

WASH Handbook for Protracted Emergencies:

The OXSI Experience in Myanmar



OXFAM



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Foreword

This Handbook compiles the learning and knowledge of the Oxfam–Solidarités International (OXFAM–SI) programme we have been supporting to provide water, sanitation, and hygiene (WaSH) services in Rohingya camps and villages in Rakhine State, Myanmar, over the period 2017–2020.

WaSH has been a top priority for the UK Government, and the HARP Facility. As the largest donor of humanitarian WaSH in Myanmar since 2016, we have, through our partners, reached over 243,000 conflict affected people in Kachin, Northern Shan, Rakhine, Chin and Yangon. The OXFAM–SI programme enabled us to focus our assistance on Rakhine, where approximately 126,000 Rohingya and 2,000 displaced Kaman Muslims have been living in overcrowded internment camps in the “Sittwe restricted area” since 2012. They lack access to basic WaSH, education and health services, face restrictions on their freedom of movement and their livelihoods, while the Rohingya population is also being denied citizenship. Through HARP–F’s partnership with OXFAM–SI, 82% of all IDPs in camps in Rakhine receive essential WaSH services, including throughout the COVID-19 pandemic.

Like everything HARP–F supports, the WaSH project run by our OXFAM–SI partners is designed to respond to the needs of vulnerable populations affected by protracted crisis and increase their resilience; but it also adapted the delivery of WaSH services to the specific context of the Rohingya human rights crisis. The programme favoured community-led processes and has been particularly vigilant during the COVID-19 pandemic to ensure a principled humanitarian response throughout. Many of the programme’s approaches to engage communities, increase their self-reliance and hand over the management of the WaSH infrastructure to them have been adopted as the standard for initiatives by WaSH humanitarian actors in Rakhine.

This Handbook captures this learning and is filling a knowledge gap, backed by evidence, on approaches and techniques to deliver WaSH services in a protracted emergency, particularly in the context of a human rights crisis. It represents an important legacy for the investment that the UK government, HARP–F, OXFAM–SI and camp communities have made in delivering WaSH services in very challenging circumstances. In the aftermath of the February 2021 military coup, the increasing humanitarian needs, the growing violence from the regime and routine human rights abuses, I believe that this knowledge is invaluable to inform the overall humanitarian response in Myanmar, and in other protracted crisis contexts.

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1.1 Purpose of this Handbook

This handbook details the activities and lessons learned of the Oxfam–Solidarites International (SI) consortium providing water, sanitation, and hygiene (WASH) services in Rohingya camps and villages in Sittwe Township in Rakhine State, Myanmar, from 2017–2020.

When the project launched in 2017, there was limited guidance available on approaches and techniques to deliver WASH services in a protracted emergency, particularly in the context of a human rights crisis. The Oxfam–SI partnership (referred to as “OXSI”) piloted and tested strategies to adapt the delivery of WASH services to the specific protracted Rohingya crisis in Myanmar, while focusing on increasing engagement and ownership of the community.

Relatively long-term funding – unusual for humanitarian programming – allowed OXSI the opportunity to tailor approaches, innovate solutions, increase efficiency, and optimise collaboration and the use of resources. The funding stability as well as the large scale of the programme allowed OXSI to build up a long-standing team with technical expertise and deep contextual knowledge and to focus on improving the programme by mainstreaming community engagement, gender, and accountability. Most of these processes and factors resulted in an increased value for money (VfM), especially as the consortium absorbed work in new areas during the three-year implementation.

In addition, OXSI amassed the experience and understanding needed to put in place context-specific operating principles, implement principled programming, and influence the direction of the overall humanitarian response in Rakhine. As an active member of coordination platforms at both national and subnational levels in Myanmar, OXSI contributed to the design of national standards and guidelines and highlighted any emerging needs by putting forward evidence and feedback from the field.

The set-up of the OXSI consortium to mainstream community engagement, gender, and accountability while providing vital WASH services emerged from learning from the previous project cycle. This process of learning and adapting continued during the OXSI consortium – a process that is also rare for humanitarian programmes that sometimes do not have time to reflect on learning and practices. The Humanitarian and Resilience Programme (HARP) and OXSI decided to invest resources to create a handbook to consolidate all of this knowledge produced during the WASH programme and to make it available to different stakeholders: the WASH community and WASH Cluster in Myanmar, as well as the wider community of WASH practitioners.

Many of the approaches described are adaptable and relevant to a protracted emergency linked to a human rights crisis. This handbook aims to help cover a gap of knowledge and also to stimulate further discussion on WASH approaches in these unique contexts.

The content of the handbook was gathered from official documentation of activities (Standard Operating Procedures, assessment results, Focus Group Discussions, learning reviews, reports, etc.), as well as from several key informant interviews (KIs) with Oxfam and SI staff.

1.2 Context Background

Rakhine State, the westernmost state of Myanmar, is home to over three million people. According to the 2017 Myanmar Living Conditions Survey, it is the second poorest state in the country, with a poverty rate of 41.6%, compared to 24.8% nationally,¹ and lags behind the national average in almost every area. Rakhine also has the highest vulnerability of any state or region – more than half of the population experiences some form of vulnerability in relation to housing materials, educational attainment, safe sanitation, drinking water, child dependency, availability of identification cards or direct exposure to conflict.² Rakhine State, with its long coastline, is also vulnerable to natural hazards and climate change. In addition to limited investment in disaster risk reduction, much of the state’s farmland is poorly adapted to these challenges.³

Rakhine has a diverse ethnic and religious population. Rakhine Buddhists make up the largest group and Muslims constitute the second largest. The majority of Muslims in Rakhine are stateless Rohingya, while a smaller number are Kaman. Although the situation in Rakhine State has garnered significant international attention in recent years, the conflict there is not new. In fact, ethnic minorities across the country have faced discrimination and human rights abuses for decades. The conflict in Rakhine especially is one of long-term institutionalised state-directed discrimination and segregation, embodied in law, regulation, procedures, and daily practice of both military and civilian authorities.⁴

In Rakhine, the first large exodus of the Rohingya from Myanmar to Bangladesh occurred in the late 1970s in response to military crackdowns, including forced labour, torture, and rape. In 1982, Myanmar enacted a Citizenship Law which deprived Rohingya of citizenship. In 1991, 200,000–250,000 refugees again fled Myanmar in response to a military operation and sheltered in camps in the Cox’s Bazar district of Bangladesh. In 2012, violence between Muslims and Buddhists, with occasional support from state security forces, led to scores of deaths, destruction of property, and mass displacement in Rakhine. Myanmar authorities responded by separating communities, moving Rohingya and other Muslim groups to camps, where most of them remain today. In 2016, a Rohingya armed group, the Arakan Rohingya Salvation Army (ARSA), attacked three police posts in northern Rakhine. The military retaliated with a major security operation marked by widespread human rights violations, causing more than 87,000 Rohingya to flee to Bangladesh over the next 10 months. In August 2017, prolonged military pressure in Rakhine led ARSA to mount another attack on around 30 security posts in northern Rakhine. The armed forces of Myanmar, the Tatmadaw, again responded with a crackdown against Rohingya in Rakhine State, committing crimes against humanity and driving more than 600,000 Rohingya to flee to Bangladesh over two months.⁵ This latest round of “clearance operations” was described by the UN Secretary General as ‘ethnic cleansing’ and the UN-mandated Independent International Fact-Finding Mission on Myanmar concluded that the state’s actions bore all the hallmarks of genocide with intent⁶. Last year, Myanmar was tried for these events at the International Court of Justice (ICJ) under the Application of the Convention on the Prevention and Punishment of the Crime of Genocide. The trial brought increased international attention to crimes carried out by the Myanmar military and to the continued persecution of the Rohingya, while making it clear that Myanmar

1 UNDP, World Bank Group, & Myanmar Central Statistical Organization. (June 2019). Myanmar Living Conditions Survey 2017. <https://www.undp.org/content/dam/myanmar/docs/Publications/PovRedu/undp-mm-mlcs-poverty-report.pdf>

2 Humanitarian Assistance and Resilience Programme Facility & the Myanmar Information Management Unit. (June 2018). *Vulnerability in Myanmar*. https://themimu.info/sites/themimu.info/files/documents/Report_Vulnerability_in_Myanmar_HARP-MIMU_Jun2018_ENG_Print_version.pdf

3 ReliefWeb, Humanitarian Data Exchange, Humanitarian InSight, & Financial Tracking Service. (December 2019). Humanitarian Needs Overview: Myanmar. https://reliefweb.int/sites/reliefweb.int/files/resources/MMR_HNO_2020_FINAL_131219.pdf

4 Fieldview Solutions. (June 2018). Time to Break Old Habits: Shifting from Complicity to Protection of the Rohingya in Myanmar. https://www.fieldviewsolutions.org/fv-publications/Time_to_break_old_habits.pdf

5 Amnesty International. (2017). Caged Without a Roof: Apartheid in Myanmar’s Rakhine State. <https://www.amnesty.org/download/Documents/ASA1674842017ENGLISH.PDF>

6 Fact-Finding Mission on Myanmar. (September 2018). Report of the Detailed Findings of the Independent International Fact-Finding Mission on Myanmar. <https://www.ohchr.org/EN/HRBodies/HRC/Pages/NewsDetail.aspx?NewsID=23575&LangID=E>

mar's internal mechanisms failed to incriminate those responsible and revealed that the GoM has entrenched a culture of impunity.

Prior to the 2017 exodus, over a million Rohingya lived in Rakhine State. They were subject to severe rights abuses and restriction of movement. To this day, there are hundreds of thousands of Rohingya in Rakhine state, all either physically or virtually imprisoned, suffering from inadequate food, shelter, medical services, livelihoods and education and all fearing daily for their lives. The conditions severely restrict almost every aspect of their lives, and their human rights are routinely violated. In the area now known as the "Sittwe restricted area" in central Rakhine, about 126,000 Rohingya and 2,000 displaced Kaman Muslims have lived in internment camps since 2012. They suffer from overcrowding, inadequate sanitation facilities, inadequate educational opportunities, deliberately limited access to healthcare, and are prevented from most possibilities of livelihood or self-sufficiency due to the restrictions placed on them by the state. The camps in the Sittwe restricted area do not meet the emergency Sphere standards of minimum land area per person, covering a surface that is only one third of the minimum.

In the restricted area, those living in existing Rohingya and Kaman villages, although not displaced, face nearly all of the same challenges as Rohingya and Kaman living in camps, including lack of freedom of movement and access to basic services. Many villagers in the Sittwe restricted area took in displaced friends and family from other areas in central Rakhine, so they may care for extra residents. However, households in villages have their own family homes, latrines, and handpumps, meaning they live in less-crowded conditions than those in camps, who are cramped into tiny one-room shelters. In previous years, there was hope that the situation in Myanmar would change and people would be allowed to return to their villages of origin. Since then, human rights abuses have intensified and the camps, which were intended as only a temporary solution, have become increasingly entrenched. The situation in Rakhine is now a protracted crisis with long-term and severe impacts on human rights and deteriorating living conditions for the affected communities.

The protracted nature of the displacements has become clear, as evidenced by the Government of Myanmar's (GoM) lack of policies for a lasting and peaceful solution in the region. The GoM shared their official National Strategy on Camp Closures with the international community in November 2019, outlining the government's plans for the return and resettlement of internally displaced people (IDPs) across the country, as well as the 'closure' of IDP camps. The strategy does not specify any funding committed to these measures, nor provide clear timelines regarding land rights issues, particularly for people 'returning' to villages that no longer exist. Several camps in Rakhine have been declared "closed" after camp residents were simply relocated to newly-constructed single-family shelters next to the old camps. These "camp closures" were conducted without meaningful consultations with communities, who were not given any choices except to move or to not move to the new locations. The new locations are not called camps, but the conditions for Rohingya forced to live there have not changed. Considering the prevailing protection challenges across much of Rakhine State and the significant outstanding challenges in relation to addressing the root causes of the crisis, such as the lack of freedom of movement and pathways to citizenship, prospects for sustainable, voluntary and dignified return of forcibly displaced Rohingya to their places of origin or of choice are likely to remain limited in the near future. With Bangladesh straining under the burden of hosting over a million refugees, it is possible that Bangladesh and Myanmar will again force Rohingya back across the border into newly-constructed and inhumane internment camps.

Although ethnic Rakhine Buddhists are not subject to the same rights abuses and restrictions of movement as the Rohingya, they have a long history of grievances against the Bamar-dominated Union government.⁷ After decades of clashes between the Arakan Army (AA), an ethnic Rakhine militia fighting for greater autonomy, and the Tatmadaw, conflict severely escalated starting in late 2018, causing the displacement of

⁷ Fieldview Solutions. (June 2018). Time to Break Old Habits: Shifting from Complicity to Protection of the Rohingya in Myanmar. https://www.fieldviewsolutions.org/fv-publications/Time_to_break_old_habits.pdf

about 90,000 people by the end of 2020 across central and northern Rakhine and Chin states. Reports of the Myanmar army imposing collective punishment on villagers suspected of supporting AA soldiers, burning down Rakhine villages, using land mines, and engaging in other rights abuses, compounded with neglect by the Central Government for decades, have heightened tensions between ethnic Rakhine communities and the Tatmadaw. These events have had the unintended consequence of softening hostility between Rakhine Buddhist communities and Rohingya and Kaman Muslim communities, potentially due to the perception of the Tatmadaw as a common adversary. The AA has made several announcements of solidarity, clarifying that they fight for all communities in Rakhine State, including the Rohingya. Rohingya refugees in Bangladesh have even raised money to support displaced ethnic Rakhine communities.

The GoM's reluctance to permit humanitarian organisations to assist the Rakhine IDPs has also contributed to the anger of the Rakhine population toward the GoM and the Tatmadaw. For humanitarian actors responding to the multiple crises in Myanmar, access to affected populations has been inconsistent and increasingly laborious and bureaucratic. Following the violence in 2016 and 2017, humanitarian agencies lost all access to Rohingya communities for months. In 2017, new regulations were put in place for organisations to apply for Travel Authorisations (TAs) for every staff in order to pass the camp checkpoints. The TAs included comprehensive workplans with additional supporting documents to explain activities and required multiple government approvals. At the time, TAs were valid for only two weeks and, accordingly to many organisations, were given arbitrarily. Although this later changed to a duration of one month, the requirements for TAs continued to increase, resulting in large workloads for organisations who wish to maintain access to camps.

There has been a notable decrease of collaboration between the international community working in Rakhine and the GoM. The government's ongoing restrictions of access and communication have contributed to the shrinking of humanitarian space and created unnecessary challenges for programme implementa-

tion. In addition to the complicated TA processes and total restrictions to some areas, several Rakhine townships experienced the longest internet ban worldwide, which lasted over 14 months. Currently, only 2G access is available in eight townships, purportedly to hinder the activities of the AA. These restrictions affect over a million civilians who lack access to vital information during conflict and a global pandemic. The government's reaction to COVID-19 in Myanmar has at times prevented humanitarian actors from delivering services, including lifesaving services, and has led to further shrinkage of humanitarian access; for example, international staff have not received travel authorisations to the camps since April 2020.

The humanitarian community (INGOs and UN agencies) working in Rakhine have experienced tumultuous relationships with government actors and the ethnic Rakhine community over the years. A growing anti-INGO and UN sentiment culminated in attacks on over 30 international organisations in Sittwe in March 2014 and a temporary evacuation of INGOs from Sittwe. The Rakhine State Government (RSG) placed the blame on INGOs for disproportionately helping Rohingya communities without supporting the ethnic Rakhine population. This showcases a profound misunderstanding of the nature of humanitarian response. However, many organisations accepted the blame, agreeing with the government's assessment that the international community had failed to build a mutually respectful relationship with the Rakhine Buddhist population. The UN and INGOs have since then worked to develop a more 'conflict sensitive' approach, and expanded their operations to offer services to ethnic Rakhine communities.⁸ This has calmed the situation for humanitarian organisations and allowed their presence and work to be accepted, or at least tolerated, for the time being.

In camps, the ongoing displacement, movement restrictions, segregation, and a lack of access to basic services have undermined resilience and coping mechanisms, as well as distorted former community structures and dynamics for Rohingya and Kaman

⁸ Fieldview Solutions. (June 2018). Time to Break Old Habits: Shifting from Complicity to Protection of the Rohingya in Myanmar. https://www.fieldviewsolutions.org/fv-publications/Time_to_break_old_habits.pdf

communities. These factors make camp governance extremely challenging. The government appoints Camp Management Committees (CMCs), a role that is not formally compensated, as the official leaders and representatives of each camp. Communities recognise CMCs as the highest level of authority in the camps, yet many report feeling intimidated by them and unable to freely voice their opinions, concerns, or report abuses of power. Although the government for the first time appointed some female CMC members in 2019, it is understood that they do not have meaningful decision-making power or influence within the CMC. This is important because despite not being trusted by communities, CMCs hold a powerful role in the design, delivery, and communication of services and are responsible for leading dispute resolution processes for cases such as gender-based violence (GBV).

Religious leaders, on the other hand, are more respected and have a much higher level of influence than CMCs or government. Shelter leaders are also trusted and people report feeling comfortable to raise issues with them. Camp-based staff and volunteers of organisations working in camps also have a level of influence within camps and villages. Yet none of these key players possess significant decision-making power in the camps.

While the government and CMC are regarded as having the most authority and power within the camps, this perception amounts to having control over humanitarian assistance rather than being the primary duty bearers. Service provision is regarded as the role of INGOs. Government focal points are often not present in the camps, except to deliver warnings about cyclones and collect data to report back to government officials.

Due to historical and ongoing denial of educational opportunities, as well as competing priorities for survival, people in camps continue to fall behind in key educational markers such as literacy. In 2019, a study conducted by DRC found that 63.5% of men and 72% of women were not able to read or write a simple sentence in any language.⁹

Vulnerable groups such as the elderly, people with disabilities, and women and girls face even greater obstacles in camps. Disability rates are higher in contexts of conflict, displacement and humanitarian emergencies due to conflict- and disaster-related impairments and lack of access to services. This is the case in Sittwe camps, where disability rates exceed the national average. People with disabilities are often “invisible” to service providers because they may not be able to participate in consultations in public spaces or may even be actively hidden from sight.

Gender norms intersect with age and change at different stages throughout the life cycle – particularly for girls during puberty. As in the rest of Rakhine and in Myanmar, women in camps face a range of socio-cultural and structural barriers to taking on leadership roles, communicating with leaders, and influencing public decisions.¹⁰ Reports highlight that a deterioration of living conditions, limited access to aid, and inadequate livelihoods increases rates of GBV. The fear of violence severely affects women and girls’ mental health, and further prevents them from accessing services and being involved in social and educational activities. Approximately a quarter of households in camps are female-headed households who face additional barriers in accessing essential services due to cultural restrictions of women’s movements and lower household income because women face barriers in participating in the labour force and receive lower pay for work than men.¹¹

⁹ Danish Refugee Council. (July 2019). Information Needs Study: Sittwe and Pauktaw IDP Camps.

¹⁰ Price, C. for INGO Rakhine Initiative. (June 2018). Gender and Age Analysis: Sociocultural and Structural Barriers to Essential Services.

¹¹ Price, C. for INGO Rakhine Initiative. (June 2018). Gender and Age Analysis: Sociocultural and Structural Barriers to Essential Services.



1.3 OXSI WASH Programme

Oxfam and Solidarites International (SI) both have a history of working in Myanmar. Oxfam first started working in Myanmar in 2008 and in Rakhine in 2013; SI also started working in Myanmar in 2008 after Cyclone Nargis and in Rakhine in the aftermath of Cyclone Giri in 2010. Furthermore, Oxfam and SI have a strong organisational relationship and history of collaborative programming in Myanmar. Prior to the current programme, Oxfam and SI worked in a consortium through the Department for International Development (DFID)/ Humanitarian and Resilience Programme (HARP) funded WASH programme in Sittwe since 2014, and collective advocacy on WASH since 2013.

Working within the coordinated humanitarian response in Rakhine and informed by a thorough needs assessment, Oxfam and SI entered into a new consortium in September 2017 to provide WASH services to 97,647 Rohingya, Kaman, and Rakhine forcibly-displaced people living in camps and villages in Sittwe township. This consortium, referred to as the “OXSI” WASH Programme, was designed to last for three years and was later extended to 2021. This product covers only the work of the consortium in its first three years.

The main objectives of the programme are to provide essential WASH services while starting to transition to community-managed WASH, handover specific WASH services to the private sector, civil society and/or government, and to build resilience of communities. The programme focuses on the provision of safe drinking water and safe, dignified, and appropriate sanitation services; faecal sludge removal, treatment, and disposal; solid waste management and drainage maintenance; and hygiene promotion to positively change hygiene behaviours. The programme aims to accomplish these goals while focusing on increasing community engagement, building ownership of infrastructure, and eventually handing over WASH infrastructure and services to communities or local authorities. The programme aims to mainstream gender, protection, and accountability in all activities.

OXSI described the longer-term vision for resilience in the context of prolonged displacement in Sittwe as a healthy, peaceful, and cohesive community that

takes ownership over maintenance of infrastructure and receives services from relevant and accountable duty bearers – government or private actors. In the context of this programme, resilience was defined as the ability of communities to transition from dependency on WASH service provision by external international humanitarian actors to community-managed ownership, self-determination, and autonomy. Therefore, the programme’s contribution to this long-term vision for resilience is that programme beneficiaries and communities as a whole have the capacities, motivation, and resources to operate and maintain WASH services themselves, to take responsibility for their own and their family’s hygiene, and to actively contribute to community sanitation and environmental hygiene through positive behaviour change.

A total of 22 camps and villages were covered under the programme in the beginning; this number increased to 25 in early 2019 with the handover of three more locations from another WASH agency, increasing the total people covered by OXSI’s WASH programme to over 100,000. Of these locations, 11 are Rohingya camps in the restricted area; 11 are Rohingya villages in the restricted area; and three are Rakhine Buddhist camps outside of the restricted area. Services provided in each area were determined based on a thorough needs assessment.

Oxfam and SI co-designed the WASH Programme together, drawing on each other’s relative strengths and experiences from working in Rakhine State. To maximise efficiency, cost effectiveness, opportunities for handover to duty bearers and relationship building, OXSI developed an implementation model, dividing responsibilities both geographically and by specialist service provision. Community mobilisation components of the programme – such as behaviour change, handover, resilience building, listening and accountability – were conducted by one lead agency per camp or village. This was allocated based on geography, existing knowledge of the camp/village, and current caseload. The consortium then divided specialist service provision across all sites as follows:

- SI was responsible for WASH infrastructure, including

the upgrading and standardisation of all WASH hardware and the management of major repairs to WASH infrastructure

- SI was responsible for the sludge management chain, including desludging, transportation, and treatment
- Oxfam was responsible for water quality testing
- Oxfam was responsible for leading the consortium on community engagement, behaviour change, gender mainstreaming, and MEAL

For part of the programme, OXSI also worked with Internews to focus on accountability, two-way communication, and increasing awareness of the complaints response mechanism – this work is further explained in Chapter 7. OXSI also had co-funding support or collaborations with UN Women, UNICEF, ECHO, Rockefeller Foundation, and Centre de Crisis for specific activities of the programme.

The OXSI consortium is managed by a Steering Committee which includes the Country Directors from Oxfam and SI and the Consortium Manager. The Consortium Manager manages the five key positions in the Programme Management Unit: WASH Programme Manager (hardware), WASH Coordinator (Community Engagement Lead), Gender and Protection Coordinator, MEAL Coordinator, and the Government and Liaison Coordination Consultant.

OXSI Approaches

The role and actions of humanitarian actors in Sittwe camps have deep impact on endorsing or fighting the existing power dynamics and narrative that ultimately affect the targeted communities. The Do No Harm approach and protection principles have to be fully integrated into the humanitarian response. The OXSI programme aimed to do this through mainstreaming community engagement, gender, accountability, advocacy, and a principled approach to implementation of activities.

Community engagement: The previous programme focused mainly on service delivery of humanitarian aid, applying traditional top-down approaches with

little involvement of target populations in identifying needs and modalities to address them. Assessments conducted prior to the start of the OXSI programme showed that many people did not feel like they were part of a community, that they did not receive enough information, and over half of respondents reported they were not consulted about latrine upgrades or repairs. It was identified that there is an urgent need to open space for dialogue, trust-building, and sharing with communities. OXSI created and implemented a community engagement strategy ([1A Community Engagement Strategy](#)) to address these concerns through stand-alone community engagement activities (See Section 4.1), as well as focusing on mainstreaming community engagement in infrastructure design, siting, building, and repair (covered in Chapters 2, 3, 5, and 6), and into routine hygiene promotion activities to promote positive behaviour change through community-led and peer-to-peer approaches, emphasizing community leadership and decision-making (See Chapter 4). Overall, the community engagement strategy in practice meant actively listening to, responding to, and advocating for the needs and concerns of communities.

Gender: With the knowledge that women and men are affected differently by conflict and other crises, and because gender equality is a core value of both Oxfam and SI, OXSI aimed from the onset to mainstream gender in all project activities. Following a gender assessment and the development of the OXSI Gender Strategy ([1B Gender Strategy](#)), the Gender and Protection Coordinator worked closely with the WASH teams to provide training and actionable recommendations to integrate gender equality in the programme to increase opportunities for women and girls to meaningfully participate in decision-making, while also prioritising their safety and specific needs. Examples of this can be seen throughout the chapters in the boxes titled “Focus on Equity – gender, protection, and inclusion.”

