



D02: WASH Recommendations for KAZA Angola Scoping

KAZA Infrastructure for Livelihoods Intervention, FP20

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List of Acronyms

Acronym	Long-Form
CRIDF	Climate Resilient Infrastructure Development Facility
CLTS	Community Led Total Sanitation
DFID	Department for International Development
WHO-UNICEF	World Health Organisation United Nations Children's Fund
KAZA	Kavango Zambezi Transfrontier Conservation Area
WASH	Water Sanitation and Hygiene
SAG	Sanitation Action Group
CHC	Community Health Club
ODF	Open Defecation Free
SAREP	

Introduction

The KAZA Secretariat undertook a field visit to the Luengue-Luiana National Park to assess the feasibility of the implementation of a conservation agriculture programme in central Jamba and the villages located in the area around the central town. Although the field visit was focussed primarily on conservation agriculture and human-wildlife conflict, the communities in this area have little access to sanitation and sanitation infrastructure, and therefore this component was added to the study.

This report presents the results and analysis of the survey tool designed for this field visit, as well as the methodology for the survey, in order to be able to determine the potential for the implementation of a Community Led Total Sanitation (CLTS) programme in the area, and make recommendations for implementation of a CLTS programme.

Methodology

A survey was developed based on the SAREP-CLTS baseline study as well as the WHO-UNICEF drinking water and sanitation household survey tool. These two surveys were amalgamated and then amended for Jamba, since little was known about the presence or condition of infrastructure or the living conditions of Jamba communities and it was anticipated that the questions – developed for less isolated communities – would not necessarily pertain to Jamba.

Further questions with regard to the interaction of the Jamba community with other communities, road and communications infrastructure and the supply of materials – household and other – were added to the survey in order to enable us to develop a rich picture of the lifestyle of community members in the area.

Composition of the survey tool

The tool was developed as a household-level survey, but this was later amended in the field, as we had not understood previously that “Jamba” consisted of 60 villages located in a radius of more than 120km around the village of Central Jamba.

As a result, the survey was implemented as a focus group interview and therefore some of the fields were not completed.

Despite the gaps in household specific data however, the tool was able to deliver the necessary data to complete the feasibility study for sanitation (using the CLTS methodology) in the KAZA area of Angola in which the 60 villages are located.

There are three components of the survey, as follows:

- Water supply (including observances of WASH behaviour)
- Sanitation and hygiene (including observance of hygiene practises)
- General questions about Jamba

The questions were used as an interview guide except where population data or household numbers were required, and most questions were not asked directly in focus group interviews.

The survey template is included as Annexure 1 to this document. The completed surveys for the 7 villages that formed part of the field trip are not included in this document but are available from CRIDF on request.

Summary of survey results per village

Central Jamba

Jamba Central is located 56km (along a very poor road) from the border with Namibia in the Caprivi Strip. It is the administrative centre of an area comprising 60 villages with a total population of 6,349 people of which 766 reside in Central Jamba itself.

There are no community structures, such as Village Development Committees or Village Health Committees although a Traditional Leadership structure exists. Pastors also perform a community leadership role. The Local Government structure in Jamba is the Administration, but this exists in Central Jamba only and covers all villages in the area. All community activities are implemented through the Traditional Leadership structures.

The people in Central Jamba are mostly formally employed by government or military and they comprise administrators, military personnel, teachers, health workers, tourism / wildlife rangers, builders and people working to remove land mines.

There are 5 water points in Central Jamba, with 10 standpipes and washing basins for people to do their laundry. There are also flush toilets for the public, which were constructed by the government at the water point near the Administration gathering place. There are also long hosepipes available to fill containers that are further away.



Figure 1 A water point with public flush toilets in Central Jamba.

Water use and behaviour

Error! Reference source not found. shows one of the water points in Central Jamba, which includes a laundry area. Although all water points are fenced, there is little control of water use and the water point area is very crowded with people and containers. The water is clean but not treated and there is standing water and wastage of water around the area of the water points. There is no monitoring of water use in place and access to water is controlled only in the sense that limits are placed by the size and number of containers and the

distance people need to carry them. Although there is always water available at the water points, the pressure varies with the season and with the level of demand (also seasonal).

Water is generally collected by women and children (both male and female) and mostly in open containers (though some were covered). Water uses include drinking, cooking, washing, cleaning, gardening, craft making and livestock. Livestock watering is from the boreholes except in the rainy season, although there is sometimes inadequate water available even in the rainy owing to low rainfall or longer dry seasons.



Figure 2 A crowded and busy water point in central Jamba

Areas around water points are very crowded (**Error! Reference source not found.**) and animals are present around the points, which leads to erosion of the aprons and standing water; and also to long waits to get to the tap. The latrines are very close to the water points, but they are waterborne toilets and therefore should not have an impact on groundwater quality. Some of the taps are broken and infrastructure is degraded and there is also solid waste around many of the water points. No household water cleaning methods such as leaving water in the sun or boiling are used.

Sanitation and hygiene behaviour

Although there are public toilets at the Administration gathering place, and at the clinic, people still practise open defecation in Central Jamba. There are few private household latrines, and the public latrines are used by more than 20 people per day. The few household latrines are maintained by their owners, but the public latrines are maintained by government.

