



Plan

Girls first

Plan Netherlands

Final Evaluation: Pan African CLTS program 2010-2015

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Final Evaluation: Pan African CLTS program 2010-2015

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Author: Andy Robinson  
(supported by FH Designs: Matt Bond, Ross Kidd, Jose Mott and Paul Tyndale-Biscoe)

# Executive Summary

Plan Netherlands and the Netherlands Ministry of Foreign Affairs (DGIS) supported the Pan African Community Led Total Sanitation (CLTS) program in eight sub-Saharan countries (Ethiopia, Ghana, Kenya, Malawi, Niger, Sierra Leone, Uganda and Zambia) between 2010 and 2015. The main objectives of the program were to reduce infant and child mortality in the project areas, and to empower rural and per-urban communities through the use of the CLTS, School-Led Total Sanitation, and Urban CLTS approaches.

The headline program target was that 2.3 million people would be living in more than 800 Open Defecation Free (ODF) communities by the end of the program. Each Plan country office designed its own project, based on its CLTS capacity and experience, with the Plan Ethiopia project by far the largest – with a target of 1.2 million people living in ODF communities, representing 57% of the total ODF target for the program.

The program was managed by Plan Netherlands, with key program partners including the Plan Regional Office for East and Southern Africa (RESA), the Institute of Development of Studies at the University of Sussex in the United Kingdom (IDS), and the International Water and Sanitation Centre in the Netherlands (IRC).

This report summarizes the findings and recommendations emerging from the final evaluation of the program, undertaken by a team of international and national consultants between October and December 2015. The final evaluation included randomly sampled household and school surveys in each country project, evaluation visits by international consultants to all eight country projects, and interviews with program-level stakeholders.

## Baseline sanitation and hygiene conditions

The Plan program was one of the first large CLTS programs in Africa, and was seen as a shift from previous ‘toilet counting’ projects towards a more behavior change and outcome focused approach. As such, program partners focused largely on the ODF goals, and neglected to undertake any baseline surveys in the understanding that the ODF population was zero at the program outset.

The country project teams reported that communities with low or below average sanitation conditions were targeted, with the Ethiopia and Niger project teams noting that many of the project communities contained almost no toilets. However, few reliable data were available against which to assess program achievements.

The latest JMP estimates of rural sanitation coverage confirm dramatic differences in the 2010 starting conditions across the eight countries:

- Less than 20% open defecation in Malawi, Kenya and Uganda
- 25%-35% open defecation in Zambia, Sierra Leone and Ghana
- 50% open defecation in Ethiopia
- 88% open defecation in Niger

The trends in rural sanitation coverage are also variable. There have been rapid improvements in Ethiopia, with open defecation dropping by 17% across the country between 2010 and 2015; whereas the open defecation rates in Ghana and Sierra Leone appear to have increased marginally over the last five years.

The evaluation suggests that these starting conditions were a significant factor in the sustained improvement of sanitation outcomes. All of the country projects were able to achieve ODF communities, but where starting open defecation rates were high, and latrine use was not the social norm, the chances of sustainability were much lower. Where progress had been made in recent years, as a result of a positive enabling environment for sanitation and hygiene improvement, the chances of sustainability were much higher.

## ODF progress

The evaluation confirmed that 1.82 million people (79% of the program target) were living in verified ODF communities as a result of program activities. Despite similar budgets, which ranged from USD 555,000 in the Plan Uganda project to USD 975,000 in the Plan Ethiopia project, the country projects achieved very different results. The majority of the program ODF population (74%) was achieved by the Plan Ethiopia project, with 1.34 million people living in 234 ODF kebele. Three other projects (Uganda, Sierra Leone and Kenya) achieved 112,000-120,000 ODF populations, with the four smallest projects (Zambia, Niger, Malawi and Ghana) achieving ODF populations of only 22,000-42,000 people.

Several of the country projects did not meet their ODF targets, including the Malawi, Niger and Zambia projects, but by far the biggest deficit was in the Kenya project. Plan Kenya planned to achieve an ODF population of 600,000 people, but fell well short with only 112,508 people (19% of the ODF target) found to live in 356 ODF villages.

## Over reporting of ODF results

Until the final evaluation, the Plan program monitoring system reported that the ODF population achieved was 2.48 million people, or 108% of the program ODF target. It was only when the evaluation team reviewed the ODF population data, and insisted on checking village names and populations against ODF verification records, that the extent of the over-reporting of ODF progress became apparent.

Four country projects were found to have over-reported ODF progress by 200% or more. Both the Plan Malawi and Plan Kenya projects reported that they had met their project ODF targets, but the evaluation team found that the actual ODF populations had been over-reported by around 500%. Similar problems were found in the Plan Zambia and Plan Niger projects, but to a lesser extent (the ODF populations over-reported by 215%-265%).

Most of the over-reporting problems were attributed to local government partners, either due to over-estimates of the number of verified ODF communities (with some partners counting self-declared ODF communities, rather than independently verified ODF communities), or to over-estimates of community population (which had not been properly checked) due to the projects targeting smaller villages than originally envisaged. A key factor was that most of the initial reporting was around the number of ODF communities, rather than the ODF population achieved, which encouraged the projects to target small communities.

The Plan monitoring systems (in the four countries where over-reporting was a problem) did not include checks to spot the over-reporting; perhaps because most of the Plan project teams were lightly staffed. As a result, the program under-achievement was not evident until the final evaluation was undertaken, by which time it was too late to take any remedial action.

## ODF school progress

The ODF school component of the program was much less significant than the CLTS component. Schools within or nearby project communities were targeted, but most projects did not provide any funds for infrastructure improvement or development, thus activities focused on triggering students, teachers, parents and other school stakeholders to eliminate open defecation, and to use and clean the school facilities.

The definition of an ODF school varied across the country projects, with no national guidelines on ODF school verification available in some countries. Based on the verification criteria agreed by the projects with local partners, 562 ODF schools resulted from program activities. This total is lower (78%) than the program target of 716 ODF schools, with the biggest shortfall again found in the Kenya project (due in part to the large target set by Plan Kenya).

## Community empowerment, gender equality and inclusion

All of the country projects appeared to have empowered communities. Good CLTS and participatory processes were reported in all country projects, with women and other disadvantaged groups active-

ly involved in the process in a number of different roles. The ODF requirement, that everyone in the community stops open defecation, meant that project interventions had to reach everyone in order to achieve ODF communities, which encouraged more inclusive activities than in conventional sanitation and hygiene projects.

The evaluation team received positive feedback from beneficiaries and project partners about the project approaches, and about the project outcomes. Even where some sustainability problems were apparent, community and household representatives were keen to report that genuine benefits had arisen from the project activities, with greater awareness of the importance of sanitation and hygiene practices to health and other dimensions of well-being; efforts were made to clean up communities and provide better excreta and waste disposal; and visible improvements were reported in community cleanliness and in the local environment.

### Household and school surveys

The evaluation included detailed household and school surveys of all eight country projects. The surveys were designed to assess sanitation and hygiene outcomes in the ODF communities reported by the program, using a smartphone survey application to enable rapid implementation of the sample surveys in 4,993 households across 170 communities, and in 102 nearby schools.

The surveys were conducted in October – December 2015, more than 5 years after the first project communities were triggered. As a result, the surveys captured not just the project achievements, in terms of the number and condition of the household latrines, school latrines and handwashing facilities in these communities, but also the sustainability losses that had occurred since these communities were verified to be Open Defecation Free. Given that verified ODF communities were reported in every year of the project, including 2010 and 2015, a broad range of sustainability outcomes were covered by the survey – from communities verified as ODF more than five years ago, to communities verified earlier in the same year.

It is important to recognize that the household and school surveys provided a far higher level of sustainability evaluation than is customary in this sort of final program evaluation. The surveys measured not just what the program achieved, but whether these achievements lasted over time, which tells us something about the quality and relevance of the interventions. The survey findings were challenging for the Plan project teams, as they exposed some serious sustainability problems (which some programs would prefer not to share with others). Therefore, Plan Netherlands should be applauded for the transparent nature of the evaluation, and for its decision to use the evaluation as a learning tool for future policy, programming and practice.

Analysis of the household survey results suggested three categories of project performance (ODF sustainability):

High performing: 92%-96% latrine coverage (Malawi, Uganda & Kenya)

Medium performing: 50%-70% latrine coverage (Ethiopia, Zambia & Sierra Leone)

Low performing: 25%-50% latrine coverage (Ghana & Niger)

## ODF outcomes: household survey results

Country	Villages surveyed	Households surveyed	Sanitation coverage	OD practice
<b>High performing projects</b>				
Malawi	20	459	96%	0%
Uganda	20	768	94%	1%
Kenya	20	525	92%	5%
<b>Medium performing projects</b>				
Ethiopia	30	1,361	70%	17%
Zambia	30	391	59%	23%
Sierra Leone	20	608	56%	21%
<b>Low performing projects</b>				
Ghana	10	354	44%	8%
Niger	9 <sup>1</sup>	527	29%	39%
Totals	160	4,993	69%	14%

Key: OD = open defecation

The self-reported open defecation (OD) rates matched the observed sanitation coverage figures well, with only 0%-5% open defecation reported in the high performing projects; 17%-23% in the medium performing projects; and 39% reported in the Niger project (in the ODF villages).

The household survey results suggest that good sustainability is possible, with three country projects demonstrating 95%-100% latrine use (including use of shared latrines) in communities that were verified as ODF up to 5 years ago. In these projects, it appears that the quality of the CLTS process was good; the ODF verification process worked well (at least for latrine use and the elimination of open defecation); and adequate post-ODF support was provided.

A distinct difference in sanitation outcomes was evident in the medium performing projects. The rate of latrine sharing was significantly higher: up to 31% in the medium performing projects; and the rate of open defecation was also much higher, with 17%-23% OD found among the medium performers. Finally, the two low performing projects reported either high communal latrine use (40% in Ghana) or a high open defecation rate (39% in Niger), which was not found in any of the other projects. Significant numbers of collapsed and abandoned communal latrines were observed or reported in Niger, suggesting that there had been a much higher rate of communal latrine use at the time of ODF verification.

### Sustained ODF population

The survey findings imply that the reported ODF populations, while valid at the time of verification, are over-estimates of the actual population living in ODF communities by the end of the program. The evaluation assessed the “sustained ODF population” as the proportion of the total population in which latrine coverage was likely to be 90% or higher, based on the household survey results. The premise for this approach is that open defecation rates were found to be significantly higher in the communities with less than 90% latrine coverage, thus that the health and other benefits (whose realisation is the main objective of the program) assumed from ODF achievement are unlikely to be realised.

Under this approach, the estimate of the sustained ODF population is drastically reduced. Only 356,000 people, around 20% of the program ODF population, were estimated to live in communities with sustained ODF, largely because 90% of the large ODF population in Ethiopia had to be discounted (due

1 20 villages in total, including 9 ODF villages and 11 non-ODF villages (because only 43% of the project communities were reported to be ODF at the time of the survey).

to the relatively high open defecation rates). The high proportion of sustained ODF in the Uganda and Kenya projects made a significant contribution to the overall program achievement, while the bottom four projects together contributed only 5% of the sustained ODF population.

While perhaps not reflective of all of the hard work and intangible benefits of the country projects, the sustained ODF population combines reported ODF data from the project teams (which captures the scale and efficiency of the projects) with survey data collected by the evaluation team (which assesses the effectiveness and sustainability of the projects). Given the risk that poor households with high disease burden tend to be among the first to revert to open defecation, it is likely that the sustained ODF population provides a better measure of the relative benefits of the country projects than most other measures.

### Handwashing survey

The handwashing surveys largely mirrored the sanitation findings, with better handwashing facility rates (44%-54%) and higher presences of soap and water in the Uganda and Kenya projects; mediocre results (14%-22% handwashing facility presence) in the Ethiopia, Zambia and Malawi projects; and poor results in the three West African projects - Sierra Leone, Ghana and Niger.

One handwashing factor, mentioned in several of the country evaluation reports, is that rural households often prefer to keep the main source of water (and soap) in the home or kitchen rather than at the toilet. Household members using the toilet often take a bottle or jug with them, or return to the house to wash their hands if the toilet is nearby. The Plan project teams in Niger, Ghana and Sierra Leone suggested that this practice resulted in few handwashing facilities being observed by the survey enumerators, and led to under-estimates of handwashing practices in these projects.

### School surveys

The school survey results were similar to the household survey results: reasonable results in the high and medium performing projects, but poor results in the low performing projects (42%-50% school latrines with visible OD in Niger and Ghana). The school survey had positive findings in Zambia and Sierra Leone: these two projects were the only ones in which no open defecation was found at the school toilets visited by the survey teams. Significant challenges were exposed in sustaining the ODF school gains made by the program, particularly where no funds were available to clean, operate, maintain or rehabilitate the school WASH facilities.

### Monitoring and evaluation

The enhanced program monitoring and benchmarking system introduced in 2013 meant that some monitoring data were more readily available than previously, but the quality and accuracy of these data were variable across the country projects.

The project teams suggested that most reporting was donor driven, hence that the monitoring and reporting systems were designed to respond to the donor requirements rather than project needs. The program design included a very limited results framework, with ODF communities and population being the main metrics of success, and few other indicators that required analysis or regular reporting.

The evaluation confirms that the Plan progress and sustainability monitoring systems were inadequate in at least half of the country projects, with neither the program nor the project teams aware of the extent of sustainability problems until the survey results were shared. Without this feedback during the life of the program, it was difficult to alter project course or take remedial action.

### Knowledge management

The evaluation found that less knowledge management took place during the second half of the project, despite recommendations at the mid-term review that the latter stages of the program should focus on capturing and sharing program learning.

In most projects, the bulk of the budget was spent during the peak implementation period in years 2-4, leaving staffing and budgets reduced in the last two years of the program. The no-cost extension grant-

ed in 2015 further stretched already tight budgets, resulting in little funds being available to finance the knowledge management specialists and consultants who could capture, document and share the significant lessons learned by the project teams. As a result, few additional knowledge management products were produced in the second half of the program.

### Project management and staff turnover

Project capacity and staff turnover had a significant impact on program performance. Few country offices retained the original WASH advisers by the end of the program. Some projects had three or more changes of project manager, and frequent periods without a WASH adviser or project manager, with detrimental effects on both project performance and on sector networking and knowledge management.

The evaluation also found an association between the country projects that provided above-average project capacity (more full-time and part-time staff) and better outcomes. Given Plan International's push for reduced human-resource costs in its projects, both the program and project management teams noted that it was difficult to get approval for the high level of staffing required for effective implementation of software-heavy projects like the Pan African CLTS program.

### Health impact

Few of the country projects were able to provide any health impact data to the evaluation teams. The main exception was the Ethiopia project, in which the three district (woreda) health offices visited by the evaluation team reported significant health impacts related to the project's ODF achievements.

Health officials in the Ethiopia project areas were adamant that the sanitation coverage, handwashing rates and ODF status were the only significant changes to occur in the last five years, and that the sanitation and hygiene improvements had led to significant health benefits in their jurisdictions, including dramatic and measurable reductions in the proportion of clinical cases linked to diarrhoeal disease.

## Conclusions

The Pan African CLTS program triggered more than 1,300 ODF communities, with a verified ODF population of 1.82 million people. Almost three-quarters of these ODF results (1.34 million people) were achieved by the Ethiopia project, with a remarkably high project cost efficiency due to extensive support from local government.

In all, program interventions reached almost 2,000 communities, and the evaluation found that the program approaches empowered communities and generated real benefits for poor households, women and other disadvantaged groups.

Sustainability outcomes were varied, with poor ODF sustainability in the country projects that started with the highest proportions of people without toilets (Niger and Ghana); and impressive sustainability (92%-96% households with private toilets) in the three country projects with the lowest levels of open defecation nationally: Malawi, Uganda and Kenya. These sustainability results confirm that it is possible to achieve and sustain ODF communities using a relatively simple CLTS approach, particularly where social norms encourage latrine use and good sanitation practices.

Five factors were identified as critical to project performance and sustainability:

- i) starting sanitation conditions, which influenced social norms in project areas;
- ii) enabling environment for CLTS, which encouraged greater government support in countries with a mature CLTS policy and program environment;
- iii) government engagement, linked to the enabling environment, the project approach (whether NGOs or local government were the main partner) and the resources available to local governments;
- iv) quality of project management, including staff turnover; and
- v) use of shared sanitation in ODF communities, which appeared to be a proxy for limited acceptance of the CLTS approach.

Another cross-cutting factor was weak monitoring and evaluation systems. While this sometimes reflected the quality of the project management, with good managers tending to establish systems that provided reliable information on progress and performance, the limited results framework and low project staffing made it difficult for the program management to spot over-reporting or implementation problems, and hard for the project management to identify sustainability risks. The main lesson is that stronger sustainability monitoring is required to identify sustainability problems early, and allow the project teams to respond appropriately.

The evaluation found that internal knowledge management had worked reasonably well, particularly through the use of annual reviews and the CLTS website (with support from the IDS team). However, few external stakeholders were aware of the program or its achievements, and a large number of useful lessons may be lost because little documentation or knowledge management was undertaken.

## Recommendations

### 1. Design for sustainability

The evaluation suggests that sustainability is linked to the enabling environment and level of local government engagement. Any future program should recognize these critical factors and assess whether the enabling environment for rural sanitation and hygiene, and the level of local government commitment, are appropriate before investing in a large-scale intervention. Where appropriate conditions are not found, alternative (smaller scale) interventions are required to develop local models of best practice that can be used to influence the enabling environment.

### 2. Program for impact

More clustered and large-scale interventions, aiming to cover entire sub-districts or districts, will produce more visible outcomes and impacts. The increased scale and visibility of the program outcomes and impacts can garner support from local government, politicians and other stakeholders, which in turn can leverage more resources and capacity to the program, and assist with sustainability.

### 3. Strengthen M&E systems

Stronger M&E frameworks and systems are important, with specific indicators to be reported for sanitation outcomes, handwashing and other hygiene outcomes (including menstrual hygiene management), measurement of disaggregated indicators (including child sanitation and hygiene, and female toilets), and separate frameworks required for school sanitation and hygiene outcomes.

Sustainability and impact monitoring should be built into programs from the start, through periodic household surveys (implemented using smartphone apps), child growth monitoring (measurement of stunting, with links to nutrition programs where appropriate), and health post surveys (designed to assess WASH risk factors and combine with child growth monitoring to enable regular and robust assessment of health impact). Where there is an intention to assess health impacts, specialists should be engaged at the outset to establish evaluation approaches, and associated data collection and analysis protocols, that will yield statistical valid results.

For M&E systems to be effective, programs need to establish a culture of monitoring and enforce simple, reliable data collection processes. M&E data need to be regularly used and checked by higher levels, in order to provide incentives for project staff and partners to report timely and reliable progress, performance and sustainability data.

### 4. Provide adequate capacity for specialist interventions

Handwashing and hygiene promotion, “Baby WASH” (including child growth monitoring, and specific baby and toddler-focused sanitation and hygiene interventions designed to reduce stunting), school WASH, supply-side strengthening and sanitation marketing, and networking and knowledge management are all important sub-sectors and program areas that require specialist inputs and specific project budget, capacity as well as appropriate results targets and indicators.

Plan International needs to assess the relative benefits of complex programs, containing many different components, against the simplicity that encourages program scale and cost efficiency. The key recommendation is that, where the program focus is clear, the design should recognize areas that are beyond the core competences of the country project teams and ensure that adequate support is provided for any specialist interventions.

#### **5. Look beyond ODF**

As is well recognized in the WASH sector today, ODF outcomes are merely a first step towards the comprehensive sanitation and hygiene improvements required in rural communities in developing countries. A phased approach to sanitation development, in which the ODF outcome is the first step in a series of verified sanitation and hygiene outcomes, provides a path to the higher level outcomes desired by many governments. It also provides a solid framework for follow up and sustainability monitoring, with verification of the required outcomes at each phase of the sanitation development (including re-verification of previous outcomes).

## Glossary and Abbreviations

<b>CLTS</b>	Community-Led Total Sanitation
<b>DHS</b>	Demographic and Health Survey
<b>FGD</b>	Focus Group Discussion
<b>Hhd</b>	Household
<b>PAC</b>	Pan African CLTS program
<b>JMP</b>	WHO-UNICEF Joint Monitoring Programme for Water Supply and Sanitation
<b>MDG</b>	Millennium Development Goal
<b>ODF</b>	Open defecation free
<b>UNICEF</b>	United Nations Children's Fund
<b>WASH</b>	Water, Sanitation and Hygiene (Sector)
<b>WHO</b>	World Health Organization
<b>WSP</b>	World Bank Water and Sanitation Program

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# 1. Introduction

The Euro 9.45 million Pan African CLTS (PAC) program, co-financed by Plan Nederland and the Dutch Ministry of Foreign Affairs (DGIS), was a five-year program being implemented in eight countries across sub-Saharan Africa (see table below). Implementation started in December 2009 and, following a one-year extension, was completed by December 2015. Program partners included the Plan Regional Office for East and Southern Africa, IRC (International Water and Sanitation Centre, The Netherlands) and IDS (Institute of Development Studies at Sussex University, UK).

At inception, the program aimed to expand Plan's CLTS activities within six African countries (Sierra Leone, Ethiopia, Uganda, Kenya, Zambia and Malawi) and introduce it into two other Plan country programs (Ghana and Niger). Due to the African focus of the program, and the geographical spread from West to Southern/Central and East Africa, it was called the Pan African CLTS program.

The general objectives of Pan African CLTS program were to reduce infant and child morbidity and mortality in the target countries; and to empower rural and peri-urban communities through the use of the CLTS, School-Led Total Sanitation (SLTS) and Urban CLTS (U-CLTS) approaches. Besides these general objectives, the program also aimed to improve and strengthen the CLTS approach by sharing experiences through learning alliances, action learning and by promoting CLTS internationally in order to scale up the approach through more organisations in more countries.

The program was based around 5 key strategies:

- community empowerment.
- involvement of local authorities.
- private sector engagement.
- networking and knowledge management.
- a phased approach over time (including a 6-month inception phase and final year sustainability phase).

The program targets assumed that ODF status would be achieved in all program communities, schools and urban areas. The program also had five other objectives:

- adequate sanitation and hygiene practices used by everyone in the program areas.
- empowered communities to develop their own sanitation and hygiene services and maintain them.
- Country specific models of CLTS, SLTS and U-CLTS to be developed.
- Cooperation networks between research and civil society institutions to be established and mobilised for CLTS, SLTS and U-CLTS.
- Local entrepreneurs active in helping households to climb the sanitation ladder.

The program targets contained in the 2009 proposal document<sup>2</sup> were revised during the inception phase, when each country project revisited the rough targets made during proposal preparation and suggested more realistic program targets. Table 1 summarises the revised program targets agreed at the outset of the program, against which program progress was assessed during both the 2012 mid-term review, and in this final evaluation.

2 Plan Nederland (2009) Final programme proposal CLTS-SLTS-ULTS for submission DGIS 14Apr09 proposal document.

**Table 1 Program Targets: Direct beneficiaries (planned)**

Country	Communities (no.)	Schools (no.)	Peri-urban areas (no.)	Population covered <sup>3</sup> (no.)	Population with new toilet <sup>4</sup> (no.)
Ethiopia	210	20	4	1,200,000	1,104,000
Ghana	50	25	3	20,000	18,000
Kenya	264	546	26	600,000	312,000
Malawi	102	16	0	94,600	35,000
Niger	103	8	3	135,000	135,000
Sierra Leone	78	10	0	13,000	13,000
Uganda	127	39	10	115,400	75,500
Zambia	600	70	0	120,000	109,000
Total	805	742	36	2,298,000	1,801,000

This final evaluation report summarises the findings of the final evaluation of the PAC program commissioned by Plan Netherlands. The purpose of the final evaluation is to assess:

1. **Relevance:** whether the program activities and outcomes are relevant to the original objectives and expected results.
2. **Effectiveness:** whether the program has achieved its objectives; key factors responsible for the achievement or failure of the objectives.
3. **Efficiency:** whether the program has made the most efficient and timely use of its capacity and resources; compared to alternative approaches.
4. **Impact:** long-term effects produced by the program (either directly or indirectly); number of people affected, and differences made to them.
5. **Sustainability:** whether the program has generated benefits likely to continue beyond the life of the program; key factors affecting sustainability of benefits.

