

Documentation of CLTS Experiences with ASNANI in Nampula Province



February 2010

Amaka Godfrey

amaka.godfrey@yahoo.co.uk



Executive Summary

CLTS was introduced in the ASNANI project in Nampula Province in May 2009 with a training of artisans in Mecuburi District. Prior to the introduction of CLTS, the artisans were trained to use PHAST tools for hygiene and sanitation promotion but it yielded minimal results. Within three months of the introduction of CLTS, the artisans in Mecuburi reported over 3,000 latrines constructed in communities where CLTS was triggered. This success is concentrated in two of the four Administrative Posts, which coincides with the areas where the trained artisans reside. This encouraging report led to the expansion of CLTS to a second District, Moma with the worst sanitation coverage in Nampula District.

A new group of artisans were trained on CLTS in Moma District but did not achieve the same success as their counterparts in Mecuburi District. Some of the factors that could have contributed to this lack of success include the skills and interests shown by the artisans, the proximity to beaches away from the immediate living environment of the coastal communities, unstable soil conditions, lack of strong leadership with interest in changes in sanitation practices, long standing tradition of defecating on the beach and lack of appropriate and affordable latrine technologies.

Although CLTS was not successful in Moma district, the result in Mecuburi has demonstrated that CLTS could potentially trigger changes and uptake of latrines at a scale that has not been seen previously. It also reinforces the need to include the approach in the national strategy for sanitation promotion in rural areas.

Findings from the field visits indicate that with more comprehensive planning, CLTS could achieve better results. The experience of the ASNANI project points to the need to have regular monitoring and support mechanisms if local resources such as the artisans are to be used for triggering. This will include clear system of verifying and reporting progress; without this clear system, it will be difficult to validate the latrine figures provided by the artisans. It also points to the need to look in-depth into how to make CLTS and/or other innovative approaches work in coastal communities and the need for appropriate low-cost technologies for these communities. The findings reinforce the important role of community leaders post-triggering. A committed and progressive leader that supports CLTS process is more likely to push for change than one that has very little interest. The effect of a committed community leader on the success of CLTS is almost equal to that of a skilled facilitator.

Finally, it is important that communities where CLTS has been triggered are evaluated to ascertain those that have reached the ODF status.

Table of Contents

1. Introduction	1
1.1 Background.....	1
1.2 This report.....	1
2. ASNANI Project in Nampula	1
2.1 Baseline information on Mecuburi and Moma districts	2
2.1.1 Mecuburi District.....	2
2.1.2 Moma District.....	2
PART 1: Findings from the Evaluation	4
3. Sanitation promotion approaches	4
3.1 PHAST.....	4
3.2 CLTS in Mecuburi District	4
3.2.1 CLTS training.....	4
3.2.2 Community selection.....	5
3.2.3 CLTS triggering/facilitation skills.....	5
3.2.4 Latrine technology and supply.....	6
3.2.5 CLTS result.....	7
3.3 CLTS in Moma District	8
3.3.1 CLTS training.....	8
3.3.2 Community selection.....	8
3.3.3 Latrine technology and supply.....	9
3.3.4 CLTS result.....	9
3.3.5 Variation of results between Mecuburi and Moma Districts.....	10
3.4 Analysis of CLTS costs	11
PART 2: Implications of findings and recommendations	13
4. Introduction	13
4.1 Capacity development for CLTS	13
4.2 Triggering CLTS.....	14
4.3 Technology and supply of latrines.....	15
4.4 Monitoring and support	16
4.5 Evaluation of communities for ODF.....	17
4.6 Conclusion	18
Bibliography	20

1. Introduction

1.1 Background

The CLTS approach to promoting sanitation is gaining ground all over the world. It has recently been applied for the first time in Mozambique, with apparently very good results, and recent pronouncements by the Minister of Public Works and Housing indicate that it is the Government's intention to adopt this approach nationally.

WSP recently commissioned a study of the CLTS interventions made under the UNICEF-supported "One Million Initiative" in Manica, Sofala and Tete provinces and a final draft report has been produced and discussed with the stakeholders. A second, somewhat smaller but nevertheless significant CLTS intervention has been undertaken under the AfDB-supported ASNANI program in Nampula province. Given the Government's intention to expand the application of CLTS, it is important that all experience to date in the country be documented and analyzed so as to inform the effective implementation of this approach in other areas.

The Water Supply and Sanitation Project in Nampula and Niassa (ASNANI) funded by the Government of Mozambique and the African Development Bank commenced activities in Nampula towards the end of 2003 and ended officially in September 2009. The project had eight components with the principal objective of improving the quality of life of the population of two provinces through the provision of improved water supply and sanitation infrastructure, and promotion of good hygiene practices in the communities.

1.2 This report

The objectives of this report are to document the application of CLTS in Nampula under the ASNANI project, with special emphasis on the lessons learned with respect to the triggering methodology, community and individual incentives, evaluation of open defecation free status, capacity-building needs and costs. The report aims to describe and analyze sanitation promotion, evaluation, recognition and incentives in the sample communities, and the outcomes, successes and failures achieved. The report also covers some program management issues such as capacity-building and costs.

2. ASNANI Project in Nampula

The ASNANI project commenced in 2003 with the objective of implementing water supply and sanitation projects in all the districts of Nampula and Niassa. The objectives of the project include amongst others: baseline studies in all the districts; construction and rehabilitation of water points; construction of latrines in schools and health centres, and demonstration latrines in the communities; improvement of hygiene and environmental health practices in communities that benefited from water supply and sanitation infrastructures; creation of a management system and establishment of a supply chain for handpump spare parts in the provinces.