There are also government-built showers near the main water point and public toilets and most people bathe there.

There is a belief that the sandy soil type prevalent in the area is not suitable for building latrines, but there is a general agreement that there are advantages to having latrines, but the interview group cited laziness, cultural beliefs around latrine use and lack of skills as other reasons why few household latrines are present.

Most small children's faeces are disposed of in the bush and older children also use the bush, though some do use the latrine. Hand washing in the household is not a common practise, however people wash their hands during visits to the water points. A hand washing bucket may be used to wash hands before and after eating, but hand washing after using the latrine is not practised.

Faeces is evident in the open around the villages and particularly in the pathways that children use when coming home from school. Hygienic practices with regard to water are also not observed and there is often standing water around water points and stored water is not covered. Household areas are generally dirty with solid waste evident around houses and most waste pits are full and wastewater is disposed of in the yard around the household. Diarrhoea is common particularly among children.

People are very comfortable talking about sanitation and acknowledge the need for training, particularly the health workers. Health workers are very constrained by the lack of medicine supplies and also good clinic facilities, however they also require training in WASH and other issues – many have simply become health workers because they live in Jamba and are available. They have never received any training in WASH practices – even from the local Health office.

Jamba Valekano (Military Cluster)

Jamba Valekano is a sub cluster of Jamba located about 3kms by good quality gravel road from Central Jamba. The compound comprises a few clustered households populated by military personnel and their families, and a total population of 47 people. The village gets their supplies from Central Jamba, which they visit on a daily basis. The children attend the school in Central Jamba and people also use the clinic there.

There is a military base located close to the compound and the soldiers do travel around the area. There are flush toilets at the military camp, which were built by the government.

There are no community structures or traditional leadership structures in Valekano as the community is made up purely of the military.

There are two boreholes but one is not operational and the community gets water from the operational borehole, which has a standpipe but no laundry basins. There are 3 latrines in the village, all made from local materials since no formal infrastructure exists.

Water use and behaviour

The water infrastructure is not well maintained, with eroded aprons and broken pipes and taps. Minor maintenance of the infrastructure is sometimes carried out on a voluntary basis by the soldiers, but major maintenance should be done by the Government. However, the people indicated that this takes a very long time. The water is clean, but not treated.

In addition, when the whole community is in the village – soldiers often are away – the demand on the one operational borehole is very high and it sometimes takes a whole day for people to get water. When there is no water, the community collects from Central Jamba on foot.

Water is generally collected by women and children (both male and female) and mostly in open containers. Water uses include drinking, cooking, washing, cleaning and gardening. The community do not keep livestock on a large scale.

Water points are not in good condition and there is standing water present. A pit latrine is evident within 30m of the water point and there are also animals around the water point, suggesting that although the water is considered clean, there is potential for local contamination around the water point.

Water is stored in uncovered containers and also left running at the water point, contributing to the standing water around that point and indicating that there is little ownership of water infrastructure or understanding of the value of water.

People do wash their clothes at the water point, but as mentioned above, there are no laundry basins present.

Sanitation and hygiene behaviour

People with no latrine use the bush and indicated that they are used to using the bush. Others have built their own latrines because they say that the rains wash dirt through the village and also that it is not safe for adults or children to go to the bush. Private areas are difficult to find since the area is cleared of bush and therefore it is a long walk.

Most small children's faeces are disposed of in the bush and older children also use the bush, though some do use the latrine. A hand washing bucket may be used to wash hands before and after eating, but hand washing after using the latrine is not practised.

Waste pits are mostly full and wastewater is disposed of on the ground behind houses. Despite this, people indicated that there had been no incidence of diarrhoea in the previous month and that it is not common.

This might be linked to the fact that latrines were in very good condition, clean and in good repair, with no flies inside the latrines, however faeces was evident around the houses.

People are comfortable discussing sanitation and hygiene practises and interested in learning about improving hygiene.

Losemba Village

Losemba village is 88km from Central Jamba along a very poor road – it takes 6 hours to get to Losemba by 4x4 vehicle. The village has a population of 200 people in 27 households. It is a very isolated community with strong traditional values, who live very much off the natural resources. Households are located in clusters that are as much as 25km apart from each other. There is no water supply or sanitation infrastructure in the village. Food is often donated by visitors to the village.

The community does have a Chief, but are highly dependent on the Administrative Authority in Central Jamba and there is little structure in the village.

Household water comes from 2 open wells, which are very dirty (**Error! Reference source not found., Error! Reference source not found., Error! Reference source not found.**).



Figure 3 Collecting water from the open well in Losemba



Figure 4 A well in Losemba



Figure 5 Drinking from a rusty tin

Water use and behaviour

Water quality is extremely poor in Losemba, and although water is not safe for drinking, no household treatment methods are used. Livestock are watered at the river (Luiana River), which is 3km from the village. Generally men collect water for other uses because of the distance from the village.

Bathing and washing clothes is done at the river, as the wells do not have enough for these uses. There is more water available in the rainy season but it is all surface water – used for people and livestock.