The evaluation also aimed to draw out lessons learnt and best practices that can be used to inform future WASH programming, planning, implementation and management by both Plan Nederland and DGIS. It is hoped that the final evaluation will inform the development of a similar, scaled-up program starting in 2016.

The main findings of the final evaluation will be presented to the Plan country teams at the WEDC Conference in Kumasi, Ghana on 14-15 July 2016. The country teams will already have reviewed the relevant country evaluation reports, thus this two-day meeting will provide an opportunity to learn about and discuss the outcomes and lessons from other country projects, as well as the overall program results and lessons. The intention of this meeting is to increase the ownership, understanding and use of the evaluation findings.

This final evaluation report should be read alongside the following supporting reports on the household and school surveys, and on the eight country evaluations:

- FH Designs (2016) Final evaluation: Pan African CLTS program – survey report Plan Netherlands, final report.
- Robinson A (2016) Final evaluation: Pan African CLTS program – Ethiopia country evaluation report Plan Netherlands, final report.
- Robinson A (2016) Final evaluation: Pan African CLTS program – Ghana country evaluation report Plan Netherlands, final report.
- Bond M (2016) Final evaluation: Pan African CLTS program – Kenya country evaluation report Plan Netherlands, final report.

3 Population to be covered by the sanitation and hygiene promotion activities.

4 Population that will gain access to improved sanitation by the end of the program. Some of the target values were based on the estimated baseline sanitation coverage, assuming 100% sanitation coverage by the end of the program.

- Tyndale-Biscoe P (2016) Final evaluation: Pan African CLTS program – Malawi country evaluation report Plan Netherlands, final report.
- Robinson A (2016) Final evaluation: Pan African CLTS program – Niger country evaluation report Plan Netherlands, final report.
- Kidd R (2016) Final evaluation: Pan African CLTS program – Sierra Leone country evaluation report Plan Netherlands, final report.
- Bond M (2016) Final evaluation: Pan African CLTS program – Uganda country evaluation report Plan Netherlands, final report.
- Bond M (2016) Final evaluation: Pan African CLTS program – Zambia country evaluation report Plan Netherlands, final report.

## 2 Methodology

### 2.1 Methodologies used

The evaluation utilized four main methodologies:

1. **Desk review.** Review of Plan and relevant sector documents, which was used to refine and improve the evaluation framework, and to supplement the findings from the household surveys, country visits and program review.
2. **Household and school surveys.** Surveys were completed in all 8 country projects, which were used to provide reliable evidence of program outcomes (including any sustainability issues), enable the evaluation team to assess the effectiveness of the program monitoring and reporting systems, and identify any major implementation weaknesses.
3. **Evaluation country visits.** International consultants made visits to all 8 country projects to evaluate the main research questions across a wide range of stakeholders (meetings and focus group discussions were held at national, district and local government levels, and with community groups and individual households).
4. **Program level review.** Interviews were held with key program and sector stakeholders to assess the overall impact and achievements of the program, and the effectiveness of the knowledge management and networking components.

The four different methodologies were squared against each other to identify common strengths, weaknesses, opportunities and threats, and build a convincing case for the key evaluation findings. In particular, the evaluation country visits were used to ground truth the findings of the desk study and surveys, and to probe any emerging issues and challenges. Wherever possible, the evaluation team discussed and presented the preliminary findings of the evaluation country visits with the Plan project team and other key sanitation and hygiene stakeholders. The intention was to ensure that the findings were accurate, and to invite feedback and additional comments, before finalizing the evaluation reports.

This approach enabled the evaluation team to develop a good understanding of the program achievements and challenges in the relatively short evaluation period. Where any major issues arose, or were unexplained through these methodologies, further remote investigations were undertaken with the Plan country offices and program team to explain and understand the issues.

The final evaluation report follows the structure of the evaluation framework laid out in the final evaluation inception report, summarising the findings of the rapid desk review, household and school surveys of the eight country projects, and eight evaluation country visits conducted by a team of international consultants between October and December 2015:

- October 2015: Ethiopia (Andy Robinson)
- November 2015: Kenya & Uganda (Matt Bond), Niger and Ghana (Andy Robinson)
- December 2015: Malawi (Paul Tyndale-Biscoe), Zambia (Matt Bond) and Sierra Leone (Ross Kidd).

**Desk review.** The main documents consulted are listed below. Issues identified were clarified through meetings and discussions with Plan staff and other stakeholders at national, district and local levels:

- Plan Nederland (2009) Final programme proposal CLTS-SLTS-ULTS for submission DGIS 14Apr09, proposal document
- Plan Netherlands (2011) Annual report 2010: The Pan African CLTS Programme Amsterdam: Plan Netherlands, annual report.
- Plan Netherlands (2012) Annual report 2011: The Pan African CLTS Programme Amsterdam: Plan Netherlands, draft annual report.
- Plan Netherlands (2013) Annual report 2012: The Pan African CLTS Programme Amsterdam: Plan Netherlands, annual report.
- Plan Netherlands (2013) Mid-Term Review: Pan African CLTS Programme Amsterdam: Plan Netherlands, report.
- Plan Netherlands (2014) Annual report 2013: The Pan African CLTS Programme Amsterdam: Plan Netherlands, annual report.

- Plan Netherlands (2015) Notes of the Pan African CLTS Annual Review Meeting in Kampala 9th-13th March, 2015 Plan Netherlands, report.
- Plan Ethiopia (2012) Pan African CLTS project: Mid-term Review report Addis Ababa: Plan International Ethiopia, report.
- Plan Netherlands (2015) Annual report 2014: the Pan African CLTS Programme Amsterdam: Plan Netherlands, annual report.

**Household and school surveys.** The evaluation team conducted household and school surveys in a random sample of ODF communities from each country project<sup>5</sup>. A detailed description of the survey sampling, process and findings is included in the supporting final Survey Report.

The household survey was used to answer the following questions:

1. Within ODF communities, what is the average coverage of toilets?
2. Within ODF communities, what is the average coverage of handwashing facilities?
3. What is the average amount of slippage in communities that have been declared ODF?<sup>6</sup>
4. To what extent are toilets and handwashing facilities being used in ODF communities?
5. What is the quality of the latrines that have been built in ODF communities?
6. Are household latrines accessible to all members of the household?
7. To what extent are households with latrines in ODF communities keeping them clean and hygienic?
8. To what extent have households moved up the sanitation ladder?

A similar set of questions was posed for schools in ODF communities. The household survey questionnaire has been included in Annex A.

The sample sizes reflected the ODF populations reported by the country projects. The reported ODF population in the Ethiopia project was more than ten times bigger than that in any other country project (except the Plan Kenya project), thus the household survey was much larger – covering 1,361 households in 30 communities, with 10 communities sampled from each of the three project areas (Amhara, Oromia and SNNP).

The Kenya and Ghana projects were spread across 3-4 project areas (program units). The sample size and logistical constraints meant that it was not possible to sample project communities from every project area in these two countries. In both Kenya and Ghana, only two program units were included in the survey, with the focus on program units that included the largest proportion of the reported ODF population. Otherwise, the country projects covered only 1-2 program units, hence the surveys were sampled from both program units in Malawi, Niger and Uganda; and from the single program units in Sierra Leone and Zambia.

5 The only exception was in the Niger project, where a mix of ODF and non-ODF communities were surveyed, because only 43% of the communities triggered had reached ODF status.

6 This assumes that the villages had full coverage at declaration. The evaluation attempted to establish the veracity of the verification process.

**Table 2 – Household and school surveys**

Country	Duration	Communities		Households		Schools
		Planned	Actual	Planned	Actual	Actual
Ethiopia	20 Oct – 17 Nov	30	30	1,350	1,361	30
Ghana	23 Oct – 05 Nov	10	10	250	525	10
Kenya	21 Oct – 13 Nov	20	20	400	354	13
Malawi	19 Oct – 06 Nov	20	20	400	459	11
Niger	22 Oct – 05 Nov	20	20	500	536	12
Sierra Leone	19 Oct – 03 Nov	20	20	500	608	8
Uganda	20 Oct – 13 Nov	20	20	500	768	8
Zambia	20 Oct – 06 Nov	20	30	400	391	11
<b>Total</b>		<b>160</b>	<b>170</b>	<b>4,300</b>	<b>4,993</b>	<b>102</b>

The evaluation was also designed to strengthen the evaluation capacity and learning of the Plan country office teams. An optional component was included to encourage staff members from the Plan country project teams to take part in the country visits to neighbouring Plan country projects, in order to benefit from their knowledge of the program, and strengthen their evaluation capacity. A similar option was included for the survey team training, with the opportunity for Plan country teams to send someone to participate in the household and school survey training held in Nairobi in early November. The survey training included orientation on the use and programming of the smartphones and survey application used to undertake the surveys, with five smartphones<sup>7</sup> (purchased by the evaluation consultants) passed on to each Plan country office when the surveys were completed, in the hope that the phones and survey app would be used for subsequent surveys of Plan projects.

Unfortunately, only Plan Uganda and Plan Malawi took advantage of these opportunities, with the Plan Uganda WASH Adviser joining the survey training, and the two WASH advisers taking part in the evaluation of each others' projects. The other projects were interested, but noted that the limited budget available by late 2015 precluded their participation in the evaluation visits.

**Stakeholder consultations.** The country visits started with a comparison of the Plan monitoring and benchmarking data against the household and school survey results. This comparison enabled an assessment of the reliability of the Plan monitoring and benchmarking systems, and a discussion of any sustainability issues revealed by the final evaluation survey findings (as some communities were verified as Open Defecation Free up to five years earlier).

The first consultation was always with the Plan project and country teams, with the aim of discussing the lessons learned; the things that went well; the issues and challenges that arose during the project life; and any recommendations for future projects based on these experiences.

The evaluation team then tried to meet national sanitation and hygiene stakeholders to obtain an external assessment of the project, and to learn whether the project progress, results and lessons had been widely and effectively shared through sector networks. Interview guides were developed for the consultations (at different levels), and are included as Annex C.

Further consultations were held with key stakeholders at regional, district, sub-district and community levels. The country visits were used to drill down to these lower levels, with visits made to at least two project regions/provinces/districts (as appropriate in each country project) to discuss the country project, its achievements and its impacts with local governments and other local stakeholders. Meetings were also held with local implementation partners (local government and local NGOs) prior to visits to

<sup>7</sup> Except in Ethiopia and Ghana, which were given six and four phones respectively (due to the different project sizes and survey requirements).

randomly selected communities.

The evaluation consultants visited at least two project communities in each project area (district), so that at least four project communities were visited during each country visit. These visits did not aim to collect quantitative data, but rather focused on qualitative evaluation, using key informant interviews, focus group discussions and transect walks at community and local government levels to assess the outcomes, impacts and learning from the program in different areas and among different groups, including disadvantaged and vulnerable groups. Wherever relevant, project schools and urban CLTS projects were also visited and assessed.

In each community, discussions were held with community representatives, including local leaders, sanitation committee members, health extension workers and natural leaders, about the CLTS process, outcomes, challenges and lessons learned.

Efforts were made to involve women in the discussions, and to hold separate discussions with the women wherever possible. The community discussions were used to identify disadvantaged areas and groups in the community, which were then targeted during a transect walk to observe the context, review household sanitation and hygiene outcomes, discuss outcomes with households, and visit the school WASH facilities (where present).

## 2.2 Evaluation constraints: methodological issues

No formal baseline evaluation was completed for the Plan Pan African CLTS program, which means that few baseline data were available against which to assess program effectiveness or impact.

The International Water and Sanitation Centre (IRC) was tasked with collecting some baseline information at the start of the program, but concerns among the program partners that baseline surveys tend to be “extractive” exercises that can raise expectations among communities; and that the focus of the program should be on achieving ODF communities (rather than counting toilets), led to a decision not to conduct any formal baseline study. Instead, IRC carried out an online survey with the intention of capturing learning from the program as it was implemented.

The 2012 Mid-Term Review found that only two of the eight country projects were able to provide reliable baseline sanitation coverage data across the project communities. While sanitation coverage is not one of the main program metrics, these data would enable an assessment of targeting – whether Plan targeted communities with high sanitation coverage in order to achieve more ODF communities – and would enable some assessment of sanitation progress in project communities that have not become ODF. Most of the country projects began collecting baseline sanitation coverage data from communities triggered after the mid-term review, but these partial data do not allow an assessment of sanitation coverage gains among the project communities.

The program relied on project monitoring systems to track ODF progress. In some cases, local governments were responsible for monitoring ODF progress with support from the Plan country office. Unfortunately, the program benchmarking system<sup>8</sup> – which tracks country project performance against a number of indicators, and benchmarks it against the other country projects – suggested that the progress monitoring reports from some of the country projects are not always reliable (usually due to the provision of progress estimates by local government that are not based on actual achievements).

The limited reliability of the project monitoring data is one of reasons that the final evaluation included a household and school survey in all eight country projects, in order to provide reliable data on program outcomes to the final evaluation. However, some of the first project communities became ODF back in 2010-2011, which means that there are likely to have been sustainability losses in the last four

<sup>8</sup> The lead consultant for the final evaluation also supervised the benchmarking system, which was initiated following the mid-term review, producing quarterly summary benchmarking reports based on the country benchmarking reports submitted by each country project team.

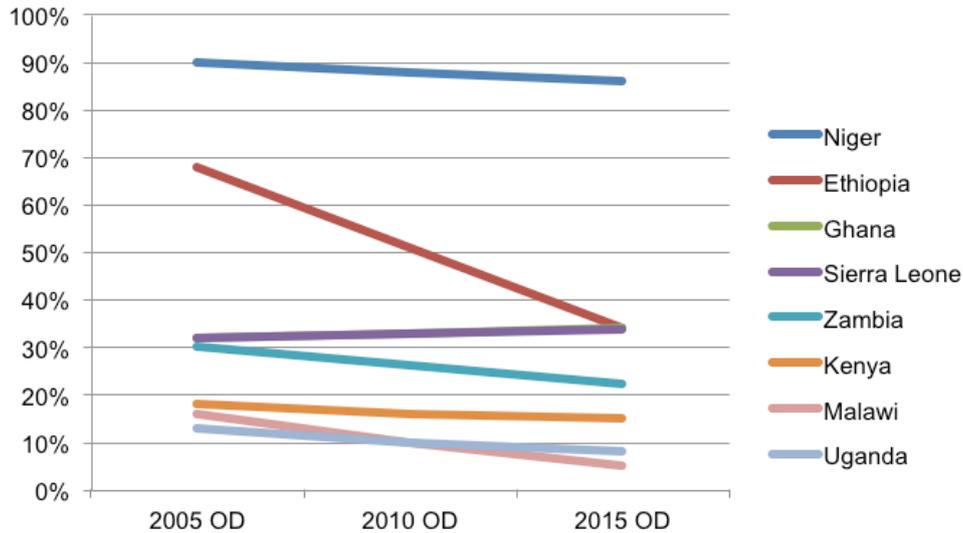
years. The sustainability effects found by the household and school surveys have been recognized by the evaluation team when analyzing these survey data.

## 3 Program effectiveness

### 3.1 JMP sanitation data

A review of JMP country data files confirmed the different baseline situations and national sanitation coverage trends in the eight countries covered by the program.

Figure 1 Open defecation rates in rural areas (JMP estimates, 2015)



Source: 2015 JMP country data files <http://www.wssinfo.com>

The 2015 JMP estimates (based on the nationally representative household survey data available up to 2015) suggest that the open defecation rates in the eight countries currently range between 5% and 34% in seven of the countries, with only Niger reporting a much higher open defecation rate, at 86%.

In all but two countries, Ghana and Sierra Leone<sup>9</sup>, open defecation has decreased in the five years since 2010, with significant decreases estimated in Ethiopia (-17%), Malawi (-5%) and Zambia (-4%). Rural sanitation coverage appears to have stagnated in both Ghana and Sierra Leone, with both estimates suggesting open defecation has increased slightly from 33% to 34% between 2010 and 2015.

The JMP estimates also confirmed:

- Ethiopia: dramatic decrease in open defecation since 2005
- Ghana: high and increasing use of shared sanitation facilities (45% in 2015)
- Uganda: high use of unimproved sanitation facilities (66% in 2015)

### 3.2 Baseline data

As noted in the mid-term review, few baseline data were available. No formal baseline study was undertaken by the program team, either of the sanitation and hygiene knowledge, attitudes and practice at baseline, or of health status in the project areas.

A few of the country projects initiated their own baseline studies. Plan Niger conducted Knowledge, Attitude and Practice (KAP) studies in its two project areas, and one of the partner NGOs reported 9%

<sup>9</sup> By chance, the JMP estimates of open defecation rates in Ghana and Sierra Leone are identical, hence the Ghana line in the chart is hidden behind the Sierra Leone line.

baseline coverage in the project villages. Similarly, one of the Plan Ghana partner NGOs (implementing in one of the four project areas) reported 4%-8% latrine use at baseline, with 27% of the population reported to use public latrines. Plan Uganda conducted a baseline survey in 30 villages in Luwero sub-county, finding 47% latrine coverage.

**Table 3** Baseline sanitation data

Baseline data	Ethiopia	Ghana	Kenya	Malawi	Niger	Sierra Leone	Uganda	Zambia
JMP rural san. coverage <sup>10</sup> (2010)	27%	50%	38%	57%	6%	26%	24%	42%
Project san coverage	-	8%	-	53%	9%	-	32%-47%	-

In general, the mid-term review assessments suggested that sanitation coverage in the project areas was below national averages. The JMP figures (in the table above) exclude unimproved toilets, which are likely to have been counted in the Uganda survey (JMP reports 66% unimproved facilities in rural areas).

The project baseline data appear to confirm that the Plan project teams tended to select communities with high rates of open defecation, which were generally poor communities. However, the limited data available confirm that the issue of toilet quality (whether toilets are considered hygienic, improved or acceptable) and toilet sharing (whether shared toilets are counted) can drastically alter the reported sanitation coverage.

As at the mid-term review, the final evaluation highlighted the difficulty of assessing project and overall program progress where no baseline data are available. This issue highlights the tension between the community-led philosophy of CLTS, which encourages communities to solve, manage and monitor their own sanitation situation, and the requirement that program managers and local governments monitor and evaluate sanitation progress and issues in order to understand better the interventions and support needed to help communities meet the government's development objectives.

### 3.3 Sanitation progress data

#### 3.3.1 Establishment and relevance of program targets

The program was developed on a demand-responsive basis, with each Plan country office indicating its interest in participation and proposing the scale and scope of its implementation project. The different stages of CLTS evolution and development in each country, and the different confidence and experience levels of the Plan country office teams, led to radically different proposals across the eight Plan country projects eventually selected for inclusion in the program.

In particular, the target ODF populations varied enormously:

- Large projects: Ethiopia (1.2 million) and Kenya (600,000)
- Medium projects: Malawi, Niger, Uganda and Zambia (95,000-135,000)
- Small projects: Ghana (20,000) and Sierra Leone (13,000)

The ODF population targets included the entire population of the communities targeted for ODF achievement, and the program design assumed a 100% ODF success rate – that is, the project budgets only allowed for triggering of the target number of ODF communities, with little or no allowance for unsuccessful triggering.

This design reflected some naiveté about the CLTS approach, as there was already evidence by 2010

<sup>10</sup> The JMP data presented here include use of improved and shared sanitation facilities, but exclude use of unimproved sanitation facilities.

that typical CLTS programs achieved around 35%-40% ODF success rates. However, the small projects proposed by Plan Ghana and Plan Sierra Leone perhaps recognised this concern by limiting the project targets to much lower levels than the medium and large projects. The mid-term review (MTR) report noted that CLTS was already well established in Sierra Leone by late 2010, with 790 ODF communities reported from 2,108 triggered communities (37% ODF success rate)<sup>11</sup>, and questioned why the Plan Sierra Leone project was so conservative.

### 3.3.2 Program scale

The program achieved the scale anticipated by the design, with more communities triggered than originally planned by all of the country projects except Zambia (378 sub-villages triggered and 600 targeted) and Niger (87 triggered against 103 targeted). In total, almost 2,000 rural communities received sanitation and hygiene interventions, with some country projects (Malawi, Sierra Leone and Uganda) triggering more than twice as many communities as originally planned. However, the average community size was smaller than anticipated, which meant that the populations triggered and verified as ODF were lower than planned.

**Table 4** ODF community progress by country project<sup>12</sup>

Country	Rural communities		Project villages	ODF progress		
	Target villages	Target pop		ODF villages	ODF schools	ODF population
Ethiopia	210	1,200,000	234	234	295	1,341,864 (112%)
Kenya	264	600,000	671	356	119	112,508 (19%)
Niger	103	135,000	87	37	42	36,774 (27%)
Zambia	600	120,000	378	185	45	41,973 (35%)
Uganda	127	115,400	220	198	35	119,684 (104%)
Malawi	102	94,587	204	125	14	23,940 (25%)
Ghana	50	20,000	50	28	37	22,367 (112%)
Sierra Leone	78	13,000	150	150	22	118,123 (909%)
<b>Totals</b>	<b>1,534</b>	<b>2,297,987</b>	<b>1,994</b>	<b>1,313</b>	<b>609</b>	<b>1,817,233 (79%)</b>

The ODF progress data (in Table 4) are based on the best monitoring data available from the relevant Plan project teams, which were checked in detail by the evaluation team during the country visits. In several cases, these data were significantly different from those reported by the project teams in the annual program reports and quarterly benchmarking reports (reported since early 2013).

Four country projects were reported to exceed their ODF targets:

- Plan Sierra Leone: 909% ODF achievement
- Plan Ethiopia: 112% ODF achievement
- Plan Ghana: 112% ODF achievement
- Plan Uganda: 104% ODF achievement

Overall, the Plan ODF data suggested that 1.817 million people were living in verified ODF communities as a result of program interventions since 2010. Given the program goal of achieving an ODF population of close to 2.3 million people, the Plan ODF data suggested that 79% of this target was reached.

The main shortfall was in the Plan Kenya project, which was 487,500 people below its ODF population target – almost exactly the amount by which the program fell short of its overall ODF population target. The largest gains were in the Plan Sierra Leone project, which reported more than nine times the expected ODF population. Unfortunately, a detailed examination of the ODF population in Sierra Leone

<sup>11</sup> Bevan J (2011) *A review of the UNICEF roll-out of the CLTS approach in West and Central Africa* 35<sup>th</sup> WEDC International Conference, Loughborough UK, conference paper.

<sup>12</sup> The data in this table excludes the urban CLTS projects, which are reported in section 3.4.

was not possible because of the 2014 Ebola outbreak, which limited CLTS monitoring between September 2014 and November 2015, and meant that many of the project staff are now focused on the Ebola recovery program.

### Over-reporting of ODF progress

Four countries over-reported ODF progress by 200% or more in previous progress and benchmarking reports:

- Plan Kenya: 601,055 ODF population in benchmarking (actual 112,508)
- Plan Malawi: 112,184 ODF population in benchmarking (actual 23,940)
- Plan Zambia: 111,135 ODF population in benchmarking (actual 41,973)
- Plan Niger: 78,936 ODF population in benchmarking (actual 36,774)

In several cases, notably in Kenya and Malawi, the previous monitoring reports made it appear that the country projects were on track to meet their targets, whereas the final evaluation revealed that, in each of these four cases, the actual ODF population was only 19%-35% of the reported population.

The evaluation data suggested that Plan Kenya triggered a population of more than 250,000 people, but achieved a relatively low ODF success rate (by community) – similar to those in the less well performing country projects. The Plan Kenya ODF target was obviously ambitious, and was affected by the triggered communities being much smaller than those envisaged in the project design. However, these issues would have been addressed much earlier if Plan Kenya had not over-reported progress, as the benchmarking data and annual progress data provided by Plan Kenya suggested that the 600,000 ODF population target had been achieved.

The Plan teams in Kenya and Malawi suggested that the over-reporting problem was linked to their reliance on local government monitoring and reporting systems, which were rarely updated or reliable, and over which the project teams had little control or oversight. However, the evaluation team also found the Plan project monitoring and reporting systems were inadequate, with insufficient effort made to track, review or follow up on project progress except when required to by the program management.