Initially the sanitation component of the project focused on the construction of latrines in schools and hospitals, and demonstration latrines in the communities, which resulted in the construction of 350 latrines. Communities were selected based on their sanitation coverage, as identified in the baseline study. The hygiene and sanitation promotion component of the project was realised with the training of water committees and artisans to promote the construction of latrines and maintenance of handpumps from November 2008. The water committees (926 persons) and artisans (136 persons) were trained in the use of the PHAST

methodology to promote hygiene and sanitation in twenty districts. The CLTS approach was introduced in May 2009 with the training of eight artisans in Mecuburi District by GEO-austral, a firm that is also working on CLTS in Sofala province. Another group of seven artisans were also trained in June 2009 in Moma District. Mecuburi District had artisans that were already working with CARE's HAUPA project, in the course of which they had been trained on latrine construction.

2.1 Baseline information on Mecuburi and Moma districts

2.1.1 Mecuburi District

Mecuburi District is made up of four Administrative Posts (PAs), *Mecuburi-Sede, Muite, Milhana, and Namina*) subdivided into 10 localities with a total of 179 communities. The district has a population of 155,296 (census, 2007) at a density of 20 p/km². The three major religions are Islam (39%); Catholicism (27%); Zion, Protestants and others (32%). The source of income for the majority of the residents is farming. The majority of the houses in the district are made of locally available materials, such as wooden poles, mud bricks, bamboo and thatch grass mainly used for roofing. Mecuburi district falls within two geological formations, quaternary sedimentary formations in the lowland areas, and primary and pre-cambrian metamorphic rocks at the plateau and the mountainous areas. The geological formation of an area plays an important part in latrine construction and use. People are usually discouraged to build latrines in rocky areas where it is difficult to dig with simple tools and even more so in unstable sandy and waterlogged areas.

A baseline assessment conducted in 2007 indicated that access to improved sanitation is low with a high percentage (48%) of people practising the 'cat method' (Salomon 2007). The report estimated that an average of 24% of the population of the District practice open defecation and 27.9% have and use traditional pit latrines. Namina (29.7%) and Mecuburi-Sede (28%) Administrative Posts were estimated to have the highest percentage of open defecation with Muite PA having the highest percentage (30.2%) of traditional latrines. Data on defecation practices was available for 174 of the 179 communities. No community was reported to have 100% latrine coverage but Carrupeia and Reonaca had an estimated 92% and 90% coverage. Only 14 communities out of the 174 with sanitation data were reported to have 0% latrine coverage respectively. This is an indication that latrine construction and use is common in this District

The baseline report mentioned that community leaders have had limited exposure and hence experience of community-based project management. As a result, community leaders may find it difficult initially to play the role of promoters and organisers of water supply and sanitation services effectively. However, a number of active Community Based Organisations (CBOs) were reported in the Districts including water committees and water point maintenance groups. According to the report, Muite PA had the highest number of water committees (16) and maintenance groups (8).

2.1.2 Moma District

Moma is a coastal district located in southern most part of Nampula Province and is made up of four PAs – Chalaua; Larde; Mocone-Moma Sede; and Mucuali. It has a population of 310,690 (census, 2007) and a total of 233 communities with Macone-Moma Sede PA being the largest. Moma District falls within the Quaternary sedimentary formation, which has implications for latrine construction and use due to the loose soil conditions. Unlike in Mecuburi, the major sources of income include fishing, mining and farming. Houses are mainly built with local materials including most parts of the coconut tree and mud. However,

the situation is slightly different in Macone-Moma Sede where many houses are made of cement blocks with zinc roofing sheets.

According to the baseline report, the most common defecation practice is the 'cat' method, followed by open defecation with a very small percentage of traditional latrines. Data on defecation practices was only available for 160 of the 233 communities. The report indicated that over 45% of communities where more than 65-100% of the population practice open defecation are located in Macone-Moma Sede P.A, interestingly, it also has the most number of communities with the highest latrine coverage; 82% in Coropa; 77% in Pilivili A; 68% in Naicole and 53% in Pilivili B. Mucuali PA has the second highest number of communities (16) with traditional latrines.

PART 1: Findings from the Evaluation

3. Sanitation promotion approaches

3.1 PHAST

One of the objectives of the ASNANI project in Nampula Province is the improvement of hygiene, health and environmentally- related practices in communities where water and sanitation infrastructure has been installed. In order to achieve this objective, water and sanitation committees and artisans were trained on health and hygiene education with focus on the prevention of water- and sanitation – related diseases; and HIV/AIDS. Artisans and water committees were trained on the use the PHAST methodology to promote ‘safe’ hygiene practices. In Mecuburi District, 8 artisans and 1 water committee were trained; and in Moma District, 7 artisans and no water committee were trained.

All the trainees were equipped with the PHAST tools to enable them to work with their various communities. Artisans were made up of not just masons but included mechanics, small business retailers, and community leaders. The artisans do not just have responsibility for health and hygiene promotion but also hand pump maintenance and community mobilisation, hence the inclusion of people other than masons. Each Administrative Post nominated 2 artisans. The 8 artisans in Mecuburi District, unlike their counterpart in Moma District, had some previous experience of sanitation and hygiene projects, as they were trained by CARE’s HAUPA project.

In order to promote latrine construction in the communities, demonstration latrines of various types were built. Latrines were also constructed in health centres and schools. Observations in the field indicated that the trained artisans more than the water committees carried out health and hygiene promotion in the communities using PHAST. However, the PHAST methodology was never used in its entirety and the artisans only selected the tools that they felt more suitable, often ‘Nurse Felicidade’. The combined use of PHAST and demonstration latrines were said to have had little impact on changing open defecation and the construction and use of latrines in all the ASNANI project Districts. The majority of the latrines that were constructed in schools were not maintained and were found to be filthy during the field visit.

3.2 CLTS in Mecuburi District

3.2.1 CLTS training

Community Led Total Sanitation Approach (CLTS) was introduced by the ASNANI project towards the official end of the project. It was first introduced in Mecuburi District with the training of 8 artisans in May 2009 by GEO-austral; an NGO that participated in the CLTS training organised by UNICEF and is involved in the “One Million Initiative” project in Sofala Province. The majority of the artisans from Mecuburi District have had extensive experience of working on sanitation construction with the CARE HAUPA project and the ASNANI project, hence the decision to train them on CLTS. The training lasted for 4 days including triggering in a community. Amongst the artisans trained were 7 men, and 1 woman based in Namina Administrative Post. All the artisans were aged between 22 – 36 years of age and seem very keen to see changes in sanitation practices in their communities.