Water is not stored in covered containers, and as can be seen from **Error! Reference source not found.**, people use dirty containers as cups for drinking water.

Sanitation and hygiene behaviour

There is no sanitation infrastructure at all, and all members of the community practise open defecation. They are extremely rooted in traditional ways and indicate that they have never seen a need for latrines and are used to the bush. They do not perceive latrines as being advantageous to them.

Children's faeces are left in the open or thrown in the bush, and there is no hand washing at all – though there is also little water available for hand washing and no soap available at all. Household waste and wastewater is disposed of around the household and (in the case of household waste) in the bush. There is much solid waste evident around the households, which were described as dirty.

Diarrhoea is prevalent in all members of the community – people indicated that all households experience bouts of diarrhoea more than twice a month, however people are uncomfortable talking about sanitation and feel that it is a taboo subject and offensive. They feel insulted to talk about latrines since they have not used them but are still alive.

Bairro 11B

Bairro 11B is a small, remotely located village with a population of 120 people in 12 households which are close together. The village is 34km from Central Jamba deep within the Luengue-Luiana National Park, and encounters with wildlife are common (elephant, lion and wild dog).

The village has no water supply infrastructure but every household has a latrine, constructed from local materials. Note that while this village has 100% latrine coverage, it cannot be said to be open defecation free as there are other components of ODF status.

Income generally comes from trading fish and garden vegetables in Central Jamba which people visit 2 -3 times per year, travelling by ox-cart.

The prevalence of wildlife in the area means that there is a high degree of human-wildlife conflict, especially with elephant and hippos with regard to activities conducted at the river, which is 2km from the village.

Water use and behaviour

Household water supply is collected from the Ngalanja River, which is 2km from the village – it takes approximately one hour to walk there. The river is a channel, which branches from the Kwando River. The Kwando River (2.5km) is used as the main source in the dry season when the Ngalanja channel dries up.



Figure 6 A latrine in Bairro 11B



Figure 7 A well constructed pit

Water is used for cooking, drinking, gardening and building shelters. The river is used for bathing and washing clothes. Livestock are watered at the river.

Because of the prevalence of wildlife, it is not safe for children to collect water and this task is done by adult men and women.

Water quality is mostly relatively poor, but sometimes very poor because of elephant activity at places where water is collected. Another impact of the prevalence of wildlife is that elephants sometimes stop people from collecting water from the river. No household treatment methods are used – i.e. boiling.

The increased availability of surface water in the rainy season reduces the human-wildlife conflict, as there is enough water for people and animals.

Sanitation and hygiene behaviour

Every household in the village has constructed a latrine from local materials (**Error! Reference source not found.** and **Error! Reference source not found.**), and the village maintains 100% coverage – when pits are full, they build new latrines. Latrine maintenance is undertaken by the owners of the latrine and the latrines are clean and in good condition. Pits are dug very deep (7 metres) and they last 2 to 3 years.

All members of the community recognise the benefits of having latrines and an additional motivating factor could be the prevalence of wildlife, which makes the bush unsafe to use. Even children's faeces are disposed of in latrines, and children know how to and do use the latrines. However, the pits are generally not covered with a lid and therefore flies are prevalent in all latrines.

Although people have buckets for hand washing, there is no soap available and hand washing is not practised after using the latrine, although people indicated that they do wash their hands before eating.

The area around households is generally clean and waste is disposed of in waste pits, although household wastewater is disposed of in the yard.

Diarrhoea is widespread but attributed to the poor quality of the water and the lack of available water for hand washing – people indicated that members of the household experience diarrhoea more than once a month.

People are very comfortable discussing sanitation and would like to learn more about improving their hygiene practises.

Bairro 11A

Bairro 11A is a village of some 120 people in 30 households located far apart from each other. The village is located 16km from Bairro 11B, but approximately 30km from Central Jamba. The roads between Central Jamba and Bairro 11A are in very bad condition. There are no community structures.

There is no water infrastructure but approximately 30% latrine coverage – latrines made from local materials.

There is no school, but there is a small clinic. The village experiences severe shortages of medications at the clinic (**Error! Reference source not found.**).



Figure 8 **A makeshift clinic**

The village grows vegetables in small gardens for home consumption and trading in Central Jamba. Because of the poor roads, people travel by ox-cart to Central Jamba to trade their vegetables and fish. There are only 5 ox-carts in the community so those that do not have them trade through sharing fish with those who do and those who do, trade in Jamba.

People stated that harvests were good, but little rain in 2014 and 2015 has left them susceptible to drought and they have not had much to trade lately.

Water use and behaviour

People in Bairro 11A collect water from lagoon that is located within 200m of the village. If the lagoon is dry, they collect water from the Kwando River, which is 2km from the village. Because the water quality in the lagoon is very poor, the river is used for drinking and cooking water and the lagoon is used for washing and bathing. Livestock are watered at the lagoon and water for gardens is also sourced there. Fishing and gardening are the primary water use activities for livelihoods.



Figure 9 **Water collection area from a lagoon**

The areas where water is collected for drinking are eroded and dirty. Several activities are conducted in areas where water is collected and water quality is very poor. No household treatment methods are used for cleaning drinking water.