One explanation for this weakness is that the program design emphasized the achievement of ODF communities above all else, with the details of the ODF populations, and related number of toilets resulting from the interventions, deemed less important than the number of ODF communities. This issue was raised by the Mid-Term Review, but was not adequately addressed by either the program or country project management teams.

### Community size

The size of the ODF communities also affected apparent ODF achievement. The program design assumed relatively large communities, notably in Ethiopia and Kenya, where 2,200-5,700 people per community were estimated; whereas the actual average size of the project communities was often much smaller than planned:

- Kenya: 316 people (compared to 2,273 planned = 719% over-estimate)
- Malawi: 192 people (compared to 927 planned = 484% over-estimate)
- Uganda: 604 people (compared to 909 planned = 150% over-estimate)

As a result, the Malawi project exceeded the planned number of ODF communities, but reached only 25% of its ODF population target. Conversely, the Sierra Leone and Ghana projects had the opposite issue: the average community population proved to be 2-5 times larger than the estimated population, which meant that the Ghana project exceeded its ODF population target despite only achieving 28 ODF communities (against a target of 50 ODF communities); and that the Sierra Leone project reported 118,000 people living in 150 ODF communities, which represents 909% of its original ODF population target.

No clear lesson emerged from the analysis of community size, except that the lack of adequate baseline data limited the ability of the program and project teams to plan and track progress. It appears that sub-villages, often much smaller than the villages originally envisaged, were counted as communities by

some country projects, which led to greatly reduced ODF population figures. This issue perhaps reflects the common finding that smaller communities are often less difficult to trigger than larger communities. It also suggests that the management focus was on the number of ODF communities, rather than on the ODF population contained within these ODF communities, which also encouraged country projects to target and count small communities.

### Household latrine coverage

CLTS projects focus on behaviour change rather than toilet counting, but it remains important to assess the number of new toilets that result from interventions, not least because this indicator captures progress in communities that have not yet achieved ODF status.

Unfortunately, the data on the number of new household latrines was found to be largely unreliable, not least because of the lack of reliable baseline sanitation data. The country projects were asked to track latrine numbers and coverage as part of the enhanced monitoring and benchmarking system, but few of the projects invested much time or effort in checking these data. Table 5 presents the latrine data provided by the country projects, with some revisions made by the evaluation team where better data were available (as summarised in the eight country evaluation reports).

**Table 5** Reported increase in rural sanitation coverage

Country	Average Hhd size	Project No. hlds	New Hhd latrines	Project achievement (%)	JMP Increase <sup>13</sup>
Ethiopia	4.8	278,322	283,871	+102%	+17%
Uganda	5.3	23,354	8,512	+36%	+2%
Kenya	4.6	55,686	11,339	+20%	+1%
Zambia	4.9	15,770	7,399	+47%	+4%
Malawi	2.5	38,232	4,403	+12%	+5%
Ghana	6.6	6,487	1,876	+29%	-1%
Sierra Leone	6.1	19,519	12,041	+62%	-1%
Niger	8.7	19,968	3,280	+30%	+2%
<b>Totals</b>	<b>4.8</b>	<b>448,338</b>	<b>332,721</b>	<b>74%</b>	

Sources: final evaluation - country evaluation reports prepared by the evaluation team.

The data presented include new latrines counted or estimated across entire project areas, including in non-ODF communities. Nonetheless, the vast majority of new toilets were built in ODF communities, with a relatively small proportion in the less successful non-ODF communities.

The latrine data suggest that the Ethiopia project over-reported the number of new latrines. Some of the communities in Ethiopia were reported to have no toilets at the start of the project, but it is likely (based on the JMP estimates) that some proportion of households had latrines at the outset, thus the total number of new latrines must be lower than 278,000. Some issues with the population data were also apparent, with unusually high household size suggested by the population data provided by the Plan Ghana and Plan Niger projects.

### ODF schools

The evaluation team obtained only limited data on school sanitation progress. Despite the introduction of additional school sanitation indicators into the enhanced monitoring and benchmarking system in 2013, few of the country projects were able to provide detailed or reliable monitoring data or reports on school sanitation.

<sup>13</sup> Background rate of sanitation coverage increase during the 2010-2015 period, based on JMP estimates of rural sanitation coverage.

Substantial variations exist between the country projects in terms of the definitions, implementation and verification of school ODF status. In most projects<sup>14</sup>, no budget was allocated for the construction of school WASH facilities, thus the activities focused on the elimination of open defecation through triggering of students, teachers, parents and other school stakeholders; and on the establishment of toilet cleaning, operation and maintenance systems.

In several countries, the ODF verification criteria for communities included school sanitation, requiring that all schools in ODF communities had hygienic toilets and were free from open defecation. While these school-related criteria encouraged attention to school sanitation during the ODF verification period, the evaluation found that little follow up or sustainability monitoring was carried out during the post-ODF period.

**Table 6** Reported ODF school progress

	School	ODF	ODF	Non-functioning
Country	Target	Schools	Progress %	School toilets <sup>15</sup> %
Ethiopia	20	312	1560%	0%
Uganda	39	35	90%	5%
Kenya	546	119	22%	3%
Zambia	70	45	64%	59%
Malawi	16	14	88%	9%
Ghana	25	37	148%	14%
Sierra Leone	20	22	110%	2%
Niger	40	42	105%	1%
<b>Totals</b>	<b>716</b>	<b>562</b>	<b>78%</b>	

Four of the country projects reported meeting their ODF school targets: Ethiopia, Ghana, Sierra Leone and Niger. The other four countries fell short of their school targets, with Zambia, Malawi and Uganda achieving 64%-90% of their targets; and Kenya achieving just 22% of its hugely ambitious (and possibly erroneous) target of 546 ODF schools.

The benchmarking reports included data on the number and proportion of non-functioning school toilets in the project areas. The reliability of these data is questionable, as none of the country projects were able to provide any detailed data to support these figures, but it was notable that the Zambia project reported that more than half the school toilets were not functioning, and that high rates of non-function (9%-14%) were also reported in Ghana and Malawi.

In most cases, the evaluation found that the reported school sanitation results tended to exaggerate the positive outcomes. Most of the interventions were based on a triggering approach among the school stakeholders, with varying degrees of intervention to encourage a systematic approach to cleaning and maintenance of the school toilets.

The evaluation suggested that most school toilets had been cleaned up and, where necessary, made functional for the ODF verification process, and that efforts were generally made to maintain the ODF status for some time after verification. However, over time, attention to the school toilet conditions diminished, leading to a decrease in the cleanliness and a consequent increase in the practice of open defecation.

Visible open defecation was found in and around the school toilets visited in the Ethiopia, Ghana and

<sup>14</sup> The exception was the Plan Zambia project, which allocated some funds for construction of school WASH facilities.

<sup>15</sup> Based on the quarterly benchmarking reports submitted by the country projects.

Niger projects. Both the project staff and the teachers were surprised by the poor sanitation conditions in these apparently ODF school toilets, evidencing a lack of sustainability monitoring since ODF verification.

### 3.3.3 Household survey findings: sanitation

The final evaluation included household and school surveys designed to assess the final project outcomes. The intention of these surveys was both to recognise the risk of sustainability losses over time, through which some ODF communities may have reverted back to open defecation; and to check on the reliability of the project monitoring and reporting systems, in the knowledge that some country project systems relied on local government systems that the Mid-Term Review and benchmarking reviews found to be unreliable (often due to over-reporting of project achievements).

The household survey findings proved extremely useful to the evaluation team. The Plan country project teams assisted in the planning of the household surveys; provided the progress data that were used to sample the communities and schools to be surveyed; and often recommended the local consultants who supervised the surveys. As a result, the Plan country project teams were familiar with the survey process, and generally agreed that the surveys provided reliable snapshots of project outcomes at the end of the program, even when the survey findings were less positive than the project teams might have hoped.

**Table 7** ODF outcomes: household survey results

Country	Villages surveyed	Households surveyed	Sanitation coverage	OD + sharing <sup>16</sup>	Reported OD practice <sup>17</sup>
High performing projects					
Malawi	20	459	96%	4%	0%
Uganda	20	768	94%	6%	1%
Kenya	20	525	92%	8%	5%
Medium performing projects					
Ethiopia	30	1,361	70%	30%	17%
Zambia	30	391	59%	41%	23%
Sierra Leone	20	608	56%	44%	21%
Low performing projects					
Ghana	10	354	44%	56%	8%
Niger	9 <sup>18</sup>	527	29% <sup>19</sup>	71%	39% <sup>20</sup>
<b>Totals</b>	<b>160</b>	<b>4,993</b>	<b>69%</b>	<b>31%</b>	<b>14%</b>

Key: OD = open defecation

The household survey results presented in Table 7 reflect the findings of a survey conducted in a limited sample of project communities, at a particular point in time. While efforts were made to sample across the project population, and limit the margin of error, the survey findings should be taken as indicative of project outcomes rather than anything more precise. In addition, the survey results for the Zambia project included five non-project communities (erroneously included on the list of project communities from which the survey sample was selected). As a result, 17% of the survey results for the Zambia

16 Proportion of surveyed population without toilets (assumed either to practice open defecation or share other household's toilets).

17 Self-reported practice of open defecation

18 20 villages in total, including 9 ODF villages and 11 non-ODF villages (because only 43% of the project communities were reported to be ODF at the time of the survey).

19 19% sanitation coverage across all 20 villages (including the 11 non-ODF villages).

20 49% open defecation reported across all 20 villages (including the 11 non-ODF villages).

project are from communities that were not part of the PAC program, and may not have been verified ODF communities.

Analysis of the household survey results suggests three categories of project:

- High performing: 92%-96% latrine coverage (Malawi, Uganda & Kenya)
- Medium performing: 50%-70% latrine coverage (Ethiopia, Zambia & Sierra Leone)
- Low performing: 25%-50% latrine coverage (Ghana & Niger)

The ODF verification criteria in Ghana require only 80% latrine coverage for Basic ODF status, thus up to 20% sharing is acceptable. Otherwise, the verification criteria in most countries require 100% latrine coverage, and the survey would be expected to find close to 100% latrine coverage in previously verified ODF communities.

The data on open defecation (OD) practice was self-reported, thus may be an under-estimate given that the respondents were aware of both the Plan sanitation project, and that the surveyors were examining sanitation status and practices. Nonetheless, the self-reported OD rates match the observed sanitation coverage figures well, with only 0%-5% open defecation reported in the high performing projects; 17%-23% in the medium performing projects; and 39% reported in the Niger project (in the ODF villages).

The one exception was the Ghana project, which reported only 8% open defecation despite the survey finding only 44% latrine coverage. Ghana has one of the highest rates of latrine sharing and public latrine usage in the world, and this was reflected in the survey results: 10% of households were found to share toilets owned by other people, and 40% reported that they use public or communal toilets. Interestingly, one third of toilet owners in Ghana reported that someone else used their toilet, confirming that shared use of toilets is extremely common.

The Niger project was the only other project to report public or communal toilet use, by 3% of households, with a further 14% reported to share other people's latrines. In both cases, the use of shared and communal latrines was a significant factor in the low performance found by the household survey in these two country projects. Few toilets were found by the Niger survey, thus it is unsurprising that 61% of toilet owners in Niger reported that they shared their toilet with other households.

### Sustainability losses

One of the big methodological questions for the evaluation was how best to control for sustainability losses over time. That is, where low sanitation coverage and open defecation were found, to determine whether this was the result of a fully ODF community in which reversion to open defecation had taken place over time; or whether the community had never been fully ODF (due to inadequate ODF verification or over-reporting of progress). In addition, the evaluation aimed to assess whether any sustainability losses were due to weaknesses in the Plan CLTS approach or post-ODF support, or whether external factors such as inadequate local government support, or unforeseen weather events, had influenced the outcomes over time.

The household survey results suggest that good sustainability is possible, with three country projects demonstrating 95%-100% latrine use in communities that were verified as ODF up to 5 years ago. In these projects, it appears that the quality of the CLTS process was good; the ODF verification process worked well (at least for latrine use and the elimination of open defecation); and adequate post-ODF support was provided.

A distinct difference in sanitation outcomes was evident in the medium performing projects. The rate of latrine sharing<sup>21</sup> was significantly higher: up from only 2%-6% in the high performing projects, to 13%-31% in the medium performing projects; and the rate of open defecation was also much higher: up from 0%-5% in the high performers to 17%-23% in the medium performers.

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21 Defined as nearby households sharing use of a private household latrine (owned by another household).

Finally, the two low performing projects reported either high public or communal latrine use<sup>22</sup> (40% in Ghana) or a high open defecation rate (39% in Niger), which was not found in any of the other projects. Significant numbers of collapsed and abandoned communal latrines were observed or reported in Niger, suggesting that there had been a much higher rate of communal latrine use at the time of ODF verification.

The country evaluation visits to Niger and Ghana suggested that the decision to allow shared and communal latrine use within ODF communities was a significant factor in the sustainability problems faced by these projects. Most stakeholders reported that open defecation had been more or less eliminated at the time of ODF verification, but that it was hard to insist that poor households constructed their own latrines, and that high levels of shared and communal latrine use were often accepted by the verification teams. As in many other countries, the cleaning and maintenance of communal latrines proved to be significant challenges.

Communal latrines continue to be used by 40% of the project populations in Ghana, despite these facilities being extremely unhygienic and unpleasant – open defecation, uncovered excreta and significant fly and smell nuisance were evident at all of the communal latrines observed in Ghana. In contrast, very few of the communal latrines built under the Niger project were still functional, hence many people had now reverted back to open defecation.

### 2012 ODF Sustainability Study

Four of the eight country projects were included in the 2012 ODF Sustainability Study conducted by Plan International and FH Designs. The ODF Sustainability Study re-verified ODF status in 4,905 households surveyed across 116 communities in the four country projects:

- Ethiopia: 57 communities in Oromia and SNNP project areas
- Kenya: 20 communities in Homa Bay and Kilifi project areas
- Sierra Leone: 20 communities in non-PAC project area (Port Loko & Moyamba)
- Uganda: 19 communities in Tororo project area

**Table 8** ODF sustainability study (2012, FH Designs)

Country	Villages surveyed	Households surveyed	2012 san coverage	2015 san coverage
Uganda	19	1,860	87%	94%
Kenya	20	814	79%	92%
Ethiopia	57	1,741	91%	70%
Sierra Leone	20	509	85%	56%
<b>Totals</b>	<b>116</b>	<b>4,905</b>	<b>87%</b>	<b>77%</b>

Key: san = sanitation

Given the focus on sustainability, the 2012 study explicitly selected communities in which ODF verification had taken place at least 2 years earlier, so most of the outcomes assessed by the study were in projects that predated the start of the Pan African CLTS program, and some of the project areas were different from those surveyed by this evaluation.

The ODF sustainability study found that latrine coverage ranged from 79% in Kenya to 91% in Ethiopia. The sustainability losses were generally lower than those found by this evaluation, perhaps because a shorter time had passed since ODF verification. However, it is also apparent that the Ethiopia and Sierra Leone results (which were from different projects and areas) were found to be worse by this final evaluation, whereas the Uganda and Kenya results (which were in similar project areas) are better than

<sup>22</sup> Communal latrines (notably in Niger) were sanitation facilities constructed by the community with open access by community members, but usually only utilized by a relatively small group of nearby households; public latrines (notably in Ghana) were much larger sanitation facilities, often constructed by local governments, with much larger catchments (often only one or two public latrines per community).

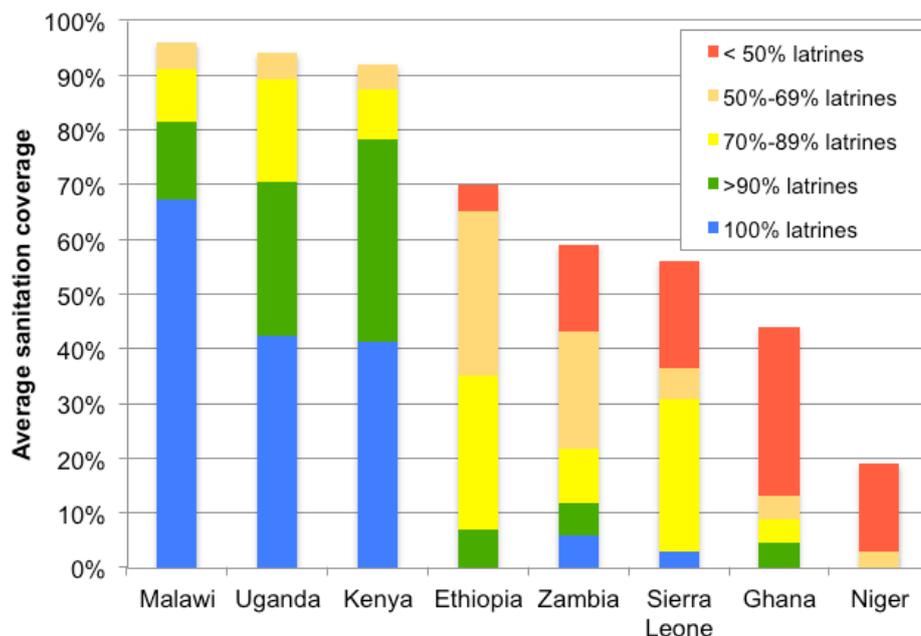
those found by the 2012 study.

### Community sanitation outcomes

The household surveys examined community-wide outcomes in ODF project communities, with the number of households sampled in each community influenced by the community population in order to provide a reasonably representative picture of community outcomes.

Figure 2 summarises the analysis of community sanitation outcomes. Each column represents the contribution of different categories of community sanitation outcomes to the overall sustainability result (measured by the average percentage of latrines found in the households surveyed). For instance, the household survey found 96% latrine coverage in the Malawi project, distributed across four different categories of community sanitation outcome: 70% of the communities surveyed had 100% latrine coverage; 15% had 90%-99% latrine coverage; 10% had 70%-89% latrine coverage; and the last 5% of the communities surveyed had 50%-69% latrine coverage. The figure intends to show the proportion of the population surveyed that lived in communities with ODF (100% latrine coverage) or close to ODF (90%-99% latrine coverage) conditions.

**Figure 2 Household survey: community sanitation outcomes**



Significantly better community sanitation outcomes were found in the three high performing projects. More than 75% of all communities surveyed in the Malawi, Uganda and Kenya projects had 90% or greater latrine coverage, with 70% of the communities in Malawi found to have 100% latrine coverage. Open defecation rates were reported to be zero in these 90%+ communities in Malawi and Uganda, and only 1.4% in the Kenya project. Only 5% of communities fell into the 50%-70% latrine coverage category, suggesting that just one in twenty communities experienced significant sustainability losses.

Only 5%-20% of the verified ODF communities surveyed in Ethiopia, Zambia and Sierra Leone had more than 90% latrine coverage; and open defecation rates were higher in these communities than in similar communities in the high performing projects, averaging 3%-5% in Ethiopia and Zambia.

The Ethiopia project performed better than the other medium performing projects, despite not having any communities with 100% latrine coverage, because very few communities slipped below 50% coverage. Only two communities were in this category, reportedly due to severe weather events that destroyed the majority of the simple toilets in the months preceding the household survey. In the four other projects at the bottom of the performance scale, significantly more of the communities

surveyed had less than 50% latrine coverage: in Ghana, 70% of the communities surveyed had less than 50% latrine coverage; and in the Niger project this figure reached 85%. As noted earlier, many of these communities appear to have been verified as ODF despite having less than 50% latrine coverage at the time of verification, under the mistaken assumption that shared and communal latrine use would be sustained without reversion to open defecation.

### Effect on overall ODF population

The survey findings imply that the reported ODF populations are over-estimates of the population living in ODF communities by the end of the program. The program results framework does not spell out whether it was anticipated that the ODF population would be 100% sustained at the end of the program, and it seems likely that the risk of sustainability losses, which is now well recognised, was not apparent when the Pan African CLTS program was designed.

Two approaches were examined to assess the ODF population sustained by the program. The first includes only communities in which latrine coverage is likely to be 90% or higher, on the basis that open defecation rates are significantly higher in the other communities, thus that the health and other benefits (whose realisation is the main objective of the program) are likely to be significantly reduced. The second approach simply applies the average latrine coverage found by the household survey to the reported ODF population – for instance, 70% latrine coverage was found in the Ethiopia project, thus 70% of the ODF population should be counted. The population calculated using this approach reflects the number of new latrines constructed by the program, but neglects the significant additional benefits linked to community-wide sanitation improvement.

**Table 8 Sustained ODF populations**

Country	Reported ODF pop	> 90% coverage	Sustained ODF pop	Survey san coverage	Pop with latrines
Malawi	23,940	85%	20,349	96%	22,982
Uganda	119,684	75%	89,763	94%	112,503
Kenya	112,508	85%	95,632	92%	103,507
Ethiopia	1,341,864	10%	134,186	70%	939,305
Zambia	41,973	20%	8,395	59%	24,764
Sierra Leone	118,123	5%	5,906	56%	66,149
Ghana	22,367	10%	2,237	44%	9,841
Niger	36,774	0%	0	19%	6,987
<b>Totals</b>	<b>1,817,233</b>	<b>20%</b>	<b>356,468</b>	<b>71%</b>	<b>1,286,039</b>

The first approach, summarised in the “Sustained ODF population” column in Table 8, counts only the proportion of the verified ODF population that the household surveys suggest is likely to have 90% or higher sanitation coverage (and zero or nominal open defecation rates).

This approach drastically reduces the estimate of the sustained ODF population. Only 20% of the reported ODF population is counted under this approach, largely because 90% of the dominant Ethiopia project gains are discounted. The Uganda and Kenya projects become more significant contributors to the overall program achievement, and the bottom four projects together contribute only 5% of the ODF population.

While perhaps not reflective of all of the hard work and intangible benefits of the country projects, the sustained ODF population combines reported ODF data from the project teams (which captures the scale and efficiency of the projects) with survey data collected by the evaluation team (which assesses the effectiveness and sustainability of the projects). Given the risk that poor households with high disease burden tend to be among the first to revert to open defecation, it is likely that the sustained ODF population provides a better measure of the relative benefits of the country projects than most other measures.

The second approach is less rigorous, assessing the population in the project areas with sustained use

of sanitation facilities as a measure of the reduced ODF population implied by the sustainability losses (evidenced by the household surveys). This assessment neglects to deduce baseline sanitation coverage (due to the lack of reliable baseline sanitation data), thus is likely an over-estimate of the sanitation gains made by the program, but reflects the program's success in raising average sanitation coverage in most project areas to 70% or higher.

By this second measure, the population found to have sustained sanitation improvements at the end of the program is 1.286 million people, approximately 56% of the 2.3 million ODF population program target.

### 3.3.4. Household survey findings: latrine quality

The program goal to achieve substantial ODF populations in each country project reflects the understanding that everyone in an ODF community uses a hygienic latrine, practises safe excreta disposal, and (where required by the ODF criteria) has a facility that allows them to wash their hands with soap. These improved outcomes are associated with health and other benefits, particularly among the poorest and most vulnerable households, those most affected by the health burden of inadequate sanitation and hygiene. The program design, therefore, assumes that verified ODF populations equate to health and other benefits in these communities.

The national ODF verification criteria vary across the different country projects, with some criteria specifying the minimum characteristics of the hygienic toilets required for ODF verification, and others accepting the use of any form of toilet providing that the practice of open defecation has been stopped.

For instance, in Ethiopia the government requires that "100% of latrines constructed by the community (of any design) are in use"; whereas in Ghana, the revised 2013 CLTS verification and certification protocol requires an improved latrine that "does not contaminate water bodies; prevents contact between human beings and excreta; confines excreta in ways that make it inaccessible to flies, other insect vectors, and domestic or wild animals; and prevents emission of foul odour".

As a result, ODF achievement can mean different things in different country projects, with the risk that, where any quality of latrine is considered acceptable, the assumed health and other benefits may not materialise. Therefore, the evaluation used the household surveys to assess latrine quality through a number of different indicators, with a view to determining whether the toilets built to achieve ODF status appear hygienic and likely to result in health and other benefits.

The latrine quality and cleanliness data (Tables 10 & 11) demonstrate the broad range of outcomes found across the country projects<sup>23</sup>. In general, the Niger latrines appear the least clean and least private, perhaps because more of the latrines (61%) are shared than in any other country project. But the few latrines found in Niger were of reasonable quality, with a relatively high proportion with some form of concrete or cement slab.