In theory, there should be 2 artisans for each of the 4 P.As to facilitate triggering of CLTS in the communities. However, 5 of the artisans are actually resident in Mecuburi-Sede PA including the 2 that were meant to represent Milhana and 1 for Muite; the 2 artisans for Namina are resident in the PA and the remaining one for Muite is also resident in Muite PA but appears to be inactive.

3.2.2 Community selection

On completion of the training, the trained artisans were mandated to trigger CLTS in their respective PAs. There were no obvious criteria for selecting communities to trigger CLTS. It seems that the artisans started in communities most convenient for them – their own community and neighbouring communities. Though they did not seem to have followed the criteria for community selection, they achieved a good result, which is discussed later on in the report.

Each of the 8 trained artisans was given a bicycle to aid them in making community visits. Considering that the majority are resident in Mecuburi-Sede PA and the distance to the nearest community in Muite PA is about 30km and to Milhana is about 20km on a dusty bumpy road, it is not surprising that the team finds it difficult to reach these communities, hence the almost total lack of activity in these two PAs. The only artisan resident in Muite does not seem to be part of the team and is practically inactive. Namina and Mecuburi-Sede P.As are the only ones with trained resident artisans. Even if all the artisans are resident in their respective P.As, it is almost impossible for two persons to cover the entire 64 communities of Muite and similarly for the other PAs. Even in Namina, where there are only 15 communities, the distances make it impossible for two people to trigger CLTS in all the communities. The table below summarises the situation in Mecuburi District.

Table 1: Distribution of artisans trained on CLTS in Mecuburi District

Posto Administrativo	No. of communities	No. of resident trained artisans	Estimated distances to Mecuburi-Sede
Mecuburi-Sede	76	5	0km
Muite	64	1	30km (North)
Milhana	24	0	20km (North)
Namina	15	2	35km (South)

3.2.3 CLTS triggering/facilitation skills

The CLTS approach requires good facilitating skills in order to ‘capture that moment’ when the entire community is triggered to take action on their sanitation situation. It requires a facilitator with the ‘right’ skills and a passion for CLTS. The five artisans resident in Mecuburi-Sede seem very motivated and demonstrated understanding of the CLTS process. However, it appears that they combined CLTS with PHAST in every community where they have triggered. They explained that they commence triggering with a PHAST tool (‘Nurse Felicidade’) and then go on to trigger CLTS. Their reason is that CLTS only promotes the construction and use of latrines but does not cover other hygiene practices such as hand washing, food and environmental hygiene; a concept also shared by the ASNANI team. The type of food used for triggering was not clear from the discussions with all the artisans except during the training when ‘caril’ and ‘arroz’ was used.

The only woman in the team is based in Namina PA and appears to focus more on triggering CLTS and was able to explain the process more comprehensively. She appears to command a lot of respect in her community and has managed to convince the community leader to include latrine construction as a prerequisite for new people wanting to settle in the community. Over 30 latrines were under construction at the time of the visit. A total of 492 latrines were constructed between May and July, with no data available for September to November 2009.

As mentioned earlier, nothing much seems to be happening in Muite and Milhana P.As where the nominated artisans are not resident.

3.2.4 Latrine technology and supply

The majority of the latrines in the communities were built by the individual households using local materials such as wooden poles, mud blocks, and grass for roofing. However, in some communities in Mecuburi-Sede such as Macuacuali where there is almost 100% coverage, many houses had improved latrines. The dome slabs used for the latrines in this community were donated by the HAUPA project of CARE to households with freshly dug latrine pits. Some houses had more than one latrine (a traditional and an improved latrine), the more recent improved latrine pit excavated to benefit from the free slab of the HAUPA project. The slabs were produced by the masons that were originally trained by CARE and then trained on CLTS and PHAST by the ASNANI project. At the time of the visit, the artisans indicated that CARE's HAUPA project has terminated the donation of slabs in Mecuburi-Sede. The artisans were awaiting the delivery of tool kits from ASNANI to enable them to start making slabs to sell directly to households. They were not sure of the price for which they would sell the dome slabs but reckoned it would be between Mzn450 – 550.



Fig 1: Traditional latrine platform under construction



Fig 2: Traditional latrine platform – finished



Fig 3: Improved latrine



Fig 4: Improved traditional latrine

The majority of the communities in Mecuburi-Sede PA have stable soil except for a few communities, hence the possibility of having unlined pits. Latrine pits are dug up to 5m deep with timber logs on the top as base for the platform. About 2 layers of plastic sheets are laid over the timber before compacted mud is used to finish off the floor, (fig 1-4). Latrine superstructures are made of mud and bamboo and roofed with grass. The majority of the latrines had an attached small shower room made of grass, which often serves as the entrance to the latrines (fig 5-8). The entrances to the latrines were slightly also raised with a bamboo fence, which they say stops pigs and snakes from entering the latrines.



Fig 5: Latrine superstructure under construction



Fig 6: Traditional latrine shower superstructure



Fig 7: Traditional latrine superstructure



Fig 8: Completed latrine

The trained artisans seemed very motivated and have the skills to build various types of latrines. However, their capacity to expand the delivery of latrines beyond Mecuburi-Sede where they reside is limited because of transportation and distances to the other PAs. At the time of the visit, the artisans have formed an association and were in the process of finalising its official registration, which has attracted more members other than those that were trained. Registering the association officially will give them the legal standing required to bid for government contracts to build institutional latrines.