Sanitation and hygiene behaviour

The people of Bairro 11A practise open defecation, although some do have latrines. Where latrines are present they have been built and are maintained by the owners, but many people use the bush.

There is an understanding of the benefits of having a latrine, but hand washing behaviour is not customary and there are no hand washing facilities or soap available.

Children's' faeces are disposed of in the bush, however faeces are not evident around the village. There is a high incidence of diarrhoea, and people stated that members of their household experience diarrhoea more than twice per month.

Household waste is disposed of in a waste pit, but wastewater is thrown in the yard.

People are comfortable discussing sanitation and will to learn more about improving hygienic practises in the village.

Bairro 18

Bairro 18 is 14 km from Bairro 11A, but 64km from Central Jamba. The population of the village is 80 people in 10 households located relatively close to each other.

There is no school, clinic or water infrastructure in the village and there are 4 pit latrines in the village. Also there are no community structures.

People visit Central Jamba 2 – 3 times per year to collect supplies and to trade in fish and the harvest from their fields.

Water use and behaviour

People collect water from the river, which is about 2km away from the village, and also from the lagoon, which is very close (56m). Water is collected by all sectors of the community. Water quality is generally poor and areas where water is collected are dirty. In the rainy season, people use surface water as a source.

Uses of water include drinking, cooking, washing, cleaning, gardening and making beer. Livestock are watered at the river and lagoon. No household water treatment methods are used, and stored water is not covered.

Sanitation and hygiene behaviour

There are very few latrines in Bairro 18 and people indicate that the reason for this is that they are used to the bush. They do, however, have an understanding of the benefits of having a latrine, and there are households that have one.

Hand washing is not customary and hygienic practises are not used when preparing food. No soap or hand washing facilities are available. Faeces are visible around the village and children's faeces are thrown in the bush or left in the open.

Household waste is disposed of on the ground around the house, as is household wastewater.

There is a high incidence of diarrhoea and people indicate that they experience diarrhoea more than twice per month.

People are comfortable discussing sanitation and willing to learn about hygienic practises.

Bairro 5

Bairro 5 is a small village comprised of 38 households 4km from Bairro 18 and 68km from Central Jamba. Households are located close to each other and there is no school or clinic. The village has an office of the MPLA (political party).

There is also no water supply infrastructure but 12 latrines have been constructed in the village from locally available materials.

People from the community visit Central Jamba 2 – 3 time per year to get supplies – clothes, cooking oil etc. – and to trade in fish and vegetables. People also grow maize for their own consumption and to trade in Jamba.

Water use and behaviour

The source of water for this village is the river, which is 6km away from the village. The river is always flowing and has never dried up in the memory of the people living here. Generally adult men and women collect water because of the distance from the source.

The river water is considered clean and no household treatments are used to clean water for drinking, however, people do cover their stored water containers. Water is used for drinking, cooking, cleaning, washing, gardening, fishing and watering livestock.

During the rainy season, surface water is used as a source and there is water in nearby streams which is used for washing and bathing.

Sanitation and hygiene behaviour

2 latrines were built by the government on the political party site, but they are used by upwards of 20 people. They are made from locally available materials. There are 10 latrines constructed at other households in the village. Those without a latrine use the bush, and indicate that the reason for this is that they are used to the bush.

People are aware of the benefits of having a latrine, although latrines are only used by adults and children's faeces are disposed of in the bush.

People indicate that they use a bucket to wash their hands before eating, but do not wash hands after using latrines, and hand washing behaviour is not well evident.

Generally latrines are clean and in good repair, but pits are not covered and flies are present. There is a high incidence of diarrhoea and people indicated that members of their households experience diarrhoea more than twice per month.

Household waste is disposed of in a waste pit and wastewater in an open pit. No faeces is evident around the village or in the open.

People are comfortable discussing sanitation and willing to be trained and to learn more about hygienic practises.

General comments on the Jamba area

Central Jamba serves as the “town” in the area and people living in Jamba are generally formally employed and trade for goods with people from the outer villages.

The area is extremely isolated with a poorly resourced Administrative structure, very poor infrastructure and extremely bad roads.

The Military and the Park Rangers do have 4x4 transport, however and soldiers and rangers do travel to villages in the area from time to time. People from other villages seldom travel to Central Jamba. People from Central Jamba occasionally travel to Namibia to get supplies and this journey can take up to a month. The government has set up tents / temporary accommodation at the border to accommodate people going to or returning from Namibia and waiting for transport to Central Jamba.

People from the villages around Jamba generally travel by ox-cart, since formal transport in the area is almost non-existent and the roads are extremely bad. The trip by ox-cart to Jamba can take up to a full day’s travel and therefore people from other villages visit Jamba Central 2 to 3 times per year. Visits are generally to trade veld products or fish and to get supplies such as cooking oil or clothes.

Because people are so isolated, however, most activities are led by the community, and to some extent by the government, although there is very little structure to any activities and they are not implemented strategically throughout villages.

Materials for building houses and latrines are readily available to all villages although good clean water is very scarce and water infrastructure non-existent except in Central Jamba and Valekano.