Accountability: Accountability is an essential component of any successful humanitarian programme. OXSI placed a large emphasis on improving accountability through frequent and diverse community engagement, a sophisticated Community Feedback Mechanism (CFM), including case management and a separate

system for safeguarding and sensitive complaints (see Sections 7.2 and 7.3), improving accountability to communities (see Section 7.5), and continuously reflecting and adapting to community feedback and changing needs (see Section 7.7).

Advocacy: Although this component of the programme is not fully covered in this handbook due to the sensitive nature of the crisis, Oxfam and SI took different approaches to leverage international, national, and local networks and platforms to push forward collective advocacy efforts, amplify community voices, and to advocate for an end to this human rights crisis. Advocacy at the Rakhine level included the standardisation of high-quality WASH infrastructure designs and approaches; increased accountability to communities; collaboration and a clear split of responsibilities for WASH agencies working in camps; and direct implementation instead of using contractors (see next section). At the national level, OXSI advocated for a more principled approach to implementation of humanitarian programming; a unified voice among humanitarian actors in response to the government's camp closure strategy; continued humanitarian access to deliver life-saving services; and a coordinated response of humanitarian and government actors that meets international standards and actively seeks dignified, durable solutions for people affected by the protracted crisis.

Principled programming: The programme implements and advocates for a principled approach to WASH services which do not exacerbate harmful power dynamics in the camps. Several WASH agencies are working in Sittwe camps, and only two of them, Oxfam and SI, directly build WASH infrastructure without hiring contractors. In the aftermath of Cyclone Mora in May 2017, WASH Cluster analysis showed that infrastructure built by contractors had significantly higher levels of damage than infrastructure built directly by WASH agencies. Although the government had given service providers a vetted list of contractors, all of them are ethnic Rakhine who do not want to operate directly in camps and as a result, they hire sub-contractors in camps to complete the work. There is only a handful of contractors in camps, most of whom are also powerful landowners who either control or are part

of CMCs. The WASH Cluster analysis highlighted that partners using contractors could be indirectly supporting corruption because contractors were known to be paying bribes to CMCs and not paying labourers a fair wage. The infrastructure built by contractors was sub-par because the sub-contractors bought low-quality materials and used a portion of the money saved for bribes.

OXSI continues to implement directly, which allows programme managers and construction teams to have oversight of materials and to ensure high-quality construction and fair wages for labourers. OXSI continuously advocated for other WASH agencies to take this approach, both because of the protection risks and Value for Money considerations of using contractors and because, when other agencies continued to use contractors, OXSI experienced significant blockages by CMCs and landowners who demanded to have the contract to build WASH infrastructure. In some areas, especially those bordering camps where other agencies were working through contractors, OXSI was blocked from conducting even minor repairs on infrastructure for months. Eventually, through continuous relationship-building and explaining to community leaders and CMCs that OXSI is not able to award contracts for construction, OXSI was able to continue direct implementation.

The incorporation of these approaches into the WASH programme is further detailed in the rest of this handbook.

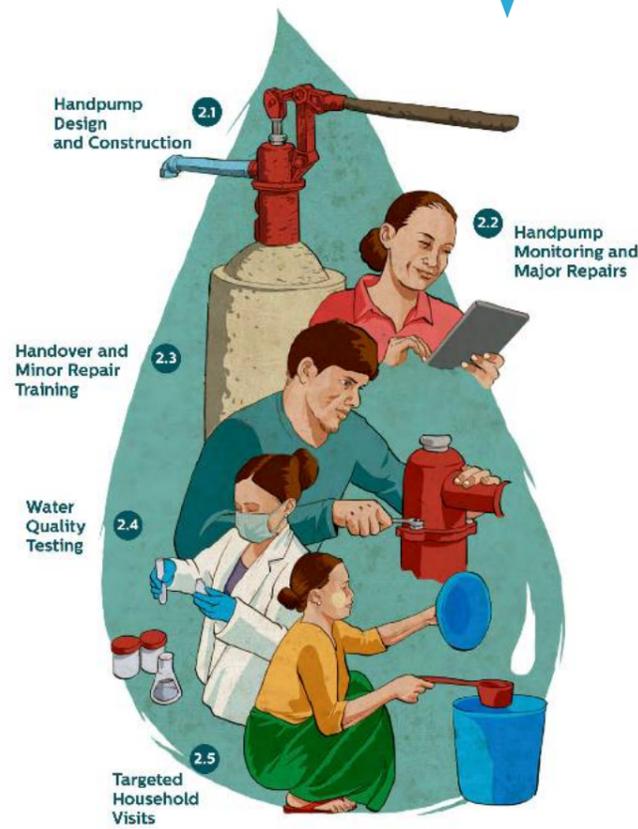
Acronyms

| | | | |
|-----------------|--|----------------|---|
| AA | Arakan Army | MHM | Menstrual Hygiene Management |
| ACE | Action from Community Engagement | MIMU | Myanmar Information Management Unit |
| ARSA | Arakan Rohingya Salvation Army | MoU | Memorandum of Understanding |
| BCT | Behaviour Change Technique | NFI | Non-Food Item |
| BOQ | Bill of Quantity | OD | Open Defecation |
| CCCM | Camp Coordination and Camp Management | O&M | Operation and Maintenance |
| CFL | Child Friendly Latrine | OXSI | Oxfam Solidarites International consortium |
| CFU | Colony Forming Units | P2P | Peer-to-peer |
| CGI | Corrugated Galvanised Iron | PDM | Post Distribution Monitoring |
| CMA | Camp Management Agency | pH | potential of Hydrogen |
| CMC | Camp Management Committee | PMU | Programme Management Unit |
| COVID-19 | Coronavirus Disease | Ppb | Parts per billion |
| CFM | Community Feedback Mechanism | PPE | Personal Protective Equipment |
| CwC | Communication with Communities | PSEA | Protection against Sexual Exploitation and Abuse |
| DFID | Department for International Development | PVC | Polyvinyl Chloride |
| E. coli | Escherichia coli (an indicator for faecal contamination) | RANAS | Risks, Attitudes, Norms, Abilities, and Self-regulation |
| F2F | Face-to-face | RSG | Rakhine State Government |
| FGD | Focus Group Discussion | SI | Solidarités International |
| FSM | Faecal Sludge Management | SOP | Standard Operating Procedure |
| GoM | Government of Myanmar | SPHERE | Humanitarian Charter and Minimum Standards in Humanitarian Response |
| HARP | Humanitarian and Resilience Programme | STS | Sludge Treatment Site |
| HBT | Hopper Bottom Tank | SWM | Solid Waste Management |
| HCD | Human-Centred Design | TA | Travel Authorisation |
| ICJ | International Court of Justice | TLS | Temporary Learning Space |
| ICT | Information and Communications Technology | TOC | Theory of Change |
| IDP | Internally Displaced Person | TWG | Technical Working Group |
| IEC | Information, Education, and Communication | UN | United Nations |
| I/NGO | International / Non-Governmental Organisation | UNICEF | United Nations Children's Fund |
| KAP | Knowledge Attitudes and Practice | VFM | Value For Money |
| KII | Key Informant Interview | WASH | Water, Sanitation and Hygiene |
| MEAL | Monitoring, Evaluation, Accountability and Learning | WQT | Water Quality Testing |
| MELF | Monitoring Evaluation and Learning Framework | WFP | World Food Programme |
| | | WHO | World Health Organisation |

1.4 How to use this handbook

Each chapter starts with an illustrated table of contents

An introduction to each chapter is next to each illustrated table of contents



Click on chapter sections to jump to the section

C2. Water

The United Nations General Assembly recognised safe drinking water and sanitation as a human right in 2010, acknowledging that these basics are essential for health, dignity, and the realisation of other rights. During a crisis, inadequate water quantity and quality is the underlying cause of most public health problems. Water can easily become contaminated at different points as users collect, transport, store, and use it. Therefore, WASH agencies should work with communities to manage the entire water chain: water sourcing, treatment, distribution, collection, household storage, and consumption.

As part of the humanitarian WASH programme in the Sittwe restricted area, Oxfam and Solidarites International (OXSI) are responsible for construction and major repairs of boreholes and handpumps, monitoring of the systems, training communities to conduct minor repairs, water quality testing and follow-up, and raising awareness to reduce contamination risk during storage, transport, collection, and use.

Jump to any chapter using the side tabs

Boxes are used to highlight tips, challenges, and mainstreamed components of the project

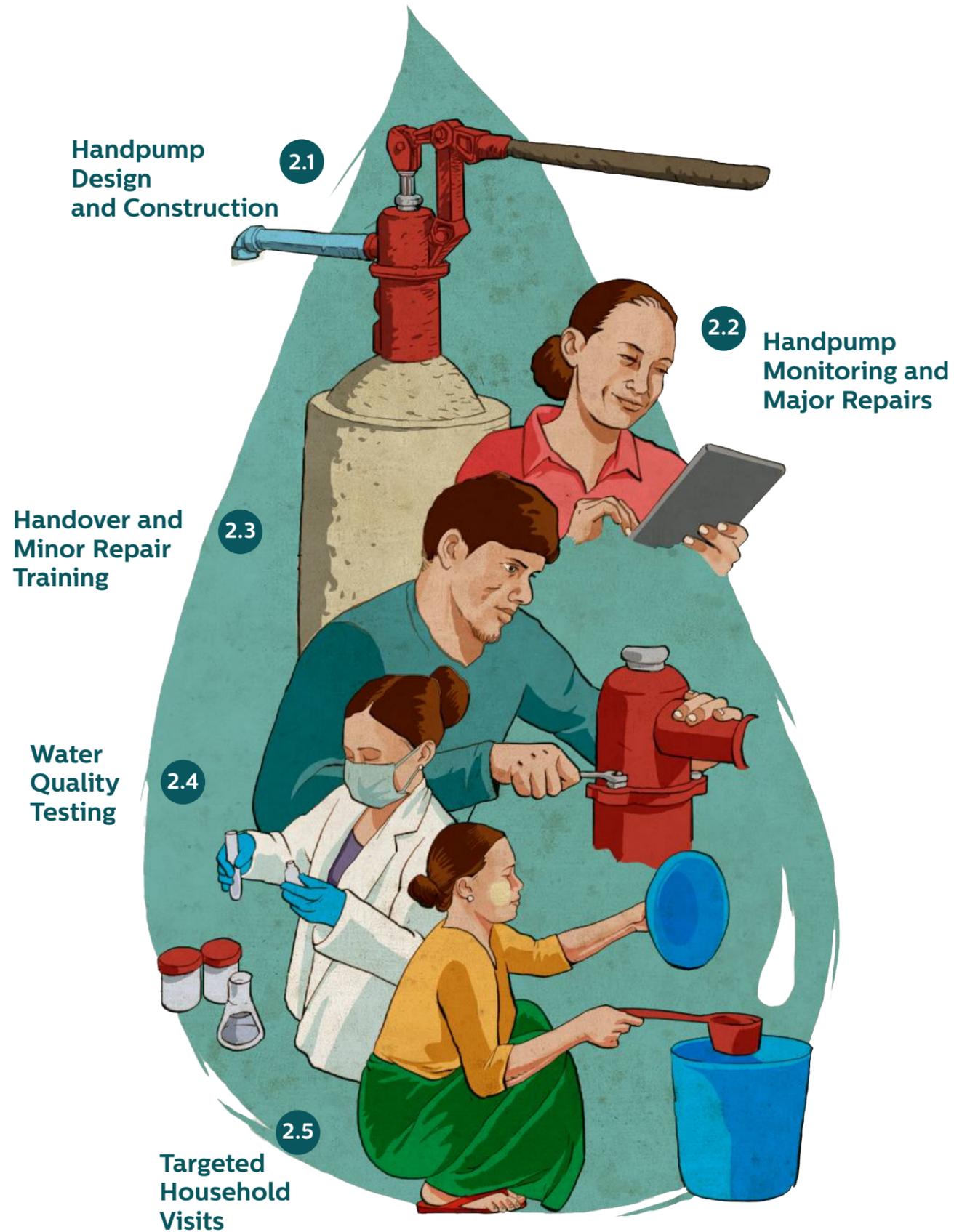
Click on links to see detailed guidelines or drawings

Title of the chapter and page number

Each chapter is divided into sections

Focus on equity – gender, protection, and inclusion

Adapting WASH facilities so children feel comfortable using them is a key child protection standard, and must be done carefully in consultation with children. Participation of children should always be transparent, voluntary, inclusive, and supported by adults from the community. Staff conducting activities with children should receive special training on child protection, which can usually be arranged by protection agencies.



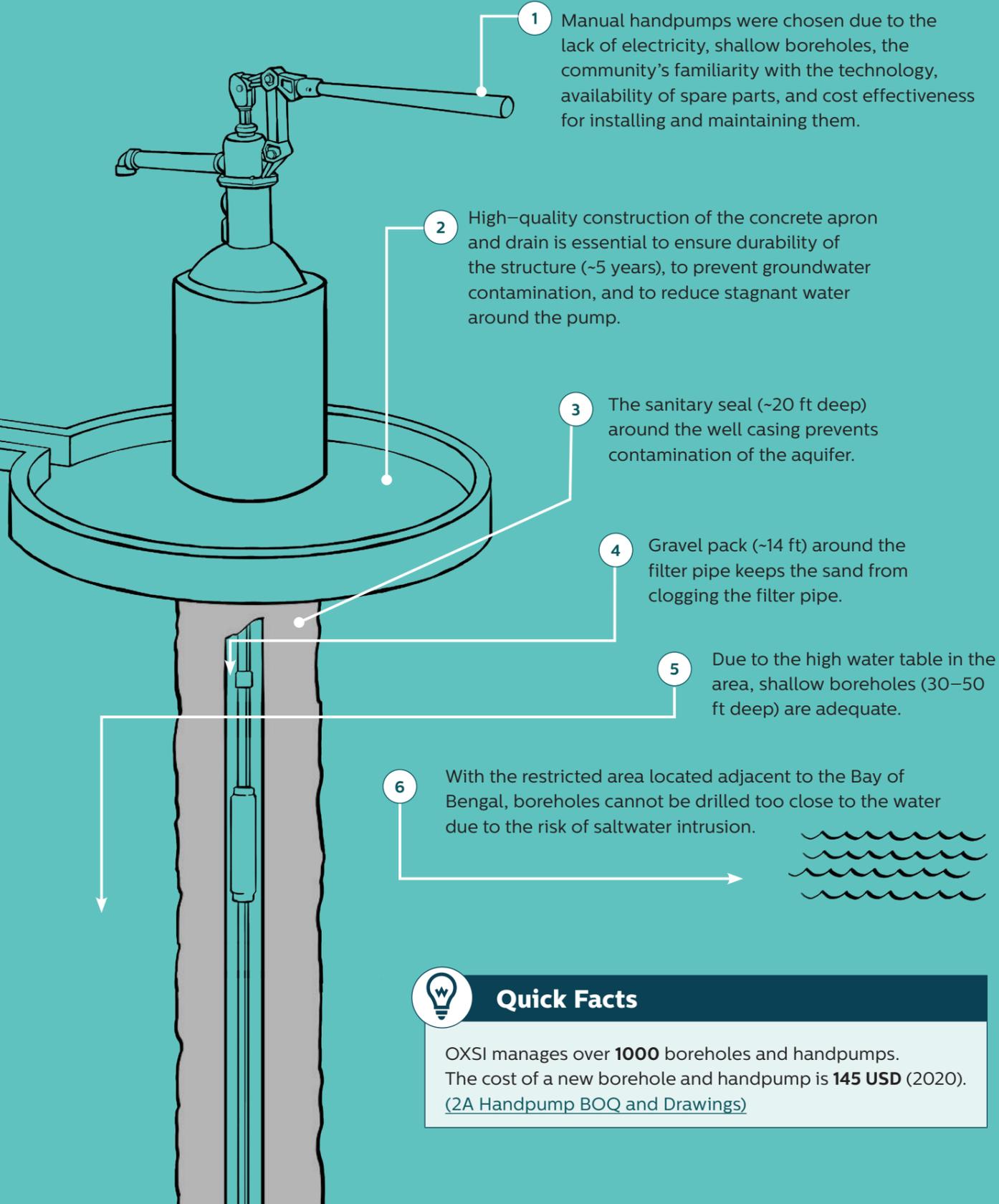
C2. Water

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2.1 Handpump Design and Construction

Design Considerations



1 Manual handpumps were chosen due to the lack of electricity, shallow boreholes, the community's familiarity with the technology, availability of spare parts, and cost effectiveness for installing and maintaining them.

2 High-quality construction of the concrete apron and drain is essential to ensure durability of the structure (~5 years), to prevent groundwater contamination, and to reduce stagnant water around the pump.

3 The sanitary seal (~20 ft deep) around the well casing prevents contamination of the aquifer.

4 Gravel pack (~14 ft) around the filter pipe keeps the sand from clogging the filter pipe.

5 Due to the high water table in the area, shallow boreholes (30–50 ft deep) are adequate.

6 With the restricted area located adjacent to the Bay of Bengal, boreholes cannot be drilled too close to the water due to the risk of saltwater intrusion.



Quick Facts

OXSI manages over **1000** boreholes and handpumps. The cost of a new borehole and handpump is **145 USD** (2020). [\(2A Handpump BOQ and Drawings\)](#)

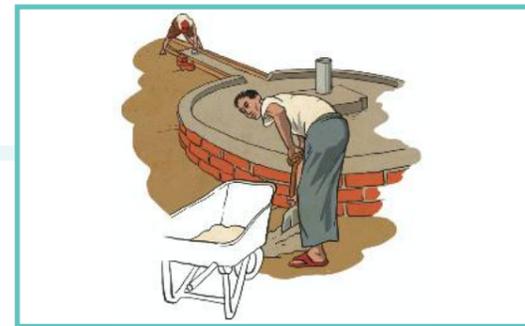
Overview of Construction Process for Hand-Drilled Boreholes



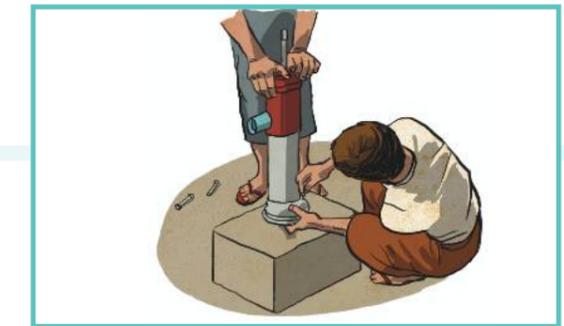
The team fills a 6" PVC pipe with water, covers the top, and pushes downward while twisting; this creates the pressure needed to drill down through the soft soil. They attach another PVC pipe to the first one and continue this process until the hole is approximately 40 ft deep.



The team installs the filter pipe, casing pipe, and the suction pipe in the hole. They pour in the gravel pack, a layer of clay, and the cement grout sanitary seal to fill the gap between the outside of the casing pipe and surrounding soil.



The team constructs the handpump pillar, borehole apron, and borehole drainage. While constructing the concrete pillar, they install the nuts and bolts to which the handpump will attach. They leave the concrete to dry.



The team installs the handpump and plasters the borehole apron and drainage with cement. The water quality will be tested by the Water Quality team prior to handing over the new handpump to the community.

OXSI Challenges

Due to complex power dynamics in Sittwe camps, OXSI's approach of directly constructing WASH infrastructure without engaging corrupt contractors sometimes led to blockages of new construction by camp leaders.



OXSI Solutions

Continuous dialogue with key stakeholders to build relationships and provide updates on plans and processes is vital in any WASH programme. OXSI learned to engage with camp leaders, appealing to their desire to improve conditions in camps to push forward the construction of new infrastructure without feeding into established systems of corruption.

OXSI's decision to implement directly instead of contracting out services is explained in more detail in Section 1.3.

2.2 Handpump Monitoring and Major Repairs

WASH programmes should aim to involve communities in WASH service provision in multiple ways, including monitoring infrastructure and reporting issues.

In the OXSI programme, MEAL teams check the status of every handpump each month using a mobile-based functionality monitoring tool ([2B Handpump Functionality Check](#)), but communities can also file a Service Request through the Accountability mechanism at any time to receive a faster response to a problem (see Section 7.2). The MEAL team promotes Service Requests because they demonstrate a sense of ownership and initiative of the community—eventually, functionality checks will be used exclusively for internal functionality tracking and donor reporting rather than for making maintenance schedules.

The definition of functionality may vary in different contexts. OXSI defines a handpump as “functional” if there are no issues with the pump head, pillar, or slab and the borehole produces adequate flow. Each month, following a functionality check, the OXSI construction team receives a list of handpumps that need major repairs and schedules these repairs into their monthly workplan. (Communities handle minor repairs, addressed in the next section.) Borehole major repairs include replacing the casing pipe, replacing the borehole suction pipe, replacing the entire handpump, and repairing the apron slab.

OXSI Monthly Functionality Check

| | |
|--|---|
| <p>Handpump design</p> <p><input type="checkbox"/> blue <input type="checkbox"/> orange</p> <p>Is it functional?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p><input type="checkbox"/> If no, record problems</p> <hr/> <p>Does it need to be maintained?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>If yes, write down what is needed</p> <hr/> <p>Does the apron extend at least 2 ft around the borehole?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> | <p>Apron slab status</p> <p><input type="checkbox"/> bad <input type="checkbox"/> fair <input type="checkbox"/> good</p> <p>Condition of drainage</p> <p><input type="checkbox"/> not present</p> <p><input type="checkbox"/> present and not functioning</p> <p><input type="checkbox"/> present and functioning</p> <p>Stagnant water</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Presence of soak pit</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Soak pit functioning</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> |
|--|---|

OXSI Challenges



OXSI Solutions

In a protracted crisis, multiple organisations may have built water infrastructure of varying designs and standards over many years. In the Sittwe camps, organisations imported and installed handpumps for which spare parts cannot be found locally (the “blue pumps”). This is a challenge as the handpumps break and OXSI cannot repair them. In addition, many of the “non-OXSI” boreholes are not built correctly and frequently experience issues such as pumping up sand or discoloured water. OXSI does not have the capacity to regularly monitor, repair, and test each of these boreholes and handpumps.

WASH agencies must have a clear strategy for taking over infrastructure built by other agencies and communicate clearly with camp leaders, communities, and with other service providers about how monitoring and repairs will be handled. OXSI monitors and repairs only OXSI-managed boreholes, which are clearly labelled, and spreads awareness for residents to use only these boreholes for drinking and cooking. As the imported handpumps break, OXSI gradually replaces them with local handpumps and ensures that spare parts are always available. OXSI also advocates within the WASH Cluster for other agencies to monitor and test the boreholes they have drilled, as well as to use a standard design for boreholes to avoid common design problems.

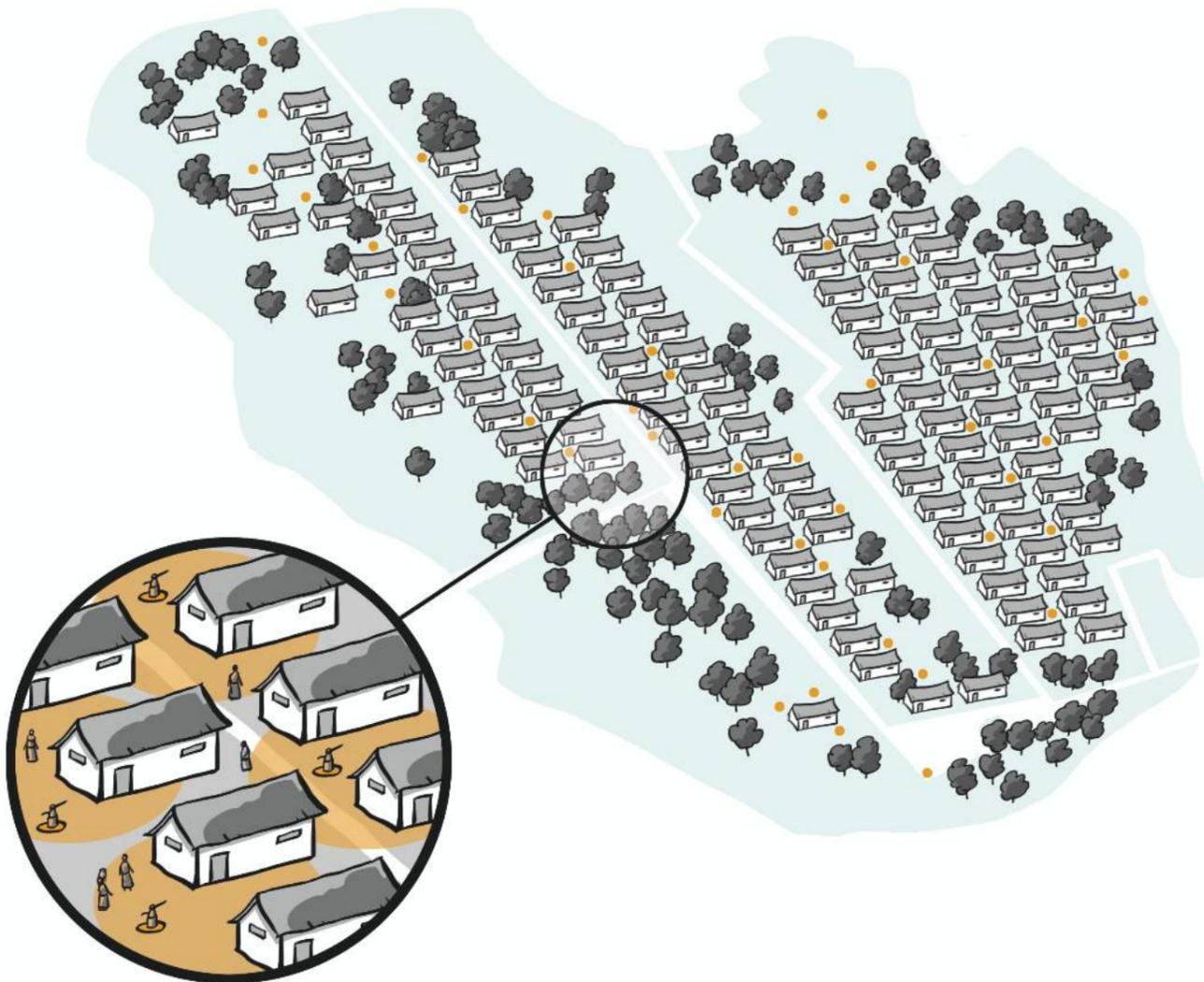
2.3 Handover and Minor Repair Training

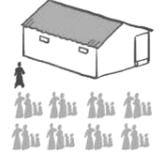
In addition to engaging women and men (and where appropriate, girls, boys, the elderly, and people living with disabilities) in designing, building, repairing, and maintaining WASH infrastructure, a process of “handing over” new infrastructure to users is important to increase the community’s sense of ownership, as well as to communicate that the new infrastructure is ready to use.