3.2.5 CLTS result

There seems to be no strategy in place for evaluating the result of the CLTS approach in Mecuburi District. This could be attributed to the fact that CLTS was introduced only three months before the end of the ASNANI project. Although a comprehensive baseline assessment was conducted in 2007, there is no valid means of confirming the exact number of latrines in the various communities where CLTS has been triggered. It was also difficult to ascertain the number of communities where CLTS was triggered after the training, as there was no monitoring system established for such. The available data from the artisans regarding the number of latrines constructed after triggering CLTS is also confusing, as some communities seem to have more latrines than the estimated population. For example, in Nacuacuali community the artisans mentioned that it has 100 improved latrines; 449 traditional latrines and 1,020 latrine pits in the process of being completed as at November 5, 2009. This will mean a total number of 1,569 latrines for 1,140 households.

Although the existing data are conflicting, it is clear that the introduction of CLTS has made a significant impact on the uptake and use of latrines. The results can only be attributed to CLTS because the artisans and the water committees have been carrying out hygiene

promotion using PHAST tools for more than one year but with little result. Other indicators include the absence of faeces in locations commonly used for open defecation prior to CLTS triggering, and the number of new latrines completed and in progress. It was evident during the field visit to communities in Mecuburi-Sede and Namina PAs that many latrines have been constructed in the last six months. According to a report provided by the ASNANI team, a total of 3,630 latrines were constructed between May and July; and 920 latrines between September and 5th of November 2009. It was not possible to verify these data, as there were no exact baseline figures for the number of latrines pre-CLTS triggering in the respective communities.

Due to the lack of a monitoring and evaluation system, no community can be said to be ODF (Open Defecation Free). Although the baseline assessment report from 2007 estimated that Reonoca, a community in Mecuburi PA had 100% latrine coverage (10% improved latrines); data from the artisans for latrines constructed in the same community between September and November 5th 2009 indicated that 440 latrines were constructed.

3.3 CLTS in Moma District

3.3.1 CLTS training

Following the success of CLTS in Mecuburi District, ASNANI introduced CLTS in Moma District, which is known to be the worst District in terms of sanitation coverage (8%) in Nampula Province. Similar to Mecuburi, 7 artisans were trained by GEO-austral in late June 2009. This group of artisans consists of 1 woman, 2 masons, 1 mechanic, 2 community leaders and 1 small business retailer. In theory, two artisans were selected from each of the 4 PAs (Chalua; Larde; Macone-Moma; Mucuali) that make up Moma district. However, 3 reside in Mocone-Moma; 3 in Chalua and 1 in Mucuali. An important difference between the artisan groups in the Moma and Mecuburi districts is that the latter have been exposed to sanitation and hygiene promotion and have undergone training under CARE's HAUPA project.

The practical training on latrine construction in Moma District was held in Mengurrine, a community on the sea front in Macone-Moma PA. The artisans in Moma District, unlike their Mecuburi counterparts, are older and seemed less enthusiastic. Discussions held with the artisans and observations made during the visit indicated that 2 artisans including the only woman have not been active since the training leaving the three residents in Macone-Moma and the two in Chalua.

3.3.2 Community selection

As mentioned earlier, the practical training was conducted in Macone-Moma where CLTS was triggered in Mengurrine community. The artisans were also trained on the construction of traditional latrines using traditional building materials. The majority of the materials such as timber, bamboo and grass for roofing were brought in for the training, as they are not available in the community.

On completion of the CLTS training, the artisans were meant to continue to trigger CLTS in the various communities in their respective PA. There were no obvious criteria for selecting which communities to trigger and it appears that the artisans have not done much triggering since the training. The artisans in Chalua seem uncomfortable with the CLTS approach and prefer to use PHAST tools, which do not involve demonstrating faecal-oral transmission using faeces. A community leader who is a member of the group commented that people

were pointing at him when he went for a meeting in Macone-Moma saying that he was amongst those that play with faeces.

3.3.3 Latrine technology and supply

In Macone-Moma PA, only one of the three artisans had a latrine in his house, but without a superstructure. The others still defecated at the beach like the majority of the communities in the beach areas of Macone-Moma. Some of the physical factors that limit the construction of traditional latrines in this area include unstable soils, high water table, and lack of local construction materials, amongst other factors.

In order to get an overview of the latrine technologies used in Macone-Moma PA, we visited communities that were shown in the baseline report to have high latrine coverage. The communities visited include Pilivili A and B with an estimated 3,397 and 2,163 households respectively, and Coropa, with an estimated 890 households. According to the baseline report of 2007, the estimated latrine coverage for these three communities are as follows; Pilivili A (100%); Pilivili B (51%); Coropa (82%). Ten houses were randomly visited in Pilivili A and all had latrines; in Pilivili B three were found without latrines, whilst all the houses visited in Coropa had latrines.

All the latrines observed were traditional latrines made with local materials. There are a few innovations including simple pour-flush latrines made with 0.5m of 4" PVC pipe connected to an external pit. The drop hole, which is one end of the PVC pipe is covered with a small round cement structure, and the latrine is also used for bathing (fig 9). The majority of the traditional latrines had raised platforms to prevent water entering into the pits in the rains (fig. 10).



Fig 9: Pour flush latrine



Fig 10: Raised traditional pit latrine

3.3.4 CLTS result

There was no evaluation system for monitoring the impact of CLTS in Moma District, which was also the case in Mecuburi District. However, information given by the ASNANI team indicated that about 85 latrines have been constructed since the introduction of CLTS. This result shows that there has not been much success with CLTS in Moma District, unlike in Mecuburi. One of the factors that may have contributed to this is the quality of triggering by the artisans in Moma District. There were indications during the visit that the artisans may not have triggered CLTS any further than what was done during the training. The majority of the artisans were in an older age bracket than their Mecuburi counterparts; also they did not seem keen to use CLTS because it uses faeces during triggering; instead they resorted to using PHAST tools. The implications of these findings are discussed later on in the report.

3.3.5 Variation of results between Mecuburi and Moma Districts

According to ASNANI reports and evidence from the field visits, CLTS was much more successful in Mecuburi than in Moma District. This could be attributed to several factors related to the artisans, communities, and technology, some of which have been mentioned in the earlier parts of this report.