People are generally willing to discuss sanitation and considerate of health and hygiene issues. Because of the scarcity of medicines and the high incidence of diarrhoea in most villages, people are interested in learning how more hygienic practises can improve general health.

Discussion and analysis

The key factors in implementing any development programme in the Jamba area are the isolated nature of the 60 villages and the poor road infrastructure – which means that supplies and materials are extremely difficult to come by in any of the villages (although Central Jamba is close to an airstrip). The poor road infrastructure also means that people from the outer villages generally only visit Central Jamba 2 – 3 times per year and there is not a great deal of interaction between all the villages.

In addition, there are no existing community structures and community activities are implemented either through the Administrative structures or through Traditional Leadership. The CLTS triggering process (refer to

Figure 10 **The ODF protocol for a CLTS programme**

as explained in Paragraph 0) will identify “natural leaders” of sanitation champions within community groups and to ensure that the process keeps moving forward, these people will form a Sanitation Action Group (SAG) to motivate and monitor the implementation process in their community, against the Action Plan that is developed after the triggering. The CHC approach (Community Health Club approach) as implemented by Africa Ahead (<http://www.africaahead.org>) in South Africa and Rwanda among other African countries should be integrated into the programme.

The mechanisms used in this approach will strengthen the community structures, which will need to be in place to ensure continued progress and also for consistent and systematic monitoring and data management.

While the lack of institutionalised community governance structures may raise a challenge to the implementation of CLTS, and the isolation means that intensive training should be done at the start of the CLTS programme – training that would ordinarily be implemented through the programme; the isolation of these communities is actually a positive for CLTS implementation.

The reasons for this are as follows:

- Activities implemented in communities in the Jamba area are already, by necessity, community led because of the isolation of communities and the lack of institutional support to programmes
- All the necessary materials for basic latrines are readily available to all communities – this is well evidenced by the 100% latrine coverage in Bairro 11B

The lack of water, however, is a challenge, for the hand washing component of ODF status, but the hand washing facilities that we use in CLTS programmes are built from locally available materials and use very little water. The biggest challenge is the availability of soap, but ash can also be used.

The ODF Protocol

The ultimate aim of CLTS is to eradicate open defecation and there are a clear set up steps that need to be implemented in order to reach this aim. These are consolidated into the ODF Protocol as set out in

Figure 11 **The ODF protocol for a CLTS programme**

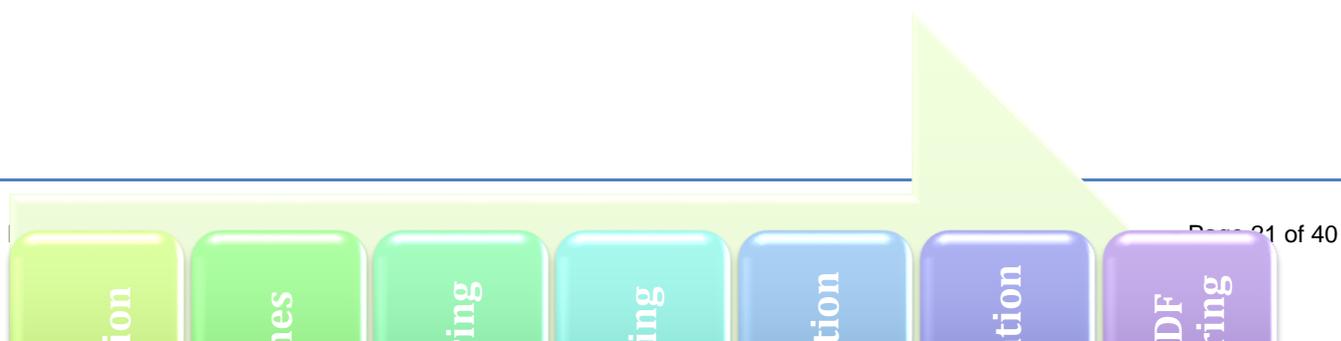


Figure 12 **The ODF protocol for a CLTS programme**

To implement these steps in the Jamba area, given its isolation, a CLTS programme will need to be structured in such a way that local capacity is built at the beginning of the programme to ensure that all aspects of the Protocol are well understood locally and the Protocol can be implemented almost in isolation of national structures – the impact of which are weak in Jamba.

It is not well understood how this will be received by the Administration or the Traditional Leadership within communities and given the existing community governance structures in Angola, the formation of SAGs may cause some conflict.

For this reason it will be critical to develop a good understanding in the Administration and the Traditional Leadership, of the CLTS governance processes to avoid these conflicts arising during the implementation phase.

CLTS is usually implemented with considerable on-the-ground support from the NGO or Consultant team that is active in the area. It is not certain to what extent this will be possible in the Jamba area – because it is very difficult to get there. However, since this programme is being implemented by ACADIR – as understood from the ToR for this feasibility study, they should be able to deploy resources on the ground for a significant length of time if not permanently.

These resources need intensive training before being deployed since ACADIR's experience with CLTS is based more on the triggering and implementation support aspects of the Protocol than the monitoring and governance aspects.