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23 Percentages are the proportion of latrine owning households reporting the variable. Each column is colour formatted with red highlighting the worst results and green the best results.

**Table 10 Household survey: Latrine quality and use**

Country	Provides privacy	Ceramic pan	Concrete slab	Metal roof	VIP or Pour-flush	Share with others
Malawi	68%	0%	7%	5%	1%	24%
Uganda	68%	0%	34%	61%	9%	9%
Kenya	42%	3%	42%	59%	12%	16%
Ethiopia	44%	0%	10%	9%	0%	24%
Zambia	55%	4%	4%	5%	0%	10%
Sierra Leone	69%	16%	67%	46%	3%	37%
Ghana	79%	24%	72%	85%	26%	31%
Niger	45%	13%	64%	9%	6%	61%

**Table 11 Household survey: Latrine cleanliness and condition**

Country	Shit on walls	Shit on floor	Shit on pan	Used anal cleansing materials	Bad smell outside	Bad smell inside	"Clean" rating
Malawi	1%	20%	10%	28%	22%	44%	79%
Uganda	1%	1%	6%	6%	9%	29%	91%
Kenya	5%	22%	7%	37%	12%	43%	79%
Ethiopia	0%	25%	0%	28%	24%	55%	76%
Zambia	0%	14%	1%	5%	17%	31%	87%
Sierra Leone	5%	25%	13%	3%	35%	44%	75%
Ghana	6%	31%	2%	6%	11%	32%	83%
Niger	27%	29%	6%	16%	41%	26%	69%

The Ghana latrine ratings are more surprising, with the highest privacy rating, highest proportions of VIP and Pour-flush latrines, and latrines with concrete slabs and metal roofing, and one of the highest cleanliness ratings (despite a high proportion of toilets observed with shit on the floor). Although it should be noted that these toilets are found largely among better-off households, as 56% of the households surveyed use communal toilets, share other toilets, or practice open defecation.

The latrines in the three high performing projects (Malawi, Uganda and Kenya) were observed to be relatively clean and odour free, perhaps because of the lower proportions of sharing in these projects. However, used anal cleansing materials were visible in around one third of latrines in the Malawi and Kenya projects.

Otherwise, there is no clear pattern to the survey findings on latrine quality and cleanliness, perhaps reflecting differences in interpretation and assessment by the different survey teams and individual enumerators. The evaluation team observed that the latrines in the Ethiopia were perhaps the most basic, with 100% pit latrines and little privacy provided, yet the survey found that these latrines were relatively clean (despite having one of the worst ratings for bad smells).

### 3.3.5 Household survey findings: handwashing with soap

Most ODF verification processes require that households are verified to have both toilets and handwashing facilities, thus the household survey would be expected to find similar levels of handwashing facility presence and latrine coverage. In reality, the sustainability of the handwashing facilities, and of the practice of washing hands with soap, appears to be limited once the ODF verification is complete. The evaluation suggests that many households construct temporary facilities in order to meet the requirements of the ODF verification process, but that few maintain or use these facilities over time.

**Table 12 Household survey: handwashing**

Country	Presence of HWF	Presence of water	Presence of soap
Malawi	17%	14%	3%
Uganda	54%	50%	21%
Kenya	44%	36%	24%
Ethiopia	14%	13%	7%
Zambia	22%	18%	14%
Sierra Leone	6%	2%	0%
Ghana	10%	9%	7%
Niger	1%	0%	1%
<b>Totals</b>	<b>22%</b>		

Key: HWF = handwashing facility

The handwashing survey findings largely mirrored the sanitation findings, with better handwashing facility rates (44%-54%) and higher presences of soap (or ash) and water in the Uganda and Kenya projects; mediocre results (14%-22% handwashing facility presence) were observed in the Ethiopia and Zambia projects; and poor results in the three West African projects - Sierra Leone, Ghana and Niger. Only four handwashing facilities were found among the 527 households surveyed in Niger, and all of these were in the Tillabéri project area. The Malawi project performed less well on handwashing than on sanitation, with outcomes that more closely paralleled those in Ethiopia and Zambia, and the third lowest presence of soap (or ash).

One handwashing factor, mentioned in several of the country evaluation reports, is that rural households often prefer to keep the main source of water (and soap) in the home or kitchen rather than at the toilet. Household members using the toilet often take a bottle or jug with them, or return to the house to wash their hands if the toilet is nearby. The Plan project teams in Niger, Ghana and Sierra Leone suggested that this practice resulted in few handwashing facilities being observed by the survey enumerators, and led to under-estimates of handwashing practices in these projects.

In particular, the evaluation of the Sierra Leone project found that the Ebola outbreak has resulted in a step change in handwashing behaviour, as everyone is now aware that hand hygiene is an important barrier to Ebola. The evaluation consultant reported that everyone passing police and disease surveillance checkpoints had to wash their hands, and that visitors (including the evaluation team) were asked to wash their hands with soap before discussing anything with individual households or community groups. The focus group meetings and transect walks confirmed that most households keep a plastic kettle at the house for handwashing, despite the household survey suggesting that only 6% of households have handwashing facilities at the latrine.

### Handwashing response rates

The handwashing outcomes appear generally low, but reflect a long-running sector weakness – the importance of handwashing with soap is widely heralded, but rarely matched by effective implementation approaches, sustainability monitoring, or any budget for follow-up once hygiene promotion is completed. Some of the best handwashing interventions, such as the SuperAMMA program implemented by the SHARE consortium (including the London School of Hygiene and Tropical Medicine) in India, achieve only 25%-30% response rates 6-12 months after implementation.

By this measure, the Uganda and Kenya projects have performed very well on handwashing – matching the performance of the best practice interventions in India – and even the medium performing projects (Ethiopia, Zambia and Malawi) demonstrate reasonable outcomes.

But the practice of handwashing with soap at critical times remains difficult to measure, thus is often left out of routine monitoring activities. Further work is required to improve the monitoring of hand-

washing, and encourage more regular and practical measures of handwashing practice and outcomes.

### 3.3.6 School survey findings

The school survey sample was much smaller than the household survey sample, given the lower priority of this component in most country projects. As a result, the margin of error on the school survey results is higher (18%-32%). Nonetheless, 102 schools were surveyed from the 1,035 schools that received project interventions, representing a 10% sample across the entire program.

**Table 13 School survey: sanitation and hygiene outcomes**

Country	School surveys	Toilets not working	Visible OD	HWF	HWF with water	HWF with soap
Malawi	11	5%	9%	36%	25%	0%
Uganda	8	1%	13%	71%	83%	25%
Kenya	13	0%	8%	27%	63%	0%
Ethiopia	30	3%	27%	9%	75%	0%
Zambia	10	4%	0%	40%	50%	8%
Sierra Leone	8	0%	0%	38%	33%	33%
Ghana	10	0%	50%	67%	86%	57%
Niger	12	18%	42%	31%	20%	0%
<b>Totals</b>	<b>102</b>					

The school survey results were similar to the household survey results: reasonable results in the high and medium performing projects, but poor results in the low performing projects. Given a focus on stopping open defecation, it was disappointing to learn that visible open defecation was observed in 42%-50% of the project schools in Niger and Ghana. The schools in Ethiopia also performed badly on this measure, with 27% of the 30 schools surveyed found to have visible open defecation in or around the school toilets. This finding was corroborated by the evaluation visit to Ethiopia, in which 25% of the schools visited in Amhara and Oromia were found to have visible open defecation in and around the school toilets.

The school survey had positive findings in Zambia and Sierra Leone: these two projects were the only ones in which no open defecation was found at school toilets; and almost all of the school toilets were working (4% non-functional in Zambia).

The school handwashing findings were variable: 67%-71% of school toilets in Uganda and Ghana had handwashing facilities, and more than 80% of these toilets had water present. Most other projects reported 27%-40% presence of handwashing facilities, except the Ethiopia project, in which only 9% of school toilets were found to have water available. The presence of soap was low in school toilets, with no soap found in any of the toilets in Malawi, Kenya, Ethiopia and Niger.

One factor in the relatively low presence of water and soap in the school toilets was that some of the schools were apparently surveyed during the school holidays, or immediately after the school holidays had ended, when the facilities were not in regular use. This issue was noted in Ghana, Niger and Zambia among others.

#### Student: toilet ratios

The evaluation also examined the student: toilet ratios in the target schools, for both girls and boys. In many cases, this indicator was beyond the control of the projects, as few of the teams had any budget to construct or improve school toilets. Instead the bulk of the interventions focused on improving school sanitation and hygiene behaviour and ensuring that existing facilities were effectively used. Student: toilet ratios were examined to assess the effect of this variable on school sanitation outcomes

Monitoring of the ratio of female students to female toilets was introduced in the enhanced monitoring and benchmarking system in 2013, with the aim of encouraging gender-disaggregated monitoring,

drawing attention to the different needs and outcomes of female students, and assessing whether female toilets addressed menstrual hygiene requirements.

**Table 14 School survey: student to toilet ratios**

	School	Boys: toilet	Girls: toilet	Benchmarking <sup>24</sup>	MHM
Country	surveys	ratio	ratio	Girls: toilet ratio	facilities
Malawi	11	90	132	132	2%
Uganda	8	71	80	72	16%
Kenya	13	74	46	125	0%
Ethiopia	30	167	215	-	0%
Zambia	10	93	78	86	4%
Sierra Leone	8	90	73	21	0%
Ghana	10	45	38	62	0%
Niger	12	45	37	35	0%
<b>Totals</b>	<b>102</b>				

Key: MHM = menstrual hygiene management

Some of the student body numbers were missing from the school survey data, and some schools lacked toilets, which required some adjustments to the student to toilet ratio calculations. By far the highest student: toilet ratios were reported in Ethiopia, which perhaps explains the relatively high rate of open defecation found in the school toilets of this project. High student: toilet ratios were also found in Malawi, with 132 girls to each girl's toilet.

Surprisingly, the student: toilet ratios were lowest in Ghana and Niger, which makes the high levels of open defecation found in these school toilets even harder to explain.

The female students to female school toilet ratios reported in the June 2015 benchmarking reports were close to those found by the school survey in 4-5 projects, but were significantly under-reported in Sierra Leone, and over-reported in Kenya. No data on female school toilets was available from Plan Ethiopia.

The school survey also examined the presence of school facilities for menstrual hygiene management. Only three projects were reported to have any facilities, with the Uganda project being the only one with any significant proportion (16%).

### 3.4 Urban CLTS activities

The evaluation of urban CLTS activities combined visits by the evaluation team to the urban CLTS projects in Ethiopia (Lalibela) and Kenya (Mathare 10), with a review of the draft document prepared by Jamie Myers of the Institute of Development Studies (IDS) on Plan Netherlands' experience of using a CLTS approach in urban environments<sup>25</sup>.

The original program design included urban CLTS components in 5 projects: Ethiopia, Uganda, Kenya, Ghana and Niger. Only the Ethiopia and Kenya projects initiated urban CLTS projects at the outset of the program. The Uganda urban projects commenced about halfway through the project, when the project team was more confident about progress in its rural project; and the Ghana and Niger project teams did not implement any urban CLTS due to capacity and budget constraints, as the project teams

<sup>24</sup> Female student to female student toilet ratio as reported in the latest quarterly benchmarking reports.

<sup>25</sup> Myers, Plan Netherlands experience of using a CLTS approach in urban areas, 2016. Amsterdam: Plan Netherlands and Institute of Development Studies at the University of Sussex (UK).

were already stretched with community and school CLTS activities.

The three urban CLTS projects implemented under the Pan African CLTS program involve very different objectives, contexts and approaches, thus each of them will be reported on separately in the remainder of this section.

### 3.4.1 Ethiopia: urban CLTS project

Plan Ethiopia worked in four towns: Lalibela, Hawassa, Leku Town and Manicho. Lalibela is a UNESCO World Heritage site and a popular tourist centre in the Amhara region, whereas the other three towns are all in the SNNP region. A predominately rural approach was used in Lalibela, Leku Town and Manicho, and some of the learning from the SNNP interventions were used to develop a more refined urban approach in the much larger town of Hawassa.

Both the evaluation and the IDS review found that the urban CLTS project has had limited success in Ethiopia. Leku Town was the only area declared ODF, but the town is relatively small (around 5,000 people), had only limited open defecation, and responded well to the conventional CLTS approaches used, which focused largely on improvements to unhygienic and unclean toilets in hotels and restaurants, and the use of flying toilets by some households.

The more urban challenges found in Lalibela and Hawassa were far harder to address through the approaches adopted. Space considerations were significant, with few households having the space or resources to build toilets, particularly in urban slums. In some cases, municipal officials demolished some slum areas to make room for communal latrines, which involved the displacement and resettlement of some households, often without adequate compensation or social support.

Plan Ethiopia also reported that the costs of the urban CLTS interventions were around three times higher than those in rural populations, and required far more intensive monitoring and support. Despite significant efforts, open defecation continues in the three kebeles targeted in Lalibela, and some of the communal facilities built at the outset of the project have now filled or been abandoned. Some positive changes have taken place, and far greater awareness of the sanitation challenges exists in the Lalibela health office, but further work is required to design an effective approach for urban CLTS in Ethiopia.

### 3.4.2 Kenya: urban CLTS project in Mathare

The Kenya project worked extensively in four urban communities in the Mathare 10 informal settlement in Nairobi. The Mathare interventions were one of the first genuine urban CLTS interventions, involving the development of new approaches to bring together local authorities, landlords, tenants and community leaders to recognise and address local sanitation problems.

The project had some notable successes, despite its limited budget, with open areas that were previously sites for open defecation now free of excreta and used for other purposes such as community gardens. Through project efforts, funds were found to build new toilets either in existing housing blocks or as standalone public facilities. Freshlife toilets were piloted, in which sludge is collected and re-used, and a toilet block generating biogas was funded by the Kenya government.

The project helped to establish the Community Cleaning Service (CCS), a commercial community-based organisation that engaged local youth to clean and maintain public sanitation facilities. CCS was active during the initial urban CLTS activities but, unfortunately, the group has now lapsed. Nonetheless, the natural leaders that emerged from the CLTS activities remain active and continue to promote safe sanitation behaviour using drama and CLTS triggering tools. Their activities are coordinated and encouraged by the County Development Officers from the Nairobi City Council, including the promotion of solid waste management and handwashing campaigns in local schools.

### 3.4.3 Uganda: urban CLTS projects in Luwero and Tororo

Plan Uganda used an urban CLTS approach in 10 urban neighbourhoods, including 2 communities in Luwero and 8 communities in Tororo. The approach used was based on the lessons from Plan Kenya's experiences in Mathare, and adapted to fit the needs of the local communities.

Local governments, local leaders and landlords, as well as on urban households and tenants, were triggered to recognise and address their sanitation realities. The local authority used the Public Health Act to pressure landlords into meeting the requirement that rented accommodation provides basic sanitation to tenants, with health inspectors responsible for monitoring compliance by the dates agreed.

The IDS review<sup>26</sup> notes that 8 of the 10 urban communities are now ODF, and that the experiences in Luwero and Tororo are now being used to inform the design of a new urban sanitation program in Uganda. One of the key lessons was that time has to be taken to understand the context, identify the key stakeholders and institutional arrangements, and adapt approaches to be effective in the urban context. These urban CLTS activities require adequate capacity and budget, and are often more complex and time-consuming than normal CLTS interventions; none of these capacity, budget or time requirements were recognised by the program design.

### 3.5 Gender equality and inclusion

The program has made contributions that address gender and inclusion needs. The CLTS approach requires that every household is reached, and the processes need to be inclusive in order to achieve ODF status. Women and girls often benefit more from increases in household sanitation coverage, due to the higher value that they attribute to the improved privacy, comfort and security provided by a private latrine. Given the important roles that women and girls play as carers, the reduced health costs associated with higher sanitation coverage and ODF outcomes are also likely to reduce the burden of care carried by the female members of the household.

In the high performing projects in Malawi, Uganda and Kenya, the survey results suggest that almost everyone is using a toilet. However, even in the projects where sustainability problems were identified, the project processes involved women as natural leaders, as members of sanitation committees and monitoring groups, as facilitators and health extension workers; and both women and girls were active participants in triggering and other activities. Several of the evaluation reports noted that both the implementing teams and the communities expected that women's opinions would be requested and valued.

Women in Sierra Leone were involved in the construction of toilets, collecting and carrying materials back to the village, moulding mud bricks, preparing food for the construction teams, and plastering the toilets. Women were also vocal in pressuring their husbands and families to work on toilet construction.

Most of the country evaluation reports noted that menstrual hygiene management (MHM) had not been well addressed by the program. The exceptions were Uganda, Malawi and Zambia, where some MHM training was provided to partners and communities, and a proportion of the girls' school toilets were found to have MHM facilities. Given the explicit shift towards a gender focus in the program, menstrual hygiene management could have been more strongly supported and emphasized.

#### Social norms

The evaluation suggested that social norms had changed in many of the project areas, with people now reporting that latrine use is considered the norm, and that open defecation is no longer tolerated. Where the social norm had changed, the sustainability of the ODF outcomes was much higher, with people reporting that they repair and replace their toilets when necessary.

The exceptions were the Ghana and Niger projects, where local interpretations of the ODF verification criteria allowed large groups to continue using communal or shared toilets, with inevitable reversion to open defecation when these facilities were busy, unclean or in need of repair or replacement.

There was also evidence that the inclusive nature of the CLTS and ODF processes had encouraged com-

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26 Myers J *Plan Netherlands' experience of using a CLTS approach in urban environments Amsterdam*: Plan Netherlands and Institute of Development Studies at the University of Sussex (UK).

munities to provide support to poor and vulnerable households. Communities in most projects reported contributions of labour and materials to those who were unable to build their own toilets. In Kenya, people noted that latrine sharing is not allowed, so some households must have assistance to build their own toilets; and in Sierra Leone, community members noted that CLTS means that “no one has to eat other people’s shit” and that some assistance is necessary to help the vulnerable to avoid eating shit.

### Sanitation for people with disabilities

Few toilets with accessibility features suitable for people with disabilities were observed by the evaluation team. However, in several country projects, households with disabled family members suggested that everyone used the same toilet, with no significant barriers to toilet use or hygiene reported by either the person with disabilities or the family. In addition, the family noted that the proximity of a private toilet had greatly improved the domestic situation, allowing the person with disability to access and use the toilet on their own.

Nonetheless, the evaluation team suggested that more attention should be given to the provision and monitoring of sanitation for people with disabilities by any future program.

## 3.6 Monitoring and evaluation

As at the mid-term review, the evaluation exposed some weaknesses in the program monitoring and evaluation (M&E) systems. The enhanced monitoring and benchmarking system introduced in 2013 meant that some of the monitoring data was more readily available than previously, but the quality and accuracy of these data was variable across the country projects.

Discussions with the project teams suggested that most reporting is donor driven, hence that the monitoring and reporting systems are designed to respond to the donor requirements rather than project needs. The program design included a very limited results framework, with the ODF population being the main metric for success, and few other indicators that required regular reporting aside from the normal financial reporting. As a result, the project teams felt little incentive to strengthen their monitoring systems, even when the weak M&E systems were highlighted by the mid-term review.

A related problem is the long monitoring chain established by most country projects. Communities monitor local outcomes, pass on the reports to local partners or government extension workers, who in turn aggregate reports and pass them on to local governments, who then pass them to the Plan program units. The project team often sit at the end of this long monitoring chain, with few formal mechanisms to check the reliability or accuracy of the monitoring data.

Where the project team was reliant on local governments for all of the monitoring data, as in Kenya and Ethiopia where most implementation is undertaken by local government partners, it was apparent that the data were generally collected and reviewed when progress reports were required. The Plan Ethiopia and Plan Uganda projects were very well managed, with close supervision and regular monitoring of project ODF progress, and a clear focus on achieving the ODF targets set by the project. In contrast, the Plan Kenya project often presented rough estimates of progress made by its local government partners, which eventually proved to over-estimate actual progress by more than 500%. Unfortunately, these data (from well monitored and less well monitored projects) appear similar in the annual reports, with few other criteria against which to judge the quality and reliability of the monitoring data.

### ODF verification

The evaluation revealed problems with the ODF verification processes in Ghana and Niger. In both cases, high levels of shared and communal latrine use were allowed by the independent verification teams (largely comprised of government officials). Project stakeholders generally reported that the ODF verification protocols were followed, but there was clear evidence that more than 80% latrine sharing had been allowed in the Volta project area in Ghana; and some of the communities in Niger reported only 30% latrine coverage at the time of ODF verification. Closer attention to and checking of ODF verification are required by a program whose main measure of success is the number and population of verified ODF communities.

### Benchmarking indicators

Few of the projects were able to report reliably on the secondary indicators introduced by the enhanced monitoring and benchmarking system:

- A5 Non-ODF progress (number of new toilets in non-ODF communities)
- B2 Toilet sustainability (number of full toilet pits/total number of new toilets)
- C2 Female student: toilet ratio (number of female students to female student toilets)
- C3 School toilet sustainability (number of non-functional school toilets)

While none of these indicators was critical to the success of the program, they were introduced to encourage the projects to strengthen their monitoring systems and start thinking about sustainability, gender equality, and monitoring of school sanitation outcomes. The evaluation found that, while most of the country projects reported on these indicators in their quarterly benchmarking reports, many of these figures appeared to be estimates, as few projects were able to provide any detailed monitoring data to support these data.

### Sustainability monitoring

The household and school surveys confirmed that significant sustainability problems existed in more than half of the country projects. In several cases, notably in Ethiopia and Niger, the survey results were surprising to the project teams, revealing far greater sustainability losses than had been suspected. Subsequent checks by the project teams confirmed that the survey results were valid, although there were some minor reservations about the sampling (which reportedly selected some of the worst performing communities).

The main lesson is that stronger sustainability monitoring is required to identify sustainability problems early, and allow the project teams to respond appropriately. Where the routine monitoring was limited, as in the Ethiopia project where the huge scale of the project made it difficult for the small Plan team (which remained by the end of the project) to reach and monitor the numerous remote communities, it appears that the lack of follow up or monitoring led to the waning of the early enthusiasm and attention to the ODF achievements.

## 3.7 Knowledge management and communication

Two of the five main program strategies relate to knowledge management and communications: at a local level, the program has the aim of engaging with and assisting local authorities to sustain and scale up program activities and outcomes; and at national and international levels, the program planned to conduct advocacy on low-cost approaches, promote knowledge sharing, and conduct action research.

In both cases, the program design intended that systematic efforts were made to capture, document and disseminate learning from across the program, with the country office and project teams prominent in knowledge management and communications with local authorities, and with support from international program partners, including IDS, IRC and the Plan RESA regional office.

The mid-term review suggested that the majority of knowledge management activities would take place during the second half of the program, as implementation becomes less urgent, project experiences accumulate, and lessons become apparent. Therefore, the mid-term review recommended that more capacity, budget and time were allocated to knowledge management during the remainder of the program.

In practice, the final evaluation found that less knowledge management took place during the second half of the project. In most projects, the bulk of the budget was expended during the peak implementation period in years 2-4, leaving staffing and budgets reduced in the last two years of the program. The no-cost extension granted in 2015 further stretched some already tight budgets, resulting in little funds being available to recruit or finance knowledge management specialists or consultants to capture, document and share the significant lessons learned by the project teams. As a result, few additional knowledge management products were produced in the second half of the program.

### Annual review meetings

The annual review meetings continued to be one of the most useful and well appreciated aspects of the program. These meetings were effective in enabling internal knowledge management – that is, within and between the Plan program and project teams – notably the sharing of project experiences and lessons, and the dissemination of innovations and learning from outside the program to the project teams. The review meetings were largely internal events, which contributed little to external knowledge management – that is, the sharing and dissemination of program knowledge to external stakeholders – except in some of the later meetings, such as the 2015 Uganda review meeting, at which other WASH sector stakeholders were invited to share and discuss lessons in the final day of the review meeting.

### Exchange visits

Several country projects reported that exchange visits between implementing partners in different project areas had been powerful tools to share innovations and lessons learned. In Ethiopia, where the project scale was often large enough to cover most of the district (woreda), local governments became interested in how best to reach difficult areas, and how to improve the cost-effectiveness of their interventions.