Factors relating to the artisans:

- *Triggering skills:* The artisans in Mecuburi district may have had more success because they had better triggering skills than their counterparts in Moma. During the discussions held with the various groups of artisans, those in Mecuburi demonstrated better understanding of the CLTS process and continued to trigger in their communities and the neighbouring ones. On the other hand, it did seem that the team in Moma, particularly in Macone-Moma PA, did not continue to trigger CLTS post-training. They also did not appear as knowledgeable about the process as their Mecuburi counterparts. The team in Moma were not very specific on how many times and where they triggered CLTS on their own after the training.
- *Location:* Evidence from the field visits suggest that more success was achieved in communities where a trained artisan is resident or in neighbouring communities where they have triggered CLTS and were able to follow up on progress post triggering. This explains why the greatest success was achieved in Mecuburi-Sede where 5 of the 8 trained artisans are resident and in Namina where 2 of the artisans are resident. Very little success was achieved in Muite and Milhana Administrative Posts, as none of the trained artisans are actually resident these areas.
- *Interest and enthusiasm:* The interest and enthusiasm to see changes in defecation practices was very obvious amongst the team in Mecuburi, as compared to their counterparts in Moma. The majority of the Mecuburi team were young and dynamic masons, which may also explain why they are keen to increase demand and the uptake of latrines. This interest in making changes may also be due to the recent cholera outbreak in Mecuburi-sede that resulted in many deaths. The majority of the artisans trained to trigger CLTS in Moma-Sede did not have a latrine in their houses, which makes it even more difficult to convince others to build one. The community leader was very pessimistic about building latrines and did not demonstrate a strong will to support CLTS unlike those in Mecuburi District. The same was the case for the Technical Officer in Moma District Public Works and Housing Department, who kept mentioning that unlined pits are not feasible in the coastal communities because of unstable soil.
- *Previous exposure to sanitation projects:* The Mecuburi artisans have been functioning as a team for a while, as they were originally set up by CARE's HAUPA project. They also received training on latrine construction under this project and have had some level of exposure to working with communities on sanitation and hygiene promotion. The team in Moma District are new to sanitation and hygiene promotion and for many of them it is the first time they have been trained on latrine construction.

Factors relating to the community and technology:

- *Easy access to open defecation sites:* Communities in Mocone-Moma PA, where the District headquarters is located close to the beach, had the worst open defecation practices of all the communities visited. Adults were seen in broad daylight defecating on the beach in the presence of many people. Easy access to the beach away from their immediate surroundings where they do not have to encounter their own faeces daily has contributed to sustaining this old practice. Other communities in the same administrative post such as Coropa, Pilivili A and B that are not within easy reach of the beach and where CLTS has not been triggered all had over 85% latrine coverage.

- *Soil conditions and local materials:* Communities near the sea in Moma-Macone have particularly unstable soils with high water table, resulting in unstable pits. All the households spoken to during the visits to these communities gave unstable soil as the main reason for not building latrines. Although unstable soil inevitably contributes to the non-uptake of latrines even for households that can afford it, coastal communities are widely known to have a relaxed attitude to life. They are not keen to take on demanding tasks and even less to build latrines that may collapse after one rain, where there is abundant beach space available for open defecation.
- *Availability of construction materials:* The non-availability of traditional construction materials (timber, bamboo and grass) in communities near the coast in Mocone-Moma PA also make it difficult for many to build latrines. All the construction materials used to construct the demonstration traditional latrine during the training were brought in from outside the community.
- *Technology choice:* Technology is a key factor affecting latrine uptake in most communities. The low-cost latrine technologies (e.g. unlined traditional pit latrines) available to rural communities are often not suitable for coastal communities and those located on loose sandy soils such as those found along the coast in Macone Moma PA. The alternatives are expensive and the majority of the households cannot afford them, which could also explain why few changes were seen in Moma. The only trained artisan in Mocone-Moma that had a latrine dug the pit within the space left by a dead coconut tree in the hope that the roots would help to stabilise the pit.

3.4 Analysis of CLTS costs

Due to non-availability of data, it was not possible to provide a comprehensive analysis of the costs of CLTS nor to estimate the cost of scaling up. Table 2 outlines the analysis of costs for setting up CLTS in Mecuburi and Moma districts respectively. It includes training costs and incentives for artisans but excludes the cost of ASNANI staff support. There were no costs for evaluation, recognition of ODF communities and prizes, as these were not part of the strategy. The cost also includes kits for latrine construction and hand pump repair, which were not necessarily part of the CLTS strategy but as part of capacity building for maintaining water and sanitation facilities. The kit with 18 items will be given to artisans in pairs, which means that the Mecuburi and Moma artisan groups will each receive 4 kits.

Table 2: Estimated cost of a setting up CLTS in Mecuburi and Moma Districts of Nampula

Activity	No	No. of days	Unit cost (US\$)	Total
MOMA District				
Artisan and leaders trained	12	4	20	960
Trainer	1	4	250	1,000
Transport	1	4	300	1,200
Material for latrine construction demonstration				300
Materials for CLTS preparation				
Collection of materials				100
Reproduction of manuals	12	1	100	1,200
Community activities	2	2	50	200
Payment of venue	1	3	100	300
Feeding, refreshment and transportation of activists	12	3	70	2,520
Subtotal (Moma District)				\$7,780

Activity	No	No. of days	Unit cost (US\$)	Total
MECUBURI DISTRICT				
Artisan and leaders trained	12	4	20	960
Trainer	1	4	250	1,000
Transport	1	4	300	1,200
Material for latrine construction demonstration				300
Materials for CLTS preparation				
Collection of materials				100
Reproduction of manuals	12	1	100	1,200
Community activities	2	2	50	200
Payment of venue	1	3	100	300
Feeding, refreshment and transportation of activists	12	3	70	2,520
Report of the 2 phases	2		100	200
Sub total (Mecuburi District)				\$7,980
General Items			Meticais	
T-shirts	50	0	500	25,000
Caps	50	0	150	7,500
Bicycles	6	0	1,800	10,800
Artisan's kit	8	0	2,730	21,840
ASNANI staff cost	-	-	-	-
Subtotal Meticais				65,140
Subtotal (US\$)				\$2,171
GRAND TOTAL (US\$)				\$17,931

The above shows the cost of setting up CLTS and the incentives given to the artisans. It was not possible to estimate the cost of each latrine constructed as a result of CLTS because of the lack of exact figures.