However, forcibly displaced families grouped into artificial “communities” are unlikely to feel the same sense of ownership over infrastructure that they might have at home. During the handover, communities and WASH agencies should agree on roles and responsibilities so that communities feel engaged but not over-burdened by caring for WASH infrastructure.

While OXSI handpumps are public and available to all, the closest residents (about 20 households) will be most likely to use a new handpump and agree to take responsibility for it during the handover ceremony ([2C Handpump Handover Certificate](#)). The community’s responsibilities involve keeping the area around the borehole clean, conducting minor repairs, reporting theft to CMCs, and reporting major repair needs to OXSI through Service Requests. OXSI takes responsibility for training, providing spare parts for minor repairs, monthly monitoring, water quality testing and follow up, and major repairs.

The OXSI construction team holds trainings once a year to teach community members how to conduct minor handpump repairs. The Community Mobilisation team invites one female and one male representative from each longhouse to the training, although everyone is welcome to join. During the training, the construction team explains all the tools they will need and how to replace each part included in the list of materials. The participants then practice using the tools and changing the parts. They are also informed of the procedure to swap old parts for new parts and borrow tools from any OXSI office. Minor repairs conducted by communities include replacing the outlet PVC pipe, replacing missing bolts and nuts that hold the handpump together, and replacing the handpump arm and handle.




 Each longhouse
 Up to 10
 households
 1 Longhouse leader


 Longhouse
 Borehole

Groups of shelters around a borehole are responsible for repairs. Part of Dar Paing Camp, Sittwe.



Focus on equity – gender, protection, and inclusion

It remains difficult to engage women in infrastructure repair because it is still not widely accepted as “women’s work” in many places around the world. By encouraging one male and one female representative from each longhouse to join the minor repair training, OXSI has raised the percent of female participants who volunteer for the trainings to 15%. Women are rarely seen conducting minor repairs on handpumps, but they participate in minor repairs by requesting spare parts from the offices.

| OXSI Challenges | OXSI Solutions |
|---|--|
| The looting of WASH infrastructure is common practice when it is known that agencies will replace stolen parts to repair infrastructure. OXSI’s system of providing spare parts for minor repairs opens the door to theft of handpump parts, particularly for the repair of handpumps that are not managed by OXSI. | Raising awareness about the value of public hand-pumps that WASH agencies actively monitor, repair, and test helps to reduce looting. To further deter theft, OXSI also informs communities that a stolen part must be brought back before a repair can be done. |

2.4 Water Quality Testing

To ensure delivery of high-quality water, WASH agencies should test water regularly.

Local conditions and the source and treatment of water all contribute to determining the tests necessary, but the minimum recommendation is to test for thermotolerant coliforms and turbidity, as well as pH and free residual chlorine if water is chlorinated.

In the Sittwe restricted area, WASH partners previously distributed household-level filters, which had a short lifespan and high breakage rate and later showed inconsistency in providing clean water. Data from years of water quality testing in the area showed that contamination was incredibly low in boreholes and tended to occur at the household level or between the borehole and household. As a result of this information, OXSI implemented a new water quality strategy for this programme with a focus on testing boreholes and households, preventing contamination, and promoting safe water chain behaviours.

The OXSI WASH programme established a Water Quality Testing (WQT) laboratory in the Oxfam office in Sittwe in late 2017. The lab analyses samples collected in camps and villages for the following: E.Coli (all OXSI-managed boreholes and a sample of households), specific conductivity and pH (all OXSI-managed boreholes), and arsenic (5–10% of OXSI-managed boreholes in each location). Turbidity testing is not needed for the clear water produced from the

groundwater sources in Sittwe. OXSI conducts tests twice per year, during the dry season and the rainy season ([2D Water Quality Sampling and Testing SOP](#)).

OXSI temporarily “closes” boreholes that fail the microbiological test (>10 CFU / 100 mL) until the construction team takes remedial action to reduce contamination and treat the borehole ([2E Shock Chlorination SOP](#)) and a follow-up test confirms the water is clean. The Water Quality team also tests a sample of households, and the Community Mobilisation team conducts household visits as a follow up for all failed household samples (see Section 2.5).

Testing over several years prior to the start of the programme indicated that arsenic was not a common problem in the area; however, a few borehole samples showed arsenic levels exceeding the Myanmar standard in 2019. In response, OXSI set up a response protocol, increased testing from 5% to 10% of all OXSI boreholes, and advocated to the WASH Cluster for comprehensive arsenic testing. When a borehole sample exceeds the Myanmar standard of 50 ppb, OXSI dismantles the handpump permanently so it cannot be used, and another water source is recommended or a new borehole drilled for the users of the closed borehole.

| OXSI Challenges | OXSI Solutions |
|--|--|
| <p>In a protracted crisis where multiple organisations and individuals have built infrastructure over many years, the current WASH actor may not be able to sufficiently manage all pre-existing WASH infrastructure. OXSI focuses on maintaining, testing, and rehabilitating only the boreholes handed over from the previous WASH actor, but receives many requests to test boreholes not built or managed by a recognised WASH agency.</p> | <p>WASH agencies must communicate clearly with communities about the services they provide and areas they cover. In the Sittwe restricted area, OXSI focuses on testing only OXSI-managed boreholes, which are clearly labelled, and spreads awareness for residents to use only these boreholes for drinking and cooking. Communities use water from non-monitored boreholes for other water needs, such as laundry and cleaning.</p> |
| <p>Collection of water quality data is among the most difficult to digitise, because information is entered both in the field and in the laboratory on different days.</p> | <p>WASH agencies should not avoid digitising data collection even if the entire process cannot be digitised. OXSI water sample collectors use tablets to record information in the camps, which lab officers in Sittwe town download and combine manually with the test results. Launching this process required creative solutions for transporting and charging tablets and training staff but collecting even half of the data digitally saves time, improves data quality and analysis, and significantly reduces paper use.</p> |

Escherichia Coli

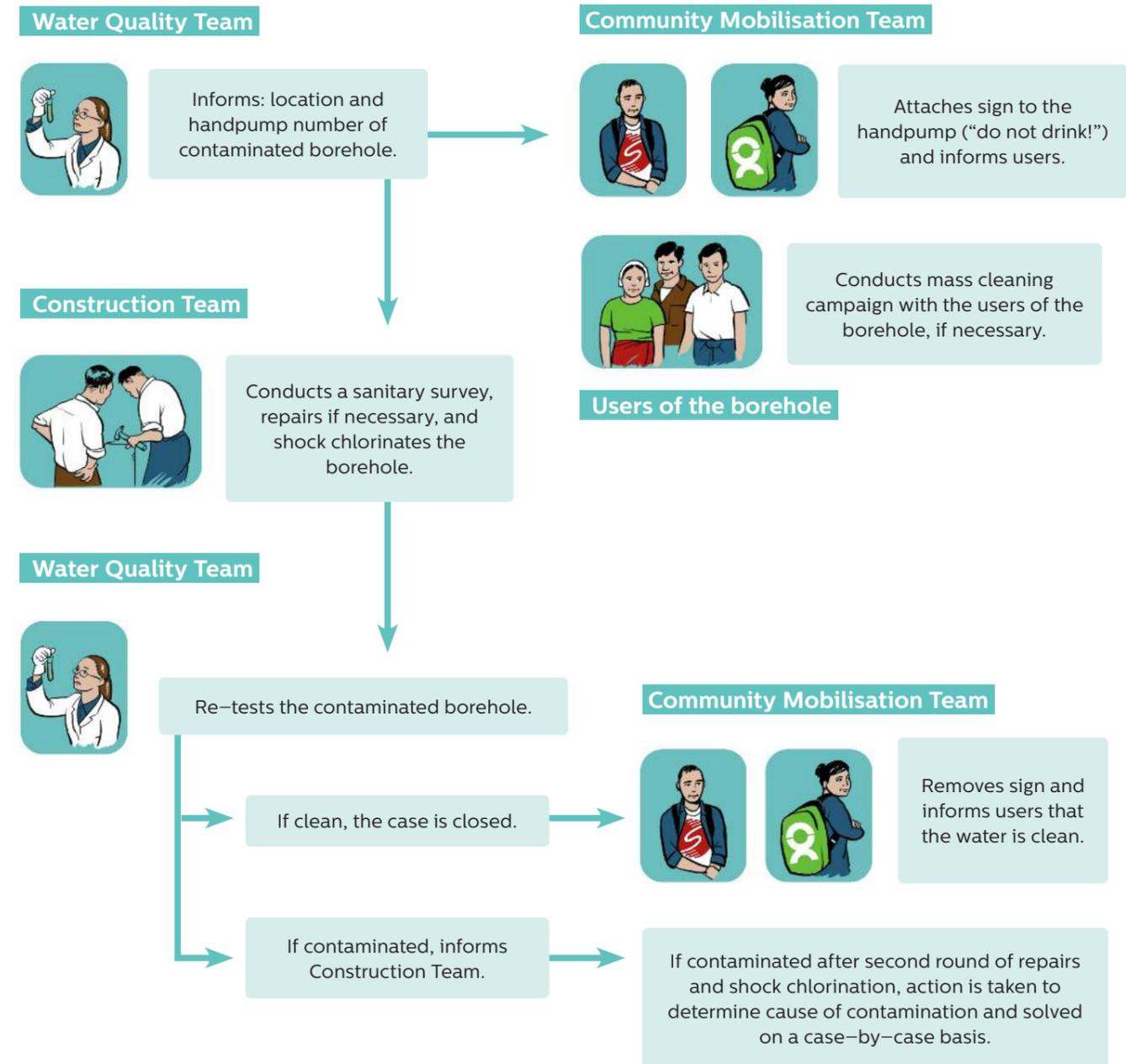


Arsenic

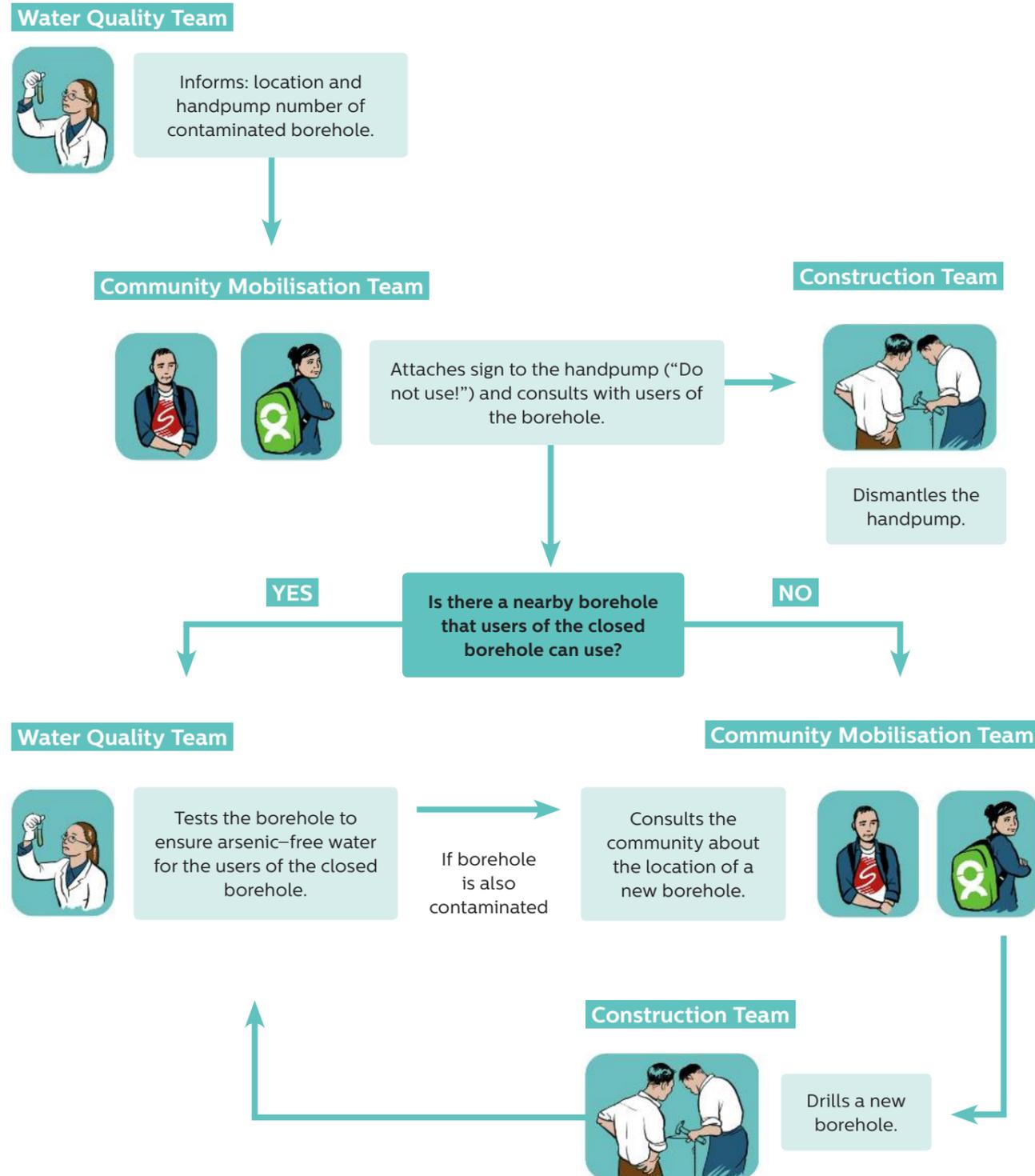


Signs placed on the contaminated handpump instruct users not to use the water for drinking or cooking; in case of arsenic contamination, the handpump is completely dismantled.

This flowchart shows the actions taken and communication between and among teams when a borehole sample fails the **microbiological** test.



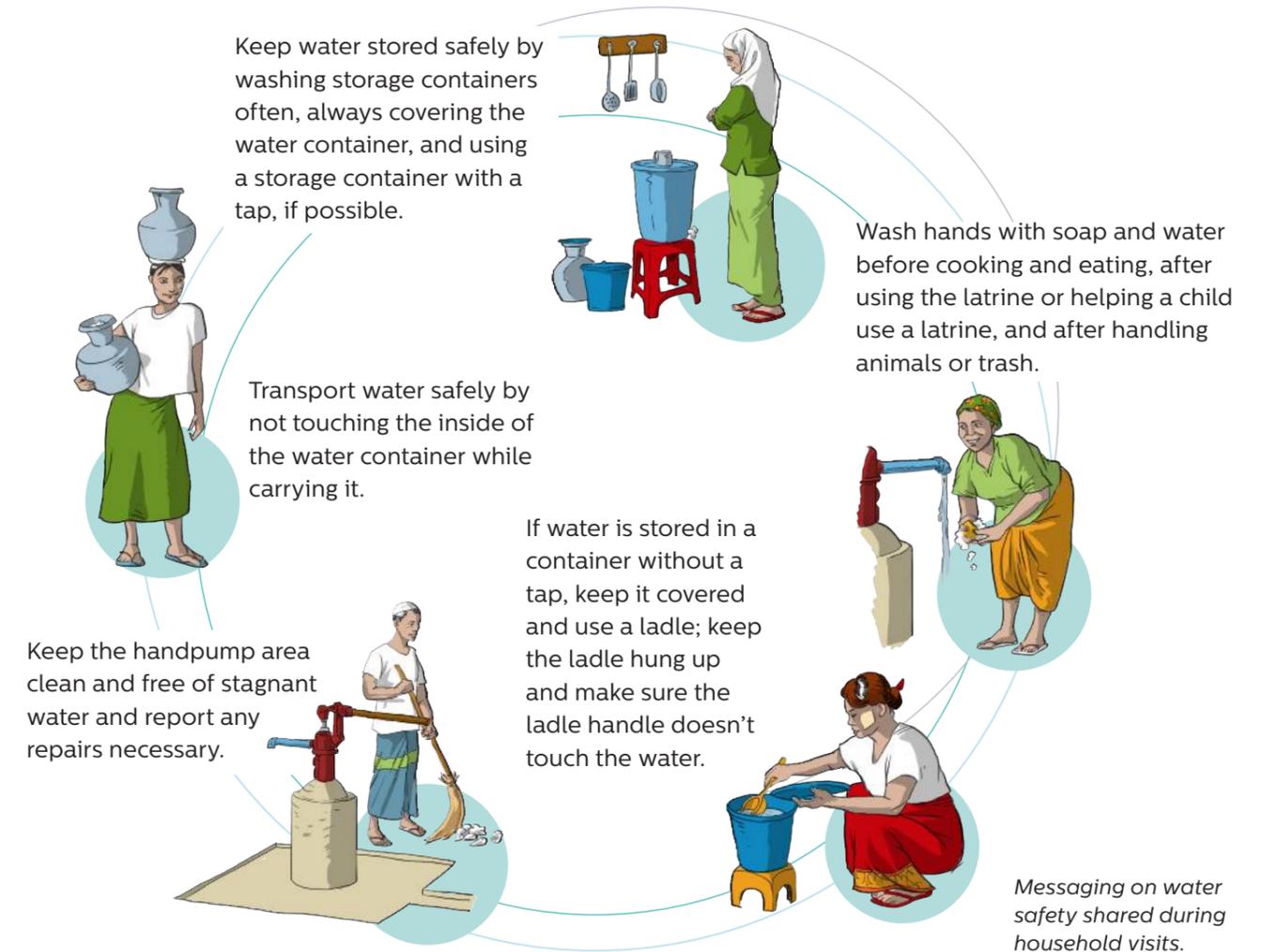
This flowchart shows the actions taken and communication between and among teams when a borehole sample fails the **arsenic** test.



2.5 Targeted Household Visits

Feeding back to the community the results of water testing is important to build and maintain trust, especially after relatively intrusive household water sampling.

When a household water sample fails, the Community Mobilisation team visits the family to share the results and recommend behaviour changes to minimise the risk of contaminating drinking water when collecting, transporting, storing, and using water. The team shares good practices with the help of the Water Safety Flipchart to ensure that household members have specific knowledge for how to improve their water behaviours ([2F Targeted Household Visit SOP](#)).



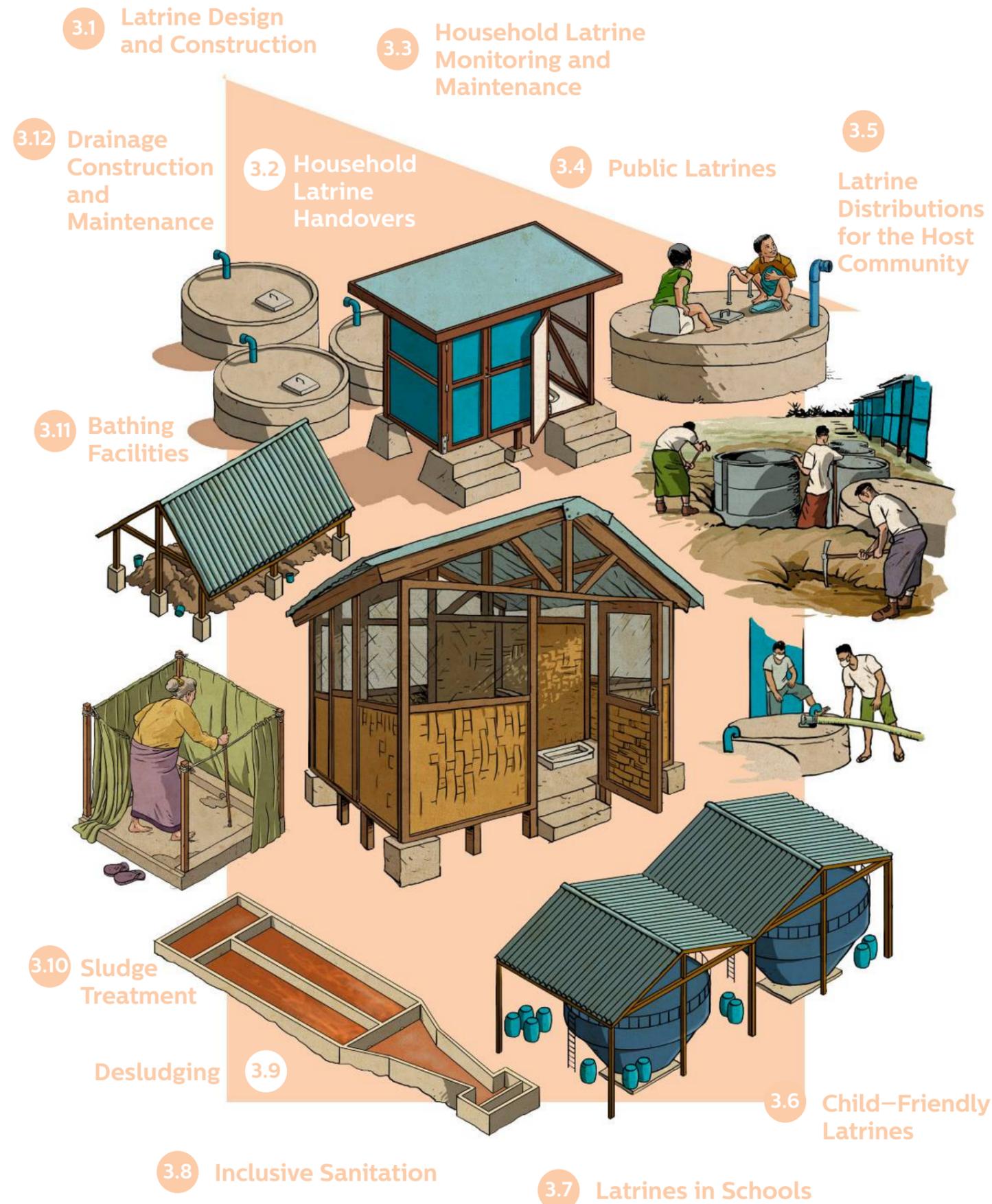
Focus on equity – gender, protection, and inclusion

Unintentionally, the team meets primarily with women during targeted household visits, because women are both more likely to be at home during the day and to claim responsibility for handling water in the household. Female Community Mobilisation staff are essential to conduct these household visits, because women often turn away male staff if another male is not at home.

C3. Sanitation

Containment, collection, transport, treatment, and disposal of human excreta is a top WASH priority, as an environment free of human waste is essential for people’s dignity, safety, health, and well-being. All people should have access to appropriate, safe, clean, and reliable toilets. Containment of human excreta in a toilet/latrine creates an initial barrier to excreta-related disease by reducing direct and indirect routes of disease transmission. Containment should then be integrated with collection, transport, treatment, and safe disposal to fully address public health risks and minimise environmental impact. This chapter covers all of these steps as implemented in the OXSI WASH programme.

Although the focus is usually on excreta management, sanitation also encompasses controlling vectors of disease through solid waste management and surface water drainage. The latter is also included in this chapter, while the former is addressed fully in Chapter 6.



3.1 Latrine Design and Construction

Design considerations

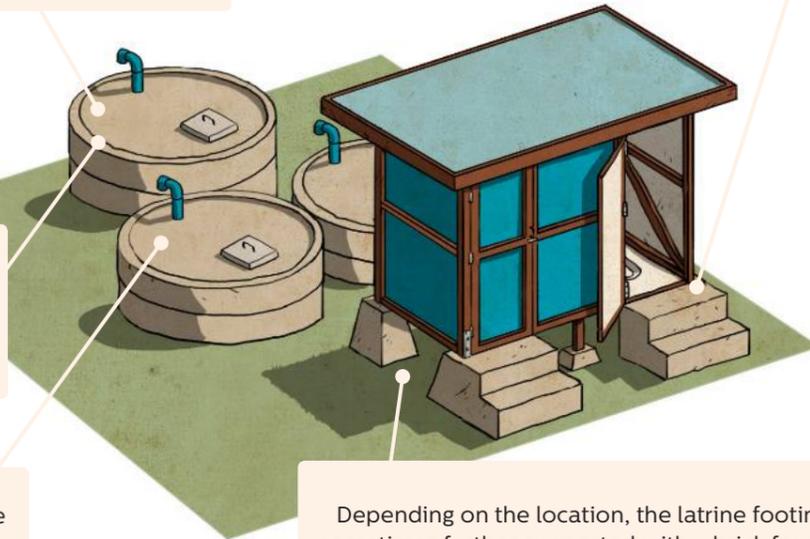
For every two latrines, two pits collect sludge and liquid waste spills over to a connected soakaway pit, where it gets slowly absorbed into the surrounding soil. This design mimics a typical two-compartment septic tank.