Other mechanisms were supposed to provide this external knowledge management, including the CLTS website hosted by the CLTS knowledge hub at IDS; and the IRC websites, networks and learning alliances. The Plan project teams appreciated the significant efforts made by the IDS team to report on program achievements and lessons learned, as well as the external documents that were shared with the project teams. However, little of these knowledge management activities appear to have reached external stakeholders, very few of whom were aware of the Pan African CLTS program, its achievements and the lessons learned by the different country projects.

In Ethiopia, a senior specialist from the WSP Ethiopia team admitted that he did not know where the Pan African CLTS program was implemented, or the extent of its results. On attending the feedback workshop in Addis Ababa at the end of the evaluation visit, he noted that there was apparently a lot of interesting learning emerging from the project that would be useful to the rest of the sector, but that it was the first time that he had heard about any of it.

Similar stories emerged in the other country projects. The project teams were obviously over-burdened with the main implementation tasks during much of the project period. Many of them either were already working on other projects, or had additional projects added to their workload as the project has wound down, with the result that nobody has any time or incentive to document the project outcomes and lessons, or to share these with anyone else.

## 3.8 Networking and learning alliances

Most of the project teams were reported to be active in national working groups and other sector forums. An exception was the Plan Ghana project, which has faced significant staff turnover (already three WASH advisers during the project life, and the post was vacant at the time of the evaluation visit) that has limited its involvement in national networking activities and learning events.

A difference was noted between the networking of the East and Southern African country offices (Plan RESA region) and those in West Africa (Ghana, Niger, Sierra Leone in the Plan WARO region): the RESA country offices generally played a prominent role in national sanitation committees and networks, with most chairing or leading the relevant bodies. In contrast, the institutional arrangements in the WARO countries were less clear, with UNICEF or WaterAid often the lead agencies.

The long-term lack of a regional WASH adviser in the Plan WARO regional office is probably a key factor in this difference. The RESA WASH adviser played a role in introducing CLTS into the RESA country offices, networking at regional and international events, and encouraging the country offices to assume prominent roles in national sanitation coordination bodies and networks. For instance, Plan Malawi chaired the Government Sanitation and Hygiene Technical Working Group for several years.

Other program partners, notably IRC, encouraged the formation of learning alliances and formal national networks to promote CLTS, exchange ideas and share knowledge on rural sanitation and hygiene improvement. The evaluation found little evidence that these efforts have had much impact: where coordination bodies and networks already existed, these have continued (with additional support); and few developments were reported where coordination and networking were less well established. Some new policies, guidelines, strategic plans or programs emerged from these networks and national working groups, and the Plan country offices generally noted their active involvement in these processes. However, a group of stakeholders contributed to these achievements, and the evaluation found insufficient evidence to attribute these developments or products to specific program activities.

## 4 Efficiency

### 4.1 ODF success rate

The proportion of triggered communities that become Open Defecation Free (ODF) is a simple measure of project efficiency and effectiveness. The benchmarking system introduced quarterly monitoring of this indicator, and encouraged the project teams to distinguish between ODF communities that have been verified or certified by independent teams, and those that have self-declared ODF status.

**Table 15** ODF success rates

Country	Triggered villages	ODF villages	ODF pop	ODF success	Sustained ODF
Malawi	204	125	23,940	61%	85%
Uganda	220	198	119,684	90%	75%
Kenya	671	356	112,508	53%	85%
Ethiopia	234	234	1,341,864	100%	10%
Zambia	378	185	41,973	49%	20%
Sierra Leone	150	150	118,123	100%	5%
Ghana	50	28	22,367	56%	10%
Niger	87	37	36,774	43%	0%
<b>Totals</b>	<b>1,994</b>	<b>1,313</b>	<b>1,817,233</b>	<b>66%</b>	<b>20%</b>

Key: ODF = Open Defecation Free; pop = population

The ODF success rates have increased since mid-term, when the Malawi project reported only 23% ODF success, as the projects worked towards their ODF targets and slowed the triggering of any new communities. Two of the projects (Ethiopia and Sierra Leone) reported 100% ODF success rates, following intensive efforts to achieve ODF status in all of the communities during the last two years of the program. As a result, the average ODF success rate was reported to have increased to 66% by the end of the program, with more than 1,300 ODF communities verified between 2010 and 2015.

As noted earlier in the report, the proportion of sustained ODF communities is estimated to be much lower, particularly outside the three high performing projects (Malawi, Uganda and Kenya).

### 4.2 Financial efficiency

The analysis of financial efficiency presented in Table 16 is based on a simple estimate of the total project expenditure<sup>27</sup> divided by the reported ODF population. This calculation provides a rough project cost per ODF person, which has been multiplied by the average household size to produce a cost per ODF household. The data on the number of new household toilets was felt to be too unreliable to use in this cost analysis, otherwise a cost per new toilet would also have been reported.

The final two columns of the table report the effect of the sustainability losses discussed in Section 2.3 Sanitation Progress Data. The sustained ODF population, assumed to be only in communities likely to have 90% or higher latrine coverage (based on the household survey results), is used to estimate the project cost per sustained ODF household (total project cost divided by sustained ODF population).

In considering the cost data produced by this analysis, the reader should recognise that the different project designs, implementation approaches, local contexts (and related factor prices) and project

<sup>27</sup> Total project expenditure = total project expenditure by Plan International (under the project cost codes). No other costs were included, despite awareness that many of the Plan country offices charge vehicles and other operational costs to non-project codes (which are not captured by these total expenditure figures).

scales will have had significant effects on the apparent cost efficiency of each project. Therefore, a high project cost per unit of outcome (e.g. ODF household) may reflect the particular circumstances of the project, such as remote and hard to reach villages, or the fact that new approaches and institutional arrangements were being piloted and developed.

In addition, many of the projects reported the use of additional finance to supplement the project funds provided by Plan Nederland. The majority of projects shared Plan vehicles with the staff from other projects implemented in the same program unit, with the vehicle costs usually paid by internal funding sources (including sponsorship money). In Ethiopia, and a few other country projects where local government implementation played an important role, government funds paid the salaries of the facilitation teams and many of the transport and other triggering costs. In contrast, Plan Niger had to pay for every activity undertaken by the local government, including attendance at the meetings held by the evaluation team.

As a result, comparisons across country projects are complex and often misleading. Therefore, these costs should be regarded as indicative of generally high or low project costs, rather than as reliable measures of relative cost efficiency.

**Table 16 Cost efficiency**

Country	Project expenditure	ODF pop	Per ODF person	Per ODF hhd	Sustained ODF pop	Sustained per hhd
Malawi	\$582,492	23,940	\$24	\$60	20,349	\$71
Uganda	\$555,286	119,684	\$4.64	\$25	89,763	\$33
Kenya	\$837,000	112,508	\$7.44	\$34	95,632	\$40
Ethiopia	\$975,067	1,341,864	\$0.73	\$3	134,186	\$35
Zambia	\$195,700 <sup>28</sup>	41,973	\$4.66	\$23	8,395	\$114
Sierra Leone	\$699,999	118,123	\$5.93	\$36	5,906	\$717
Ghana	\$623,473	22,367	\$28	\$169	2,237	\$1,687
Niger	\$649,000	36,774	\$18	\$153	0	-
<b>Totals</b>	<b>\$5,118,017</b>	<b>1,817,233</b>	<b>\$2.82</b>	<b>\$14</b>	<b>356,468</b>	<b>\$69</b>

Key: hhd = household; Sustained per hhd = Cost per sustained ODF household

The costs based on the reported ODF populations confirm the remarkable cost efficiency of the Ethiopia project. The use of the substantial local government capacity and resources dedicated to sanitation and hygiene improvement enabled the Ethiopia project to achieve verified ODF populations for only USD 3 per household. However, the relatively low sustained ODF population estimated in the Ethiopia project means that this figure increases tenfold to USD 35 per sustained ODF household.

While apparently less cost efficient than the Ethiopia project per ODF person achieved, the high sustainability of the Uganda and Kenya projects means that they report similar costs per sustained ODF household: USD 35 – USD 40. This comparison emphasizes the value in investing in sustainability, and the costs associated with low sustainability.

The Sierra Leone project reported lower costs per ODF person than the Kenya project, but its low sustained ODF population results in an estimated cost of USD 717 per sustained ODF household – some 18 times higher than in the Kenya project. Similarly, the Ghana project costs are extremely high because of the low ODF population achieved, and because the sustained ODF population was also very low.

<sup>28</sup> Excludes water supply development costs, but appears to be an under-estimate of actual CLTS costs

### 4.3 Program and project management

The evaluation findings on project management are similar to those at mid-term. Limited capacity was allocated to project management by the country offices, despite the mid-term recommendation to expand Plan project capacity. Many of the project managers were also responsible for managing several other projects at the same time, with little chargeable time allocated to the project. For example, the project manager in Niger noted that he had no time charged to the project, which meant that he was unable to spend much time on anything but strategic issues.

As previously, the Uganda and Ethiopia project teams stood out for their responsive and efficient project management. In both cases, the project teams were larger than average, although the teams reduced in size towards the end of the project.

In project planning, the percentage of project expenditure allocated to human resources is reviewed by the country office management, and efforts are made to keep this proportion as low as possible. Little recognition is given to the importance of human resources to a software-heavy project like the Pan African CLTS program, and the need to allocate a higher proportion of project costs to human resources than on conventional service and infrastructure delivery projects.

#### Staff turnover

Staff turnover remains a significant threat to program performance. The Plan country office teams reported that Plan International tends to pay low salaries (compared to other comparable INGOs), and work staff very hard. However, the experience and on-the-job capacity building gained are valuable, and often allow Plan staff to move onto higher paying or easier jobs in other organizations. As noted in the mid-term review, efforts to involve a wider group in project management, and to be more systematic in capturing and sharing project learning, might alleviate the loss of staff and institutional memory caused by the current high rate of staff turnover.

#### Program management by Plan Nederland

The program management team had only limited influence over the project teams. As noted in the mid-term review, the only leverage over the decentralised country offices was related to the remaining project payments. Given a rudimentary results framework and unreliable project monitoring, it was then difficult for the program management team to link payments to performance, or exercise any control over the project teams.

An improved results framework, with clear targets and triggers for staged payments, and incentives for reliable and accurate monitoring, would greatly assist the management of any future program.

#### Role of program partners

While the program partners definitely added value to the program, the roles of the program level partners were not clearly articulated, which led to some confusion and overlap between IDS and IRC, who both understood themselves to be responsible for networking and knowledge management; and to some under-performance by the Plan RESA regional office, which could have played a greater role in encouraging and facilitating exchanges between country projects and the other program partners.

The mid-term review recommended that some efficiency metrics be introduced to allow assessment of the performance and value-for-money of the program level partners, notably IDS and IRC. Efforts were made at the 2013 Malawi review meeting to facilitate this discussion, but little progress was made, with the program level partners reluctant to agree changes in the vague objectives and results frameworks.

Consequently, the accountability of these partners remained low. Plan Nederland reports that it was satisfied with the performance of the IDS team, but that the limited extent, relevance and utilisation of the outputs produced by the IRC team resulted in several requests for improvement to the IRC management.

## 5 Relevance

### 5.1 Engagement with local authorities

In general, the level of project engagement with local authorities was a good proxy for the sustainability of project outcomes. Where local authority engagement was strong, as in Malawi, Uganda, Kenya and Ethiopia, the outcomes were generally good. Where the engagement of the local authorities was limited, the outcomes tended to be less good, at lower scale, and less well sustained.

In the Niger and Ghana projects, every government activity and displacement had to be paid for by the project, and most implementation activities were undertaken by local NGO partners. There was little accountability between the NGO partners and local governments, which further reduced the involvement of the local authorities in the project.

On a wider level, the enabling environment for rural sanitation and hygiene also played a significant part in the achievement and sustainability of project outcomes. In the five better and medium performing projects (Malawi, Uganda, Kenya, Ethiopia and Zambia), the national governments have made ODF achievement a national priority, and adopted supportive policies and institutional arrangements. As a result, local governments clearly understand that ODF progress was their responsibility, and appreciated the assistance provided by the Plan projects.

In contrast, in Niger the national sanitation policy allows both CLTS and toilet subsidy-based approaches. Most district (department) governments prefer the financial incentives linked to conventional subsidy projects, and remain unconvinced that a CLTS approach will work in areas with significant food security and water supply problems. The evaluation suggests that the low achievement and sustainability of the Niger project is related to the inadequate enabling environment for CLTS, but was also affected by the food security and personal security problems (due to Islamist threats along the Mali border) found across the project areas..

Several of the country evaluation reports recommended that a more clustered and programmatic strategy would assist with local government engagement. Where small numbers of communities were selected in each district, the impact of the interventions was barely visible to the district authorities. In contrast, where interventions were clustered in a sub-district, or in a district in the larger projects, the outcomes were more visible and convincing, and led to greater support from influential local leaders and politicians.

### 5.2 Engagement with private sector

There was little evidence of engagement with the private sector under the program. A few projects provided basic mason training, and experimented with simple sanitation marketing approaches, but there was little evidence that any of these private sector interventions led to substantive changes or improvements in latrine coverage or quality.

The program was not set up to develop or implement sanitation marketing, and very few Plan staff at any level have experience of sanitation marketing. As a result, it is unsurprising that the project efforts have not translated into measurable outcomes.

### 5.3 Relevance of program design

The program design has generated some program level benefits, due to the sharing of ideas and innovations across the eight country projects, and the ability to involve program level partners like IDS, and (at the outset) the Plan regional office for east and southern Africa, which would probably not have been possible with a set of smaller country level projects.

The experience gained on the Pan African CLTS program also had spread effects, with Plan country

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offices attracting finance and support for other sanitation and hygiene projects because of the expertise developed on the Pan African CLTS program. Specific examples include:

Gates Foundation action research project in Ethiopia, Ghana and Kenya (Plan USA with Plan Ethiopia, Plan Ghana and Plan Kenya).

Malawi Global Sanitation Fund project (Plan Malawi).

EU Water Facility project (Plan Uganda).

DGIS Ethiopia WASH and FNS program (Plan Ethiopia).

The main weakness of the program design was the inclusion of too many components, without sufficient allowance for the specialist capacity and additional budget required for effective implementation of all of these components at the same time. The program included CLTS, school CLTS, urban CLTS, and private sector engagement (assumed by many to be sanitation marketing). The small project teams struggled to cope with parallel implementation of all of these different components, which led to some fairly half-hearted interventions with limited monitoring or reporting.

As noted above, some sustainability issues were exposed by the final evaluation household survey, which reflects the lack of any project components specifically designed to monitor, sustain and upgrade toilets in ODF communities. The program design included a final “sustainability” year, which was intended to revisit and reinforce project gains, but some of the projects continued full-scale implementation into 2015 in order to achieve their targets. Inadequate budget was included for sanitation marketing, or for the systematic post-ODF follow-up and sustainability monitoring that may have identified and potentially addressed sustainability problems.

## 6 Impact

### 6.1 Health and hygiene progress data

Few of the country projects were able to provide any health impact data to the evaluation teams. The main exception was the Ethiopia project, in which the three district (woreda) health offices visited by the evaluation team reported significant health impacts related to the project's ODF achievements.

In Seka Chekorsa, the Chief Health Officer stated that 35 of the 36 kebele were ODF (including 3 secondary ODF and 32 primary ODF), that about 32,000 toilets have been built in his woreda since 2010, and that the proportion of the clinical cases with diarrheal disease (according to the woreda clinical records) had halved from 13.4% in 2010 to 6.8% in 2013.

In Gidan, where 12 out of the 25 kebele have verified ODF status, the health office reported that diarrheal diseases were no longer in the list of the top 10 diseases published every year (based on woreda clinical records); and in Meket, where 24 out of 47 kebele have verified ODF status, the health office reported that the proportion of diarrheal disease cases in the clinical records had dropped from 17% in 2012 to 12% in 2015, despite a rise in absolute case numbers due to drought-related water supply issues.

When questioned as to whether other health improvements may have been responsible for the reported reductions in diarrheal disease (and other WASH-mediated illness), the health officials were adamant that the sanitation coverage, handwashing rates and ODF status were the only significant changes to occur in the last five years, and that they were certain that the sanitation and hygiene improvements had led to significant health benefits in their jurisdictions.

This conviction played an important part in encouraging the woreda governments to continue with their CLTS efforts, and to work towards the sustainability of these improvements over time. It appears that the scale of the interventions in the Ethiopia project, with more than half of all villages verified as ODF in most project woreda, has led to visible changes in health outcomes, greatly increasing the support and value given to the interventions.

#### Anecdotal benefits

Most of the country projects reported anecdotal benefits with little supporting evidence: communities reported perceptions that people were healthier; health post officials reported fewer medicines being required; and there were several cases of ODF protection from local disease outbreaks, including reports that no cases of Ebola were reported in the ODF communities in the Sierra Leone project.

The evaluation team expressed concerns about some of the unhygienic latrines observed and surveyed, noting that exposed pit contents (due to missing squathole covers and badly covered pits) may increase the risk of disease and offset some of the ODF benefits. However, there is little evidence globally of the higher health benefits of more hygienic and improved sanitation facilities<sup>29, 30</sup>, with the main benefit ascribed to the separation of human excreta from human contact (which occurs in even basic pit latrines).

29 Feachem et al (1983): "The greatest determinants of the efficacy of alternative [sanitation] facilities are, first, whether they are used by everyone all the time, and second, whether they are adequately maintained ... Pit latrines would, from the viewpoint of health rather than convenience, approximate the same rating as a water-based sewerage system".

30 Study of fecal contamination and diarrheal pathogens among Tanzanian households, Pickering et al (2012): "There was no significant difference in fecal indicator bacteria levels between households using pit latrines with a concrete slab (improved sanitation) versus those without a slab. These findings imply that the presence of a concrete slab does not affect the level of fecal contamination in the household environment in this setting."

## 7 Sustainability

### 7.1 Empowered communities

In the better performing projects (Malawi, Uganda, Kenya and Ethiopia) there was clear evidence of empowered communities. In these projects, local governments and communities were highly engaged – aware of the project, keen to discuss what had happened and changed, and positive about the outcomes.

The evaluation team also found evidence of a change in social norms: toilet use has become the new social norm in the project communities, and open defecation was no longer considered acceptable. A key indicator of the social norm change was when new households (newlyweds or migrants) build toilets, and when full latrine pits were replaced by digging new pits and constructing new latrines.

The better performing projects suggested a high quality CLTSH process. Key messages and CLTS tools were remembered by most people, with a clear understanding that the aim was to avoid ‘eating shit’, and ODF achievement by all communities. The behaviour change activities were evidently effective, with widespread improvements reported in sanitation and handwashing behaviour.

The process was also empowering, with communities noting that they had solved their own sanitation problems, and felt significant pride in the verification of ODF status by local governments.

These factors were less evident in the lower performing projects (Sierra Leone, Ghana and Niger), where local governments and communities were less engaged, and there was less evidence that social norms had changed (as open defecation was still often prevalent). The household survey confirmed that sustainability was weaker in these projects, with the less effective empowerment reflected in a rapid return to open defecation and unhygienic habits.

#### Equitable outcomes

Relatively few differences in latrine materials and construction were observed in the better performing projects. Some people had made their latrines cleaner and tidier, with smooth platforms and tight-fitting squathole covers, but even the poorest had generally used similar materials to those used by others in the same village (although concrete slabs and metal roofing were more prevalent in Uganda and Kenya).

The household survey did not identify the characteristics of the households surveyed (in order to speed up and simplify the survey process), which means no analysis can be conducted of the profile of the households without toilets. However, anecdotal evidence (from the evaluation visits and discussions with key stakeholders) suggests that population without toilets contains poor and vulnerable households, in addition to those living in communities affected by adverse climatic events.

### 7.2 Capacity development

Substantial capacity building activities were conducted under the country projects, including training of local government officials, health extension workers, teachers and natural leaders. In general, the capacity building appeared to have been effective, with most stakeholders aware of their roles and responsibilities, and some evidence of effective activities by the trained local stakeholders.

Unfortunately, few local governments allocated funds or vehicles for the long-term support of improved sanitation and hygiene, with the result that even well-trained local officials did not conduct as many follow up and monitoring visits as required.

#### Exchange visits to successful project areas

Several Plan country projects organised and encouraged exchange visits to take key sanitation stakeholders from neighbouring project areas to visit successful areas and learn about the approaches utilised. These visits were effective as ‘institutional triggering’ to revitalise the less successful project areas, either through providing new ideas on how to address challenges and accelerate progress, or through recognition that other areas had progressed more.

## 8 Conclusions

### 8.1 Main conclusions

**80% achievement of program targets.** The evaluation found that around 80% of the ODF population target, 1.82 million people, had been verified during the life of the program. The Ethiopia project dominated the program results, with 1.34 million people verified to live in ODF communities. This population represents 74% of the overall ODF achievement and surpassed the Ethiopia ODF target by 134,000 people (which alone was more than any other project achieved).

Despite having similar project budgets, the other country projects set themselves widely ranging ODF population targets, from only 13,000 people in Sierra Leone to 600,000 people in Kenya. The reported ODF results, which were based on ODF verification and population records, suggest that in the end the Sierra Leone project actually achieved a similar ODF population (118,000 people) to the Kenya project (112,500 people). The significant over-estimate of what could be achieved in the Kenya project, and the related over-reporting of the Kenya results, were among the main reasons that the overall ODF population target was not achieved.

**ODF sustainability was highly variable.** The evaluation measured ODF sustainability through household and school surveys in all eight country projects. The robust evaluation of sustainability, which went beyond the type of evaluation usually conducted on rural sanitation projects, revealed a wide range of sustainability outcomes.

The three best performing projects (Malawi, Uganda and Kenya) had impressive sustainability results, with 92%-96% latrine coverage and very low rates of open defecation (0%-5%) found in the communities surveyed. These findings prove that CLTS interventions can generate sustainable sanitation outcomes, and that ODF sustainability is possible under the right conditions.

These sustainability results compare well with the best results from other ODF sustainability studies: a UNICEF review of ODF sustainability studies<sup>31</sup> found that 90% of households were still using hygienic latrines in high performing programs, with open defecation rates varying from 2.5% to 10%.

The sustainability results were mediocre in the three medium performing projects (Ethiopia, Zambia and Sierra Leone), in which 50%-70% latrine coverage was found in previously verified ODF communities. Open defecation rates averaged 17% in the large Ethiopia project, and only 10% of the surveyed communities had latrine coverage high enough (above 90%) to suggest sustained ODF status.

Finally, significant problems were exposed in the Ghana and Niger projects. Only 29%-44% latrine coverage was found in the ODF communities surveyed. The evaluation visits confirmed widespread open defecation in Niger, and significantly unhygienic communal toilets in the Ghana communities.

**Sustained ODF population was low.** The evaluation estimated the sustained ODF population, based on the household survey findings. The proportion of communities in which open defecation was zero or very close to zero was assessed, and this proportion was applied to the project ODF population to estimate the “sustained ODF population”.

The three high performing projects (Malawi, Uganda and Kenya) sustained 75%-85% of the ODF achievements, generating 58% of the total sustained ODF population. Only 5%-20% of the ODF achievements in the other projects were estimated to be sustained (and even these reported up to 5% open defecation).

31 Annex 3 in UNICEF (2013) *Community-Led Total Sanitation in East Asia and Pacific: Progress, lessons and directions* Bangkok: UNICEF East Asia and Pacific Regional Office.

As a result, the overall sustained ODF population was estimated at just 356,000 people, around 20% of the reported ODF population. This analysis suggests that 20% of the reported ODF population had the additional benefits of living in ODF communities (with very low or zero levels of open defecation), while the remaining 80% of the reported ODF population had some benefits – such as the use of individual hygienic latrines, where latrine usage continued – albeit with a higher risk of faecal-oral contamination where their neighbours practiced open defecation.

**Handwashing interventions need improvement.** Despite many of the ODF verification criteria including 100% presence of handwashing facilities, the handwashing results were generally poor. Only two projects (Uganda and Kenya) reported good handwashing results, and even in these projects only 21%-24% of household handwashing facilities had soap present.

By international standards, the strongest programs (Kenya and Uganda) performed well on handwashing – matching the performance of the best practice interventions – and even the medium performing projects (Ethiopia, Zambia and Malawi) demonstrated reasonable outcomes.