It will be critical to the success of the programme, therefore to define ODF and develop a strong but simple monitoring system before any training is conducted on the ground, and then add a day to the baseline study training to ensure that there is buy-in for the definition, the baseline study, the verification and certification

process – which would usually be implemented by external agencies – and importantly the “home base” of the system that will house the data that comes from implementing these.

Another significant issue is the poor quality of water, and the indication that water is neither stored safely, nor treated in any way by home treatment methods. Addressing open defecation without addressing the potentially harmful effects of poor water quality would therefore be ineffective.

An intensive CLTS facilitation training course will need to be conducted for the Health Workers, Administration Staff and other community members in Central Jamba. This training course would usually involve two triggering events but we believe there should be at least four of these to ensure that all CLTS facilitators have a full understanding of the methodology. The course should be followed up by training on the monitoring system and forward planning for implementation in all villages.

Conclusions

Based on the status of sanitation in Jamba, a CLTS programme is feasible in the area, however modifications will need to be made to the process to ensure that the isolated nature of communities and the lack of institutional support and capacity is addressed and does not become a limiting factor to the implementation of CLTS.

Secondly, while there is a relatively good understanding of the benefits of sanitation, the level of existing WASH capacity in the area is very low, even in Health Workers. In addition, the high incidence of diarrhoea is often attributable to poor water quality and a lack of understanding safe use of water. Therefore WASH education techniques should be added to the programme to augment the 10 education techniques that are already included in the CLTS methodology, but which are focussed on Open Defecation rather than broader WASH issues.

Addressing WASH issues should include training and capacity building on the storage and treatment of water – there are methods of treating water that area available to people in the Jamba area, e.g. boiling or leaving covered containers in the sun to kill bacteria.

Another component of ODF is the safe disposal of children's faeces, which is not considered in most of Jamba (except in Bairro 11B) and these techniques would assist in addressing that issue.

Recommendations for implementation

In order to ensure that the points discussed above are integrated into an implementation programme, we recommend the following:

- An exchange visit to the Choma area of Zambia: While there needs to be very careful definition of who should attend this exchange visit, the Paramount Chief of the Choma District, Chief Macha is an Ambassador for CLTS and the area is relatively close to Jamba with similar conditions – at least in terms of locally available materials, the smallish size of villages and the prevalence of human-wildlife conflict. In addition, because as aspects of the CLTS programme would need to be implemented by local people, it would be highly motivational to see a successfully implemented CLTS programme in an entire District. The Choma District comprises some 50,000 people and is Certified (By the Zambia Ministry of Local Government and Housing) Open Defecation Free.
- As mentioned in the discussion in Paragraph 0, all aspects of the Protocol that pertain to monitoring and evaluation – the ODF definition, the Baseline survey, the Verification process, the Certification process and the Post-ODF monitoring (which must be systematic), should be designed beforehand and then agreed with the relevant CLTS group in Jamba. Normally these processes would be implemented by relevant institutions for sanitation implementation in the national government, but this is impossible in Jamba. Therefore a group will need to be established to play the part of the “referee”. It is therefore recommended that a CLTS M&E toolkit and monitoring system specific to Jamba should be developed and what would normally be a one-day training for the baseline study should be augmented to include the other monitoring issues
- The establishment of the “referee” group will necessitate a discussion on CLTS governance structures. This discussion should include the issue of the establishment of Sanitation Action Groups (SAGs) in communities. Given that there are currently no community structures and all activities are implemented through the Administration – with some input from the Chiefs – this may cause some conflict. It is recommended that a workshop to establish the governance structures for CLTS be conducted before the monitoring training. It cannot be conducted as part of the M&E toolkit training because the participants will most likely be very different. Recommendations will be made to the Administration as to who should attend both the Governance workshop and the M&E toolkit training
- Implement the CHC approach through establishing the CHCs and conducting the necessary training on monitoring mechanisms.
- The training course that is pivotal to any CLTS programme is the Facilitator training. This is usually a 5 and a half day training course which includes two triggering events in actual villages in order to allow participants to practise the 10 facilitation techniques that make up the CLTS methodology. Because support will be very difficult to deliver on a regular basis in Jamba, the CLTS Facilitator Training course should be extended to at least 4 triggering events. This should allow sufficient time for a larger group of facilitators to practise enough to be able to trigger other villages on their own
- There is a lack of transport in the area, but there is transport available from both soldiers and from rangers who travel around the area and have 4x4 vehicles. It is strongly recommended that the Central Jamba group that is trained includes members of the Administration, the Military and the Rangers in order that

transport can be shared to be able to take facilitators to the outer-lying villages to undertake triggerings there as the programme rolls out to the broader area. It is recommended that this discussion be included in the governance discussion. Note that CLTS facilitators cannot also be part of the M&E training, as this should always be a separate group.