Because the Sittwe area is prone to flooding during the rainy season, the latrine and latrine pits must be elevated, with steps required to access the latrines.

No-fines concrete is used to construct soak pits to increase infiltration on the sides of the pits.

Latrine pits are offset to ease desludging and maintenance.

Depending on the location, the latrine footings are sometimes further supported with a brick foundation, which keeps the latrine steadier in case of erosion.



The OXSI latrine design, validated and adopted by the Myanmar WASH Cluster, performed incredibly well in a strong storm in 2017 when over 2,500 latrines in Sittwe camps sustained major damage. Nonetheless, OXSI continued to strengthen resistance of latrines to storms and cyclones through small changes, highlighted on the next page.

The OXSI latrine design applies to single latrines, double latrines (pictured), or 4-door latrines. The different designs have unique benefits and drawbacks. The single latrines offer more privacy for users because they have no shared walls and are easier to hand over as sex-segregated latrines (see Section 3.2). However, single latrines require more materials per latrine door, take longer to build, and take up more space, a precious resource in the Sittwe camps. Due primarily to these Value for Money considerations, OXSI typically builds only double or 4-door latrines. Double latrines offer a compromise between cost and material use, while still making it feasible to hand them over as sex-segregated latrines, if communities prefer this option. The main advantage of the 4-door latrines is that they take less space per latrine door. The 4-door latrines use about the same amount of materials as two double latrines, because they require twice the number of pits as the double latrines.



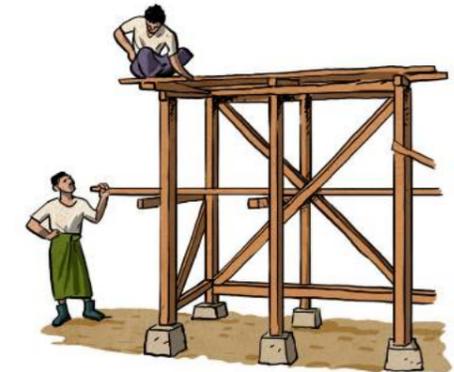
Quick Facts

OXSI manages over **3,600** latrines. On average, each household latrine is used by 20 people. The cost of a new 2-door latrine block is **approximately 1,000 USD** (2020).
([3A 2-Door Latrine BOQ and Drawings](#))

OXSI Construction Tips for Latrines in Cyclone-Prone Areas:



1. Large footings increase resistance to overturning during storms. Cast each footing with a metallic anchor strap that will later be bolted to the hardwood of the superstructure.



2. Include horizontal and diagonal bracing when constructing wall framing with hardwood to prevent the structure from racking.



3. Join the roof rafters to the structure with hurricane straps to prevent uplifting. A roof angle of 3° (5%) is optimal to increase resistance to overturning. Reduce CGI sheet overhang and bend 90 degrees around the wooden roof beam to increase resistance to uplifting when wind hits the front of the latrine.



4. Attach concrete steps to the latrine structure using cast-in metal anchor rods, which increase resistance to overturning when wind hits the front of the latrine.



5. Include metal guy wire from the latrine pits to the back of the latrine structure to increase resistance to overturning when wind hits the back of the latrine.



6. Coat the hardwood with varnish to protect it from termites and rain.

3.2 Household Latrine Handovers

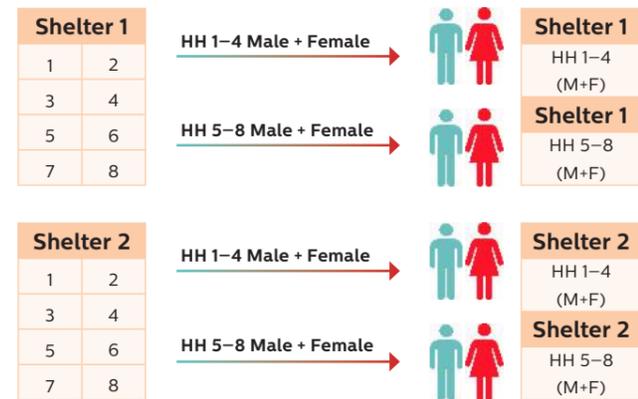
During an emergency, WASH agencies tend to construct public latrines, but as an emergency becomes prolonged, it may be possible to “hand over” latrines to households to monitor, clean, conduct minor repairs, and report major repair needs.

In the Sittwe restricted area, following consultations after the displacement, WASH agencies handed over latrines as “household latrines”, each one shared by men, women, and children from four households. Communities generally preferred the household shared model because it increased privacy, reinforced ownership, and reflected the practice of family-owned latrines in the communities of origin. In one small camp, the latrines were sex-segregated as well as shared by households.

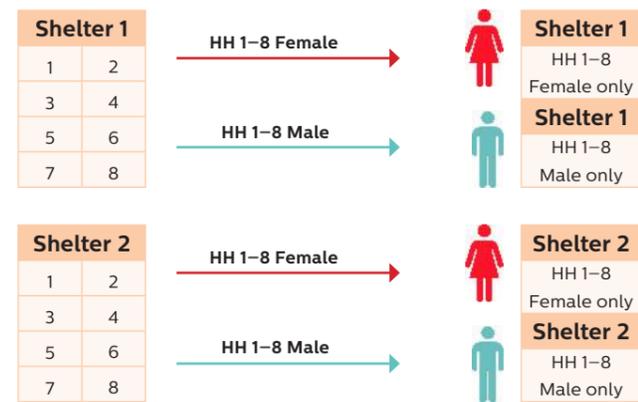
However, in some situations, women and girls reported not feeling comfortable sharing latrines with men from their families or neighbouring families. As part of OXSI’s goal to mainstream gender and protection in all WASH activities, the Community Mobilisation team piloted a new consultation process to let clusters of households decide how to separate their shared latrines. During this process, men and women from two shelters have separate discussions and look at different options of latrine sharing, decide their preferred scenario, then come together to make the final decision together. OXSI staff facilitate the process the first time, but encourage the two shelters to come together and decide if any changes are needed to the latrine sharing model at any time. For some groups of households, this process led to the decision to sex-segregate the family-owned latrines (Scenario 3), while other households preferred to stay with the current family-owned, non-sex-segregated scenario (Scenario 1). The decision is made entirely by the group of households sharing the latrines (3B Household Latrine Handover FGD).

Three scenarios for two shelters of eight households each to share two double latrines.

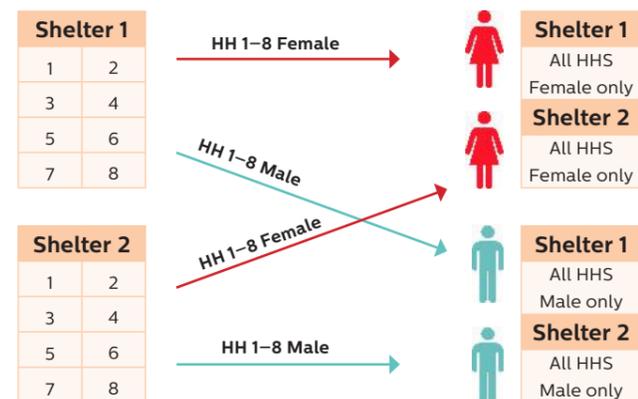
SCENARIO 1 (Non-segregated, one latrine block for one shelter)



SCENARIO 2 (Segregated, one latrine block for one shelter)



SCENARIO 3 (Segregated, two latrine blocks for two shelters)



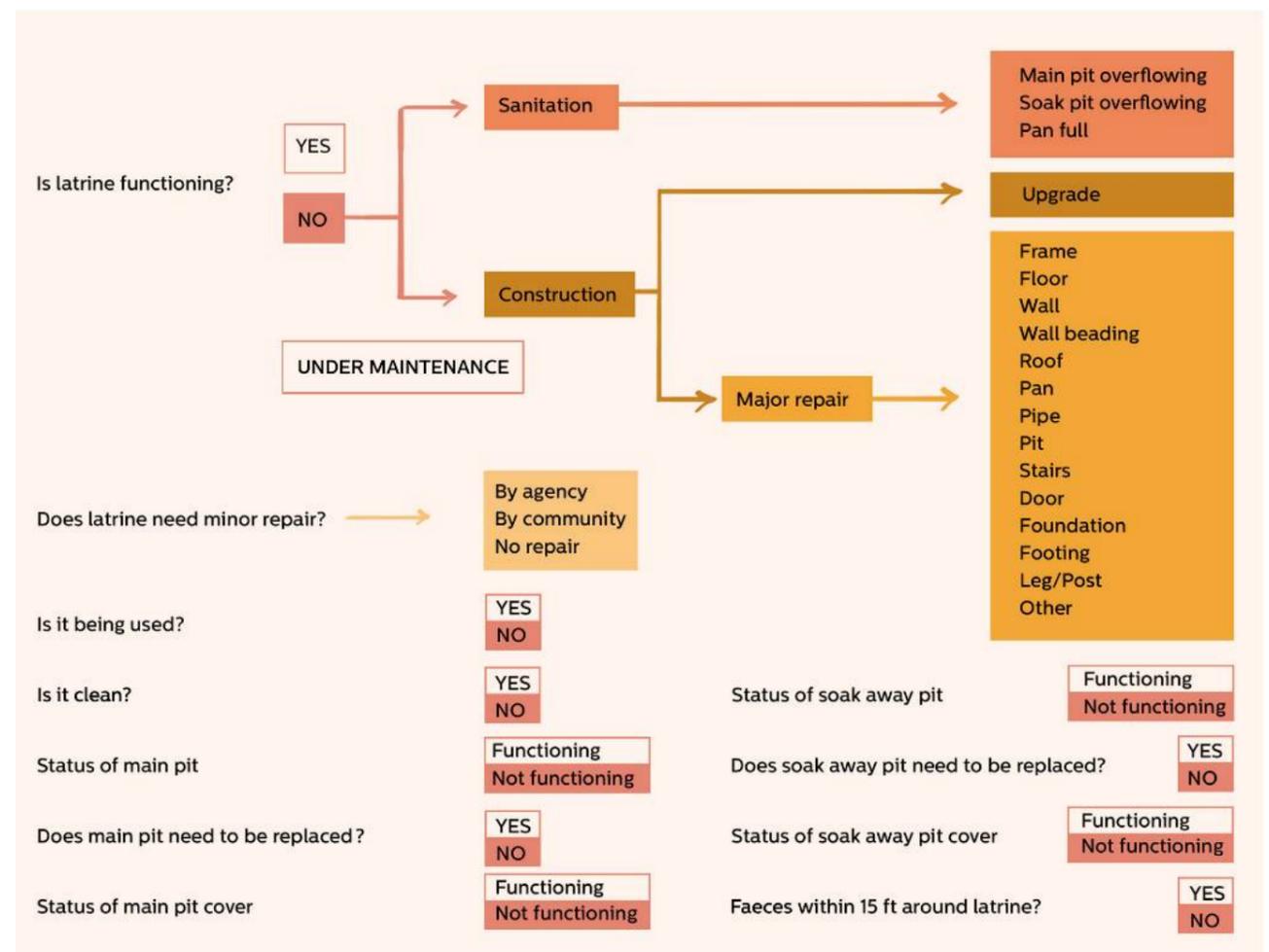
3.3 Household Latrine Monitoring and Maintenance

As with all infrastructure, WASH agencies must have a plan for monitoring and maintaining latrines, involving the community where feasible.

In addition to receiving service requests for infrastructure through the Community Feedback Mechanism, CFM (see Section 7.2), the OXSI MEAL team conducts a thorough monthly functionality check of all latrines managed by OXSI, and using the results, the construction team creates their workplan to repair the latrines. Because of this, the functionality check is quite detailed, which allows the construction team to know exactly which parts and tools are needed for repairs (3C Latrine Functionality Check).

Again, the functionality of infrastructure may be defined differently in different contexts. In Sittwe camps, OXSI defines a functional latrine as one that people are able to use, which means it provides privacy, protects from the elements, and the pipes and pits are in good condition. A latrine is considered non-functional if the pit is full or overflowing, or if the pipes, pits, or superstructure are broken to the point that users cannot safely and privately use the latrine.

OXSI’s Monthly Functionality Check:



In densely-populated camp settings, and especially if WASH agencies must build semi-permanent infrastructure, latrines may need frequent repairs. OXSI conducts regular maintenance of latrines, using the results from monthly functionality checks and service requests received through the CFM to make construction workplans.

Pilot

OXSI piloted an additional maintenance system to reduce response time for service requests, contribute to the overall decentralisation of infrastructure management, and increase community ownership of latrines. Continuing to use the OXSI Community Feedback Mechanism, which collects service requests (see Section 7.2), OXSI trained Community Construction Leads to conduct common minor repairs in the sector of the camp where they live. The Community Construction Leads received a specific list,

put together by the SI construction team, of latrine repairs needed. They requested materials and tools from OXSI offices for the work. Rather than paying the Construction Leads as staff or daily workers, they were paid a fixed rate for each specific maintenance task completed. The OXSI construction team supervised or checked the final results to ensure high quality of work before payment, and then closed the cases in the CFM. [\(3D Community Construction Leads\)](#).

OXSI intended that as Community Construction Leads worked on more latrines, the community would receive their contact information to contact them directly in case of problems. This would allow a slow transition of communities handling minor latrine repairs directly, without OXSI's involvement. However, the Community Construction Leads still need to ensure that the requested repairs are entered into the CFM, for accountability purposes.

3.4 Public Latrines

In addition to household and school latrines, and especially if these are handed over to households to manage, camps may require public latrines in markets, community centres, and/or places of worship.

In the Sittwe WASH programme, because OXSI does not pay for latrine cleaners and hands over latrines to households to manage, it was vital to ensure that the communities would maintain public latrines. OXSI worked together with mosques to agree on a strategy to build latrines for mosque compounds – while OXSI provided materials, religious leaders gathered volunteers for the construction and agreed

to maintain the latrines after completion. OXSI's experience constructing public latrines in this way showed that linking active community groups around a common cause was effective to increase engagement and ownership. As with child-friendly latrines, (see Section 3.6) communities can submit a service request for major maintenance through the CFM, but OXSI does not regularly monitor or repair the public latrines.

| OXSI Challenges | OXSI Solutions |
|--|---|
| For the public latrines in mosques, OXSI did not distribute materials until religious leaders made a commitment that they had enough volunteers (and in some cases, money to pay technical workers) to build the latrines. This caused long delays in some situations. | Community involvement in infrastructure construction undoubtedly takes more time, but it is worth it to increase ownership. WASH agencies need to build in extra time into the programme schedule and check in frequently with communities to see if they need further support. |

3.5 Latrine Distributions for the Host Community

In certain situations, WASH agencies can distribute materials for people to build their own latrines, which strengthens skills and ownership and allows for more independence and decision-making. This is more common in development programmes than humanitarian.

In villages in the Sittwe restricted area, the host community faces similar challenges as people living in camps, such as lack of freedom of movement and access to income-generating activities and adequate health and education services. However, people living in villages have their own homes, often own land for growing food or raising livestock, and have private latrines and handpumps. Many of these households took in displaced friends or extended family, which placed additional burden on WASH infrastructure.

As years went on in a protracted emergency, infrastructure significantly deteriorated and many could not afford to replace latrines. After an assessment to look at the state of village latrines and discussions with village leaders, OXSI supported the families hosting displaced individuals by distributing materials for latrines, with the goal of no more than 20 people sharing one latrine. OXSI formally handed over the latrine materials [\(3E Latrine Handover for Host Community\)](#) and families made their own decisions about the

location of their latrines, while adhering to the OXSI design for safety reasons. OXSI lent any tools needed for the construction, and the technical team of SI provided daily supervision to ensure safe construction, but the families took responsibility for transporting the materials to their homes and providing labour to build the new latrines. The households also clean, maintain, and desludge their latrines, as OXSI does not carry out functionality checks or repairs in villages.

After distribution, the MEAL team conducts Post Distribution Monitoring (PDM) to determine if the families have completed latrine construction, and are using, maintaining, and cleaning the latrine. The PDM also analyses how people managed the construction of the latrine – for example, if they had to hire labour to help them, and if so, how they paid the labour. Based on the PDM data, the Community Engagement Team engages the community to resolve any issues.

| OXSI Challenges | OXSI Solutions |
|--|--|
| Some households did not feel confident enough to build infrastructure by themselves, and because they do not have disposable income, traded valuable materials to pay skilled workers, which meant compromising the design of the latrine. | When materials are distributed directly for communities to construct infrastructure that requires technical expertise, WASH agencies should provide construction support to communities so that they can construct the infrastructure without the need to hire workers and give away part of the materials as payment. |
| Power dynamics between some households led to a single household primarily using the latrine built for a cluster of households. | WASH agencies must clearly communicate about shared infrastructure to ensure everyone is benefiting from it. For the village latrine distribution, OXSI asked each household to sign a Memorandum of Understanding (MoU) that they would ensure fair use and responsibility of the latrine. |

3.6 Child-Friendly Latrines

Children, especially those under five years old, are more vulnerable to water and sanitation related diseases and may require adaptations in the design of WASH facilities to use them safely and comfortably.

WASH agencies must consult children of various ages as well as caretakers to understand children's needs and preferences. Although changing latrine use behaviours can rarely be accomplished with infrastructure alone and needs to be paired with a systematic behaviour change programme (see Section 4.8), removing barriers that children face in accessing facilities is an important first step to create an enabling environment for behaviour change.

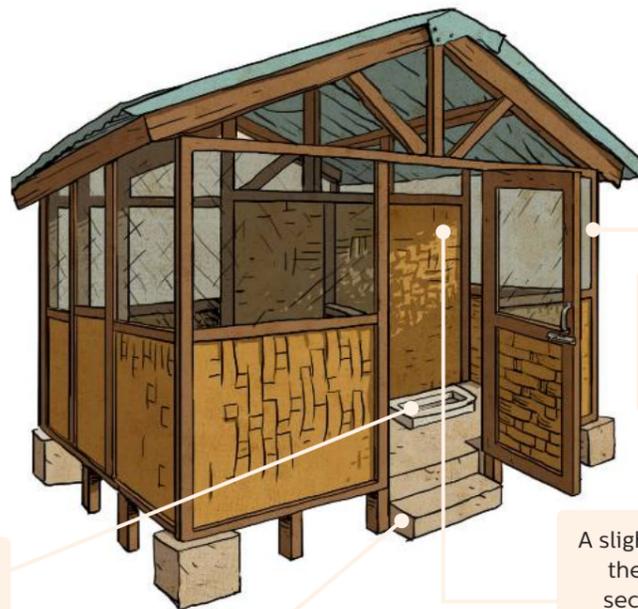
In the Sittwe WASH programme, OXSI learned that children under the age of five years old could not use the household latrines, and even children under 10 preferred to defecate outside. Through consultations with children, supervised by their parents, OXSI learned that children faced multiple barriers to using the latrines: tall stairs, dark latrine rooms, wide squat pans, and locked latrines. In addition, adults did not encourage children to use the latrines, and did not trust children with the keys.

Design considerations

Since young children consider using a latrine together a social activity, they wanted multiple children to be able to use it at once—the final design has four pans.

Children painted the latrines with bright colours during the handover ceremonies

The latrine pit is directly under the latrine pans. SATO pans, a patented plastic pan equipped with a flap door that closes up after each drop, ensured vector control.



Just one small step up to the latrine (the latrine still had to be elevated to avoid flooding).

Children preferred half walls for light and air to get into the latrine

A slightly taller wall separates the latrine into two, one section for boys and one section for girls

(3F CFL BOQ and Drawings)



Focus on equity – gender, protection, and inclusion

Adapting WASH facilities so children feel comfortable using them is a key child protection standard, and must be done carefully in consultation with children. Participation of children should always be transparent, voluntary, inclusive, and supported by adults from the community. Staff conducting activities with children should receive special training on child protection, which can usually be arranged by protection agencies.

Pilot 1 – Child friendly latrines

OXSI launched a process for designing child-friendly latrines (CFLs) for children under the age of 10 to increase child latrine use and curb open defecation. In two pilot camps, OXSI conducted a three-session participatory design process through games with children aged 6–10 (supervised by teachers or parents) that asked simple yes/no questions to help with the design process. The second part of the process involved the children creating drawings of latrines, voting, making modifications, and eventually deciding on a design for OXSI to pilot in two camps. The children also suggested locations where they would like to have the latrines installed, most of which were close to Temporary Learning Spaces (TLSs) and play areas. OXSI then verified the locations and sought approval from camp leaders and teachers.

The OXSI MEAL team monitored if the CFL pilots improved open defecation (OD), and found that there did not appear to be significant changes to OD prevalence in the immediate vicinity of the CFLs. Many children used the new latrines, but it remains unclear if these children typically defecated in the open or if they simply switched from using adult latrines to using the CFLs.

After another round of consultations with children in the pilot camps, OXSI made some minor changes to the CFL design, such as including a lock for CFLs to be locked at night, and scaled it up in the remaining camps. OXSI organised handover ceremonies for the child-friendly latrines, attended by teachers, children, camp leaders and other community members. The children painted the latrines in bright colours to finalise the handover process. OXSI also provided latrine cleaning kits to the nearby TLS or households who agreed to take care of the latrines, and facilitated games and skits with children to teach them how to use the latrines.

Pilot 2 – Potty Hubs

OXSI could not meaningfully consult children under the age of five, but observations and consultations with parents and caretakers indicated that young children frequently defecated in the open, because parents typically do not teach children to use latrines until they start school. After years of hygiene promotion sessions, children knew that defecating near

homes and water points was wrong, and OD was most often observed immediately around latrines, especially on top of latrine pits. It was also observed that children went to the latrines to defecate in groups, usually during playtime.

The WASH Cluster and UNICEF engaged a Behaviour Change Lab, 17 Triggers, to use human-centred design to tackle OD in OXSI camps. After observations and rapid field tests, one of the solutions 17 Triggers piloted was the Potty Hub – a solution based on the behaviour that children already practiced of defecating on top of latrine pits. The Potty Hub consists of two different pans (a squat pan and a potty) built onto a latrine pit, so that two children could use each Potty Hub at the same time (3G Potty Hub Drawings).



The Potty Hub consists of two pans, a squat pan and a potty, built directly onto a pit.

The pilot of three Potty Hubs in one OXSI camp proved successful, with high early adoption rates and a decrease of OD in the vicinity. However, OXSI environmental cleaners have to clean the Potty Hubs weekly; since they are public and used frequently, no one in the community wants to take responsibility for cleaning them.

In addition to Potty Hubs, to assist children in practicing safe defecation behaviour, OXSI distributed a child potty for each household. The Community Mobilisation team paired the potty distribution with messaging on proper disposal of potty contents into latrines. This initiative stemmed from the 17Triggers recommendations and formative research results of the RANAS approach, which both showed that OXSI could focus more on teaching parents to potty-train children to reduce OD, as described in Section 4.8.

3.7 Latrines in Schools

In a camp setting, the WASH facilities in schools, clinics, community centres, and other communal buildings may be managed by the agencies operating these buildings, or by WASH agencies.

If managed by WASH agencies, they must consider the specific WASH needs of building occupants. In schools, WASH infrastructure should be child-friendly and appropriate.

In the Sittwe restricted area, as part of its WASH in Schools approach, OXSI built child-accessible hand-washing stations and latrines, not only to provide essential WASH facilities but also to enable children to practice positive hygiene behaviours taught in peer-to-peer educational sessions (see Section 4.2).

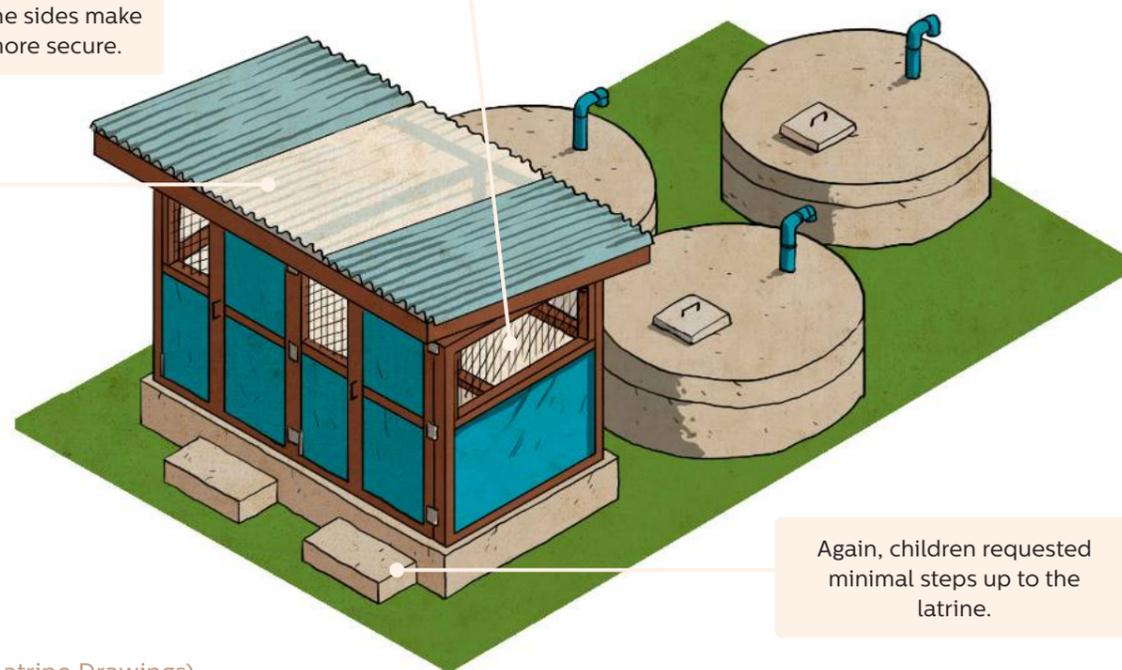
Children from grades 1–5 attend Temporary Learning Spaces (TLS), with each TLS focusing on one or two grades. This allowed OXSI to work with children in a narrow age range at each TLS to understand their specific needs and preferences for latrines. For kindergarten TLSs, OXSI installed the same child-friendly latrines described in Section 3.6. For older children, OXSI worked with children to come up with a more private child-friendly design. The design had small variations at each TLS, depending on what the children requested.