Effective promotion of handwashing with soap is difficult, and requires specialist inputs and support. Few of the projects invested heavily in the handwashing promotion, and the monitoring of handwashing response rates and the sustainability of handwashing practices was extremely limited.

**Monitoring and evaluation were weak.** Project monitoring was weak in most projects. To a large degree, the evaluation found that this related to a flaw in the program design: the absence of any detailed results framework (with specific outcome indicators) limited the attention paid by the project teams to monitoring and evaluation. Efforts to introduce an enhanced monitoring and benchmarking system following the mid-term review met with only limited success, with little incentive for the project teams to improve monitoring.

Overall management of the program by Plan Netherlands and the inclusion of partner agencies – IRC and IDS – were not effective in identifying and addressing inadequate performance monitoring.

**Health impacts not well monitored or evaluated.** The complexity and expense of establishing health impact, combined with the absence of any baseline data, precluded any formal evaluation of health impacts. Nonetheless, district health data from the Ethiopia project suggested significant health impacts at the district level, with the impact data playing an important role in convincing health officials and local leaders of the importance of ODF outcomes.

Anecdotal evidence of health and other benefits were reported in all of the other projects, but the evaluation team found that some of these perceptions of benefits were influenced by a desire to please the project and evaluation teams rather than due to measurable improvements. Despite this, there was widespread evidence of non-health benefits, such as the empowerment, pride and dignity linked to the ODF achievements, and much greater awareness of the importance of good sanitation and hygiene behavior.

**Mixed results in school sanitation interventions.** More than 600 ODF schools were reported by the projects, despite no budget being allocated for the improvement of school WASH facilities. As in the community ODF results, the sustainability of these ODF outcomes was mixed and related to the general performance of the project: the high performing projects sustained 90% of the school ODF results; medium performing projects sustained 80% of school ODF; and the two low performing projects sustained only 50% of the school ODF results.

Despite evidence that the good projects sustained a lot of the school ODF results, the overall findings around the school sanitation projects were disappointing. Few school toilets were clean, few of them had handwashing facilities or soap or water, and there was little evidence of any regular monitoring of school sanitation outcomes.

This outcome suggests that incorporating schools as part of general, community-targeted CLTS pro-

grams is not, on its own, an effective way to address short-comings in school WASH. Complementary, school-specific interventions are required, with governance components designed to leverage funds from other education, nutrition and WASH-related budgets for the construction, operation and maintenance of school WASH facilities. There should be modest expectations about the changes in school WASH outcomes that can be achieved through CLTS programs focused on community-level change.

**Urban CLTS needs further work.** Some ODF achievement was reported in the more rural settings where urban CLTS interventions were implemented. In particular, Plan Kenya undertook some innovative CLTS interventions in congested informal settlements in Nairobi.

Otherwise, little progress was made in more complex urban environments – where progress had been made, the evaluation often found that it had not been sustained. The lesson is that urban sanitation interventions are difficult, expensive and time-consuming, requiring specific project design, good capacity and adequate budgets.

**Knowledge management needs strengthening.** The evaluation found that internal knowledge management had worked reasonably well, particularly through the use of annual reviews and the CLTS website (with support from the IDS team). However, few external stakeholders were aware of the program or its achievements, and a large number of useful lessons learned by the project teams may be lost because little documentation or knowledge management was undertaken during the life of the program.

## 8.2 Factors influencing variable outcomes

A number of factors were found to influence the program results, and explain why the Ethiopia project achieved such large scale results; why sustainability outcomes were so variable; and why the Niger and Ghana projects performed so badly.

**Baseline sanitation conditions and background trends.** The baseline sanitation coverage and conditions (at national level) varied enormously across the eight projects. The 2010 JMP estimates confirm that the highest proportions of people without toilets at the start of the program were found in the projects with the worst performance:

- Niger (88% open defecation)
- Ghana (75% without toilets);
- Ethiopia & Sierra Leone (53%-57% without toilets)
- Malawi, Uganda, Kenya and Zambia (18%-35% without toilets).

These baseline sanitation figures tally remarkably with the sustainability performance of the projects. It appears that the challenge of overcoming high levels of open defecation or shared latrine use was possible in the short-term, but that sustainable ODF outcomes proved elusive in the country projects starting from a lower position. Despite working in communities with below average sanitation coverage, the stronger social norms for improved sanitation and hygiene practices in Malawi, Uganda and Kenya, where open defecation is generally less common, appear to have increased the chances of sustainability. In contrast, the challenge of sustaining latrine use in areas where very few people have ever used toilets, and where CLTS is a new and often controversial approach, is clearly more significant.

The Ethiopia project bucks the trend a little, having out-performed its rank in the baseline sanitation table, perhaps because of the remarkable decreases in open defecation reported across the country over the last ten years. The JMP estimates suggest that the national rate of open defecation dropped by 17% during the five-year life of the program, and this background trend will have greatly assisted the large-scale Ethiopia project.

**Enabling environment for rural sanitation and hygiene.** Another important factor was the enabling environment for rural sanitation and hygiene improvement. Project sustainability was higher in countries where CLTS had reached maturity, and was well accepted and institutionalized (in policies, programs and practice). The enabling environments have changed over the five years of the program,

with efforts by the project teams contributing to some of these positive changes, and are generally supportive in Malawi, Uganda, Kenya and Ethiopia. As a result, local governments in these countries were more interested in sanitation improvement and ODF achievement, and appreciated external support.

In contrast, the enabling environment for CLTS in Niger was less supportive. The national sanitation policy allows both toilet subsidies and CLTS, with many local governments preferring a subsidy-based approach and remaining unconvinced about the effectiveness and sustainability of the CLTS approach. As a result, the quality of the CLTS interventions was lower than in the other projects – local governments and facilitation teams were not genuinely convinced about the CLTS approach, and verified communities as ODF despite less than 50% of households owning toilets.

**Local government engagement.** Project engagement with local governments was another factor associated with greater ODF achievement and sustainable outcomes. Where the projects had built capacity and worked closely with local governments in the triggering, monitoring and follow up processes, and where the local governments were willing to finance some of their own activities (without direct project support), the chances of sustainability appeared higher.

The Ghana and Niger projects were reliant on NGO partners for most project activities. Local governments were involved in the project, but required payment for most activities, thus did not take on any of the monitoring or follow up roles when the NGO contracts ended.

**Project and country office management.** There were noticeable differences between the support and management provided by the different country offices and project teams. Where staff turnover was high and project responsiveness low, notably in Ghana and Kenya, the project achievements tended to be lower. Despite high turnover and some management issues, the Kenya project reported good sustainability – perhaps due to the enabling environment and strong local government engagement in specific localities (such as Kilifi).

Where the country office and project teams were well organized and responsive, particularly in Uganda and Ethiopia; and where the project teams had adequate capacity, the results followed (with sustainability helped by the good enabling environments and strong local government engagement).

**Household and communal latrine sharing.** Latrine sharing is often considered acceptable in ODF communities, providing that the social norm is changed and open defecation is eliminated. However, there is growing evidence that latrine sharing can result in sustainability problems, particularly when the number of people sharing each latrine exceeds 20, and when the people sharing a latrine do not know each other well (e.g. in public or communal latrines).

The evaluation found that household and communal latrine sharing were significant sustainability risks. Where communal latrine use was allowed by the ODF verification process, and ODF communities were verified with low sanitation coverage (sometimes below 50%), as in the Ghana and Niger projects, the evaluation visits and household surveys confirm that open defecation rates were high, and that the communal latrines still in use at the end of the project were unhygienic and unpleasant. In some cases, the acceptance of high rates of latrine sharing was linked to the historical use of latrine subsidies, with households and local governments still suggesting that poor households need assistance to build latrines, thus that sharing is the only alternative when latrine subsidies are not available.

## 9 Recommendations

**Design for sustainability.** The evaluation suggests that sustainability is linked to the enabling environment and level of local government engagement. Any future program should recognize these factors and invest in program components designed to strengthen the enabling environment, and build strong engagement with local government. In addition, Plan needs to provide adequate human and other resources, both for the main implementation components and for the post-intervention sustainability period.

**Program for impact.** More clustered and large-scale interventions, aiming to cover entire sub-districts or districts, will produce more visible outcomes and impacts. The scale of these outcomes and impacts can garner support from local government, politicians and other stakeholders, which in turn leverages more resources and capacity to the program, and assists with sustainability.

**Strengthen M&E systems.** Stronger M&E frameworks and systems are important, with specific indicators to be reported for sanitation outcomes, handwashing and other hygiene outcomes (including menstrual hygiene management), measurement of disaggregated indicators (including child sanitation and hygiene, and female toilets), and separate frameworks required for school sanitation and hygiene outcomes.

Sustainability and impact monitoring should be built into programs from the start, through periodic household surveys (implemented using smartphone apps), child growth monitoring (measurement of stunting, with links to nutrition programs where appropriate), and health post surveys (designed to assess WASH risk factors and combine with child growth monitoring to enable regular and robust assessment of health impact). Where there is an intention to assess health impacts, specialists should be engaged at the outset to establish evaluation approaches, and associated data collection and analysis protocols, that will yield statistical valid results.

For M&E systems to be effective, programs need to establish a culture of monitoring and enforce simple, reliable data collection processes. M&E data need to be regularly used and checked by higher levels, in order to provide incentives for project staff and partners to report timely and reliable progress, performance and sustainability data.

**Provide adequate capacity for specialist interventions.** Handwashing and hygiene promotion, “Baby WASH” (including child growth monitoring, and specific baby and toddler-focused sanitation and hygiene interventions designed to reduce stunting), school WASH, supply-side strengthening and sanitation marketing, and networking and knowledge management are all important sub-sectors and program areas that require specialist inputs and specific project budget, capacity as well as appropriate results targets and indicators.

Plan International needs to assess the relative benefits of complex programs, containing many different components, against the simplicity that encourages program scale and cost efficiency. The key recommendation is that, where the program focus is clear, the design should recognize areas that are beyond the core competences of the country project teams and ensure that adequate support is provided for any specialist interventions.

**Look beyond ODF.** As is well recognized in the WASH sector today, ODF outcomes are merely a first step towards the comprehensive sanitation and hygiene improvements required in rural communities in developing countries. A phased approach to sanitation development, in which the ODF outcome is the first step in a series of verified sanitation and hygiene outcomes, provides a path to the higher level outcomes desired by many governments.

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# Annex A

## Household survey: Headline results

Headline results – better-performing PUs	Kenya		Malawi		Uganda		
	Homabay	Kilifi	Lilongwe	Mulanje	Tororo East	Tororo North	Luwero Katikamu
<b>Within ODF communities, what is the average coverage of toilets?</b>	88%	97%	91%	100%	96%	79%	98%
<b>Within ODF communities, what is the average coverage of HWF?</b>	21%	64%	14%	20%	74%	21%	52%
<b>Households with HWF with soap or ash</b>	4%	41%	1%	4%	41%	0%	15%
<b>What is the average amount of slippage in ODF communities?</b>	12%	3%	9%	0%	4%	21%	2%
<b>Are toilets and HWF being used in ODF communities?</b>							
<b>Households with toilets that have no signs of OD</b>	95%	99%	93%	95%	99%	94%	98%
<b>Households with toilets that are using them</b>	95%	98%	99%	99%	100%	98%	100%
<b>Households with HWF that are using them</b>	87%	85%	68%	84%	95%	75%	79%
<b>What is the quality of the latrines built in ODF communities?</b>							
<b>Toilets with adequate privacy</b>	60%	29%	60%	71%	76%	68%	64%
<b>Toilets with ceramic pan</b>	1%	1%	0%	0%	0%	0%	0%
<b>Toilets with a concrete/masonry slab</b>	47%	37%	11%	5%	20%	19%	48%
<b>Toilets with zinc roof</b>	74%	45%	4%	5%	47%	41%	75%
<b>What percentage of households share their toilet with others?</b>	34%	5%	25%	26%	19%	19%	6%

Headline results – better-performing PUs	Kenya		Malawi		Uganda		
Evaluation Question	Homabay	Kilifi	Lilongwe	Mulanje	Tororo East	Tororo North	Luwero Katikamu
Are household latrines accessible to all households members? <sup>1</sup>	0%	0%	1%	0%	1%	0%	0%
Are latrines in ODF communities being kept clean and hygienic? <sup>2</sup>	68%	88%	73%	78%	85%	84%	82%
To what extent have households moved up the sanitation ladder? <sup>3</sup>	11%	14%	2%	0%	7%	10%	10%

Headline results – moderate and weaker -performing PUs	Ethiopia			Sierra Leone	Zambia	Ghana		Niger	
Evaluation Question	Amhara	Oromia	SNNP	Bombali	Luapula	Central	Volta	Doosso	Tillaberi
Within ODF communities, what is the average coverage of toilets?	65%	74%	71%	61%	61%	41%	48%	6%	34%
Within ODF communities, what is the average coverage of HWF?	31%	9%	3%	6%	22%	5%	14%	0%	2%
Households with HWF with soap or ash	14%	4%	2%	0%	14%	2%	11%	0%	1%
What is the average amount of slippage in ODF communities?	35%	26%	29%	39%	39%	59%	52%	94%	66%
Are toilets and HWF being used in ODF communities?									
Households with toilets that have no signs of OD	82%	93%	93%	99%	65%	96%	98%	64%	65%
Households with toilets that are using them	86%	97%	93%	97%	99%	92%	98%	79%	89%
Households with HWF that are using them	39%	65%	63%	64%	90%	92%	91%	0%	100%
What is the quality of the latrines built in ODF communities?									

Headline results – moderate and weaker -performing PUs	Ethiopia			Sierra Leone	Zambia	Ghana		Niger	
	Amhara	Oromia	SNNP	Bombali	Luapula	Central	Volta	Dosso	Tillaberi
Toilets with adequate privacy	38%	48%	37%	64%	55%	76%	66%	25%	44%
Toilets with ceramic pan	0%	0%	0%	2%	1%	8%	16%	0%	18%
Toilets with a concrete/masonry slab	5%	2%	23%	67%	4%	70%	73%	61%	67%
Toilets with zinc roof	0%	13%	12%	46%	6%	82%	82%	0%	0%
What percentage of households share their toilet with others?	32%	23%	29%	36%	9%	38%	31%	0%	78%
Are household latrines accessible to all household members? <sup>1</sup>	4%	1%	0%	0%	0%	15%	46%	0%	0%
Are latrines in ODF communities being kept clean and hygienic? <sup>2</sup>	82%	78%	75%	73%	70%	82%	95%	84%	87%
To what extent have households moved up the sanitation ladder? <sup>3</sup>	0%	0%	0%	8%	0%	37%	50%	0%	27%

School headline results – Kenya, Malawi, Uganda	Kenya		Malawi		Uganda		
	Homabay	Kilifi	Lilongwe	Mulanje	Tororo East	Tororo North	Luwero Katikamu
Number of schools surveyed	9	4	11	0	2	1	5
Average number of boys	228	265	453		466	300	195
Average number of girls	181	238	468		455	292	204
Average number of boys toilets	3	4	6		6	6	4
Average number of girls toilets	3	8	6		6	8	4
Average student/toilet ratio for boys <sup>1</sup>	68	85	90		106	50	61
Average student/toilet ratio for girls <sup>1</sup>	51	35	132		146	37	62
Percentage of schools with visible OD	11%	0%	9%		0%	0%	20%
Average cleanliness of school toilets <sup>2</sup>	57%	100%	30%		100%	100%	93%
Average proportion of girls toilets with menstrual facilities	0%	0%	2%		0%	25%	20%
Average percentage of toilets with accessibility features	22%	0%	15%		55%	80%	27%
Average percentage of toilet blocks with a disabled toilet	11%	0%	0%		55%	80%	27%
Average percentage of school toilets with HWF	17%	50%	36%		100%	100%	53%
Average percentage of school toilets with water at HWF	50%	75%	25%		100%	100%	67%
Average percentage of school toilets with soap/ash at HWF	0%	0%	0%		50%	0%	17%

School headline results – other country projects	Ethiopia			Sierra Leone		Zambia		Ghana		Niger	
	Amhara	Oromia	SNNP	Bombali	Luapula	Central	Volta	Dozzo	Tillaberi		
Number of schools surveyed	11	9	10	8	10	5	5	6	6		
Average number of boys	250	423	722	163	225	134	121	98	50		
Average number of girls	289	418	625	196	211	122	116	82	57		
Average number of boys toilets	2	2	7	3	2	3	2	3	2		
Average number of girls toilets	2	2	4	4	3	3	2	4	2		
Average student/toilet ratio for boys <sup>1</sup>	153	200	154	90	93	43	82	47	41		
Average student/toilet ratio for girls <sup>1</sup>	185	300	180	73	78	40	64	29	48		
Percentage of schools with visible OD	36%	11%	30%	0%	0%	40%	60%	50%	33%		
Average cleanliness of school toilets <sup>2</sup>	23%	9%	30%	17%	74%	20%	47%	33%	22%		
Average proportion of girls toilets with menstrual facilities	0%	0%	0%	0%	4%	0%	0%	0%	0%		
Average percentage of toilets with accessibility features	11%	8%	30%	48%	85%	60%	40%	50%	17%		
Average percentage of toilet blocks with a disabled toilet	0%	0%	3%	6%	0%	7%	0%	0%	0%		
Average percentage of school toilets with HWF	20%	6%	0%	38%	36%	80%	53%	39%	22%		
Average percentage of school toilets with water at HWF	67%	100%	na	33%	50%	75%	100%	0%	50%		
Average percentage of school toilets with soap/ash at HWF	0%	0%	na	33%	8%	50%	67%	0%	0%		

# Annex B

## Plan Ethiopia project: Key findings

### Lessons learned

**CLTSH approach effective to achieve ODF.** The CLTSH approach has proved effective in achieving ODF in large villages, at scale, driven by a huge government investment in sanitation and hygiene improvement. The CLTSH approach intends to strengthen the hygiene behaviour change component within the conventional CLTS approach, but the evaluation findings suggest that the handwashing component has been less successful than the sanitation component.

Some gains in handwashing practice were noted, particularly in the Amhara project area where approximately one third of households were found to have handwashing facilities; but not one handwashing facility was found in 9/20 (45%) communities surveyed in the Oromia and SNNP project areas.

**Toilets used and rebuilt.** The evaluation confirmed that toilet quality was low in many places, with basic latrines constructed from local materials that were not resistant to rain and weather events, and which were often difficult to clean and unhygienic. Nonetheless, the vast majority of latrines were in use, and there was evidence that full latrines were being replaced.

**Health impacts recognised.** Woreda health officials reported significant, woreda-wide health benefits in the ODF areas. These benefits were not rigorously assessed, and were based only on clinical records (which often exclude private and traditional treatments, and auto-medication) but the woreda health officials were convinced that the ODF achievements were the only significant change that had taken place during a period of measurable improvements in public health.

**Different approaches used in different project areas.** The project team learnt that different implementation approaches were appropriate in the different project areas, reflecting variations in culture, practice and context. Specifically, the team found that HEWs were less effective at CLTS triggering in Oromia, and that external facilitators were required to improve effectiveness.

This lesson was considered important by other national stakeholders, who reflected that the government hopes to expand the HEW-based CLTSH approach nationally, despite concerns from other stakeholders that the HEWs are already over-loaded, and may not always be the best option for CLTS triggering.

**Outcome-based approach effective.** The project adopted a programmatic and outcome-based approach, providing capacity building while encouraging woreda governments to use their capacity and resources to achieve ODF outcomes in whatever way worked best under local conditions. As a result, different approaches were used by different woreda governments, with some proving more effective than others. Plan Ethiopia capitalised on the learning from this outcome-based approach through quarterly review meetings, and by supporting exchange visits to the more successful project areas.

**Post-ODF monitoring and follow up were inadequate.** Sustainability and toilet quality problems are not being identified by monitoring systems, with greater sustainability losses (reversion to open defecation or latrine sharing) found by the household survey than anticipated by the project team and local government partners. Some of these problems could have been tackled if identified earlier, but there remains a need to introduce second stage interventions designed to advise rural households on how best to make their toilets more durable and hygienic.

**Little toilet upgrading or improvement.** Plan Ethiopia reported some efforts to train masons and encourage latrine improvement, but noted that there was insufficient budget available to scale up these activities and, therefore, efforts had focused on ODF achievement.

The need for toilet upgrading to improve the durability and sustainability of the simple latrines built after CLTSH interventions is now a well-recognised sector priority. Sanitation marketing options and guidelines are being finalised, but have not yet been widely tested or utilised.

**Weak school sanitation approach.** The school sanitation approach focused on encouraging the use of school toilets, without any budget for infrastructure improvements. The conventional CLTSH approach utilised, through which teachers and students were triggered to use and maintain existing toilets, had limited effectiveness – visible excreta were found in and around most of the school toilets surveyed and visited, and few school toilets had handwashing facilities. Further work is required to develop an effective approach for sustainable sanitation and hygiene improvement in schools.

**Urban CLTSH expensive and difficult.** The urban CLTSH approach also had limited success. Some ODF areas were achieved, notably in more rural settings, but these successes were fragile, with communal facilities constructed at the outset of the project found collapsed and abandoned at the final evaluation. The Plan Ethiopia team noted that the urban interventions had proved more difficult and expensive than anticipated, and that specific resources and capacity are required for this sort of urban project.

## Main factors influencing results

**Government support to Plan Ethiopia project.** The large scale and impressive cost-effectiveness of the Plan Ethiopia project was allowed by the government support. Local governments undertook all of the implementation activities, with little financial or other assistance from Plan Ethiopia. Without this government support, the small project team would not have been able to implement on such a large scale, or at such a low cost per outcome.

**Low effectiveness of handwashing approach.** Despite recognition of its importance, the WASH sector continues to struggle with the effective promotion of handwashing with soap. Few interventions achieve more than 25% response rates to handwashing interventions<sup>32</sup>, with the risk of a reduction in handwashing practice over time.

The Amhara household survey reported 31% presence of handwashing facilities, which appears reasonable for this sort of intervention; whereas in the other two project areas the survey found only 3%-9% handwashing facilities, which is well below the anticipated outcomes.

**Sustainability problems in remote communities.** Plan Ethiopia suggested that the sustainability problems, notably that 30% of households in verified ODF communities were found not to have toilets, were concentrated in remote communities where regular monitoring and follow-up were more difficult and time-consuming.

**ODF verification criteria.** The woreda governments suggested that 30% of households are sampled in the ODF verification process. The sustainability problems revealed by a randomly sampled household survey suggest that some of the more remote development units (sub-villages) may not have been adequately covered by the verification process, and that some sort of ODF checks by higher levels of government may be useful to improve the reliability of the ODF verification process.

**Lack of sustainability monitoring.** No formal approach was utilised for post-ODF follow-up, or for the monitoring of ODF sustainability. Plan Ethiopia has developed a set of post-ODF guidelines, which will be adopted by the government nationally, but these were not used on the project.

The majority of project stakeholders were content that the project had apparently achieved its ODF population target, thus had not invested sufficient time, effort or resources in revisiting or monitoring

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32 The SuperAMMA program in India, implemented with support from the London School of Hygiene and Tropical Medicine, including best practice interventions and intensive monitoring and support, achieved only 28% increases in handwashing rates after six months.

the post-ODF outcomes despite increasing awareness of the risk of CLTS sustainability problems and reversion to open defecation.

## Best practices

Plan Ethiopia suggested that the use of teachers for CLTS triggering was an effective implementation approach. The BMGF-Plan USA research questioned this approach, finding little difference between the outcomes achieved by the teacher-facilitated approach and the conventional HEW-facilitated approach. Nonetheless, the Plan Ethiopia team were adamant that the involvement of teachers, including utilisation of the ‘development days’ included in the teacher’s schedules, helped to improve and accelerate the triggering process.

## Recommendations

**Provide advice on sanitation upgrading and improvement.** The evaluation suggested that sustainability (and health outcomes) could be improved through the development of more durable and hygienic toilets. Efforts are already underway to utilise sanitation marketing to encourage toilet upgrading and improvement. However, few sanitation marketing interventions have scaled up in largely non-market economies like the rural communities found in Ethiopia.

