Technical Working Group (TWG) was established with all relevant offices in place, receiving support from a consultant and led by MWRI. Members comprise of four government entities (MWRI, Ministry of Health, Ministry of Housing and Local Government Board), UN organisations, INGOs, local NGOs and academia. Regular exchange of the sector-wide CLTS TWG maintains connections within the sector and assures that critical aspects like the need for sanitation subsidies in South Sudan are looked at from all perspectives. The workshops and the TWG have generated interest and knowledge about CLTS among concerned government agencies, who have responsibilities in sanitation programme implementation, but may previously have had little involvement.

<sup>1</sup>[https://www.who.int/water\\_sanitation\\_health/publications/2013/jmp\\_report/en/](https://www.who.int/water_sanitation_health/publications/2013/jmp_report/en/)

<sup>2</sup>[https://www.who.int/water\\_sanitation\\_health/publications/jmp-report-2019/en/](https://www.who.int/water_sanitation_health/publications/jmp-report-2019/en/)



Unfortunately, the strong restrictions through COVID-19 currently put limits to face-to-face sector interaction and the guideline document is being further consolidated remotely with different stakeholders in different regions of South Sudan. High-level government officials have been involved from the beginning to put WASH on the national agenda. The reignited sector connection and sanitation-relevant policy processes have prepared the ground for further activities, such as developing a monitoring system and joint database to map progress, or rethinking actors' responsibilities on local levels.

### LESSONS LEARNED:

With the process at an early stage of implementation for now results have been slow, but steady. In a fragile context like South Sudan with great needs in all areas, political offices and agendas are fast changing and therefore hard to rely on. There is also a need for a certain flexibility to adapt the national guidelines to the local context, as different areas in the country have different levels of fragility. Supporting already highly motivated actors, like MWRI, has been a success factor in maintaining an active process. Furthermore, the involvement of respected sector-wide stakeholders has brought important weight to the process and significantly raised the understanding on potential of CLTS application towards achieving country-wide future sanitation goals. Generally, the common CLTS process as an entry point has been a great success to start a concrete communication and interaction of relevant sector-stakeholders from different levels – ranging from field implementation to policy makers.



▶▶ **One participant** from an INGO with long experience in the South Sudanese WASH sector declared that the CLTS coordination process since 2012 had never gone this far as this time.