PART 2: Implications of findings and recommendations

4. Introduction

Some of the key factors that contribute to the success of CLTS include facilitators' skills; buy-in from strong community leaders; size and nature of community; use of food considered special by the community; triggering CLTS alone without combining it with other hygiene and sanitation promotion methodologies. The introduction of CLTS in Nampula province under the ASNANI project, though *ad-hoc*, produced convincing results showing that CLTS has the potential to bring about changes in defecation practices on a large scale. Although none of the communities where CLTS was triggered was declared ODF, some of them were certainly getting there. However, the lack of an evaluation system and the end of the ASNANI project cycle means that these results may never be ascertained.

This section discusses the implications of findings from the review and ends with some recommendations for scaling up CLTS in Nampula Province. It is divided into subsections covering various key areas that have potential impact on scaling up CLTS. The key issues discussed include capacity development for CLTS; selecting communities for CLTS, delivery of improved latrines, evaluation and recognition of ODF communities.

4.1 Capacity development for CLTS

The impact of triggering CLTS in any community is dependent on the effectiveness of the facilitation and on how active the community leader is, post-triggering. CLTS is a new approach in Mozambique and was introduced in 2008 by the UNICEF "One Million Initiative" with the training of 74 people selected from various NGOs and UNICEF staff. According to the information from ASNANI, 12 artisans and community leaders were trained in Mecuburi and Moma districts respectively by GEO-austral, an NGO that was trained in CLTS under the "One Million Initiative". Two artisans were nominated from each of the four Administrative Posts that make up Moma and Mecuburi Districts respectively, for training on CLTS. It is important to note that they were not all masons but included community leaders and small business retailers. Although the artisans were assumed to be resident in their respective Administrative Posts, this was not the case in Mecuburi District resulting in CLTS triggering being concentrated in Mecuburi-Sede, hence the high results in this area.

It was not possible to verify the actual numbers of communities where the trained artisans triggered CLTS post-training, as there was no particular system for record keeping or monitoring. There were some doubts on whether the artisan team in Moma district actually triggered CLTS in any community post-training but rather used some PHAST tools for sanitation promotion. Scaling up CLTS in Nampula Province requires a clear strategy that outlines the profile and selection criteria for facilitators, and for community selection; systems for monitoring and evaluation of ODF communities; incentives for facilitators and a simple and cost effective recognition system for ODF communities.

Recommendations:

- Facilitators' skills are crucial to the success of CLTS and should therefore form the strong foundation on which CLTS is introduced in the community. The use of artisans to trigger CLTS is an innovative and potentially more cost-effective system than using NGOs. However, care needs to be taken on the profile of the artisans, and also a close monitoring and support system should be put in place.

- The artisans should consist mainly of masons, with community leaders as support persons, and should be based in or close to the communities where they will be triggering CLTS. This will make it easier for them to get to the communities and focus on triggering rather than stressing about transportation.
- If community-based facilitators such as artisans and leaders are to be used for triggering, at least 2 artisans and a '*Régulo*' should be trained on CLTS in each *Regulado*. The number of people to be trained should be guided by the annual target for ODF communities. The baseline report provides good background data and can guide the selection of regulados/communities to target.
- The profile of artisans should include activeness; interest in change and enthusiasm shown. It is counter-productive to include people with little or no enthusiasm that have reservations with the process of CLTS. Triggering CLTS requires a particular type of facilitator who is keen and willing to use faeces for the demonstration. This will mean that age may play a part in the profile of a facilitator. In cultures where older people are not meant to have contact with faeces, it will be unproductive to use them as facilitators rather, they may be more effective post-triggering. This may be the case in Chalaua PA Moma where the older members of the team were not keen to trigger CLTS but used PHAST tools to promote change in defecation practices. In Mecuburi, the team were younger, keen and enthusiastic about bringing change using hygiene and sanitation promotion methods including CLTS.
- Having more masons in the team could motivate them to trigger more communities, as they may be able to increase the demand for their services. Apart from being interested in change, masons will also be motivated because of the likely economic benefit.
- Women who have shown strong interest and leadership skills during community discussions should also be considered for training on CLTS. Women are often more affected by sanitation and are more interested in improvements, therefore including them as facilitators will reach out to more women and can bring about sustainable change. The only woman in the team of facilitators in Mecuburi district, based in Namina Administrative Post, had had a very strong impact on change in defecation practices in her community, and almost all by herself.

4.2 Triggering CLTS

- The artisans in both Mecuburi and Moma Districts were encouraged to incorporate some PHAST tools whilst triggering CLTS. In Mecuburi, the artisans described how they trigger CLTS, which they said begins with 'Nurse Felicidade', a PHAST tool, before they do the actual triggering. The essence of the CLTS process is to present the shocking reality of defecation practices, which in turn is hoped will trigger collective change in any given community. Beginning with PHAST tools dilutes this shock, as the community members are prepared for what follows.
- The combination of PHAST and CLTS could result in overloading the community members with messages, which has a counter-productive effect. It is well documented that sending too many messages in one go could result in none of the messages reaching the target audience. The assumption is that combining CLTS with PHAST tools will ensure that other hygiene practices such as hand washing; environmental sanitation and food hygiene will be covered.