Therefore, it is recommended that the post-ODF approach should include a set of ‘second-phase’ interventions designed to provide advice on how to upgrade and improve sanitation and handwashing facilities using local materials. Where possible, this advice should be based on successful local toilet designs (rather than external options designed by engineers) in order to capture and share local innovation, and benefit from the more cost-effective use of materials by local innovators.

**Develop better school, urban and hygiene approaches.** Further work is required to improve the effectiveness and sustainability of the school CLTS, urban CLTS and hygiene components of the CLTSH approach. The learning from this project is that these important activities require specialist capacity, resources and attention, and that this probably requires specific and tailored projects with results frameworks that reflect the specific objectives of these approaches.

**Programme for long-term support and monitoring.** Given growing recognition of the sustainability problems faced by ODF communities, long-term support and sustainability monitoring are critical components of any sanitation program. Future programs should address the need for long-term support; interventions to assist and encourage the upgrading and maintenance of household latrines; and aim to establish some form of sustainability monitoring system that is not reliant on the project capacity and resources.

An annual ODF review should be introduced, perhaps on the ‘ODF birthday’ of each community, which encourages local authorities, communities and other stakeholders to revisit and re-verify ODF status. Where possible, higher levels of sanitation and hygiene outcomes should also be introduced (beyond the secondary ODF status), and efforts made to monitor and verify progress towards these higher level outcomes.

# Annex C

## Plan Ghana project: Key findings

### Main factors influencing results

**Mixed CLTS success.** The ODF population target was achieved through the 28 verified ODF communities, but the household survey found that only 20% of the ODF communities had retained 80% of higher latrine coverage; and that latrine coverage averaged only 34% in the other 80% of the ODF communities surveyed.

These results suggest that the CLTS approach was only effective in supportive conditions and communities, and struggled to achieve sustainable outcomes in communities with less supportive conditions and less active leadership.

**Few low-cost toilets built.** The majority of toilets observed during the evaluation were good quality. The household survey found that 72% of the household toilets surveyed in the Central and Volta regions had concrete or masonry slabs, thus few of them had durability problems. The only exception was in the Eastern region, where many of the toilets were simple pit latrines with wooden or mud platforms.

The toilet types and variation across regions reflected the demographics of the toilet owners. Few poor or vulnerable households had household latrines in the Central or Volta regions, with the majority using shared household or communal latrines; only in the Eastern region were toilets found among poor households.

**Public and communal latrines.** The use of communal latrines and shared household latrines to achieve Open Defecation Free (ODF) status, particularly in communities where households had space to build toilets but were unwilling to invest, has greatly reduced the sustainability of ODF outcomes.

Shared toilet use is a significant issue in southern Ghana, as the level of shared latrine use tends to be far higher than in other countries. But the findings of this evaluation suggest that communal latrine use rarely contributes to hygienic or sustainable sanitation outcomes; and that the sharing of household latrines often reflects low sanitation demand rather than a genuine long-term sanitation solution.

**ODF verification criteria.** The ODF verification criteria in Ghana allow up to 20% of households to use other household or communal latrines. The evaluation found that this criteria had been relaxed in some project areas, with communities verified as ODF despite having much higher proportions of shared and communal latrine use. In practice, the shared use proved problematic to the sustainability of ODF status, as it is difficult to monitor the use of shared and communal facilities, and these practices run a high risk of occasional reversion to open defecation when facilities are busy, distant or unclean.

**Lack of sustainability monitoring.** No formal approach was agreed for post-ODF follow-up, or for the monitoring of ODF sustainability. Few data were available on project progress, other than on the number of verified ODF communities.

The majority of project stakeholders were content that the project had apparently achieved its ODF population target, thus had not invested time, effort or resources in revisiting or monitoring the post-ODF outcomes despite increasing awareness of the risk of CLTS sustainability problems and reversion to open defecation.

**Plan staff turnover reduced project effectiveness.** Plan Ghana had no WASH adviser at the time of the evaluation, and has had three different advisers during the last five years. The lack of full-time project management reduced the supervision of the NGO partners and the overall continuity of the project. Some benefits accrued from the parallel implementation of the BMGF action research project during 2012-2015, with approaches and capacity borrowed.

**Low project capacity despite large budget.** The project had limited capacity despite expenditure of USD 620,000 during the five-year project duration. No full-time staff were allocated, and the project was reliant on the performance of its partner NGOs in many areas.

## Best practices

Plan Ghana suggested that ODF success was associated with energetic female natural leaders, and that the training and support of these natural leaders was a best practice that should be adopted by future projects.

## Recommendations

**Strengthen ODF verification criteria and application.** More rigorous application and checking of the ODF verification process is required. The acceptance of higher than permitted levels of shared household and communal latrine use led to serious sustainability problems, and some extremely unhygienic outcomes. Clear guidance is required on the use of public and communal latrines, particularly in more peri-urban contexts in southern Ghana; and tighter protocols are needed for the assessment and long-term monitoring of any form of shared latrine use.

A related recommendation is that communal latrines should not count towards ODF status. Sometimes communal latrines are necessary, when there is insufficient space for household latrine construction, or in temporary or post-disaster situations, but these facilities often suffer from sustainability and hygiene problems due to the issues around communal management and maintenance of the facilities.

**Programme for long-term support and monitoring.** Given growing recognition of the sustainability problems faced by ODF communities, long-term support and sustainability monitoring are critical components of any sanitation program. Future programs should address the need for long-term support; interventions to assist and encourage the upgrading and maintenance of household latrines; and aim to establish some form of sustainability monitoring system that is not reliant on the project capacity and resources.

**Address Plan Ghana staff turnover issue.** Plan Ghana suffers from a serious staff turnover problem. Discussions at the time of the mid-term review, and again during the final evaluation, confirm that the Plan Ghana salaries are low; and that staff are worked very hard, with few benefits outside some international travel and solid work experience. Unfortunately, the combination of tough working conditions and good experience are a recipe for departures to other organisations offering better salaries or easier work.

Plan International puts pressure on its project designers and managers to minimise staff costs, often based on standard metrics for the proportion of human resource costs in the total project cost, without recognition that CLTS projects are entirely reliant on human resources. Far better results will be achieved by recruiting and paying good salaries to CLTS specialists than by attempting to cut project costs through minimising staff inputs and salaries.

## Annex D

### Plan Kenya project: Key findings

Overall, the PAC Program was successful in Kenya. The population target set for the program appears to have been highly ambitious and was not met. The program, however, greatly exceeded the target for triggered and ODF communities and achieved strong results for sustainability, with low rates of slippage, particularly in Kilifi. An ongoing impact has also been achieved for the urban CLTS activities carried out in the informal settlement areas of Nairobi where the program operated.

#### Best practices and program strengths

**Relationship and standing with government.** Plan Kenya has a strong reputation with the Ministry of Health. During meetings at both national and PU level, government stakeholders were very clearly familiar with Plan's CLTS programs and aware of the role that Plan had played in introducing CLTS into Kenya. CLTS is central to the MoH's strategy for an ODF Kenya by 2018. This has meant that the PAC Program naturally aligned with government policy. Plan is viewed as a capable, reliable partner to assist MoH deliver its CLTS program. Plan is active in the National WASH cluster and co convenes the Sanitation Promotion Technical Working Group (one of seven working groups under the Environmental Sanitation and Hygiene Interagency Coordinating Committee).

**Government capacity.** As a result of working with Plan on the PAC Program, county and sub-county government health staff have the skills to arrange and carry out CLTS triggering, post-triggering and post-ODF activities. In both Kilifi and Homabay, MoH staff noted that they have the skills and experience necessary to conduct the CLTS campaign, and this has been demonstrated by the success of the PAC program. Sub county MoH WASH coordinators (and the county WASH coordinator in Kilifi) described their ability to plan for CLTS programming, having prepared detailed plans for submission to County government. While other elements of capacity require further development (e.g. finances, transport, HR systems) the government has acquired the skills to deliver CLTS at scale.

**Empowered communities.** The work Plan has supported in communities to achieve ODF status has created a broader momentum for change and stimulating other development. This is true in both rural communities (for example, community members improving their housing after having built toilets) and in the urban area of Mathare10 (where community members linked the moves toward gaining land tenure directly to the CLTS intervention).

**Handwashing in Kilifi.** The extent of handwashing facilities in Kilifi, including those with soap/ash, were very strong in comparison to most PAC Program areas. The household survey found that 64% of households had a handwashing facility of some type and in 41% of households (two thirds of those with hand washing facilities) there was soap or ash present at the facility. By comparison, only 22% of households had handwashing facilities in Homabay and soap or ash was present in just 4%.

**Block making machine.** Use of stabilised soil block making machines has been very successful in Kilifi and those communities that have used the machines reported a very positive experience.

**Urban CLTS.** Plan's engagement in Mathare10 informal settlement has created sustained capacity to promote safe sanitation behaviour. The focus on eliminating open defecation—rather than sanitation infrastructure—created an opening for the community to take action with its own resources and achieved a very positive impact.

#### Main factors influencing results and areas to strengthen

**Monitoring.** The quality and extent of monitoring data collected for the program was very weak. KCO does not have data readily available about basic program outputs, including the number of villages triggered, triggering dates, ODF status, village populations and the number of schools benefiting from the

program. Data that was provided before and during the evaluation was often contradictory, illustrating the problems with management of monitoring during implementation.

**Sanitation marketing.** The program's sanitation marketing activities involved training local artisans to make slabs and toilets and trialling of block making in a few villages. These activities were too limited and occurred too late in the program to have significant impact. Thirty masons were trained in one sub county in Homabay, in 2014. Plan staff reported that there was no remaining budget to replicate this training in the other two sub counties. Seventy six artisans were trained in Kiifi in two divisions in one sub county. This occurred in 2015, at the very end of the program. A more strategic approach is required to assisting households to move up the ladder more quickly and in many more cases.

**Disability.** Disability has a low profile in PAC documentation for Kenya. There was very little mention in Plan's reporting of any activities targeted at disability. This was also reflected in school survey results, where only two of the nine schools surveyed had features to enable use by students with disabilities. Plan Kenya has not partnered with local or national Disabled Peoples Organisations for PAC.

## Opportunities and threats

### Opportunities

**Urban CLTS.**—Plan's urban CLTS work in Mathare<sup>10</sup> was a strong success. It does not appear to have been documented in a way that facilitates sharing and replication of the approach in other areas by other agencies (or even by Plan Kenya). Plan could contribute its experience to preparation of a 'how to' guide for use within the WASH sector in Kenya.

**Disability.** The response to disability could be significantly improved in subsequent CLTS activities, including creating partnerships with Disabled People's Organisations and facilitating community based monitoring of activities undertaken by households to facilitate universal access to WASH facilities.

**Self-triggering.** Many communities—and in some areas whole sub-locations—have been 'self-triggered' by contact with other communities during triggering or exposure of leaders to areas that are ODF. This phenomenon could be further explored by Plan Kenya to determine how it could be integrated into sanitation programming and whether there are sustainability or hygiene behaviour issues that arise in self-triggered communities.

**Block making machine.** Use of the stabilised soil block making machines has been very successful in Kilifi and should be expanded for use in future programs. Opportunities to strengthen commercial access to machines should also be explored so that the device can be made available at-scale across entire counties where CLTS has been triggered.

### Threats

Government of Kenya funding for CLTS. The program has worked effectively to build the technical skills and experience of MoH staff to implement CLTS but the missing element of capacity is GoK resources. MoH CLTS coordinators in both Homabay and Kilifi noted that following the closure of PAC, they do not have resources to continue triggering villages in their sub counties. Plan met the cost of transport, allowances and materials for CLTS triggering and follow up. With devolution of health funding to the counties, there is the prospect of county governments allocating budget to sanitation but this is yet to materialise in any meaningful way. The lack of government budget allocations inhibits the scale at which CLTS can be implemented and the viability of post-ODF follow-up.

## Lessons learned

**CLTS in schools.** Quite sensibly, Plan does not take responsibility for WASH infrastructure in all schools that are included in an at-scale CLTS program. What will and will not be done in schools needs to be more clearly articulated in program documentation. Funding from other sources for improved infrastructure in priority schools could be linked to ODF achievement. This should not undermine communities taking their own action and demanding better services from government.

**Knowledge management within KCO.** Systems to manage knowledge products and information should be improved to make it more readily available. Sharing of good practices developed in Kenya is inhibited by the difficulty of finding documented, packaged resources. This problem was highlighted by the significant staff turnover during program implementation. Institutional knowledge was lost in this process which emphasised the need for KCO to strengthen its knowledge management. PU staff noted that sharing of knowledge across PUs could have been more effective. This could have included regular opportunities for implementing staff from the three PUs to meet and regular peer exchange visits between the PUs.

**Attaining good handwashing results is possible.** Plan staff in Kilifi attributed the success of their handwashing results to the quality of their program. Plan should further investigate the reasons why the handwashing results were so much stronger in Kilifi than in Homabay. With MoH staff, Plan should seek to understand what has contributed to this very strong result and how it might be replicated.

## Recommendations

**Monitoring data.** For future programming, Plan needs to strengthen its systems to capture, manage and report program monitoring data. This could include progressively compiling baseline data.

**Sanitation marketing.** Knowledge gained through PAC could provide the basis for an integrated sanitation marketing strategy for future programming. This strategy could also draw upon other recent research in the sector including by WSP and SNV. Alternatively, Plan might decide to partner with other agencies for sanitation marketing and focus its resources on using CLTS to create ODF communities, an area where its reputation is already well-established.

**School sanitation.** Program staff felt some level of responsibility for improving WASH conditions in schools, where these were located in a target community, but lacked the budget to address widespread needs. For future CLTS programming, Plan could be clearer about what responsibility a program will take for WASH conditions in schools. It may be preferable to target results that every school can achieve with their own resources, such as functioning toilets; regular cleaning; some response to accessibility; hand washing facilities with soap/ash; and some response to menstrual hygiene.

# Annex E

## Plan Malawi project: Key findings

### Best practices and program strengths

**Use of local stakeholders.** The approach of working with and providing support and training to village chiefs and natural leaders together, as well as the HSAs has proved highly effective. Within villages the authority of the chiefs and the energy and enthusiasm of the NLs combined with the support and follow up of the HSAs has led to good results in terms of communities being declared ODF, and the spontaneous expansion of the process to non-project communities.

**High sustainability.** There has been an apparent change in social norms, with many community members stating that toilet use is now their lifestyle and they will never go back to OD. This is supported by the high numbers of households re-building latrines when pits fill up. The apparent improved health outcomes (whether attributable to the project or not) have provided a strong reinforcement which community members claim will be inter-generational. Additionally, there was an apparent awareness of environmental sustainability issues such as deforestation and the link to building and re-building latrines which provides an opportunity for promoting permanent toilet solutions.

**Enthusiasm to move up sanitation ladder.** Linked to above is the clear latent potential for sanitation marketing indicated by the widespread desire for improved latrines. It was apparent that the current barrier to movement up the sanitation ladder is simply a lack of awareness of how to achieve this. This provides a significant opportunity for innovative approaches to sanitation marketing, linking entrepreneurial businesses with micro-credit schemes (such as the VSAL schemes which already exist) to facilitate household access to improved sanitation facilities. Additionally in several FGDs there was interest expressed in alternative technologies such as composting latrines – again with lack of knowledge the main barrier to access.

**Innovative approach to solving problems.** Indicative of the high levels of sustainability, there was evidence of households innovating to overcome problems. For example in flood prone areas many households had raised their toilets above the flood level to prevent inundation, and in areas where the soil was highly reactive, some households had modified the construction of the superstructure to accommodate the conditions. Within the project itself, innovations such as the dialogue circles have been used to overcome real and perceived barriers to the process.

### Other factors influencing results (areas to strengthen)

**Low Government investment.** Despite having a clear goal for the country to become ODF by 2022, Government investment in sanitation is very low. The strategy appears to be to rely on civil society organisations to implement sanitation programs and hope they achieve the desired results. This will inevitably lead to a patchwork approach with potentially conflicting approaches in adjacent areas. The low level of Government investment in sanitation also means that in some instances the HSAs have large areas and numbers of villages to cover. Inevitably this means some villages (the most remote) receive less attention in terms of triggering and follow up and this may impact on the outcomes.

**Handwashing with soap.** Whilst during the community visits reasonable results were seen in terms of handwashing facilities near toilets, the household survey showed that overall results in this area are poor. Only 25 – 20% of households had HWF and virtually none had water with soap or ash. There is clearly more work required in this area.

**Sanitation Marketing.** At present there is little coherence in the approach being taken to promote sanitation marketing, beyond provision of some construction and business training to masons or other community members. Whilst sanitation marketing was not a clear objective of the program, more recently it has become a focus. It is not clear, however, whether the aim is to support and facilitate the

formation of actual sustainable businesses selling sanitation products and services, or to form small community based cooperatives to facilitate households in the community to gain improved toilets. A more systematic and analytical approach to sanitation marketing would assist, and whilst this has started in Mulanje with some market research, more effort is required to get this off the ground.

**Monitoring & Evaluation.** As discussed in several sections above, M&E is an area of considerable weakness in the project. Low staffing levels coupled with high turnover of some positions has meant that there is a lack of data, and insufficient time to process data that is collected. There is no clear M&E framework and whilst the benchmarking system has been a good initiative for the project, it is clear that in Malawi the system is not well understood which in turn has led to incoherent, confused and contradictory project data. Further, the high level objectives are hard to measure and make attribution difficult.

## Lessons learned

**Sanitation marketing.** Sanitation marketing is both a weakness and an area of significant potential for future projects. In the communities visited there is clearly a latent demand for better quality latrines and community members are ready for a well designed sanitation marketing component. Rolling out an incoherent and poorly designed sanitation marketing program has clearly not worked in terms of promoting access to sanitation products beyond simple pit latrines.

**Water Supply.** In many of the communities visited, participants in the FGDs expressed frustration in their water supply and said that this was in many instances hampering their ability to promote good hygiene and sanitation. When asked what changes should be made for a future project, nearly all said that water supply should be included. Whilst it is important to keep the momentum of sanitation going, if communities do not also have access to a convenient clean water supply then the risk remains that gains in sanitation will be undermined.

**School Sanitation.** The current PAC program has no resources for school sanitation infrastructure and none is available through the Government, and so any investments in school toilets must be made by parent-teacher associations or similar. This leads to a rather ad-hoc approach in which student:toilet ratios are inadequate and the types of toilets being installed are temporary, poorly designed and inadequate in an institutional setting. Promoting good hygiene and sanitation through school health clubs and training teachers can easily be undermined if the facilities are not present to allow students to practice good hygiene.

**Monitoring and Evaluation.** Attention to M&E is required from the outset of implementation, including developing a suitable indicator framework and putting in place the mechanisms to collect required data. The lack of a dedicated resource for M&E on the project may have contributed to the weakness in data gathering, exacerbated by weak demand for data from program management.

## Recommendations

The following recommendations follow from the lessons and observations discussed in the previous sections, and are made with a future phase of the PAC Program in mind:

**A district wide approach.** The project approach of supporting HSAs, chiefs and NLs is effective and lends itself to a district wide program, as is being done in Mulanje District through the DFAT CS WASH Fund.

**Sanitation Marketing.** The project should devote more effort to developing a coherent and systematic approach to sanitation marketing, starting with a comprehensive understanding of the market(s). As a first step, Plan should investigate the approaches taken to SM by other organisations active in this area.

**Government Funding.** The low levels of investment by the GoM in school sanitation and sanitation more broadly is a risk to the sector in Malawi. A future program should seek to advocate through

WESNET and other forums to raise the profile of sanitation. Where school sanitation is included a future program should look for ways to raise funds for school toilets and ensure they are appropriate in an institutional setting and meet recommended student:toilet ratios.

**Monitoring & Evaluation.** Strengthen collection of monitoring data using simple systems and in a way that builds the capacity of other stakeholders. Strengthen the demand for monitoring data from management at all levels.

**Staffing.** Related to several of the issues raised above, a future program would benefit from a greater level of staffing.

# Annex F

## Plan Niger project: Key findings

### Main factors influencing results

**Communal latrines.** The use of communal latrines and shared household latrines to achieve Open Defecation Free (ODF) status, particularly in communities where households had space to build toilets but were unwilling to invest, has greatly reduced the sustainability of ODF outcomes.

**ODF verification criteria.** The ODF verification criteria, while apparently requiring 100% latrine coverage, were rarely rigorously applied. All of the Dosso communities visited by the evaluation team reported latrine coverage below 50 percent at verification, with the assumption being that household latrine sharing and communal latrine use would be sufficient for the other 50%-70% of the population.

**Lack of follow-up or sustainability monitoring.** Inadequate budget was allowed for post-ODF follow-up or for monitoring of ODF sustainability, which meant that problems were not identified or addressed over the last two years of the project.

**Over-ambitious project design.** The project goals were overly ambitious, with 103 ODF villages too high a target for what was effectively the pilot of a new approach. In addition, the initial implementation approaches were too expensive, leading to severe budget constraints in the second half of the project (including during the one-year no budget extension).

**Subsidy projects undermining CLTS.** There was some evidence that the continuing presence of sanitation projects offering latrine hardware subsidies in the same area as the CLTS interventions reduced demand for and undermined the CLTS interventions, particularly among the local government officials in Dosso.

**Arid land context in project areas.** Water supply remains a challenge in most project areas (excluding villages adjacent to the Niger river), which creates challenges for the practice of handwashing with soap at critical times.

**Lower commitment and conviction in Dosso.** The evaluation found that the Dosso project stakeholders, including the Plan Niger project coordinator, were less convinced by the CLTS approach, and appeared less committed to project success. The Dosso project area was also affected by the food security crisis at the time of the project launch, which diminished interest in the project.

**Local government finance.** The need to finance all local government activities was an important factor, as this greatly constrained the extent and sustainability of local support and monitoring.

### Best practices

Plan Niger is recognised as having among the best CLTS approaches in Niger, and is frequently asked to train others (including UNICEF project partners, CARE, SDC) in the CLTS approach and its implementation. Unfortunately, the significant sustainability problems uncovered by the household survey bring into question the quality and sustainability of the implementation approach, which in turn prevents much recognition going to the practices used by the Plan project team and its partners.

### Recommendations

**Strengthen ODF verification criteria and application.** More rigorous ODF verification criteria are required, with more rigorous application and checking of the verification process. Some countries now have a multi-tiered verification process, whereby the local verifiers comprise those more readily available (and experienced in) ODF verification; there is then an annual or bi-annual district or region-

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al review of ODF certified communities to check that the local verifiers are doing their job well; and sometimes an annual national process to visit and review ODF certified communities. The intention is to ensure that ODF verification criteria are strictly followed, and to recognise that some checks and balances are required to make this process work at scale.

A related recommendation is that communal latrines should not count towards ODF status. Sometimes communal latrines are necessary, when there is insufficient space for household latrine construction, or in temporary or post-disaster situations, but these facilities usually suffer from sustainability and hygiene problems due to the issues around communal management and maintenance of the facilities.

**Programme for long-term support and monitoring.** Given growing recognition of the sustainability problems faced by ODF communities, long-term support and sustainability monitoring are critical components of any sanitation program. The sustainability issues were less well known at the time of this program design, which may explain why the Niger project failed to budget or plan adequately for the post-ODF period.

Future programs should address the need for long-term support; interventions to assist and encourage the upgrading and maintenance of household latrines; and aim to establish some form of sustainability monitoring system that is not reliant on the project capacity and resources.

**Utilise flexible programming.** Flexible programming recognises that some elements of a project will not scale at the same rate as others, and that budgets should allow for capacity and resources to be deployed where they will be most effective in achieving the program objectives.

Program design should allow for multi-stage expansion in each project area, with additional capacity and resources only being allocated once intermediate targets have been achieved. This flexible approach provides incentives for local implementation partners to work towards their goals, and avoids over-investment in unsuccessful project areas (while still allowing remedial action to help project areas in challenging contexts that require additional support and attention).

This flexible approach requires solid monitoring and benchmarking systems, which allow local governments and project units to compare progress, and learn from each other, while providing an objective basis for the allocation of project capacity and resources.

**Propose CLTS + Subsidy solutions.** There is increasing recognition that, in some environments, targeted subsidies may be necessary to help poor and vulnerable households develop durable and hygienic sanitation and hygiene services. CLTS remains the most effective approach known for generating sanitation demand, and for eliminating open defecation on a short-term basis, but there is often a need for some follow-up interventions to help sustain the gains made from the CLTS approach.