Design considerations

Clear corrugated roofing sheets on part of the roof allows more light into the latrine. CGI sheets on the sides make the roof more secure.

As with child-friendly latrines, some children still wanted the latrine to have a large portion of the wall meshed to allow light and air to get inside.

The school latrines have the same pit design as double household latrines – two pits connected to one soakaway pit.



Again, children requested minimal steps up to the latrine.

(3H School Latrine Drawings)

OXSI does not conduct functionality checks on school latrines, but notifies teachers, the education partner, and community leaders to submit any requests for desludging or repairs through the CFM, (see Section 7.2).

3.8 Inclusive Sanitation

Over one billion people live with some form of disability, and emergencies can result in even higher rates of disabilities due to conflict and lack of access to services.

In addition, almost half of older people (those over the age of 60) have disabilities. WASH infrastructure is designed to quickly and efficiently address the needs of the majority, leaving little space and time for tailored solutions. As a result, people living with disabilities and older people are at a disproportionately greater risk of not having adequate access to communal water and sanitation services in humanitarian settings.

Through previous consultations and listening exercises, OXSI learned that the elderly and people with disabilities struggled to use household latrines due primarily to the “one size fits all” design of latrines and the distance from their shelters to the latrines. OXSI’s approach was to involve people with disabilities in meaningful conversations about a tailored solution that would address their specific needs. Prior to engaging with people with disabilities, OXSI hired a consultant experienced in advising on disability rights and gender to conduct a training for OXSI field staff and to assist with the consultations. In an effort to reach people with disabilities, OXSI worked with CMAs, who had collected information in all camps using the Washington Group assessment. With the assistance of the consultant, OXSI organised Focus Group Discussions or households visits to consult all of the individuals who the CMAs identified as needing assistance or their caretakers. The discussions focused on sanitation access, and how participants used (or

did not use) household latrines. OXSI asked participants what would make it easier for them to access latrines or to have a dignified sanitation solution in their home. For these discussions, OXSI procured sample items, such as commodes, crutches, potties, and bedpans to show participants some options for assistive devices. Each participant chose an assistive device, which was then tailor-ordered based on their measurements and delivered to their household.

Pilot – Handles in latrines

As adults get older, they may experience difficulty in getting up and down from the squatting position when using a squat latrine. Another pilot conducted by 17 Triggers to help small children use latrines had the unintended positive effect of also helping the elderly. The pilot involved placing handles on the outside of latrine pans for children to hold on to while squatting. Children reported that the handles helped them feel more comfortable using adult latrines, and older adults also praised the handles. Able-bodied adults, however, complained that the handles reduced the total space in an already-small latrine. Although the handles were positively received by most, this suggested that these installations need to be agreed upon by all the users of the latrine, which may require more sensitisation efforts for able-bodied adults to realise the difficulties experienced by the elderly, children, and people with disabilities when using latrines.



Focus on equity – gender, protection, and inclusion

WASH agencies must take extra steps to find and consult people with disabilities, who may be quite isolated. When organising FGDs, OXSI reimbursed participants for their travel costs, since many were not able to walk to the office, and took steps to make the venue more accessible. For those who were not able to participate in FGDs, OXSI visited them in their homes.

3.9 Desludging

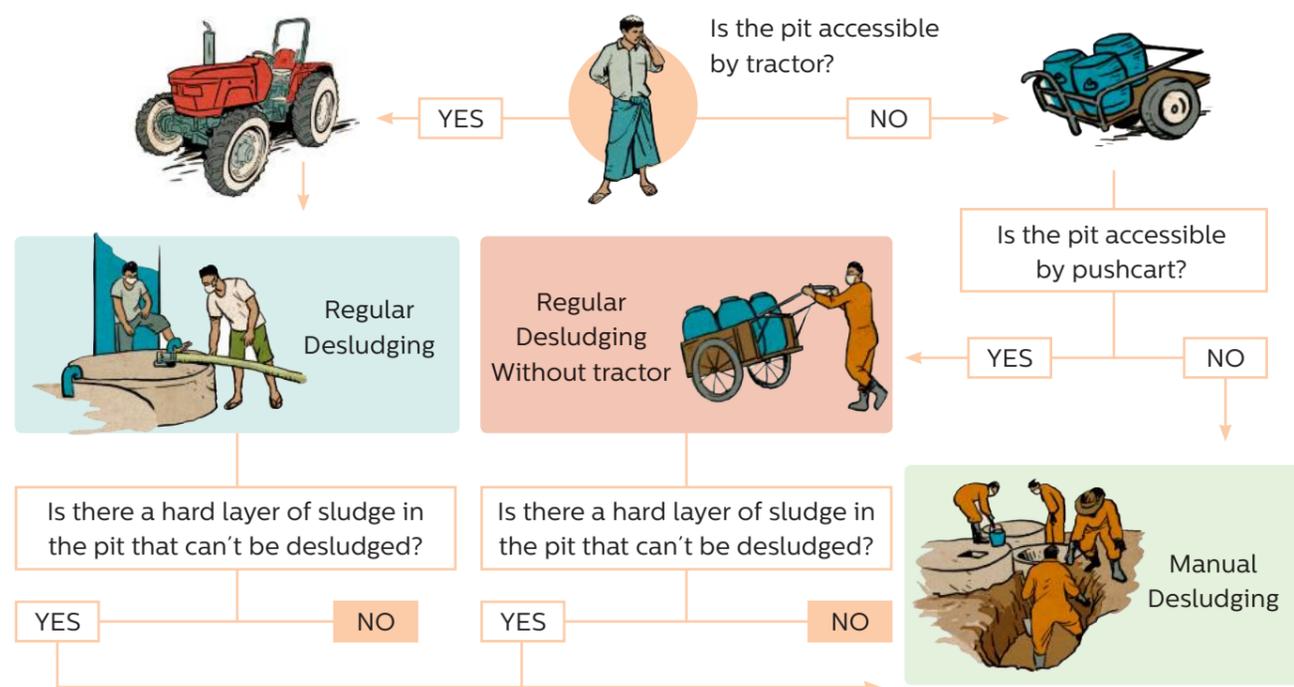
Unless camps have adequate space to relocate latrine superstructures over new pits when latrine pits fill up, WASH agencies need to plan to provide desludging services.

SI provides regular desludging services in all camps. Some of the factors that make desludging challenging and unpredictable in the camps include crowded living conditions, a long rainy season, and a high water table. In addition, WASH agencies over the years built latrine pits of different sizes and designs with different desludging rates. The desludging tractors cannot access all pits, requiring labourers to push carts by hand to access certain areas.

SI has developed solutions to these problems with a combination of desludging approaches. Sanitation workers use a tractor and a pump (“regular desludging”)

to desludge the majority of pits. When tractors cannot access certain pits, the workers use pushcarts with barrels and pump sludge into the barrels, a process referred to as “regular desludging without tractor”. And finally, when a pump is not able to remove a hard layer of sludge, the workers do “manual desludging” with shovels to remove and bury the hard sludge layer.

In villages inside the restricted area, because fewer people use each latrine and because there is space within private compounds, families cover their latrine pit when full and move their latrine superstructure over a new pit.



Quick Facts

OXSI desludges **approximately 500** latrine pits per month. (31 OXSI Desludging SOP)

3.10 Sludge Treatment

Many options exist for faecal sludge treatment and disposal depending on space, resources, and level of treatment needed.

In the onset of an emergency, it may not be required to reach high levels of treatment, but as an emergency becomes prolonged, the impact of improperly treating and disposing faecal sludge becomes higher in terms of environmental and public health concerns. In most of Myanmar, faecal sludge is dumped without treatment, creating significant contamination of soil and water, with consequent impacts on the environment and on the health of the population. In the Sittwe restricted area, OXSI not only desludges and transports sludge from over 3,600 latrines, but also operates the Sludge Treatment Site (STS) to treat sludge from all latrine pits.

The STS has been a site of technical research on Faecal Sludge Management (FSM) and an example of appropriate, low-cost, and low-maintenance FSM in a humanitarian setting. The STS design is based on the principles of the DEWATS (Decentralized Wastewater Treatments) method designed by BORDA, adapted to a centralised treatment site. OXSI staff transport sludge in tractors to the reception basins, but once dumped there, the entire treatment system operates by gravity. The STS consists of primary treatment by sedimentation and secondary treatment with biological processes, not requiring chemicals or electricity. The system requires minimal maintenance. However, some components rely heavily on human labour, such as the manual emptying of dried sludge from the drying beds.

STS Testing

At the end of 2018, OXSI set up a new laboratory at the STS to measure the performance of the different components of the system. The monitoring aimed to understand the performance of the STS in decreasing pathogens and to explore the possibility of using the final products (dry sludge and effluent) in agriculture.

Analysed parameters include Chemical Oxygen Demand, Total Solids, Total Suspended Solids, ammonium, nitrate, phosphorus, and E. coli. The inlet and outlet of most components is tested once per week or every two weeks and analysed in the laboratory onsite. Despite the high performance of the STS in pathogen reduction, results show the liquid effluent is not yet usable for agriculture.

The results of the monitoring led to the design of the STS upgrade in two phases: the first to increase the STS capacity through the extension of the solid line and the piloting of planted drying beds, and the second to review the liquid line to improve STS performance and increase the effluent quality to meet agricultural use standards.



Quick Facts

The construction of the STS was finished in March 2014 and cost approximately **270,000 USD**. The STS processes **35 m³** of sludge, on average, per day. (3J STS Operator Manual)

Dumping Station

Workers empty sludge into a reception tank which screens out large solids using a bar screen



The sludge gets directed into two hopper bottom tanks that work in parallel

Hopper Bottom tanks

In the Hopper bottom tanks, the sludge settles, creating separation between the liquid and solids, which take different routes for treatment



The liquid from the top of the hopper bottom tanks moves to an anaerobic baffled reactor

The thicker sludge that has settled into the hopper bottom tanks moves into the drying beds

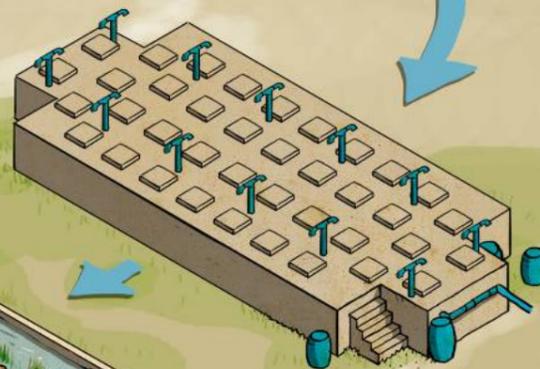
Constructed wetland

Liquid sludge then moves through horizontal flow constructed wetlands, which filter out particles and further degrade the organics



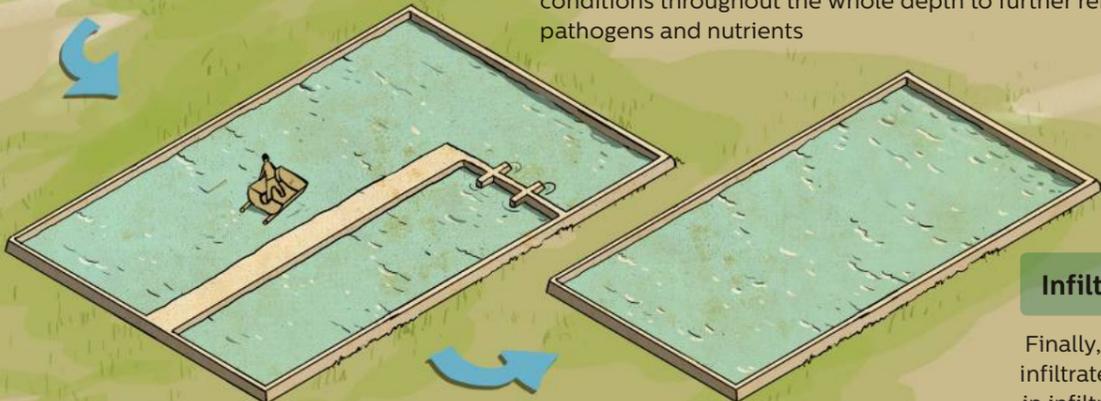
Anaerobic baffled reactor

In the anaerobic baffled reactor, microorganisms contained in the settled sludge help to biodegrade organic material



Maturation ponds

The liquid sludge then moves into the maturation ponds, which allow light penetration to the bottom and aerobic conditions throughout the whole depth to further remove pathogens and nutrients



Infiltration basins

Finally, the liquid sludge infiltrates into the ground in infiltration basins

Drying beds

In the drying beds, water drains through the sand and gravel to the bottom of the bed, while evaporation helps to remove water at the surface of the drying beds



The liquid drained from the drying beds moves to a horizontal flow constructed wetland

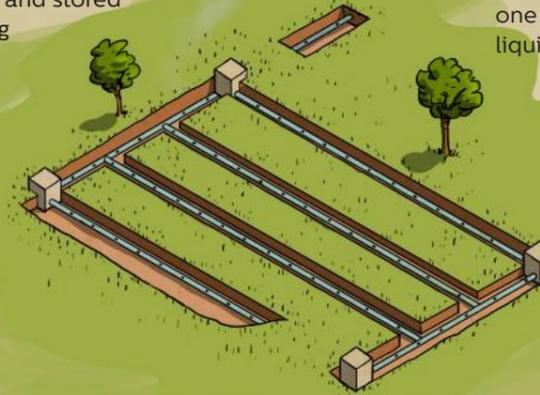
Dry sludge storage

The dried sludge remaining on top of the drying beds is removed manually and stored in storage units to continue drying



Secondary constructed wetland

Like the other constructed wetland, this one further degrades the organics in the liquid leachate



Infiltration trenches

Finally, the liquid infiltrates into the ground through infiltration pipes settled into trenches filled with gravel

Incinerator

Finally, workers incinerate the dry sludge



3.11 Bathing Facilities

If household private bathing is not possible, WASH agencies should provide communal, separate facilities that ensure safety, privacy, and dignity, where culturally preferred and accepted.

The design and locations should be decided in consultation with communities, especially with women, girls, and people with disabilities. They must be accessible to all users, provide sufficient privacy and safety, have a convenient supply of water, and ensure the correct disposal of greywater.

In the Sittwe restricted area, another programme piloted communal bathing facilities, which were unused and quickly looted. Consultations showed that people overwhelmingly prefer to bathe in their homes. Most men and boys bathe outside next to the handpumps, but women and girls bathe inside often—cramped houses where multiple relatives, male and female, share one room. Bathing safely and privately is a particular challenge for women with disabilities, who often need assistance from a caretaker.

Another service provider has started piloting communal bathing facilities in some camps. With the knowledge that public bathing spaces would not work for people with disabilities, OXSI chose to focus on household-level bathing facilities for people with severe disabilities. After consultations with people with disabilities on the design of the facility, and because people all have different home set-ups and preferences for bathing in their homes, rather than build bathing facilities directly, OXSI distributed materials for households to build simple bathing facilities themselves. The bathing slab kit consisted of materials to build a small concrete slab with drainage, a rope, and tarpaulin that users could install for privacy and take down when the space was needed for other purposes.

OXSI held training sessions on how to build a concrete slab, and assisted those who asked for help with the construction and/or transporting the materials to their shelters. OXSI also followed up frequently over two weeks to ensure that the materials had been used to build the bathing facility.

The OXSI WASH team conducted Post Distribution Monitoring (PDM) to ask recipients about their experience with the distribution, construction, and use of the bathing facilities. Although everyone reported satisfaction with the bathing facilities, most still have challenges bathing in the small space inside their shelter and requested a sturdier wall made of bamboo or metal sheeting instead of the tarpaulin. Most recipients said that the whole family uses the bathing facility, and that the dedicated space also helps with washing clothes. Many recipients reported paying for help installing the slabs or buying materials to make the slabs bigger. OXSI will use the results from this activity to better plan any future bathing facilities.



Inside the household, a concrete slab with drainage can be used as a bathing facility with the set-up of a tarpaulin for privacy, while also being useful for other purposes, such as laundry or washing dishes.

3.12 Drainage Construction and Maintenance

Effective surface water drainage is vital in emergencies, especially where the risk of flooding is high.

Sources of surface water include rainfall, flood water, water spillage from tap stands or handpumps, leakage from piping systems, and greywater from sinks, showers, or laundry. The construction and maintenance of drainage channels reduces stagnant pools that serve as breeding grounds for vectors such as mosquitoes and/or harbour dangerous pathogens that cause a wide range of diseases. In addition, drainage systems prevent landslides and mudflows and ease access in camps for camp residents as well as vehicles.

Surface water drainage should be part of initial site development in combination with roads and buildings, but it is often difficult to prioritise at this early stage. Improper camp layout and initial drainage network design can adversely affect the management of surface water in the future. Drainage should be the collective responsibility of camp management agencies, WASH service providers, and the people living in camps.

In the Sittwe restricted areas, drainage is a continuous problem due to poor camp planning and space constraints. In some camps, excess surface water is designed to drain into farmlands to serve agricultural needs, but landowners and farmers blocked the outlets. In these camps, without an outlet, there is little use in re-constructing or repairing drainage channels, which just serve as extra storage for rainwater while the water slowly absorbs into the ground.

Minor drainage channels, those between shelters and on small streets that connect to larger drainage channels, are also often blocked by households who extend their shelters over the channels or fill in the channels to avoid stagnant water and foul odours. From the beginning of the programme, OXSI has advocated for communities to care for and maintain minor drainage channels by themselves.

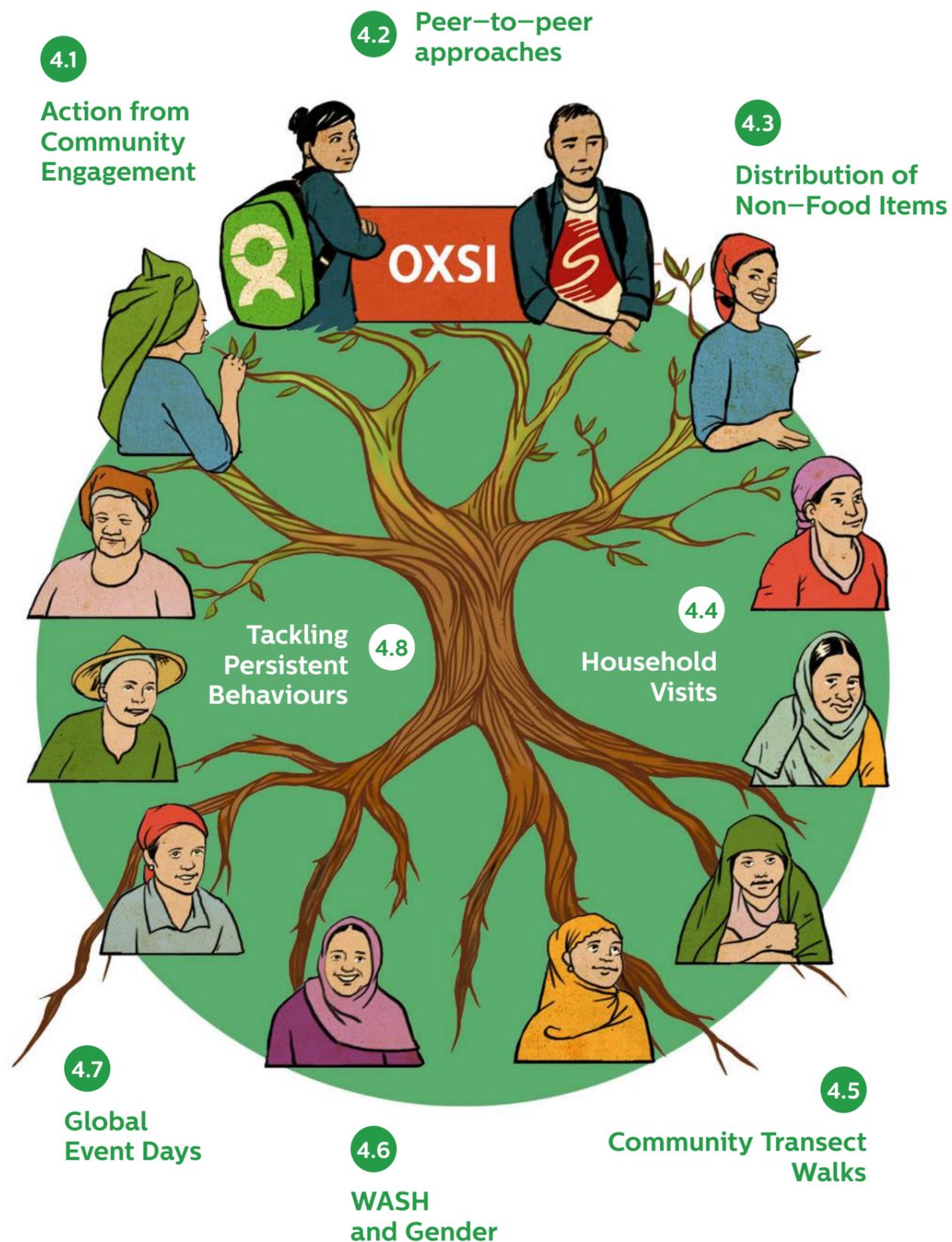
At the beginning of the programme, OXSI conducted regular assessments of the state of the drainage, focusing especially on main drainage channels. After the construction team completed the planned major maintenance and construction, they maintain drainage channels based only on CFM complaints. Some service requests received through the CFM, however, cannot be carried out if the requested repair is too large or if there is no outlet for the drainage water. In addition, OXSI frequently repairs borehole drainage, which is part of the functionality check, and is constructed and repaired based on the functionality check as well as on CFM service requests.

Every year before the rainy season begins, OXSI partners with CMAs and communities to clear out the large drainage channels to allow rainwater to flow more easily and to have more rainwater storage in the drainage channels (see Section 6.6). The drainage cleaning campaigns make a big difference to reduce overflowing drainage channels and flooding during the rainy season.



Focus on equity – gender, protection, and inclusion

Wide drainage channels facilitate the movement of a large volume of rainwater, but may be difficult for children, the elderly, and people with mobility constraints to cross. Where common pathways cross large drainage channels, WASH and/or camp management agencies should provide drainage crossings, which can consist simply of reinforced concrete slabs. The locations of drainage covers should be decided with communities, including the elderly and people with disabilities.



C4. Hygiene Promotion and Community Engagement

Positive hygiene behaviours are just as important, if not more important, than clean water and safe sanitation facilities in preventing the spread of disease, especially in dense camp settings. Hygiene promotion is a major component of humanitarian WASH programming, with the ultimate goal of changing hygiene behaviours, primarily through education and with the provision of non-food items (NFIs) needed to practice healthy hygiene behaviours.

In the Sittwe camps, previous Knowledge, Attitude, and Practice (KAP) surveys showed a gradual increase in the level of hygiene knowledge – however, the acquisition of knowledge had not directly translated into changed practices. The OXSI approach to hygiene promotion, as well as the overall programme approach, aimed to move away from top-down messaging to working with communities to understand barriers, provide enabling tools, and guide behaviour change while considering the challenging environment.

Therefore, the OXSI WASH programme, while continuing to focus on hygiene education, emphasised community engagement and systematic behaviour change approaches to impact stubborn behaviours. The community engagement strategy outlines three key objectives for building trust and community, increasing ownership of WASH infrastructure, and improving hygiene behaviours through participative programming and proven behaviour change models. This chapter focuses on two of these three objectives, excluding the work on ownership, which is covered in other chapters.

4.1 Action from Community Engagement

Engaging communities in designing WASH programming leads to greater positive behaviour uptake and helps agencies understand real priorities.

Community engagement is critical for behaviour change and for building resilience, as well as for designing and implementing effective programming overall. The OXSI WASH programme mainstreamed community engagement throughout its activities, which required first and foremost an attitude shift for OXSI staff. Although the team modified many activities to increase participation, decision-making, and leadership of communities, it proved even more effective to facilitate this attitude shift through the creation of new activities.