- The CLTS triggering process requires materials such as coloured powdered to represent various activities in the village, and one or two other things that are used in the other triggering techniques. In addition, there are WASH education materials it is recommended should be used to augment the triggering techniques. Owing to the isolated nature of Jamba, these packs should be developed and put together for each of the 60 villages, plus some additional materials packs (at least 5). All of these materials packs will need to be delivered to the Jamba Administration at the time of the CLTS facilitator training course which will also include training on how to use them.
- The CLTS Facilitator Training course should be conducted by experienced CLTS facilitators and there will need to be at least four people on the training team. There are experienced facilitators available in Botswana that were trained under SAREP – Tshoganetso Masunga is one of them, as is Ishmael Nkhwa who is currently working for SAREP (until August 2016). They could be assisted by people from the Shakawe community who have extensive triggering and CLTS facilitation experience on the ground. There is an active group of at least 4 people in Shakawe who have the skills to assist in the facilitation training, but none of the above people have experience with the WASH education techniques that is recommended are used in the implementation process. They would therefore need a training course to ensure that they are fully familiar with the WASH tools and where they could most effectively be used in the triggering process. This would most likely be a 2-day workshop, as the tools are readily – and freely – available. The WASH education toolkit must include techniques for safe water storage and home-based treatment mechanisms.

Annex 1: Sanitation field assessment tool – Jamba, Angola

This survey has been developed to understand the sanitation status of the village of Jamba in the Province of Cuando-Cubango, Angola.

The ultimate aim of the survey is as follows:

- To determine the potential for a CLTS programme in Jamba and to develop a costing model for the implementation of CLTS

The objectives of the survey are as follows:

- To identify what, if any, sanitation infrastructure exists in the community and how that infrastructure is used and maintained
- To identify current water, sanitation and hygiene (WASH) practices in the community
- To identify relevant community structures for sanitation and hygiene and their current strength
- To assess the surrounding infrastructure (if any – roads etc.) and availability of materials for latrines

This is a combination of a household and community-level survey which is partly comprised of interview questions and partly comprised of observation questions (i.e. the observation questions will not be asked of the interviewee).

The data capture tool will be implemented in the community over the field visit being made to Jamba by the KAZA-led team as supported by CRIDF in November 2015.

It is intended to deliver the data required to develop a feasibility report for sanitation in Jamba.

A video camera will be provided to the surveyor.

COMMUNITY DEMOGRAPHICS

Name of community:	
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Coordinates	
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Name of Administration:	
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Administrator's name:	
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Description of location:	
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Population:	
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Number of households:	
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Livestock numbers:					
Cattle		Goats		Sheep	
Donkey		Horses		Other	

COMMUNITY STRUCTURES

Name:	

Assessment of level of activity (High / Medium / Low):	

Description of activities of each committee: <i>i.e. How many members, what the committee does and how they provide feedback to the community</i>	1	
	2	
	3	
	4	
	5	

WASH INTERVIEW & OBSERVATIONS

WATER SURVEY

Where do you get water for your household?

How much water do you use each day? *Tick appropriate*

Below 50l		50 – 100l		101 – 150		Above 150		Don't know
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What is the quality of the water? *Tick appropriate*

Clean		Dirty		Cloudy		Slightly cloudy		Don't know
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What do you do if there is no water?

How far do you go to fetch water? <i>Tick appropriate</i>

Water on premises	<input type="checkbox"/>	Less than 50m	<input type="checkbox"/>	50-200m	<input type="checkbox"/>	201-500m	<input type="checkbox"/>	501-1km	<input type="checkbox"/>	1-5km	<input type="checkbox"/>	Above 5km	<input type="checkbox"/>	Don't know	<input type="checkbox"/>
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Who usually goes to this source to fetch the water for your household? (Probe: Is this person under age 15 years? What sex? <i>Tick appropriate box that best describes this person.</i>)
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Adult woman	<input type="checkbox"/>	Adult man	<input type="checkbox"/>	Female child (under 15 years)	<input type="checkbox"/>	Male child (under 15 years)	<input type="checkbox"/>	Don't know	<input type="checkbox"/>
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Do you ever pay for water? <i>Tick appropriate. If yes, describe what and who you pay</i>

No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	Describe:	
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Do you ever treat your water to make it safe to drink? <i>Tick appropriate</i>
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No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	Don't know	<input type="checkbox"/>
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If yes, what do you usually do to the water to make it safer to drink?
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Boil	<input type="checkbox"/>	Add bleach /chlorine	<input type="checkbox"/>	Strain it through a cloth	<input type="checkbox"/>	Solar disinfection	<input type="checkbox"/>
Use a water filter (ceramic, sand, composite, etc.)	<input type="checkbox"/>	Let it stand and settle	<input type="checkbox"/>	Don't know	<input type="checkbox"/>		

What are the three (or more) most important ways that you use water? *Rank at least three, more if mentioned*

Drinking		Cooking		Washing		Cleaning		Livestock	
Gardening		Craftmaking (baskets, leatherwork...)		Small business (making beer, etc)				Other uses	

Does the way you get water change depending on the season / time of year? *If Yes, describe how*

Yes		No		Don't know	
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Describe:

How do you get water for your livestock?

How much water do you think your livestock need in one day?