Recommendations:

- It is important that the triggering of CLTS is not combined with other sanitation promotion approaches in order to ensure that the shocking impact is sent undiluted to community members.
- If there are concerns that CLTS alone is not targeting other hygiene practices, the follow-up/monitoring visits could be used to cover these practices. At this stage, PHAST tools, and other hygiene promotion methods can be used to reinforce the messages. The important thing is to ensure that the communities are not overloaded with messages and that at least one single message goes across rather than none.
- It is important that smaller rural communities are selected for triggering CLTS even though the trained artisans are resident in peri-urban communities. Some of the known favourable conditions for CLTS include smaller settlements; remote communities; social and culturally homogeneity; lack of cover or sites with easy access for open defecation; young and progressive leadership; existence of active group within the community; etc.
- CLTS may not be suitable for coastal communities with abundant beach areas, and in other communities where there are sites with easy access for open defecation, which are however removed from their immediate surroundings. It is worth considering other approaches such as sanitation marketing. To begin with, a study should be carried out to understand the potential motivators and barriers to the uptake of latrines by various groups, and also the attributes they prefer in a latrine. This will prepare the ground for developing a sanitation marketing strategy including technology choices and supply mechanisms. One approach would be to begin by triggering CLTS with a highly skilled facilitator. Sanitation marketing could then be launched post-triggering to reinforce CLTS and offer people affordable latrine choices. This would need to be trialled before scaling up, as there is little skill and experience of sanitation marketing in Mozambique.

4.3 Technology and supply of latrines

i. Appropriate technology

- As indicated earlier, the lack of appropriate affordable latrine technology is a contributing factor to the low uptake of latrines in coastal communities in Macon-Moma PA. It is therefore important to develop low-cost methods of building longer lasting latrines, particularly in areas with unfavourable ground conditions.
- One approach would be to modify the style of traditional latrine pits. Instead of the current 1m(W) x 4m(D) that is the norm in Mecuburi, the pits could be made shallower and narrower to help stabilise it. The top soil (0.5m), which is often where the pit starts to cave-in, can be reinforced with burnt brick hence reducing the cost of lining the entire pit.
- In order to facilitate the use of water for anal cleansing, and the combined use of the latrine superstructure for showering, offset pour-flush latrines such as the one described earlier section 3.3.3 (fig 9) could be further developed. In this type of latrine, a short length 4" PVC pipe is placed on a slightly raised platform and then channelled to an external pit. Faeces are flushed into the pit by gravity using small amount of water.

ii. Supply of improved latrines

- The availability of skilled persons that can offer advice and build latrines for households is vital to achieving sanitation improvements. The involvement of artisans in triggering CLTS and also supplying sanitation services is a good approach that could encourage artisans (particularly masons) to promote sanitation.
- Although the services of masons are usually required for fabricating slabs and finishing off the platform of improved latrines, other artisans such as latrine diggers are also required. In Mecuburi district, artisans that specialise in digging latrine pits were found to be operational and charge between Mzn50 – Mzn100 to dig a pit of 1m (diameter) by 4m (depth) using simple implements. They usually work in pairs taking turns to go into the pits. Their clients are widows, women living alone or whose husbands are sick, old and sick men and women; basically people that are not capable of digging their own pits. They also charge extra for completing the platform and superstructure of traditional latrines.
- The promotion of cheaper versions of improved traditional latrines such as the use of sanplats instead of the larger dome slabs should be encouraged. The majority of the masons and the community members often assume that improved latrines can only be made with dome slabs. Although dome slabs are understandably easier to place, as they require less use of timber logs for their foundation, and can be cleaned easily, they are also more expensive and more difficult to transport. The important thing is to ensure that households are given clear information to enable them to make informed choices.

4.4 Monitoring and support

i. Project role:

- The main difference between the approach used for CLTS in the ASNANI project and the “One Million Initiative” is that the former uses artisans to trigger CLTS whilst local NGO staff are used by the latter. NGO staff are usually more educated and have had more exposure and experience in working with communities and also in hygiene and sanitation promotion. Although the field staff have had years of experience, they are still supervised by some senior staff.
- In the case of the ASNANI project where artisans with minimal education and less experience of community work had the responsibility of triggering CLTS, it is very necessary for them to be monitored and supported. The artisans themselves echoed the need for regular support and guidance when interviewed.
- Any strategy for scaling up CLTS that includes artisans as the key facilitators must also outline the process for monitoring their activities and supporting them. A clear guideline should be provided for community selection including a baseline count of the number of latrines in any given community pre-triggering. This will enable the artisans to monitor and evaluate the progress of CLTS in the communities.
- An approach used in a number of other countries where CLTS is applied, is for the communities themselves to undertake the monitoring. This process, apart from gathering information, serves to exert peer pressure on families who are slow in building themselves a latrine, and to identify families who require assistance. This is an element that could usefully be considered in future CLTS work in Mozambique.

ii. The role of district government

- District administration can play an important role in supporting CLTS by showing interest in the activities of the artisans. This not only encourages the artisans but makes them realise that government supports their activities. It is therefore important

that the project gets District Administrators interested in the CLTS concept prior to scaling it up.

- Individual departments such as Public Works and Housing have an important role to play. The Technical Officers will be the ones that the artisans will look to for support and assistance and they should therefore be included in the CLTS training. Getting these Officers to buy into the CLTS approach is as important as the buy-in from the District Administrators and Heads of the PAs. They can also play important roles in identifying and modifying latrine technologies for difficult soil conditions.

4.5 Evaluation of communities for ODF

The lack of a system for evaluating communities that have become Open Defecation Free (ODF) has made it impossible to know how many communities have achieved this. This could be attributed to the fact that the ASNANI project was coming to an end when CLTS was introduced.