The OXSI WASH programme introduced a new community engagement approach under the project name of “Action from Community Engagement (ACE)”. ACE aimed to build trust and teamwork; actively listen and foster two-way communication; increase problem solving skills, sense of community, and ownership; and engage more people in the creation of WASH campaigns. Although ACE uses tried and tested tools, they were chosen and combined to form a process unique to OXSI and the Sittwe camps. The flexible tools allow small groups to identify and break down problems and then design and implement campaigns to tackle an identified WASH issue. Each ACE process takes 2–3 months, with the end goal of a community-led campaign to solve a WASH issue identified by the group. [\(4A ACE Manual\)](#)

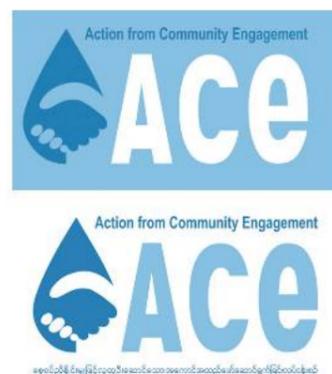
OXSI piloted ACE with two groups of men and two groups of women prior to scaling up the approach. The pilot showed a need for more staff training, detailed guidelines for each of the activities, more transparency about the ACE process with the rest of the community, and flexibility in adapting the approach for each group. During the pilot, all OXSI WASH staff participated in the creation of a logo for ACE, which ‘branded’ it as a unique approach within OXSI. The chosen logo shows a handshake inside of a water drop to signify collaboration of OXSI and communities in creating WASH campaigns.

The same small group of participants (maximum of 15 people) complete the ACE activities together in the order specified because they build upon each other. The first three activities the group does together—Community Mapping, Photovoice, and Problem Tree—are “needs-identification” activities, which help the group explore, prioritise, and break down WASH issues in their community. The groups are somewhat homogeneous to assist them in choosing issues that are relevant for and representative of most of the group members.

Several design options

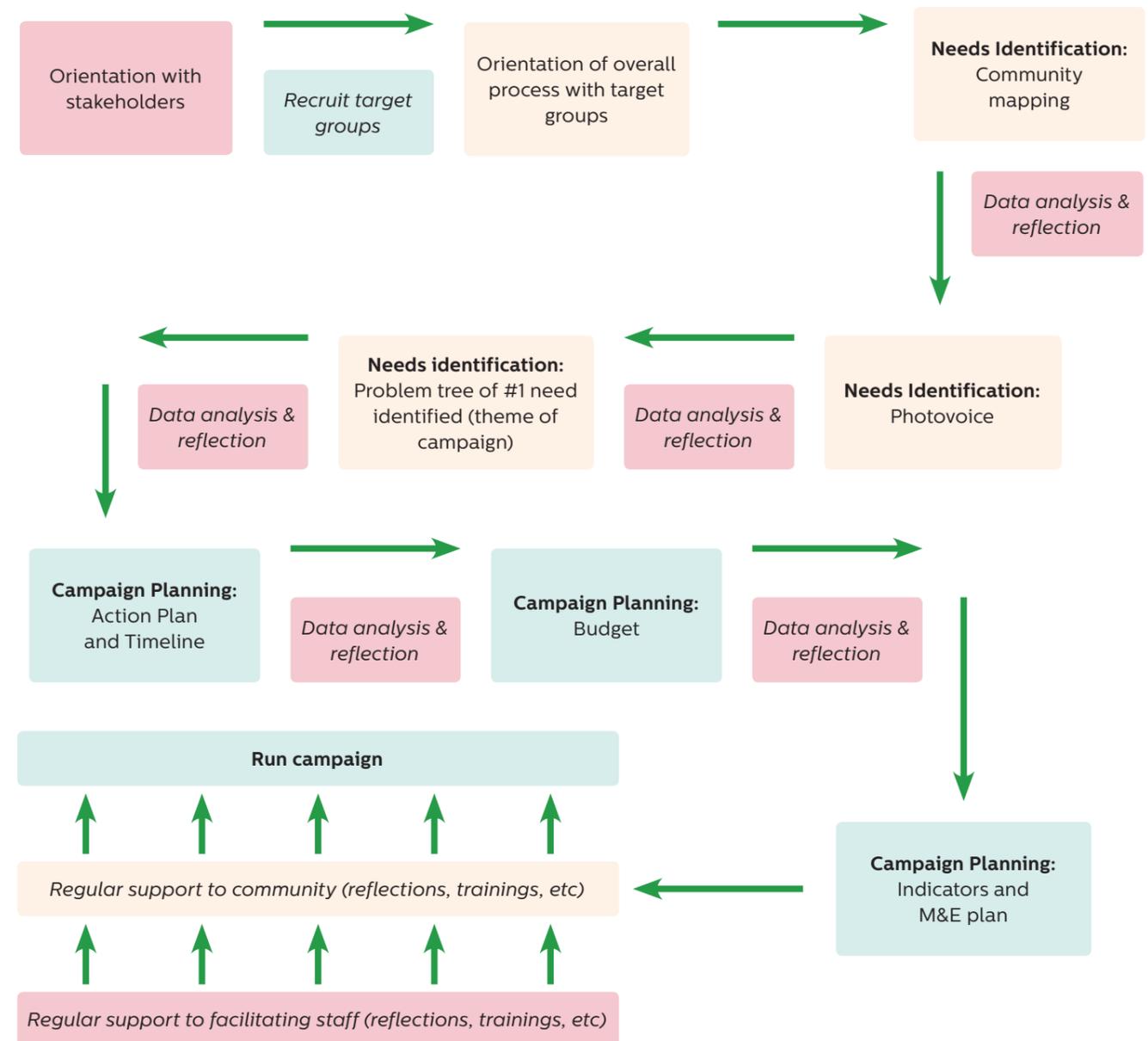


Final version



The participative creation of a logo for the Action from Community Engagement process branded it as a unique activity within the programme.

A flowchart showing the ACE activities



Focus on equity – gender, protection, and inclusion

As much as possible, ACE tools are designed to allow participants with different backgrounds and abilities to join. For example, literacy is not a prerequisite, particularly for the interactive and illustrated needs-identification activities. More importantly, the entire ACE process can be adjusted to the needs and preferences of each group, from the activities they choose to do, to the format of the deliverables of each activity, to the topics they discuss and the WASH issue they choose for their campaign.

Community Mapping

The community mapping exercise is the first in the ACE process, serving as an icebreaker for the group to get accustomed to participative activities and to start thinking about needs in their community. The activity challenges the group to decide and discuss the elements of their area that they perceive as important, to mark what is or isn't accessible, and to build confidence and teamwork. To include illiterate participants, minimal or no writing is used, and the group can opt to use pre-made icons or create new icons to symbolise roads, buildings, latrines, etc.



Photovoice

Photovoice is a participatory photography method where participants use photography and dialogue to deepen their understanding of an issue, reach decision-makers with their stories, and take action at the community level. Because photography crosses cultural and linguistic barriers, photographs describe realities, communicate perspectives, and raise awareness of issues that may not be easily communicated otherwise. In the ACE process, photovoice is used as a visual aid to help participants identify and discuss the issues they see, and to prioritise one issue to work on in their campaign.

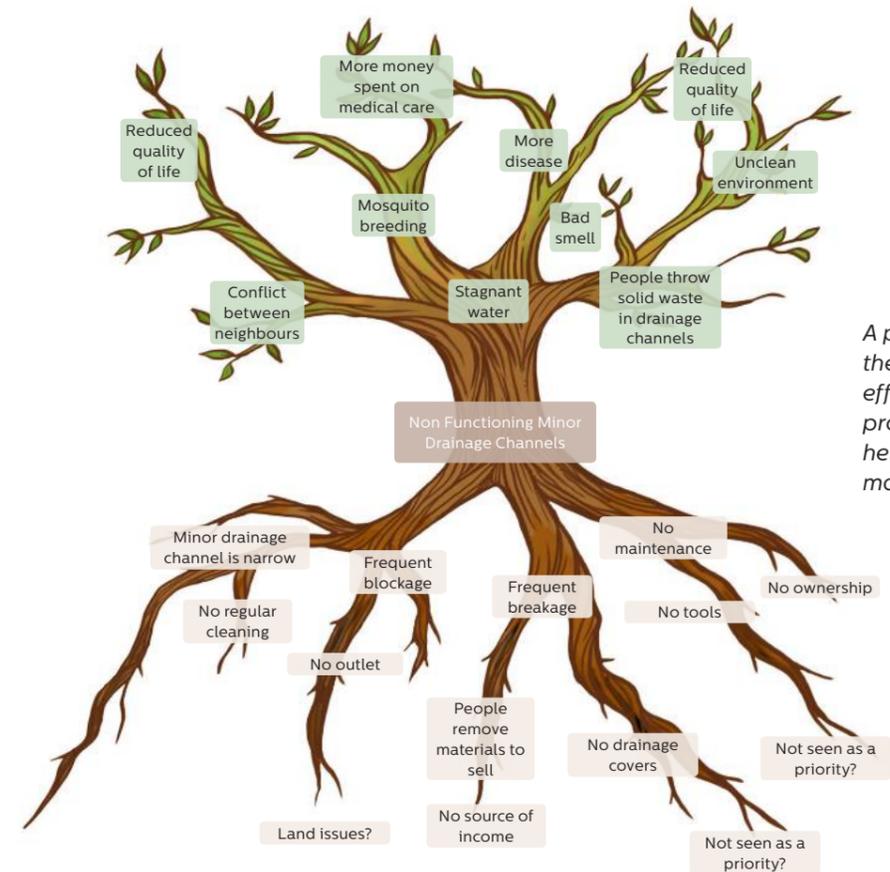
Unlike the other ACE activities, photovoice takes several sessions. Participants learn to use cameras and over several days, take pictures to depict attitudes and practices around water and sanitation that influence health in the community. They then write a caption (a "photostory") for one chosen picture. The group comes together again to share their photographs and photostories and uses the pictures to prioritise the issues in their community and to choose one issue to focus on for the next step.



During photovoice, participants take pictures of WASH-related issues in their community to prioritise needs as a group.

Problem Tree

A problem tree is a tool for breaking down an issue to understand the different causes (roots) and effects (branches) of the problem. The problem tree illustrates that a large problem often has many causes, and although it may feel overwhelming, the issue can be solved by gradually addressing each of the causes. The ACE group identifies primary and secondary causes of the issue by asking, "why does this happen?" and primary and secondary effects by asking, "what does this lead to?". They then identify the causes they have some influence or control over and choose one to focus on for their campaign.



A problem tree illustrates the causes (roots) and effects (branches) of a problem (trunk), which helps break it down into manageable pieces.

| OXSI Challenges | OXSI Solutions |
|---|--|
| <p>Components of ACE, particularly photovoice, are sensitive in certain contexts, and camp leaders blocked this activity in some Sittwe camps. In other areas, campaigns that involved any construction were blocked.</p> | <p>Prior to launching new activities, WASH agencies need to carry out assessments and consult stakeholders to ensure communities are not put at risk by participating. OXSI took time to explain the ACE process to camp leaders and to obtain permission in advance.</p> <p>In addition, participants should receive protection tips before carrying out sensitive activities, which are always voluntary. OXSI emphasised that during photovoice, only WASH infrastructure and consenting adults should be photographed, and cautioned participants not to photograph police, checkpoints, distributions, or events. In some cases, ACE groups just skipped the photovoice activity.</p> |

Campaign–Building

The second phase of ACE is the “campaign–building” phase and includes 2–3 sessions to put together an Action Plan and Timeline, Budget, and an Indicators and Monitoring Plan. The ACE groups have freedom to self–organise and plan their campaign in a way that suits all the participants. For example, they can verbally agree on an action plan, with notes kept by OXSI staff only for record–keeping. These activities help the group plan the campaign to tackle one of the WASH problems identified earlier. Most of the action plans have components that the ACE group leads as well as steps where they need the support of OXSI staff (for example, purchasing and delivering materials for construction).

The campaigns vary in length and complexity depending on the issue the group has chosen. For example, one group organised a 1–day cleaning campaign each week for a month, while another two groups worked together to design, construct, and install small MHM incinerators, a process that took three months (see Section 6.5).

Although the ACE process is time–intensive and requires training and support, staff and participants give largely positive feedback. After completing the ACE process, almost all of the participants have expressed interest in continuing to meet and discuss new issues, with many saying that ACE has given them confidence to tackle even non–WASH issues.

OXSI tries to continue to engage the ACE groups when possible. For example, during the pilot, one ACE group wanted to focus their campaign on providing solar lights, but at the time, OXSI was only in the planning stages of solar light installation. The ACE group chose another topic to focus on for their campaign. When OXSI was ready to start the solar lighting project, the Community Mobilisation team came back to the ACE group to ask for their support in siting the solar lights and spreading awareness to ensure that materials would be kept safe. See Section 5.1 for more details.



Focus on equity – gender, protection, and inclusion

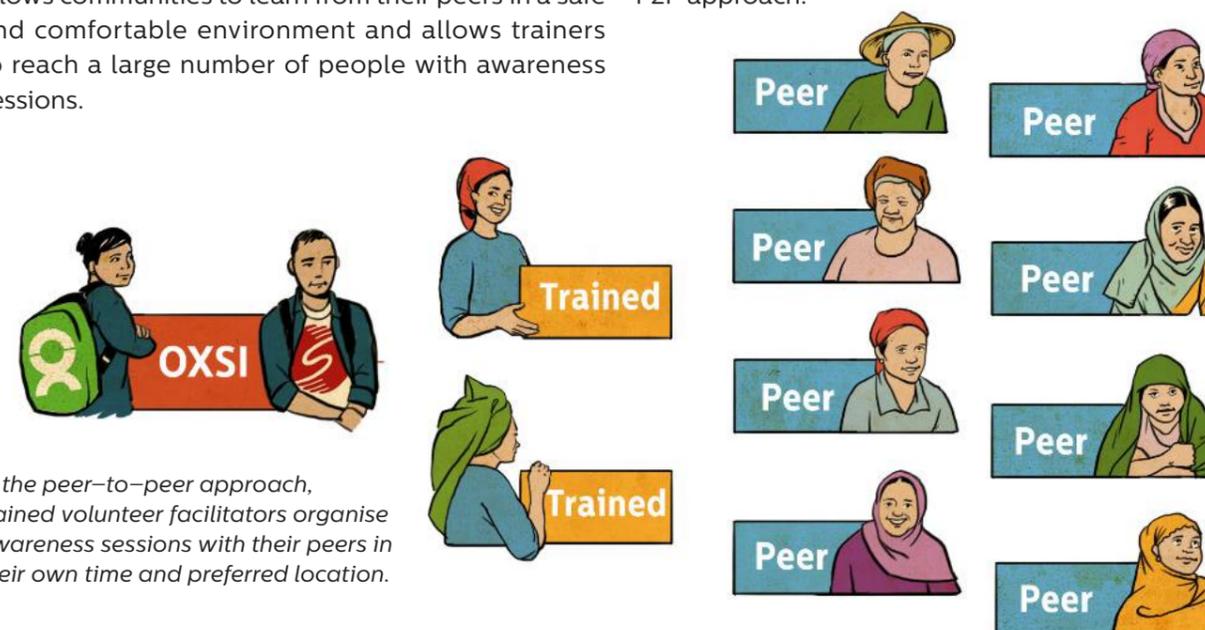
Community engagement means reaching diverse groups within the community, not just leaders. There can be barriers to participation in hygiene promotion activities such as ACE, particularly for people with disabilities, which WASH agencies need to address. OXSI worked with Humanity and Inclusion to conduct a comprehensive training for all staff on disability rights and models and barrier mapping, and developed an action plan to involve people with disabilities in the programme. The action plan gave the teams concrete steps to work on to open space for people with disabilities to participate in OXSI activities, such as arranging transportation to activities, conducting house visits to share information and invitations to sessions, and creating more accessible IEC. Barrier mapping also identified key challenges in accessing WASH facilities, especially latrines, which is addressed in Section 3.8.

4.2 Peer–to–peer approaches

The peer–to–peer (P2P) awareness raising model, like ACE, is built on the belief that communities know their needs and can be agents of positive change among their peers.

A small group receives training on a topic and then takes the initiative to pass on information to empower others, build relationships, and inspire collective problem–solving and self–reliance. Those who receive training organise small groups in their homes or location of choice on their own time. The P2P model allows communities to learn from their peers in a safe and comfortable environment and allows trainers to reach a large number of people with awareness sessions.

OXSI has slowly implemented the P2P approach to replace top–down one–way messaging for three hygiene promotion activities: WASH in Schools, WASH for Women, and Menstrual Hygiene Management (MHM). All of these activities were initially led by OXSI staff and, in most areas, have transitioned to using the P2P approach.



In the peer–to–peer approach, trained volunteer facilitators organise awareness sessions with their peers in their own time and preferred location.

WASH in Schools

In most countries, school curriculums incorporate some hygiene education, but in emergencies, WASH and education agencies can work together to ensure tailored hygiene education as well as functional WASH infrastructure in schools. In collaboration with the education sector and teachers, OXSI conducts WASH in School sessions in over 100 Temporary Learning Spaces (TLSs), madrassas, and Child Friendly Spaces (CFSs), reaching children from kindergarten to grade 5. To do these sessions, the OXSI team works closely with teachers to set a schedule for the sessions and then recruits students in grades 2–5 to join “WASH Clubs”. The students in WASH clubs receive training from OXSI and then conduct hygiene promotion sessions for younger students. They use games, songs, child–friendly IEC, and demonstrations to make the activities more engaging.

To learn and practice positive hygiene behaviours, children need access to functional WASH infrastructure in schools and at home. Handwashing with soap is an especially important behaviour to prevent disease and children who practice it early are more likely to continue it into adulthood. OXSI built two simple handwashing stations for testing by children in two TLSs. Children used the stations and gave feedback, emphasising the height of the stand (too high for children in kindergarten), while the teachers made suggestions to improve the stability of the handwashing stands while keeping them portable. OXSI incorporated the feedback into a final design, and handwashing stands were manufactured in camps and installed for the TLSs that had no existing handwashing station or had stations that need repair. For OXSI’s process of designing and installing latrines in schools, see Sections 3.6 and 3.7.

WASH for Women

Due to power dynamics in certain contexts, WASH agencies should consider conducting sex-segregated awareness sessions, FGDs, and other activities to increase participation and comfort of female participants. In addition, although WASH is the responsibility of all household members, women and girls often bear the biggest burden of domestic and WASH duties in the home, so it is especially important to reach women and girls in WASH awareness sessions. OXSI trains small groups of women in each camp to disseminate hygiene messages using the P2P approach. Each participant works in the area where she lives,

focusing on 5–10 shelters, and conducts at least one session per month with a small group of neighbours and peers. OXSI organises a monthly training refresher session to give the group more information, IEC, and to allow the leaders to share feedback and get advice on their sessions. The topics covered by the groups include: waste management, cleaning of the house and latrine, water transportation and storage, personal hygiene, decision making in the household, sharing experiences related to WASH, using WASH items, understanding the F-diagram, and more.



Women use the peer-to-peer approach to discuss WASH issues in small, female-only groups.

Menstrual Hygiene Management

Gender inequality has led to, among other things, restrictive cultural taboos, stigma, and shame around menstruation. Addressing both the practical and strategic needs of women and girls related to menstruation and menstrual hygiene requires comprehensive programmes. In addition to the distribution of essential menstrual products (Section 4.3) and construction of incinerator bins for sanitary

pad disposal (Section 6.5), OXSI works with women and girls (and eventually men and boys) to raise awareness on menstrual hygiene and to dispel myths and break taboos around menstruation. Again using the P2P approach, MHM leaders receive training and IEC from OXSI to pass on during P2P sessions. To facilitate learning for illiterate participants, the training covers one topic each month, with frequent refresher trainings on past topics. The trained leaders start organising their own P2P sessions whenever comfortable, and share feedback on their sessions during monthly meetings.



IEC showcasing “good” and “bad” MHM practices is used during MHM peer-to-peer sessions.

In small P2P sessions, the trainers provide clear information on menstruation, help women and girls recognise symptoms and learn about ways to alleviate them, recommend healthy hygiene practices and well-being during menstruation, and advise on ways to properly dispose of sanitary protection materials. (4B MHM SOP) The MHM groups also actively participate in the design and installation of small sanitary pad incinerators, a process described in Section 6.5.

Although MHM groups currently focus on women and girls to ensure they feel knowledgeable and comfortable speaking about MHM, the programme plans to add a component for men and boys to receive training and to have discussions on MHM and gender inequality. Men and boys can contribute significantly towards changing cultural norms and taboos around menstruation and are often involved in decisions related to women’s menstrual hygiene needs. It might be difficult at first to talk with men about MHM due to reluctance, prejudices, myths, and misconceptions surrounding the issue, but through effective education and communication, this can change.



Focus on equity – gender, protection, and inclusion

Women can experience pushback from camp leaders or even family when stepping into a leadership role, being active in their community, or discussing issues considered taboo. Therefore, WASH agencies should discuss with camp leaders why women leaders are essential for specific activities, start small (such as with a pilot), and focus on “easier” topics (such as hygiene behaviours) prior to tackling more controversial issues. The P2P approach allows women and girls to gather in small groups in their homes as they would normally socialise, which limits community pushback. However, it is also vital to bring men and boys into the conversation about topics considered “women’s issues” to bring about lasting change in perceptions and taboos.

4.3 Distribution of Non-Food Items

Specific personal and household items are essential for hygiene, health, dignity, and well-being, and to create an enabling environment to practice positive hygiene behaviours.

The Sphere standards provide guidance on minimum essential hygiene items and quantities, but WASH agencies must conduct assessments to determine what Non-Food Items (NFIs) people need, as well as the best modality for delivery (eg. in-kind, cash, voucher, etc.). In the Sittwe restricted area, OXSI distributes hygiene kits on a monthly basis, as well as other items every six months or as needed.

Hygiene kits

In camps, OXSI distributes a monthly in-kind hygiene kit to every household, which contains body soap, laundry soap, and sanitary pads. Due to a lack of market access, distribution of cash or vouchers is currently not feasible in Sittwe camps. When the soap supplier reduced the weight of their soap, the programme switched to a different, unscented soap bar to continue to meet Sphere standards. However, Hygiene Kit Post-Distribution Monitoring (PDM) showed that women and girls preferred and requested the scented soap. OXSI put in place a system of distributing two hygiene kits – one with scented soap and one with unscented – on a quarterly schedule, to meet the needs of the community while adhering to Sphere standards. Subsequent PDMs consistently showed more than 90% satisfaction with the quantity and quality of the items. In 2020, in response to the COVID-19 pandemic, OXSI changed its distribution protocol to adhere to COVID-19 preventative measures.

[\(4C HK Distribution SOP COVID19\)](#)



Hygiene kits containing body soap, laundry soap, and sanitary pads are distributed each month, while other distributions are less frequent.

Dignity kits

A gender assessment and feedback from women and girls revealed a need for underwear distribution, so in the second half of the programme, OXSI distributed dignity kits containing female underwear every six months. Because mostly men come to OXSI offices to collect hygiene kits, OXSI piloted a new approach for these distributions during which female facilitators distributed items to groups of 8–10 households at a time near their shelter, inviting only women and girls to join. The facilitators brought a variety of colours and sizes of underwear to each distribution, and the participants chose the kind they wanted, which was important for women and girls who rarely have a choice in distributed items. This approach also ensured that as many women and girls as possible could join the sessions and that they felt comfortable during the distribution. [\(4D Dignity Kit Distribution Pilot SOP\)](#).



Other

OXSI distributed several other hygiene items throughout the project, always involving communities to understand needs and preferences. For example, OXSI distributed water containers and potties to each household, and household and environmental cleaning supplies (broom, rake, shovel, bamboo basket) to each longhouse. More complex distributions are highlighted in the sanitation chapter (Sections 3.4, 3.5, 3.8, and 3.11).

4.4 Household Visits

Household visits are essential for reaching the most vulnerable as well as ensuring complete coverage when sharing important information, such as during an acute crisis or event.

However, staff must conduct household visits with care, because they are disruptive and can violate privacy. At the beginning of a household visit, staff need to ask if it is a good time to talk and make sure that all household members agree to the visit and understand that they can choose to end it at any time without negative consequences.

In Sittwe camps, OXSI uses household visits in the following ways:

- When a case of severe diarrhoea is reported, the Community Mobilisation team visits surrounding households to notify them of a case near them, to encourage them to visit the clinic if they experience diarrhoea, and to inform them about the free availability of Aquatabs (for purifying drinking water) and Oral Rehydration Solution (ORS, for rehydrating during diarrheal episodes) in the OXSI offices.
- When a borehole fails the water quality test, OXSI informs users of the handpump not to use it for drinking, cooking, or washing dishes or food, unless they boil the water. When the borehole is remediated and cleared for use, OXSI again informs households that it is safe to use.
- As explained in Section 2.5, when a household sample fails the water quality test, OXSI conducts a household visit to inform the household of the result and to share information on positive water storage, transport, and use behaviours to prevent contamination.
- To increase awareness and use of the Accountability System and to allow people an opportunity to file a complaint in private, accountability officers conduct household visits (Section 7.4).
- Household visits are conducted to close the feedback loop when someone has submitted a complaint to the Accountability System (Section 7.5).
- Before and during the COVID-19 response (Section 8.2), to prevent large gatherings, household visits were used to convey important information.
- After Transect Walks (Section 4.5), if a specific household is consistently “flagged” for poor hygiene behaviour by neighbours, the Community Mobilisation team will visit and encourage the household to respond to the issue.

4.5 Community Transect Walks

A Community Transect Walk is a participative tool for observing and discussing with communities any resources, problems, land use, and features in an area.