Cattle		Goats		Sheep	
Donkey		Horses		Other	

WATER OBSERVATIONS									
Water points / where water is collected									
Observation	Boreholes			Open wells			Surface water (river / pans)		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
Surface/area clean, free of debris?									
Apron in good repair?									
Soak-away present?									
Stagnant water present?									
Erosion around edges of apron?									
Animals within 5-10m?									
Latrine within 30m?									
Fence around water point? OR specific area for water collection at river									
People washing clothes where water is collected?									
Is there a long wait (above 15min)?									
Is the water salty?									

Question	Observation
Who can you see collecting water?	
Can you see whether people cover their water?	
Describe the areas where people are collecting water	
Can you see any water left in the sun to clean it?	
What uses of water can you see?	
General comments about water supply and water use in Jamba	

SANITATION AND HYGIENE SURVEY

Name of household owner:	
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Number of people in household:	
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Gender of head of household/description:	
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Number of houses in compound (average):	
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Total number of people in compound:	
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Age of people in household:			
Children under 2 years		Children / adolescents under 14 years	
Children under 5 years		Adults 18 years and older	

What type of sanitation do you have at your household?									
Flush/pour flush		Piped sewer system		Septic tank		Pit latrine		Composting toilet	
Bucket/open pit		Ventilated improved pit latrine		Pit latrine without slab		Pit latrine with slab			
No facilities or bush or field		Hanging toilet/hanging latrine		Unknown place/not sure where		Other (specify)			

<p>If flush or pour flush toilet is present, where does it flush to?</p>
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Do you share a toilet / latrine with any other households? <i>If Yes, how many households share a toilet?</i>					
Yes		No		Don't know	
1-2		3-4		5 and above	

Is anyone allowed to use this toilet?					
Yes		No		Don't know	

Why don't you have a latrine?					
Already started one		Other latrine collapsed		Used to bush	
Just		Have no tools		No one to dig it	

arrived/waiting for next season					
Don't want or need one		Moving away soon		Other/specify:	

What are the advantages of having a latrine? <i>Tick appropriate</i>					
None		Less smell		Privacy	
Fewer flies		Better health		Convenience	
Other/specify:					

If you do have a latrine, who built it? <i>Tick appropriate</i>			
Self		Others from the community	
Government		Donor	
Other (specify)			

Who maintains your latrine? <i>Tick appropriate</i>									
Owner		Other Users		Council		Owner and Other Users		Don't know	

How do you dispose of small children's faeces?					
Child used toilet/latrine		In the bush		Put/rinsed into drain or ditch	
Left in the open		Thrown into garbage		Put/rinsed into toilet or latrine	
Buried near the house and water source		Buried far from the house and water source		Do not know	
Other (specify)					

Where do you wash your hands?

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When do you wash your hands? <i>Tick appropriate</i>					
Before and after eating		When hands are dirty		After going to the bathroom	
Before preparing food		Never or rarely		Before and after feeding children	

Where do you dispose of household waste? <i>Tick appropriate</i>					
On the ground around the house		In the bush		Waste pit	
Refuse bin for collection		Don't know		Other/specify:	

Where do you dispose of wastewater? <i>Tick appropriate</i>					
Backyard		Open pit		On the street	
In open drainage		In close drainage		In soak pit	
Don't know		Other/specify:			

Have you or anyone in your household had diarrhoea in the last month? <i>Tick appropriate</i>					
Yes		No		Don't know	

How often do you or members of your household have diarrhoea? <i>Tick appropriate</i>					
More than twice a month		More than once a month		Less than once a month	

SANITATION & HYGIENE OBSERVATIONS		
If there are latrines:		
Observation	Yes or Good	No or Bad
Floor clean (without debris, urine, faeces)		
Presence of cover for pit		
Lid being used		
Hole full or almost full		

Structure in good repair		
Privacy		
Flies in latrine		
Latrine located within 30m of water point		
Status of wastewater and treatment		
Type of sanitation existing		
State of infrastructure if any		
Health threats (Describe):		

OBERVATION QUESTIONS	
Observe the general state of household areas. Is it dirty or clean and tidy?	
How do people observe hygienic practises when preparing food?	
Is there faeces around households and at the school?	
Are there designated places to shit or do people go anywhere?	

<p>How comfortable are people talking about sanitation and hygiene?</p>	
<p>Do you see people washing their hands before preparing food, before eating etc.?</p>	
<p>General comments on sanitation and hygiene practises in Jamba:</p>	

GENERAL QUESTIONS ABOUT JAMBA	
<p>How are households spread? (Far apart, close together)</p>	
<p>Are materials available for latrine construction?</p>	
<p>How long does it take to get to Jamba from the border?</p>	
<p>Are there any other towns nearby?</p>	
<p>How regularly do people from Jamba interact with people from other villages?</p>	

<p>Do people from Jamba go to other centres to get supplies for the village? If Yes, who goes and where do they go?</p>	
<p>Where do people get supplies such as cooking oil or clothes?</p>	
<p>Is there any communications infrastructure? (Cell phone signal, radios)</p>	
<p>Is there a school and a clinic?</p>	
<p>Does the school or clinic provide any kind of health information to the community?</p>	
<p>Has any health or sanitation project been done in Jamba before?</p>	
<p>General comment on the village and village life?</p>	

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