Recommendations

i. Annual Targets:

- In order to help the artisans or future facilitators of CLTS to have some sense of direction, it may be worth working with them at the beginning of the year to develop a plan and agree on targets for triggering CLTS in the communities.
- The annual work plan and targets should have the overall objective of facilitating a certain number of communities to become ODF. However, this may be much more difficult to achieve in the absence of incentives for the artisans. This approach was more feasible in the UNICEF “One Million Initiative” project because the NGO partners are paid based on the results that they achieve.
- If CLTS is to be scaled up in Nampula Province using local artisans as facilitators, it may be worth considering creating a competition amongst various artisan groups with clear indicators to be measured. This could include the number of communities triggered and the resulting numbers that become ODF. An incentive for the winning artisan group could be some bags of cement to enable to make latrine slabs for sale.

ii. Incentives for artisans:

- If artisans, particularly masons, are to be involved in the scaling up of CLTS in Nampula Province, a clear strategy should be developed for their involvement. The first thing to consider is that these artisans are often daily income earners that do many odd jobs including small farming, fishing or trading when there are no jobs. Involving them in triggering CLTS and following-up in the communities will take them away from their daily income earning activities.
- It could be argued that they will get income from building latrines if they are able to increase demand. This assumption is uncertain, as many households opt to build cheaper traditional latrines that do not require the services of a mason. It is therefore important that some form of compensation is given to the artisans, which can be based on outputs.

iii. Evaluation methods:

Evaluation of communities for ODF should be conducted by groups of neutral persons that are not biased in any way, to ensure that the results are valid. Regular monitoring of post CLTS triggering will help to decide when to conduct an evaluation. An approach used elsewhere is for community leaders and local officials from neighbouring communities (preferably ODF) to make the assessment. This can be audited on a sample basis by a

higher-level technical team, and in areas where more than a certain percentage of locally-produced assessments are found to be inaccurate, ALL local assessments are invalidated

- In cases where artisans manage to trigger CLTS in many communities, they should be encouraged to conduct their own pre-evaluation and give indications of communities that have achieved more than 50% coverage. This can then be compared with monitoring reports, and decisions can be made on the communities to be evaluated without informing the artisans about the dates or which communities will be visited.
- The results of the evaluation should be made known publicly and all the artisan groups should be made aware of the best-performing groups and those that still need to improve. The District Administration can be persuaded to write letters to the best performing artisan group congratulating them. This will create a sense of healthy competition amongst the various groups and also identify the groups that require more support.

iv. Recognition of ODF communities:

- The UNICEF “One Million Initiative” has developed various forms of recognising ODF communities. These include public ceremonies to acknowledge their ODF status, a signboard with the community name clearly saying that it is ODF, and various prizes. Although the prizes are expensive and not sustainable, it is still important to identify a sustainable and cost effective means of recognising ODF communities.
- The local media could be involved during the evaluation to boost interest amongst communities about the upcoming evaluation. This will then be followed up with public announcements on air about the winning communities. Some of the leaders from the ODF communities could be brought into the radio station to discuss how they achieved ODF, what the previous sanitation situation was and advise other communities on how to do the same. If planned properly, this will not cost much and will also get the media interested in the sanitation issue.
- Small ceremonies can also be held at the Administrative Posts where the leaders of the winning communities are issued with certificates and signboards with their respective community names stating that they are now ODF.

4.6 Conclusion

The introduction of CLTS in the ASNANI project in Nampula Province commenced towards the end of the project period with the contracting of GEO-austral to execute the training of artisans. The presence of a group of artisans already created and given some training by CARE’s HAUPA project made them an easier group to commence with. Although ASNANI had already given this group some training on hygiene and sanitation promotion, the introduction of CLTS gave them the opportunity to achieve better and quicker results. Within the first three months, the team reported about 3,000 latrines, which was more than they had managed to achieve in the previous three years. This indicates that CLTS, when properly triggered, can yield results at scale within a short period. It also reinforces the assumption that the CLTS approach could be scaled up nationally after the successes recorded by the UNICEF “One Million Initiative” project in 2008 and 2009.

Findings from the field visits also show that although local artisans can be used instead of NGOs, they need to be based in the areas where they are triggering CLTS. Logistically, they are not able to achieve good results if they are required to cover communities more than about 5km from where they reside.

Following the success in Mecuburi District, a new group of artisans was trained in Moma District, which has the worst sanitation coverage in Nampula Province. These artisans, unlike their Mecuburi counterparts, have not been involved in any water and sanitation project and are new to the whole process of community mobilisation. Due to several factors, including the limited skills of the artisans, the easy availability of the beach for open defecation and the unstable soil conditions, CLTS was not as successful in Moma District as it was in Mecuburi District.

In general, although the introduction of CLTS in Nampula Province by the ASNANI project was not as comprehensively planned as in the UNICEF “One Million Initiative” project, it provides good lessons on other approaches for using local resources to trigger CLTS through community-based artisans. It is an indication that community-based groups or persons can be trained to trigger CLTS and are capable of achieving similar results to the NGOs. Lessons learnt from the ASNANI project also highlight the need to work on developing appropriate latrine technologies for communities with unstable soils and high water table. It also indicates that CLTS alone may not produce results at scale in coastal as opposed to non-coastal rural communities. There is a need to use other innovative approaches such as sanitation marketing to ensure that messages are targeted and are based on real motivations for latrine uptake in coastal communities like those in Macone-Moma.

Bibliography

Geo-austral (2009) Relatório dos Resultados da Promoção de CLTS em Moma (Pós despertar).

Kar, K. (2008) '*Community Led Total Sanitation in Mozambique. First hands-on training workshop on CLTS*', A draft report for UNICEF Mozambique.

Kar, K. and Chambers, R. (2008) *Handbook on Community-Led Total Sanitation*, Institute of Development Studies and Plan International, UK.

Kar, K. and Chambers, R. (2008) *Manual de Saneamento Total Liderado pela Comunidades*, Institute of Development Studies and Plan International, UK.

Projecto ASNANI (2009) Relatório de Actividades. VII Reuniao do Comité de Acompanhamento do Projecto ASNANI. Direcção Provincial das Obras Públicas e Habitação, Governo da Província de Nampula.

Salomon, (2007) The Baseline Assessment Survey. Final Report – Mecuburi District. Volume I – Main Report. Salomon Lda, Maputo, Mozambique.

Salomon, (2007) The Baseline Assessment Survey. Final Report – Mecuburi District. Volume II – Annexes. Salomon Lda, Maputo, Mozambique.

Salomon, (2007) The Baseline Assessment Survey. Final Report – Moma District. Volume I – Main Report. Salomon Lda, Maputo, Mozambique.

Salomon, (2007) The Baseline Assessment Survey. Final Report – Moma District. Volume II – Annexes. Salomon Lda, Maputo, Mozambique.