One solution currently being tested in several countries is a phased approach to sanitation development, which encourages the achievement of ODF communities in the first phase, with a behaviour change focused approach that does not utilise hardware subsidies; then, once ODF status is verified, introduces additional finance to support targeted latrine subsidies to help poor and vulnerable households upgrade and improve their toilets (using vouchers, rebates and other demand-side subsidies that support rather than compete with existing sanitation markets), while also tackling school and institutional sanitation, and handwashing with soap; before a final third stage, triggered on verification of reaching the second phase outcomes, whereby higher level environmental sanitation and hygiene outcomes are encouraged (such as solid and liquid waste management, household water management and water quality testing).

## Annex G

### Plan Sierra Leone project: Key findings

The PAC Program has exceeded its targets for ODF communities, laid the foundation for district-wide success and demonstrated an effective model for mobilising communities to achieve and sustain ODF. The inclusion of water supply and Village Savings & Loan Groups provided an effective complement to the CLTS program, using a separate budget. The program was found to have delivered strong results with the funds that were invested in CLTS.

#### Best practices and program strengths

**Leadership role in the sector.** Plan Sierra Leone has a strong reputation with the Ministry of Health and Sanitation and is seen as a reliable partner that works closely with government at national and district levels to create an ODF Sierra Leone. Plan is well-regarded by national and district level stakeholders for its CLTS capabilities. Plan has helped develop national CLTS policies and the CLTS methodology; worked to build the capacity of other NGOs; and is seen as a key partner for government at the district level. Plan has also established a strong working relationship with UNICEF, which is the principal agency supporting MOHS to delivery CLTS nationally. This is a platform to build upon in future CLTS programming.

**Conversion of triggered into ODF villages.** High rates of conversion (100%) are indicative of high quality triggering and follow-up.

**Work group based, campaign type construction approach.** The mobilisation approach promoted by Plan of getting the whole community to work together in building toilets, rather than individual households working on their own, has been largely successful and accounts for the rapid pace of conversion from triggered to ODF communities.

**Empowered communities.** Plan's work to support communities to achieve ODF has created a broader momentum for change. They have supported the extension of this process to incorporate community managed development of water supply and the work of the Village Savings & Loan Groups. The integration of the CLTS program with these additional programs has been largely successful.

**Active Natural Leaders.** The Plan program has trained and motivated large numbers of Natural Leaders, without financial incentives, to take up lead roles in triggering and follow-up. While some have dropped out to take up migrant work, the majority seem to be still in place and continuing to work on ODF sustainability. Some Natural Leaders were hired as contact tracers and social mobilisers during the Ebola period – a demonstration of their skills and confidence in mobilising their communities

**Women and Female Natural Leaders.** Community women have taken a lead role in the work groups to organise the building of toilets and to push the men to take an active part. Female Natural Leaders have played a key role in the follow-up visits to promote maintenance of toilets and handwashing.

**Sustainability of ODF achievements.** While the survey suggests that there is substantial slippage, the focus groups and other informants suggest that households are rebuilding and repairing toilets, and are highly interested in moving up the sanitation ladder.

**Dissemination of learning.** Plan's program in Bombali is a hub for stakeholders in Sierra Leone to learn about CLTS. Government and Natural Leaders are sharing their expertise with peers in other districts.

#### Other factors influencing results (areas to strengthen)

**Government expenditure.** Government is not allocating funds to CLTS in districts where agencies like

Plan work. Consideration should be given, however, to create a more equal partnership with government that combines government funding with Plan's technical inputs. This would demonstrate a model that the government could better scale-up with its own resources, and improve the prospects for sustainability.

**Sanitation marketing.** Sanitation marketing needs to be introduced earlier in communities. Plan staff noted that sanitation marketing is relatively new in Sierra Leone so there is limited experience and models to build on. There is, however, strong interest at the community level in using more sustainable materials. Knowledge gained through PAC could provide the basis for an integrated sanitation marketing strategy for future programming – trained masons, fabrication of sanitation products, financing from Village Savings & Loan Groups, and promotion of products by Natural Leaders and masons. Alternatively, Plan might partner with other agencies for sanitation marketing and focus its resources on using CLTS to create ODF communities, an area where its reputation is already well-established.

**Schools.** Within Plan, there is a strong desire to have funds to help schools improve their WASH facilities. Plan needs to be realistic about what it can achieve. Rather than allocating CLTS funds for school WASH facilities, it is recommended that funds from other grants be used to meet the needs of high-priority schools in ODF communities.

**Monitoring and learning.** More attention is required on M&E from the outset of implementation, including developing a suitable indicator framework and putting in place the mechanisms to collect required data. This could include strengthening MoHS staff to report and analyse WASH related health data. The lack of a dedicated resource for M&E on the program may have contributed to the weakness in data gathering, exacerbated by weak demand for data from program management. Learning could incorporate more emphasis on peer-to-peer exchange at the PU level.

## Opportunities and threats

### Opportunities

**Better-sustained outcomes.** Plan and other stakeholders are aware of the sustainability challenges and have solid data on where and how many households are abandoning their toilets after their community has been declared ODF. For the future Plan needs to articulate how it will respond to these issues, develop a clear strategy for improving sustainability and then monitor its effectiveness.

**Handwashing.** Many informants suggested that there is a strong handwashing culture, as a legacy of the Ebola epidemic and the preventive measures taught to communities during the epidemic. Plan should take advantage of this legacy and help to consolidate this new handwashing habit. This process should include assessing the feasibility of using the indigenous handwashing “facility” – the plastic kettle found in most households.

**Communities want stronger building materials.** There is a strong demand to get better materials to build their toilets. This provides an important trigger for resourcing better materials, including the use of local materials but applying appropriate technologies.

**Government budget allocations for CLTS.** Under the decentralisation agenda, MOHS is allocating a budget for sanitation directly to district councils. Rather than having to rely solely on donor funded programs in future, District government will have its own budget for sanitation. Plan can work with government to ensure that these funds are effectively used and that budgets earmarked for sanitation are spent on sanitation.

**Disability.** Future programming should make sure that disability is covered in stakeholder training and is integrated into post-triggering and post-ODF follow-up. Special efforts should be made to ensure that disability is raised by Natural Leaders during their community meetings; households with disability within beneficiary communities should be formally identified; the program should record community action to help households with disability. Plan staff should also partner with disabled peoples' organisations to work with stakeholders to encourage people with disability to take on positions of leadership

and responsibility.

### Threats.

Given that the program has concluded, aside from sustainability, threats to the program are minimal.

## Lessons learned

Getting communities to work as communities to plan and build toilets is an effective strategy for achieving ODF. The same approach can be applied to re-building toilets after the annual rains.

ODF communities should be given priority for water supply development (where required) . Both programs engage the whole community in planning and construction; and develop leadership for management. The water supply program serves as a good incentive for achieving ODF; and represents a higher level of community organisation, and can build on the level of organisation achieved through the CLTS process.

Sanitation and hygiene programming can be a strong defence against Ebola. There were no cases of Ebola in the 150 ODF villages covered by Plan's CLTS programme.

Sanitation marketing needs to be developed at the outset and introduced early in the program to support households to optimise use of limited resources.

Different generations can contribute to the CLTS process. Young men are needed at the start to help with toilet digging and toilet construction. However at a later stage female Natural Leaders are more likely to sustain the regular visits to promote maintenance of toilets and improved hygiene.

## Recommendations

Recommendations from the review are implicit in the strengths and weaknesses listed above. Of particular note:

- Continue to work closely with government; at district-wide basis; and leveraging more financial support from government wherever possible.
- Promote the rebuilding of toilets in the Bombali villages as part of Plan's Ebola recovery program.
- Integrate sanitation marketing more effectively into the sanitation program.
- Strengthen collection of monitoring data using simple systems and in a way that builds the capacity of other stakeholders. Strengthen the demand for monitoring data from management at all levels.
- Ensure that there is specific, adequate budget to provide for engagement of government staff at district and national levels during any future CLTS program.
- Analyse, document and address the reasons for poor sustainability of sanitation in ODF communities.

# Annex H

## Plan Uganda project: Key findings

### Best practices and program strengths

**Conversion of triggered into ODF villages.** High ODF success rates, including at scale in Tororo, which contains the first ODF sub-counties achieved in Uganda; indicative of high quality facilitation and follow-up.

**Social inclusion.** Strong response from communities to support vulnerable households and ensure that they access improved sanitation. Family resources are mobilised where possible and then direct support is provided if required.

**Dissemination of learning.** Plan's program in Tororo is a hub for stakeholders in Uganda to learn about CLTS. Government and VHT members are sharing their expertise with peers in other districts.

**Sustainability of ODF achievements.** There remain high rates of toilet ownership in Plan areas, even several years after ODF declaration. Households are rebuilding and repairing toilets. The rate of upgrading to improved models remains low.

**Partnership with government.** Implementation relied strongly on government, especially in Tororo, and there has been close collaboration with government. Engagement of Health Inspectors and the VHT members was particularly successful. These staff 'own' the CLTS process, are knowledgeable, and continue to follow up in ODF communities, several years after triggering and ODF celebration. Senior government stakeholder (MoH, District government and district health officials) all reported being satisfied with Plan's contribution to the government's aspirations.

### Other factors influencing results (areas to strengthen)

**Government expenditure.** Government is not allocating funds to CLTS in districts where agencies like Plan work. Measures should be sought to encourage a more equal partnership with government that combines government funding with Plan's technical inputs. This would demonstrate a model that the government could better scale-up with its own resources, and improve the prospects for sustainability.

**Sanitation marketing.** Sanitation marketing was not introduced early enough in the program to have a strong impact. In addition to training artisans, more could have been done to engage the private sector to increase access to goods and services (e.g. tank and soap manufacturers, and hardware chains). This could draw on existing consumer research and models being piloted by other agencies (although it is noted that there are no successful models currently being implemented in Uganda at scale). More attention could have been given to promoting sharing and developing sanitation marketing ideas across countries in the PAC program.

**Handwashing and other post-ODF follow-up.** Some good results were found in Tororo, where handwashing facilities were still present in many houses. In other areas, the rate was very low, particularly of facilities that had soap or ash present. Learning from successful communities and replicating their solutions to the program more broadly may improve handwashing rates in the program. In addition to handwashing facilities, post-ODF follow-up could also continue to promote use of fly-proof pit covers and improved privacy.

**Disability.** While social inclusion was well handled generally, the program did not focus much attention on disability. Efforts could be made to make sure disability is raised by VHTs during their post-triggering and post-ODF follow-up; that the program records the types of responses community members adopt; and that encouragement is given for people with disability to take on positions of leadership and responsibility within CLTS programs. Formal partnerships with Disabled People Organisations, nationally

and locally would assist.

**Monitoring and learning.** Collecting and collating regular, reliable monitoring data was an area of weakness. More attention is required on M&E from the outset of implementation, including developing a suitable indicator framework and putting in place the mechanisms to collect required data. This could include strengthening MoH staff to report and analyse WASH related health data. The lack of a dedicated resource for M&E on the program may have contributed to the weakness in data gathering, exacerbated by weak demand for data from program management. Learning could incorporate more emphasis on peer-to-peer exchange at the PU level.

## Opportunities and threats

### Opportunities

**Integrating VHTs into other health initiatives.** If VHTs remain active, they can continue to follow-up sanitation and hygiene in ODF communities. There are a range of community health programs being operated in rural Uganda by the MoH. Incorporating VHTs into these programs offers the opportunity for the VHT members to remain engaged for post-ODF CLTS follow-up.

**Ongoing MoH action.** MoH at district level are requiring their Health Inspectors to trigger and follow-up CLTS in at least one community per quarter, using their own resources. Although small in scale, this will ensure that there are some ongoing CLTS activities in all districts where Plan has been working. With minimal input, Plan could provide support and motivation to the health inspectors for this work, and provide expert technical advice where required.

### Threats

Given that the program has concluded, aside from sustainability, threats to the program are minimal. CLTS fits within government policy and will continue to underpin steps towards Uganda's national ODF target. To achieve entire districts that are ODF will require government and agencies such as Plan working in larger, more difficult peri-urban and semi-urban areas. This will require CLTS processes are adapted to create success in these areas.

## Lessons learned

**Work across a whole district.** Government would like to see Plan working across the whole district rather than in pockets. Plan is restructuring its Program Units to align them to entire districts. Future CLTS programs should consider how best to allocate available funding so as to have an impact across an entire district (for example, training all Health Inspectors and VHT members) and support district-wide ODF achievement.

**Sanitation marketing.** Sanitation marketing needs to be introduced earlier in communities, in conjunction with ODF achievement and celebration. This requires sufficient funding so that all ODF and triggered communities benefit—not just a few. In addition to training artisans, commercial operators should be engaged to increase access to goods and services.

**Schools.** There is a strong desire within Plan to allocate funds to help schools improve their WASH facilities. Plan needs to be realistic about what it can achieve, and take responsibility for, within a district-wide CLTS program. Rather than allocating CLTS funds for school WASH facilities, it may be preferable that funds from other grants be used to meet the needs of high-priority schools in ODF communities.

**Monitoring and learning.** Attention to M&E is required from the outset of implementation, including developing a suitable indicator framework and putting in place the mechanisms to collect required data. The lack of a dedicated resource for M&E on the program may have contributed to the weakness in data gathering, exacerbated by weak demand for data from program management. Learning should incorporate a strong emphasis on peer-to-peer exchange at the PU level.

## Recommendations

Recommendations from the review are implicit in the strengths and weaknesses listed above. Of particular note:

- Continue to work close with government; at district-wide basis; and leveraging more financial support from government wherever possible.
- Integrate sanitation marketing more effectively into future sanitation programs.
- Strengthen collection of monitoring data using simple systems and in a way that builds the capacity of other stakeholders. Strengthen the demand for monitoring data from management at all levels.

# Annex I

## Plan Zambia project: Key findings

The PAC Program did not meet its targets for ODF communities but has laid the foundation for district-wide success and has demonstrated a substantial increase in coverage. The inclusion of water supply, school WASH, nutrition and livelihood elements was an unhelpful distraction that delayed CLTS progress and absorbed most of the program budget. Despite this, the program was found to have delivered strong results with the funds that were invested in CLTS.

### Best practices and program strengths

**Leadership role in the sector.** Plan is well-regarded by national-level WASH actors for its CLTS capabilities. Plan has contributed to the development of national policies and strategies; worked to build the capacity of other NGOs in the sector; and is seen as a key partner for government at the provincial and district levels where it works. Plan has also established a strong working relationship with UNICEF, which is the principal agency supporting MLGH to deliver CLTS nationally.

**Monitoring data, including baseline information.** Plan has supported the government's monitoring system to collect regular progress data. Paper-based systems are being replaced by mobile-to-web reporting using the DHIS2 platform. This has provided the program with a wealth of monitoring data, collected at the community level. Importantly, the data collected contains both baseline information and an ongoing indication of whether toilet coverage is slipping in ODF (and non-ODF) communities.

**Chieftdom triggering.** Plan has learnt from its early experience of implementing CLTS that engaging the chiefs and traditional authorities is the key to achieving success. Initial organisation of implementation was based around the political structure of wards. Moving to chieftdom triggering is speeding up the rate at which communities are becoming ODF and provides an efficient scale for verification and celebration of ODF achievements.

**Active Community Champions.** The Plan program has been successful in supporting government to train and motivate Community Champions. These are volunteers who work for MLGH to trigger communities and provide post-triggering and post-ODF follow-up. Plan has motivated these champions to work without financial incentives. This is significant because elsewhere, in UNICEF-supported districts, Community Champions are paid an incentive payment of approximately USD10 for each village declared ODF. Whilst not all Community Champions remain effective, the PAC Program has helped create a pool of active, motivated champions who are encouraging and supporting community-level Sanitation Action Groups who in turn are sustaining ODF status in their communities.

### Other factors influencing results and areas to strengthen

**Integrated WASH, nutrition and livelihoods programming.** This was the only PAC Program country that adopted an integrated WASH approach. The inclusion of water supply, school WASH, nutrition and livelihood elements was found to be an unhelpful distraction for achieving the program's main aims of increasing access to sanitation and improving hygiene behaviours. These other activities delayed implementation of the CLTS program and absorbed most of the program's funding. Each of the non-CLTS activities—improved water supplies and multiple uses of water, school WASH, school vegetable gardens (nutrition) and fish ponds (livelihoods)—are valuable activities in their own rights. Combining them within the PAC program, however, did not create synergies. In particular, these program elements were very different in scale. CLTS was triggered in almost 400 villages comprising more than 15,000 households. In contrast, a few household benefitted in eleven locations where fish ponds were constructed. Combining the different WASH elements also undermines government ownership. Individually, each of the activities aligned well with government policies but the package of activities was a Plan creation and could not be fitted into any overarching government framework.

**Sanitation marketing.** Plan and National MLGH report that there are currently no strong models to draw from in Zambia for sanitation marketing. Sanitation marketing was not pursued in any depth in the Plan program. Sustainability of toilets is a problem, with stakeholders reporting that collapsing latrines after seasonal rains is the main reason why households abandon their toilets. No households surveyed for the evaluation had invested in VIP or pour-flush toilets. This highlights the need for action on sanitation marketing. The survey found that most households (61%) were building their pit toilets from fired clay bricks, suggesting a willingness to invest resources in durable facilities. Plan could build on that willingness by increasing the pool of knowledge and skills available in each community. A broad definition of sanitation marketing should be adopted that considers village-level capacity. This is important since communities in Luapula rely almost exclusively upon locally-sourced materials for construction. In addition to exploring the potential for supply of commercial goods and services, sanitation marketing could involve training a cadre of masons/construction workers in each zone and scaling up innovations that use local materials (such as woven baskets, use of brick-lined pits and corbelled construction). The Chembe DWASHE Committee has prepared a proposal for training masons that Plan could support. To avoid communities suffering several seasons of collapsed latrines, any future CLTS programming should prepare and introduce a sanitation marketing component at the outset of implementation.

**Engagement with government.** The program reflected mixed success with government engagement. At provincial level and in Mansa District, engagement appeared to be strong. In Chembe, however, stakeholders on the DWASHE Committee and the Council Secretary expressed great disappointment at Plan not having engaged them more strongly in planning and execution of the PAC program. In part this is explained by Chembe District having been created in 2013, mid-way through program implementation. Nonetheless, given the nascent institutional capacity, there was an obvious need to work especially closely with Chembe government stakeholders and to support their institutional development. This experience should prompt Plan Zambia to redouble its efforts to integrate CLTS activities into government programming for the sector. This would include shared planning, budgeting, monitoring and reporting of outcomes.

**Insufficient staffing.** Very few staff were allocated to the PAC Program. At commencement, there was one fulltime staff member at PU level, with part-time support from the National WASH Adviser. The fulltime staff member was responsible for all elements of the program—CLTS, water, schools and nutrition. The program then doubled in scope and also expanded its capacity development responsibilities without any additional staff being added. There was no dedicated M&E resourcing, either within the PAC Program or for the WASH portfolio. This staffing level is much lower than that applied in other PAC countries.

**Disability.** Disability did not feature strongly in the PAC program and is not mentioned in the PAC Program reporting for Zambia. The school survey found no provisions for students with disability in any of the schools. Plan staff noted that capacity is beginning to be built for disability-inclusive programming.

**Schools.** Plan included a distinct WASH infrastructure component for schools within the PAC program. This creates some tension within a program that generally aims to mobilise communities' own resources for sanitation but then directly supports some schools with infrastructure but not others. It may be preferable to manage school WASH funding separately and ensure that within the CLTS program the focus remains on facilitating all schools in triggered communities to improve their WASH situation within their own means. Where work is carried out in schools, more attention could be paid to ensuring that there are menstrual hygiene management facilities available for girls and that facilities meet the needs of students with disabilities—particularly wherever new infrastructure is funded.

## Opportunities and threats

### Opportunities

**Better-sustained outcomes.** Through the DHID information system, Plan and other stakeholders are aware of the sustainability challenges and has solid data on where and how many households are abandoning their toilets after their community has been declared ODF. Plan is also aware of some of the

causes for this, particularly collapsing pits in unstable soils. For the future Plan needs to articulate how it will respond to these issues, develop a clear strategy for improving sustainability and then monitor its effectiveness.

**New and renewed engagement with government.** Ongoing work in Chembe district during the no-cost extension and the forthcoming school WASH program create an important opportunity to improve the relationship with Chembe District government. This should involve joint planning, delivery and monitoring of activities. It could also involve promoting greater engagement from other Plan programs beyond WASH. Increasing work with Chiefdoms creates an opportunity to promote a role for MoCTA within CLTS and sanitation programming.

**Government budget allocations for CLTS.** Under the Zambian Government's decentralisation agenda, MLGH is allocating budget for sanitation directly to district government. Rather than having to rely solely on donor funded programs in future, District government will have its own budget for sanitation. Plan can work with government to ensure that these funds are effectively used and that budgets earmarked for sanitation are spent on sanitation.

**Modelling effective hygiene promotion.** During the no-cost extension Plan will use the remaining program funds to trial a new approach to promoting hygiene behaviour change through the chiefs and traditional leaders. This will help develop a model to address the low rates of handwashing facilities observed in many communities during the household survey and which could then be applied to Plan broader CLTS programming.

**Disability.** Future programming could make sure disability is covered in stakeholder training (both for traditional leaders and CLTS facilitators) and is integrated into post-triggering and post-ODF follow-up. Program monitoring could record the types of responses community members adopt to facilitate access by people with disabilities. Plan staff could also partner with local and national disabled peoples' organisations to work with stakeholders to encourage people with disability to take on positions of leadership and responsibility.

**Move to use of Community Health Assistants (CHAs).** The Ministry of Health progressively training and deploying CHAs to the sub-district level to oversee community health programs. CHA training includes CLTS. Within rural villages, the CHAs work with volunteer Neighbourhood Health Committees. This is a very similar structure to that being created by MLGH with Community Champions and SAGs. The significant difference is that CHAs are a formal part of the civil service and are paid and managed by government. Community Champions are volunteers and stakeholders report an ongoing struggle to keep them motivated. Plan could model a more cost-effective, sustainable program delivery approach by demonstrating how to deliver CLTS with the CHAs.

## Threats

Given that the program has concluded, aside from sustainability, threats to the program are minimal. Two areas to consider relate to use of follow-on funding. Plan Zambia is Chembe District's only WASH partner and the district is not yet ODF. If follow-on funding is available, it would be useful to assist Chembe to make use of the capacity developed to date to create an ODF district. The DWASHE's ambition is to become Zambia's third ODF district. Consideration should also be given to leveraging resources from the forthcoming DGIS-funded school WASH program to maintain CLTS momentum. Plan will be working regularly with WASH stakeholders in Chembe for this activity and could continue to monitor CLTS progress at the ward/community level even as it works in schools.

## Lessons learned

- Chiefdom triggering and verification is an effective means of creating ODF communities and an efficient scale at which to apply program resources.
- Avoid attempting to integrate small-scale water, nutrition and livelihood activities into programs that are predominantly focused on CLTS. These additional activities absorb significant amounts of funding, inhibit alignment with government programming, and invariably create 'winners' and 'losers'

amongst ODF communities.

- Sanitation marketing needs to be developed at the outset and introduced early in the program to support households to optimise use of limited resources. In Zambia sanitation marketing needs to have a broad definition that encompasses brokering skills and knowledge in addition to sale of commercial products.

## Recommendations

Recommendations from the review are implicit in the strengths and weaknesses listed above. Of particular note:

- For Chembe, work to better integrate Plan activities into the government program. Build stronger relationships with Chembe Council (both by WASH program staff and senior PU staff). Ensure that government staff are central to rather than peripheral to program planning and delivery.
- Ensure that there is specific, adequate budget to provide for engagement of government staff at district, provincial and national levels during any future CLTS program.
- Analyse, document and address the reasons for poor sustainability of sanitation and hygiene outcomes in ODF communities.
- Coordinate delivery of water, school WASH and CLTS activities in future WASH programming but do not attempt to integrate them into a single activity.
- For CLTS programming at district scale, provide at least one full-time staff member per district; and consider allocating additional resources for monitoring and learning.



**Girls first**