One of the tools used in the Community-Led Total Sanitation approach, this activity can be adapted to a variety of issues.

In the OXSI programme, the activity involves Community Mobilisation staff recruiting community members to walk together in their area to identify WASH issues and opportunities. The group splits the issues identified into two categories: those that the community can solve without help, and those where support from the WASH agency is needed.

The group then develops a brief action plan to solve the issues identified during the Transect Walk, with tasks assigned to community members or the WASH agency. If a non-WASH issue is identified, OXSI can refer the information to the appropriate agency, or provides information to the group on how to refer the complaint. Unlike typical hygiene promotion sessions, Transect Walks allow discussion of multiple topics, promote problem solving, and engage men, women, and children in a mixed group to build a sense of community (4E Community Transect Walk).

4.6 WASH and Gender

As part of the Do No Harm principle, WASH agencies need to avoid inadvertently contributing to perpetuating gender stereotypes through their activities.

Although the gendered division of labour in many cultures puts women and girls in charge of household and childcare duties, WASH agencies can ensure that women and girls have adequate hygiene information while at the same time advocating for more gender equitable division of labour and, where possible, seeking to challenge restrictive gender norms.

Mainstreaming gender in WASH activities and staff training can help programmes avoid common pitfalls, but creative activities can challenge participants in new ways. In Sittwe camps, in collaboration with the *Inclusive Development and Empowerment of Women in Rakhine State Joint Programme*, the WASH team adapted an activity typically used in gender trainings to create a hygiene promotion activity focused on promoting gender equality, called “Balancing WASH”. The objectives of the activity are to raise awareness on the inequitable distribution of labour in WASH-related work and other domestic work in the household, and then to review the key messages on good hygiene practices associated with each WASH activity.

The creation of this activity, as well as the accompanying IEC, involved several consultations with female camp-based staff and groups of men and women who tried out the activity in its draft form and gave feedback on the design of the icons and the activity. In the final version of the activity, the participants create a table to show the different tasks performed by members of the family, with time indicators to show the length spent on each task, and then compare the work done by male and female household members. The facilitators pose questions to deepen dialogue about gender norms, the unequal division of labour in WASH and domestic household duties, and who in the household makes the most decisions about WASH-related issues. (4F Balancing WASH SOP)

Gender focal points piloted the activity in camps and provided mostly positive feedback. Male participants reported higher awareness of women’s work in the household and the realisation that unpaid household work is also work, just like paid work. Men also committed to help with household work and

to encourage their sons and brothers to participate. The activity was especially well received with illiterate participants because it relies entirely on icons and tick marks, with no writing or reading involved. However, comprehensive gender training for facilitators is pivotal to sufficiently address participant criticism; otherwise, the activity could be counterproductive.



The Balancing WASH activity challenges men and women to examine the gendered division of domestic and WASH responsibilities in the household.

4.7 Global Event Days

Certain days are designated annually as observance days to raise awareness on a specific issue, and these present an opportunity for WASH agencies to hold special events.

Three main WASH-related global days are celebrated in OXSI camps each year: Global Handwashing Day, World Water Day, and World Toilet Day. Because OXSI’s programming already focuses heavily on handwashing, good behaviours around water use and storage, and toilet use, the main purpose of the special days is to have a festive event that is fun for children, includes games and prizes to test knowledge, rewards people for demonstrating their WASH knowledge publicly, and brings people together to celebrate positive changes. These events are designed to inspire people to feel part of a global community who cares about WASH issues. OXSI holds global event days in each camp, which almost always include the following:

- Decorations, informational posters specific to the event, music, and refreshments.
- Introductory speeches from OXSI staff and influential leaders in the community about the importance of the topic.
- Songs, skits, and/or dances performed by children illustrating a WASH concept.
- A quiz or activity for adults and/or children, often involving prizes.

OXSI staff and participants give overwhelmingly positive feedback about WASH events, saying they are fun and engaging. However, limited space and resources make it impossible to include everyone, and the events must be capped at about 200 people. This proves especially challenging in larger camps, where many people have likely never joined an event day. OXSI strives for diversity at these events by inviting children from different schools, influential leaders, men and women, elderly and youth, and people with disabilities.

Smaller events are also held to celebrate additional days such as Menstrual Hygiene Day, World Humanitarian Day (to celebrate humanitarian staff), and 16 Days of Activism Against Gender-Based Violence. These global designations provide an opportunity for collaboration with other agencies and across sectors to bring attention to these important issues.

4.8 Tackling Persistent Behaviours

Hygiene education, WASH infrastructure, and NFI items that enable positive hygiene behaviours are sometimes not sufficient to change long-standing behaviours.

For example, in Sittwe camps, despite years of hygiene education focused on eliminating open defecation (OD, the practice of defecating outside rather than into a toilet), it remained a common practice and a persistent public health risk. To continue the battle against OD, OXSI took a multi-pronged approach of listening and understanding, continuing education, providing accessible infrastructure, and monitoring OD.

The OXSI team received intensive training on the Risks, Attitudes, Norms, Abilities, and Self-Regulation (RANAS) approach for behaviour change and applied it in understanding the driving factors of OD. The approach includes a detailed questionnaire to evaluate behavioural factors within each of the RANAS categories and a doer/non-doer analysis to identify the most significant difference between doers and non-doers. Based on the results, several Behaviour Change Techniques (BCTs) are suggested, adapted to the context, and used to tailor interventions to have the highest impact on changing the behaviour.

OXSI conducted an intensive interview of caretakers of children between 3–5 years old and focused on two targeted behaviours: letting their child defecate in the open and teaching their child to use a latrine. The doer/non-doer analysis identified certain behavioural factors that had the most significant difference between doers and non-doers. Using the BCTs suggested to target these factors, OXSI staff created new activities or interwove the BCTs into existing activities to increase

messaging impact. Another questionnaire at the end of the intervention period will be used to evaluate the results in the targeted camps and compare them to the “control” camps.

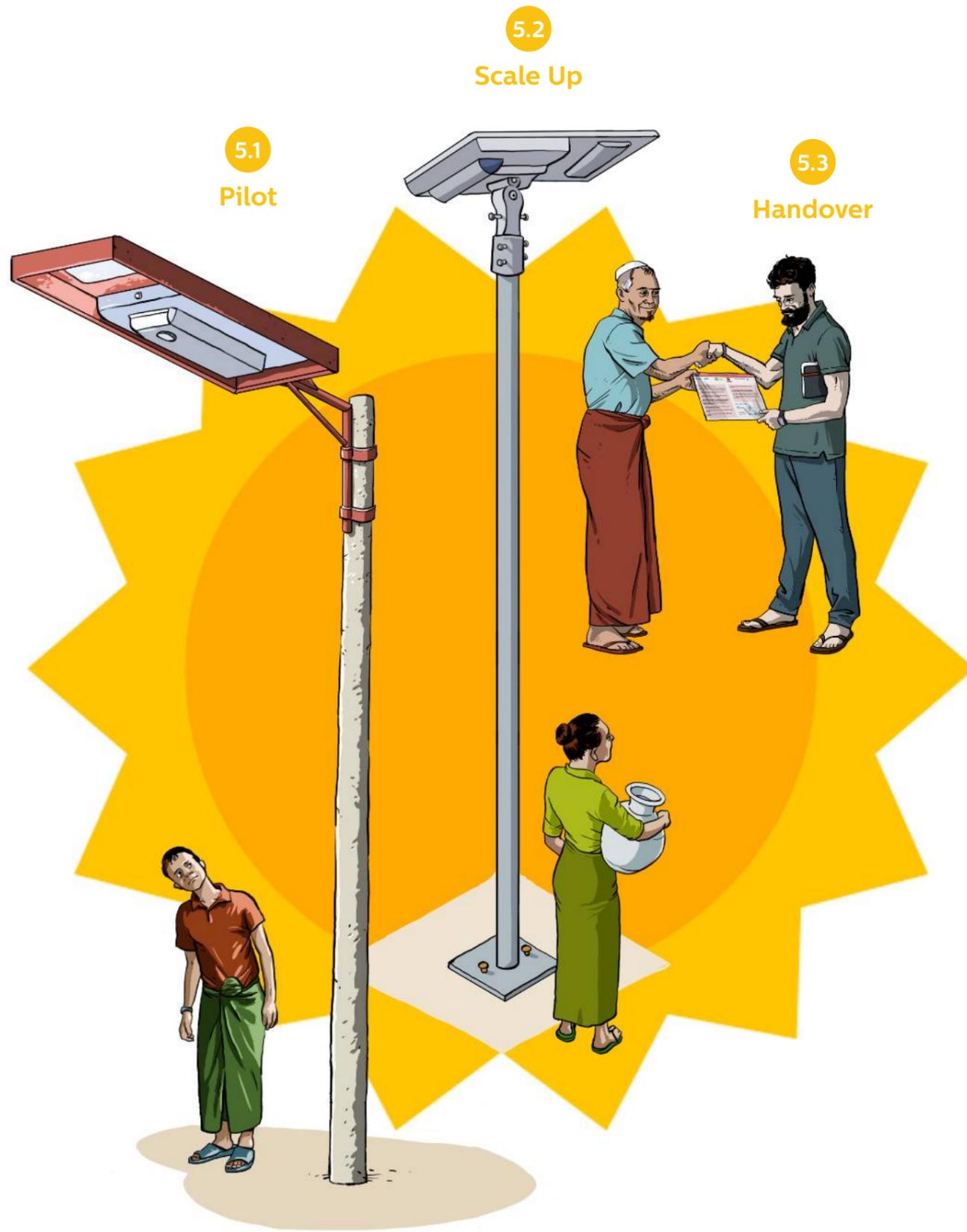
A Human-Centred Design (HCD) consultancy, 17 Triggers, also worked in OXSI camps to identify causes of OD and to make suggestions. They discovered a gap in knowledge not covered by OXSI’s hygiene promotion messaging: teaching children to use latrines. They developed activity guidelines and corresponding IEC for OXSI to teach parents about potty training and how to teach children to ask for help with using a latrine. OXSI paired the launch of this activity with the distribution of potties for every household.

In addition, 17 Triggers piloted “Latrine Helpers”, a process where households volunteered for shifts to assist small children to use latrines, clean up, and wash their hands. Although the activity did not move past pilot stage, it showed the households involved that they could solve child OD in their neighbourhood with creative community solutions.

In addition to understanding the causes of OD and targeted hygiene education, OXSI worked with children to design accessible child-friendly latrines, covered in Section 3.6. The hardware suggestions resulting from the 17 Triggers consultancy are covered in Sections 3.6 and 3.8.



IEC showing positive behaviour makes awareness sessions more engaging for children and adults alike



C5. Solar Lighting

Inadequate lighting around WASH facilities reduces their usage at night, especially by women and children, primarily due to fear of violence and abuse. Poor lighting also makes it more difficult for the elderly and people with disabilities to access WASH facilities at night. In a camp setting, WASH agencies take responsibility for providing lighting around WASH facilities, while other agencies typically provide lighting for other public areas.

Vandalism, theft, and poor technical expertise and workmanship have hindered previous solar street light projects in Rakhine. Although former WASH agencies installed solar lighting around latrines in the Sittwe restricted area, all of the systems were in disrepair or fully non-functional at the time that OXSI took over as the WASH agency. When planning new solar installations, OXSI took a step back to evaluate how to install better designs and work with communities to reduce theft.

5.1 Pilot

A pilot can be helpful for new or technical interventions that are difficult for communities to design.

A pilot helps to identify problem areas in the design, protocol, and/or materials suppliers, and increases the likelihood of success during scale up. In the case of solar lighting, the OXSI pilot was essential for learning and led to changes in the design of the solar systems.

Things to consider when choosing a solar system include design options, cost, the availability of spare parts, lead time, maintenance and technical expertise requirements, community involvement and preferences, and more. After an assessment of the technical feasibility of installing solar lighting in the OXSI camps, two main viable designs emerged:

- A centralised system: solar panels, controller, batteries, and inverter are located in a central location, connected with wiring to lights on poles placed near latrines.
- Integrated units: each pole houses a solar panel, battery, light, and controller in a single, standalone unit placed near latrines.

Prior to the pilot, OXSI considered it best to install a centralised system in all camps and to supplement with integrated units in isolated locations where wiring from a central location would be inefficient. However, piloting each system in a separate, similarly-sized camp would clearly highlight the advantages and disadvantages of each design.

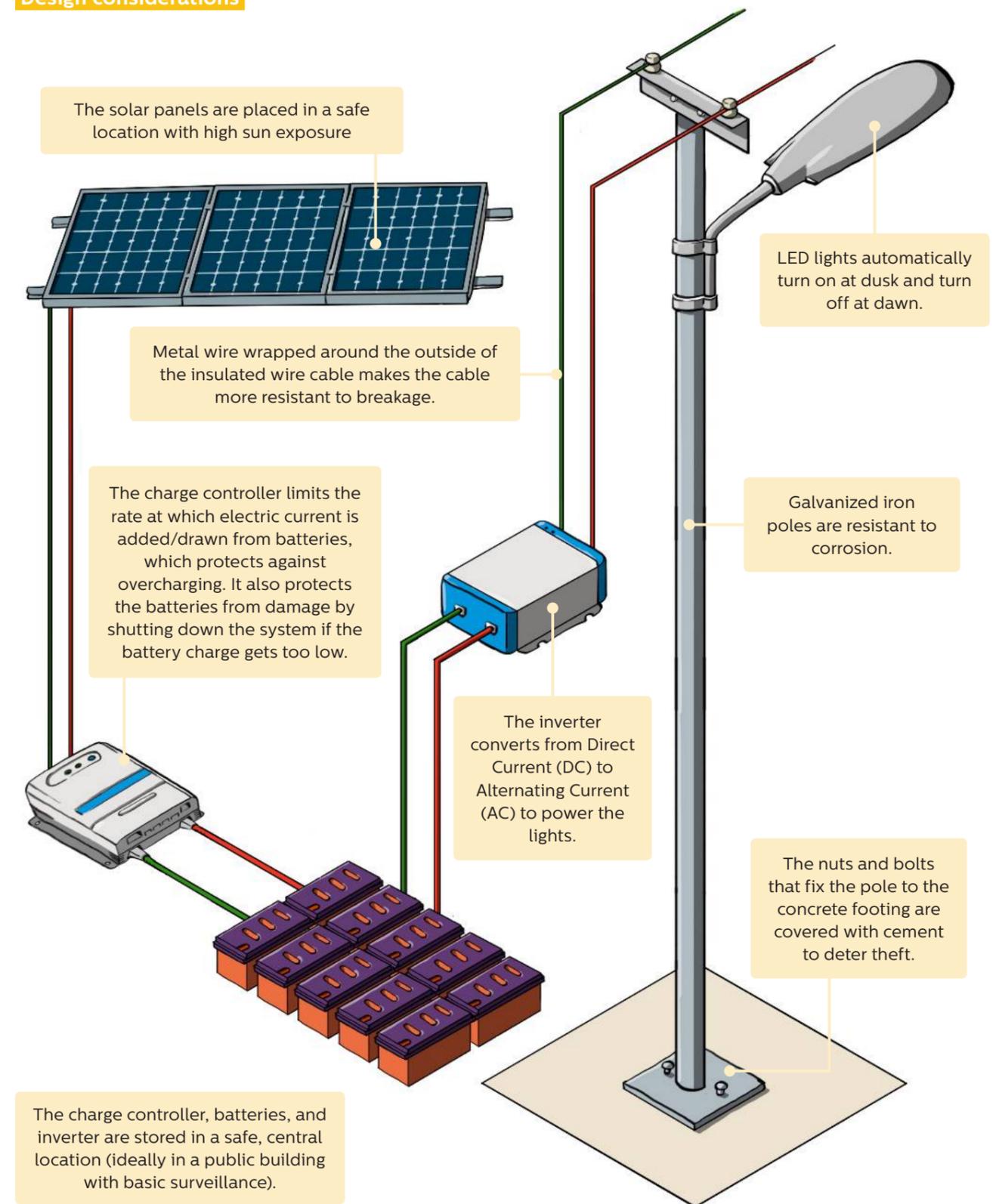
OXSI selected two camps with almost the same population and where OXSI had strong positive relationships with camp leaders to test the two solar designs.

Pilot 1

Although one camp already had a centralised system in place, the new centralised system pilot focused on exploring better quality equipment and a different supplier, as well as higher involvement of the community in the entire process to combat frequent breakage and theft. OXSI planned to pilot a hybrid system by installing integrated units to cover latrines that could not be covered by the centralised system; however, due to the small size of the camp, the centralised system adequately covered all of the areas that needed lighting and the hybrid system was not needed. Therefore, in Pilot 1, OXSI installed two centralised solar systems with nine solar lamps each.

A former men's ACE group that had expressed interest in working on solar lighting (see Section 4.1) worked closely with OXSI solar technical staff to identify locations for solar posts, as well as safe public buildings to install the solar stations. After approval from camp leaders, OXSI installed the solar stations in a school and a mosque. The ACE group continued to support the process by informing the community about the installation, making sure CMCs were informed and engaged, and committing to help keep the solar systems safe. Together with the CMC, the ACE group signed the handover certificate for the systems, pledging to take responsibility to recover looted items, report malfunctioning lights to OXSI, and monitor the systems regularly (for more about handover, see Section 5.3).

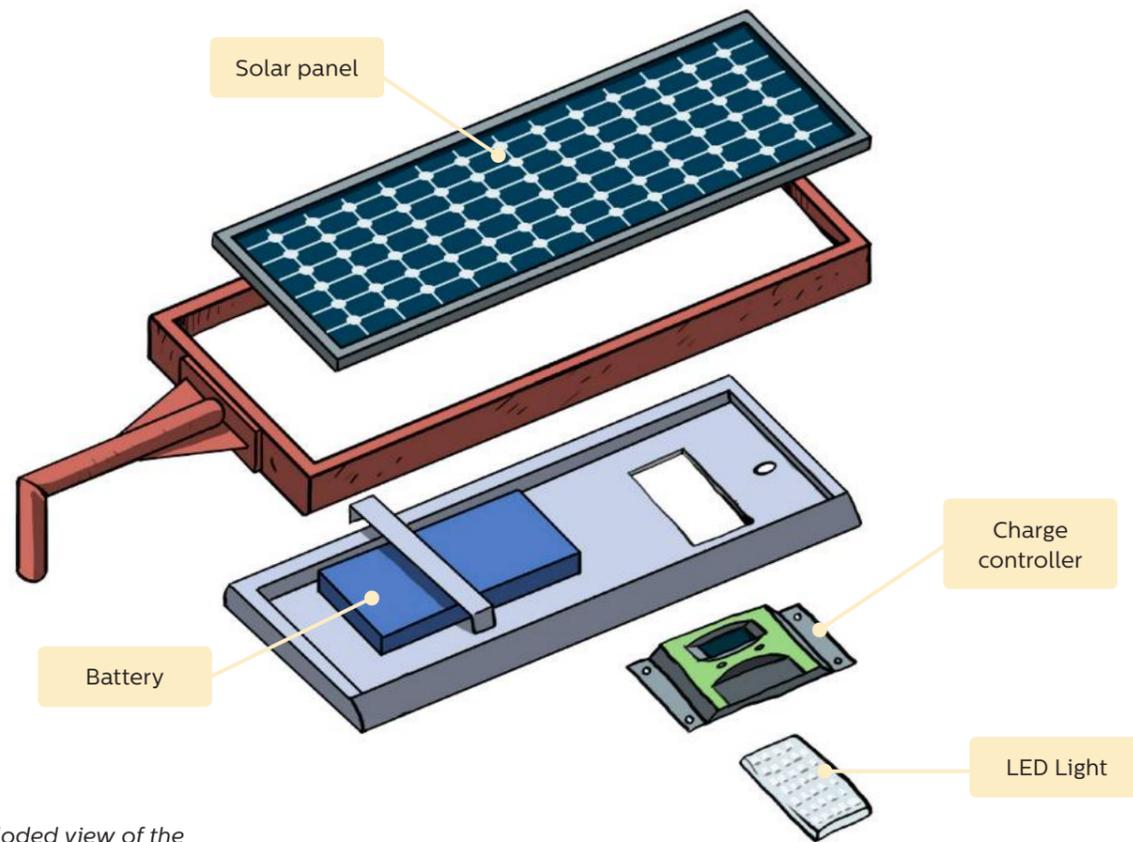
Design considerations



Pilot 2

In a Technical Working Group (TWG) organised for partners implementing solar lighting, OXSI and other agencies designed a second solar system: an integrated design featuring the solar panel, battery, light, and controller in a single, standalone unit that simply needs to be mounted onto a pole. Unlike the stand-alone solar units previously installed in several camps, where the components could be separated and used for other purposes (and thus were more useful if stolen), this truly integrated design means that the solar unit can only be used as a light.

OXSI piloted this second design in another camp of a similar size to Pilot 1, again with a total of 18 units installed (two more units were later added in public spaces). As with Pilot 1, OXSI consulted with camp leaders about the design and location of the solar lights. Unlike Pilot 1, there was no need for a secure central location for the solar system components. The community agreed to monitor and take care of the solar units near their homes and report any issues to OXSI.



An exploded view of the integrated solar unit used in Pilot 2

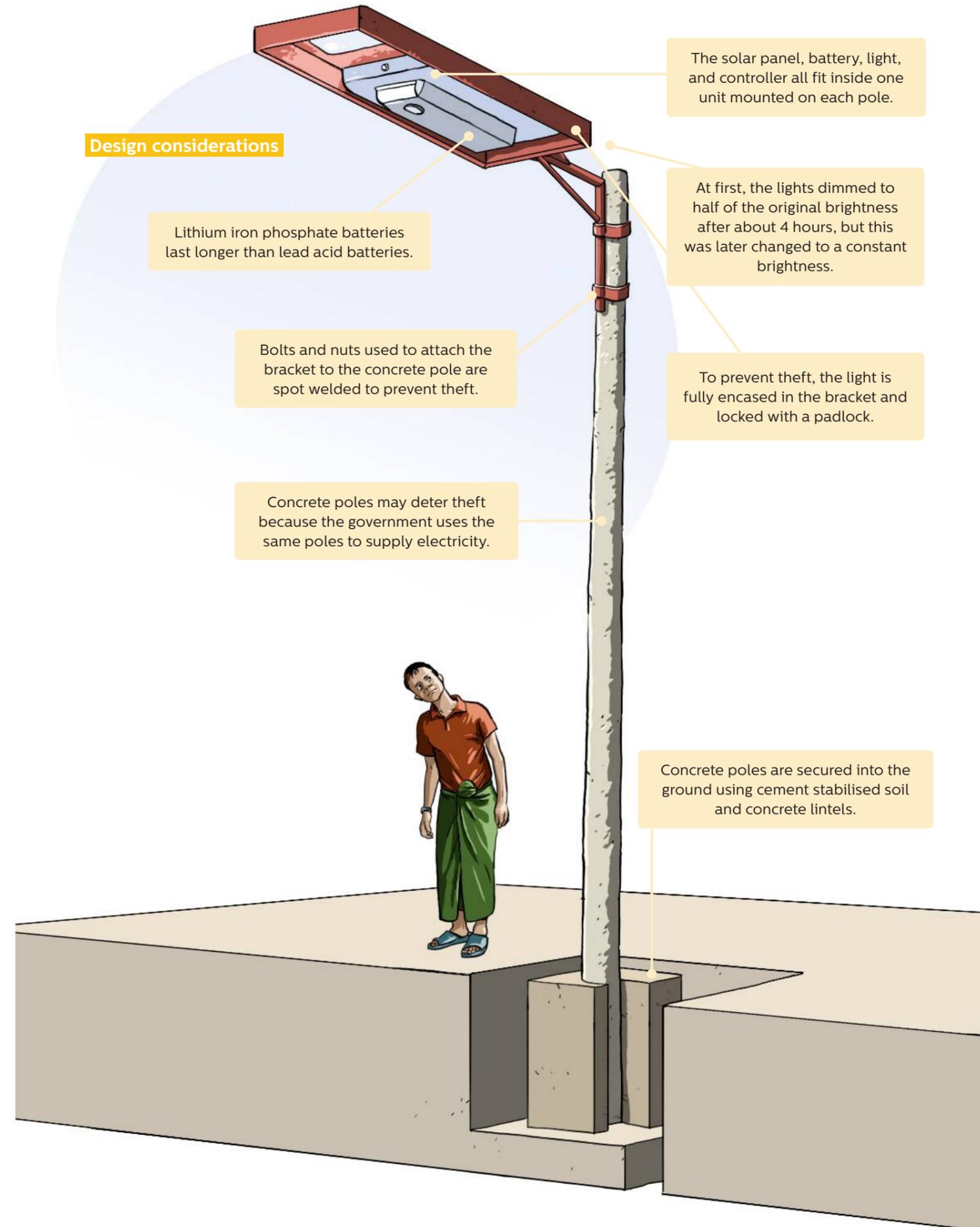
OXSI Challenges

High quality solar components are essential for solar systems to function as designed. For Pilot 2, the manufacturer initially provided lights that did not comply with the specifications provided, resulting in the lights turning off partway through night. In addition, the bracket covered part of the solar panel, which negatively affected the output of the panel.



OXSI Solutions

These types of projects require technical expertise and research, either in-house or through the help of Technical Working Groups. OXSI worked with the supplier to swap the components with those that met the tender specifications, modified the bracket design, and changed the light angle to resolve all of the problems.



Design considerations

Lithium iron phosphate batteries last longer than lead acid batteries.

Bolts and nuts used to attach the bracket to the concrete pole are spot welded to prevent theft.

Concrete poles may deter theft because the government uses the same poles to supply electricity.

The solar panel, battery, light, and controller all fit inside one unit mounted on each pole.

At first, the lights dimmed to half of the original brightness after about 4 hours, but this was later changed to a constant brightness.

To prevent theft, the light is fully encased in the bracket and locked with a padlock.

Concrete poles are secured into the ground using cement stabilised soil and concrete lintels.

Pilot Results and Reflection

OXSI assessed the results of the two pilots, with special emphasis on technical and financial considerations such as cost, design life, installation difficulty, and efficiency.

A summary comparison of the two designs:

| Criteria | Pilot 1: Centralised Solar System (Myanmar Solar Power) | Pilot 2: Integrated Solar Unit (Solar Solutions) |
|--|---|---|
| Cost (per light) | Higher (USD 560) | Lower (USD 311) |
| Warranty | Shorter (1 year) | Longer (3 years) |
| Design Life | Shorter (major components last about 2 years) | Longer (4+ years) |
| Battery | Bulkier, don't last as long, could be damaged by deep discharge (lead acid) | More compact, last longer, not damaged by deep discharges (lithium iron phosphate) |
| Solar panel type | Less efficient (polycrystalline) | More efficient (monocrystalline) |
| Efficiency | Low (110W solar panel for one light) | High (50W solar panel for one light) |
| Theft of electricity | Possible | Not possible |
| Theft of expensive components | Similar (greater use for lead acid batteries and solar panel, but these components are protected) | Similar (easier to steal, but less desirable; can only be used as a light) |
| Flexibility for pole placement | Similar (wiring to central power station, but doesn't require poles to be placed in sunny location) | Similar (no wiring needed, but requires poles placed in sunny location) |
| Installation difficulty | Moderate to hard (especially the requirement to secure expensive components in safe space; limited in camps) | Easy |
| Vulnerability to environmental hazards | Similar | Similar |
| Maintenance | Slightly harder (whole system shuts down if there is a problem, which requires troubleshooting to find problem, but some parts are available in Sittwe, which could make maintenance easier and faster) | Slightly easier (problem with one unit does not affect others, easier to find, very easy to replace entire unit. However, opening integrated unit and replacing individual components is difficult) |
| Local availability of spare parts | Similar (more parts needed; some parts available in Sittwe while others need to be ordered from Yangon, possibly imported by Yangon supplier) | Similar (spare parts need to be ordered from Yangon, possibly imported by Yangon supplier) |

Community perceptions

During pilots, feedback from communities is more crucial than ever, because big and small changes alike are easier to make prior to full scale-up. The OXSI team conducted focus group discussions (FGDs) in the pilot camps with women, men, and children to listen to feedback on the two solar systems.



Several flaws of the pilot analysis emerged over time. First, OXSI did not pilot a hybrid system using both the centralised and stand-alone units in one camp, as originally planned. Second, it is possible that the centralised system could have been designed differently to be less expensive, which may have changed the final decision (however, the quality of the components would have suffered). Third, the two communities consulted could not meaningfully compare the pilot systems, since they each experienced only one system – because neither of the communities

expressed dissatisfaction with their system, the results of the consultations were not used to decide between the two systems, but rather to tweak any problems highlighted by communities for the chosen system. Finally, the short duration of the pilots meant that longer-term maintenance, ownership, and management could not be meaningfully assessed. In the next programme, OXSI will continue to monitor and consult communities about the solar light installations to collect feedback for future programming.



Focus Group Discussions are an effective way to gather feedback.

5.2 Scale Up

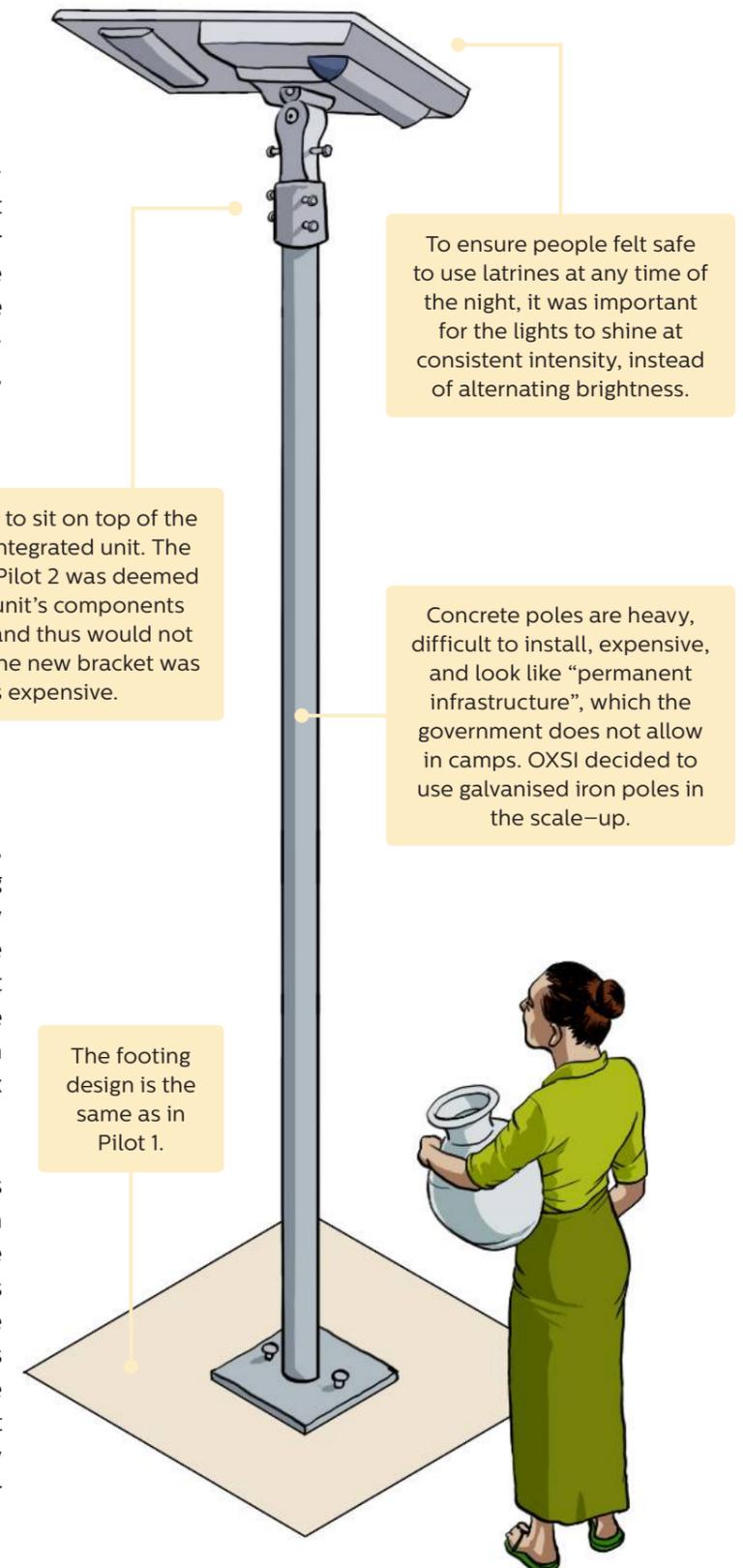
Analysis of a pilot is used to inform any improvements and scale up of the intervention.

The assessments, observations, and consultations showed that the integrated units in Pilot 2 performed better overall, but the full solar design needed a few modifications. To scale up in the remaining camps, OXSI installed the integrated solar lights from Pilot 2, the galvanised iron poles and the footings from Pilot 1, and a newly designed bracket.

A new bracket was designed to sit on top of the pole and to screw into the integrated unit. The theft-proof bracket used in Pilot 2 was deemed unnecessary, because the unit's components cannot be used separately and thus would not be useful except as a light. The new bracket was also significantly less expensive.

To scale up the design in the other camps, OXSI followed its usual steps of involving communities as much as possible, especially in the decision about the locations of the lights. Following the pilot and assessment period, the scale up to the remaining nine camps was relatively smooth and quick, with the remaining lights installed in about six weeks. ([5A Solar Light BOQ](#))

OXSI shared the experience and final designs of the solar lights with other humanitarian agencies in Rakhine, and others are using the integrated solar design for light installations in and outside of camps. Depending on the demand for spare parts, these installations may influence the local market, bringing more spare parts and technical knowledge about solar lighting to Sittwe. Over time, this may positively affect the sustainability of the solar light installations in Sittwe camps.



5.3 Handover

With all newly-completed infrastructure, a ceremony for “handing over” infrastructure to users is vital to increase ownership and engagement, to answer questions, and to communicate important information about the infrastructure.

For the solar lights, the handover process differed slightly for the centralised system (Pilot 1) and the integrated units, but in both cases, the main concern of OXSI and the community was theft prevention.

During the handover, a group of households closest to the solar point (or, in the camp with the centralised system, those responsible for the mosque and school where the solar stations were secured) gathered with

OXSI staff to learn more about the solar installation, ask any questions, and choose two solar point representatives to sign the handover certificate. Everyone gathered for the handover made a public commitment to keep the infrastructure safe from theft and to report any issues to OXSI. OXSI agreed to handle all of the repairs and maintenance. ([5B Solar Light Functionality Check](#))

A snapshot of the certificate outlining the specific responsibilities is pictured below.

| SOLAR LIGHT SYSTEM HANDOVER CERTIFICATE | |
|---|--|
| CAMP NAME STMG | # OF SOLAR POINT 3 |
|  |  |
| <p>Camp representatives agree to:</p> <ul style="list-style-type: none"> Take responsibility for all materials included in the solar system mentioned in the handover certificate. Take responsibility to inform OXSI in case of material looting and/ or damage. Take responsibility for relevant action in case of solar material looting or destruction. Assume ownership of the solar system materials and take responsibility to get back the materials in case of looting and inform OXSI for required technical support to return the looted materials to the original place. Take responsibility to inform OXSI in case of non-functioning solar lights. Regularly check to see if the solar lights are functioning. Take care of the overall security of the solar system. | <p>Oxfam + Solidarites International (OXSI) agree to:</p> <ul style="list-style-type: none"> Provide fully installed solar systems with functioning lights in the pre-identified areas. Provide regular technical supervision of the solar system and technical support whenever it is needed. Replace damaged materials (if the materials are not stolen). <p>DATE July 8, 2019</p> <p>OXSI representative: </p> <p>Community representative: </p> |

([5C Solar Point Handover Certificate](#))



Focus on equity – gender, protection, and inclusion

Women, men, children, and the elderly should attend handover ceremonies to understand that the infrastructure belongs to them, not only to community leaders or those involved in WASH agencies' activities. During handover ceremonies, WASH agencies need to be clear about rules and responsibilities. In OXSI camps, for example, men and boys were forbidden from socialising under the solar lights, because this behaviour made women and girls feel unsafe to use the latrines, which defeated the main purpose of installing the solar lights. Women and girls feel more comfortable to report such behaviour if the rules are clearly outlined and if they feel ownership of the infrastructure.



One copy of the handover certificate is kept by the organisation and another is kept by one of the chosen community representatives.

6.1 Household Waste Separation



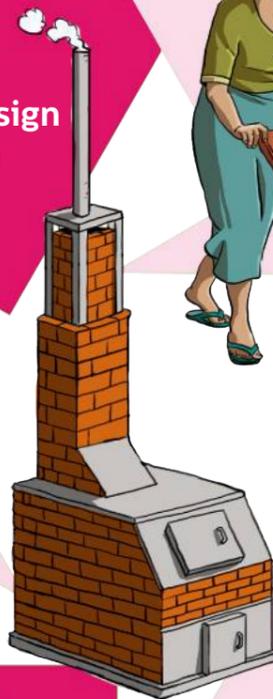
Collection and Transport

6.2



Incinerator Design and Operation

6.3



6.4



Incinerator Monitoring and Repair

6.6

Cleaning Campaigns



6.5

Menstrual Waste Incinerators



C6. Solid Waste Management

In many countries, including Myanmar, municipal solid waste management (SWM) is still not prioritised outside of large cities, leaving many households to deal with solid waste on their own. Sophisticated SWM, especially disposal, is often too expensive for humanitarian programmes, leading to imperfect and unsustainable solutions, which becomes particularly problematic in prolonged emergencies. However, SWM plays a key role in WASH programming to reduce public health risks and keep the environment clean. WASH agencies collect, transport, and dispose of solid waste while drawing the link between SWM and disease reduction in hygiene promotion sessions and engaging communities to help keep their surroundings clean.

The details of a SWM system will vary, depending on the type of waste generated, contextual limitations, and preferences for waste storage, collection, and disposal. Prior to setting up a new system, WASH agencies should understand what happens with waste, both at the household level and the community level, and to evaluate routes, required frequency, and number of workers needed for waste collection, as well as identify final disposal sites and methods.

6.1 Household Waste Separation

An analysis of waste at the household level will indicate the amount of waste separation already occurring, if any.

Separating waste at the household level generally makes solid waste management more efficient, but that depends on several factors, such as the type of waste produced, feasibility of recycling, and the final disposal method. The analysis conducted in Sittwe camps showed that households already receive incentive to separate waste—for example, many households feed food scraps to chickens or sell recyclables to shops that collect recycling. Analysing waste streams also revealed that organics and recyclable plastics, glass, metal, and paper do not make up a significant portion of dumped waste, which gave OXSI the information needed to set up the SWM system.

In a previous programme, Oxfam conducted a pilot to further encourage residents of one camp in the Sittwe restricted area to separate waste. Because waste collected in camps is incinerated, removing non-flammable items such as glass and metal helps the incinerator workers process waste faster, and separating out wet waste such as food trimmings makes combustion more efficient and produce less smoke. The waste separation pilot involved raising awareness and the distribution of containers for organic waste and dry waste. The pilot led to mixed behaviours, with some households starting to separate waste for the first time, while others continued to mix all the waste in one bin.

During this programme, OXSI has continued to encourage waste separation, with similar mixed results. Households that feed food waste to animals and/or sell recyclables to recycling vendors continue to do so, while others mix waste because they are far away from recycling shops or unaware of them, don't have chickens or other animals, do not have enough bins in their rooms to separate waste, or simply don't like to separate waste. In general, the separation of waste at household level was not incentivised enough to become habitual for those not already practicing household waste separation. In the future, OXSI could explore other factors that drive or hinder household waste separation based on the special needs of each household.



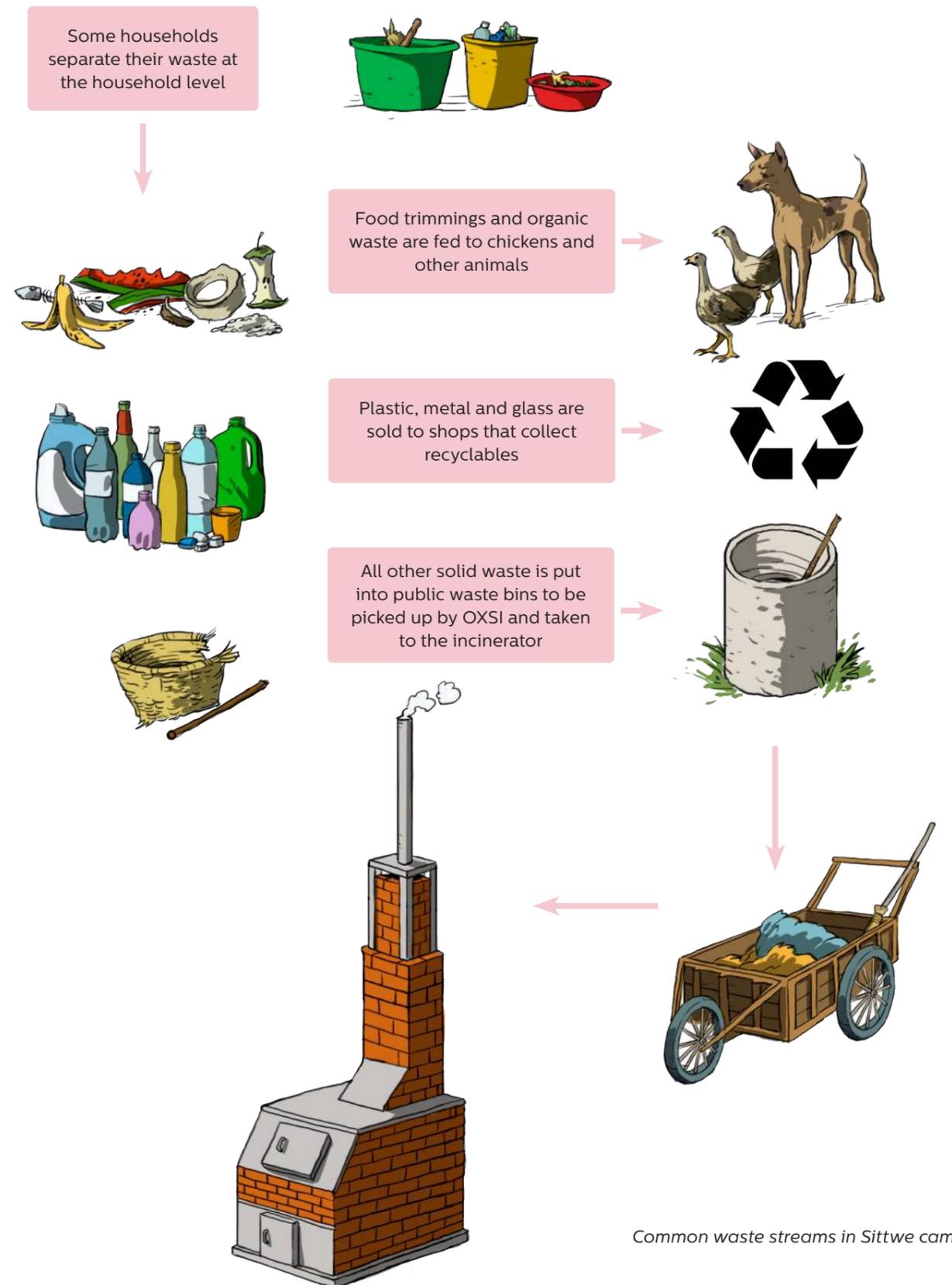
Some households separate waste into three categories: organic waste, recyclables, other.

(6A Waste Separation IEC)



Tip

Responsible solid waste management includes avoiding the creation of more waste as much as possible. OXSI takes care to minimise packaging in non-food item distributions—for example, monthly hygiene kits are distributed in cardboard boxes, which camp residents use for storage or as a fire starter, and only the sanitary pads have plastic packaging.



Common waste streams in Sittwe camps.

6.2 Collection and Transport

After household bins get filled up, solid waste must be either picked up or deposited in a central location for pick up and transport to the waste processing area.

Through consultations and experience, OXSI has found advantages and disadvantages with different public bin designs. For example, bamboo waste bins are light, moveable, and allow ventilation, but must be replaced every six months; concrete bins are durable but not moveable; plastic bins are sturdy and moveable, but the most expensive option.

Considerations about collection efficiency, value for money, and accountability led OXSI to hire environmental cleaners assigned to collect waste from public bins and to pick up litter in specific zones in the camps where they live. In dense camp settings with small unpaved roads, environmental cleaners cannot navigate heavy machinery to collect waste. Instead, they collect the waste in pushcarts, and when full, take the pushcarts to incinerators in each camp. The placement of public bins is important, especially to allow women and girls to dispose of waste during the day and night without walking too far from their shelters; however, too many bins are a burden for environmental cleaners to empty and if not emptied frequently, will become a public health risk or will be removed by nearby households bothered by the smell of old waste.

Pilot

To increase the efficiency of waste collection, OXSI piloted a collection service in one camp. During the pilot, environmental cleaners moved along a predetermined path on the same days and at the

same time each week and used a bell to signal people to come out and dispose of their household waste directly into pushcarts. If someone was not home at the time of the waste collection, they continued to use public waste bins as usual. When full, the environmental cleaner took the pushcart of collected waste to the incinerator.

The pilot ran successfully for a month, and a survey of 60 households showed that the majority (82%) liked the new waste collection system. In addition, although the total quantity of waste collected during the pilot did not change significantly compared to the volume collected using the old system, the number of days the environmental workers needed to collect the same amount of waste per week decreased. Environmental cleaners also reported that the new system made their jobs easier, since they no longer had to shovel out the waste from each waste point. They still needed to empty public waste points, but not as frequently.

OXSI scaled up this waste collection system in half of the camps where OXSI manages WASH. In the remaining camps, environmental cleaners continue to collect waste from public waste bins and transport it in pushcarts to the incinerators. Different systems will work in different situations, so it is important to pilot options and consult communities to find what works best.



Focus on Equity – gender, protection, and inclusion

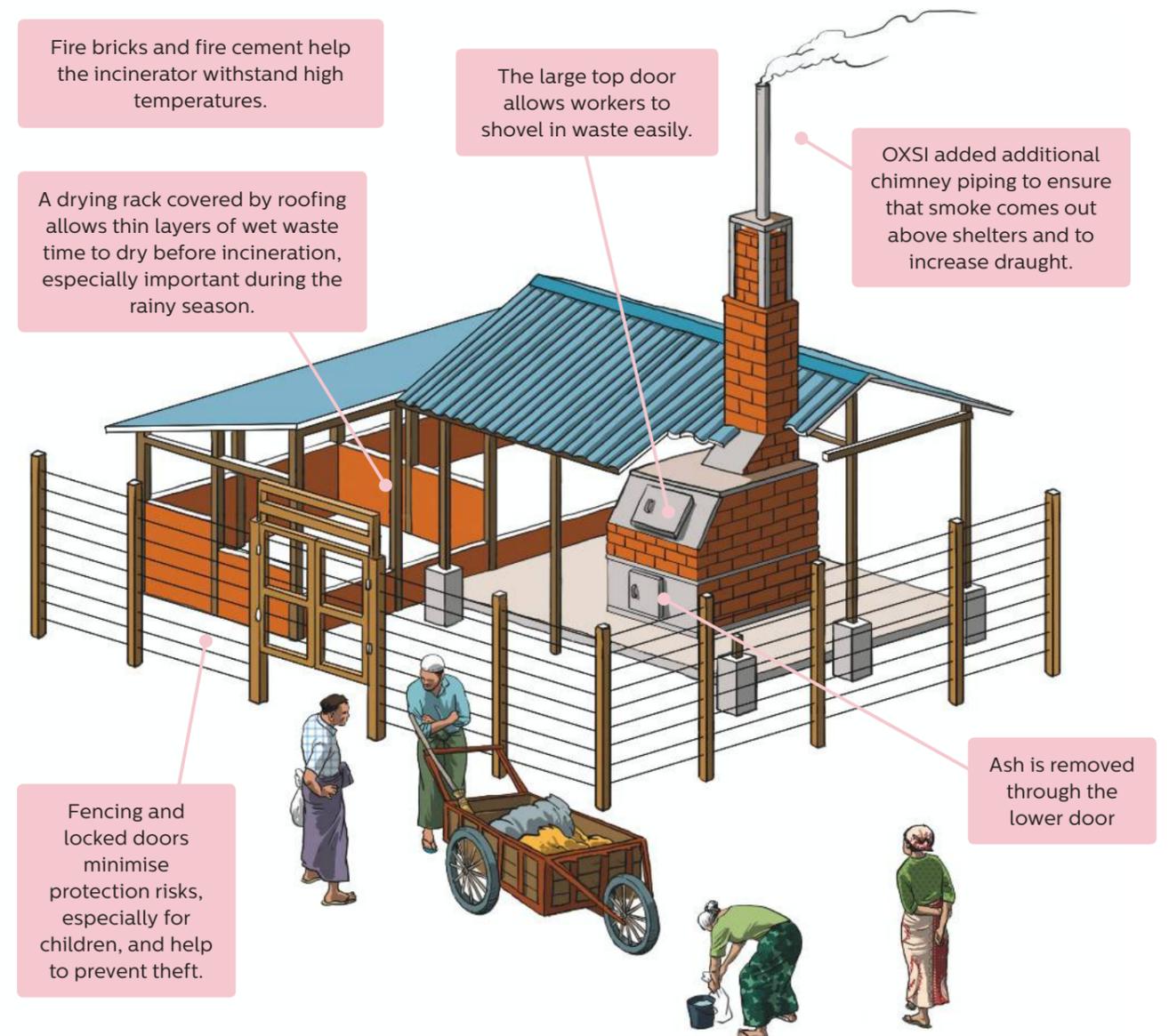
Environmental cleaning can provide an income-generating opportunity for affected populations during a humanitarian response. In WASH programmes, where construction activities tend to favour male workers, women may have less access to livelihood opportunities. For better or worse, women are often accepted as environmental cleaners, and therefore this activity provides an important opportunity for women to earn income. In some OXSI camps, environmental cleaners split a monthly shift, with each cleaner working for two weeks of the month to allow more people an opportunity to earn income.

6.3 Incinerator Design and Operation

In an emergency, and especially in rural areas where local governments do not provide solid waste management services, WASH agencies may have limited options for the treatment and disposal of solid waste.

A waste analysis, including an understanding of community preferences, should be conducted prior to finalising treatment systems. In the flood-prone and densely populated Sittwe camps where managed landfills are impossible, incineration of solid waste is the most practical option, albeit not the most environmentally sustainable. In OXSI camps, there are two different incinerator designs. In the majority of camps, OXSI operates one of these large incinerators.

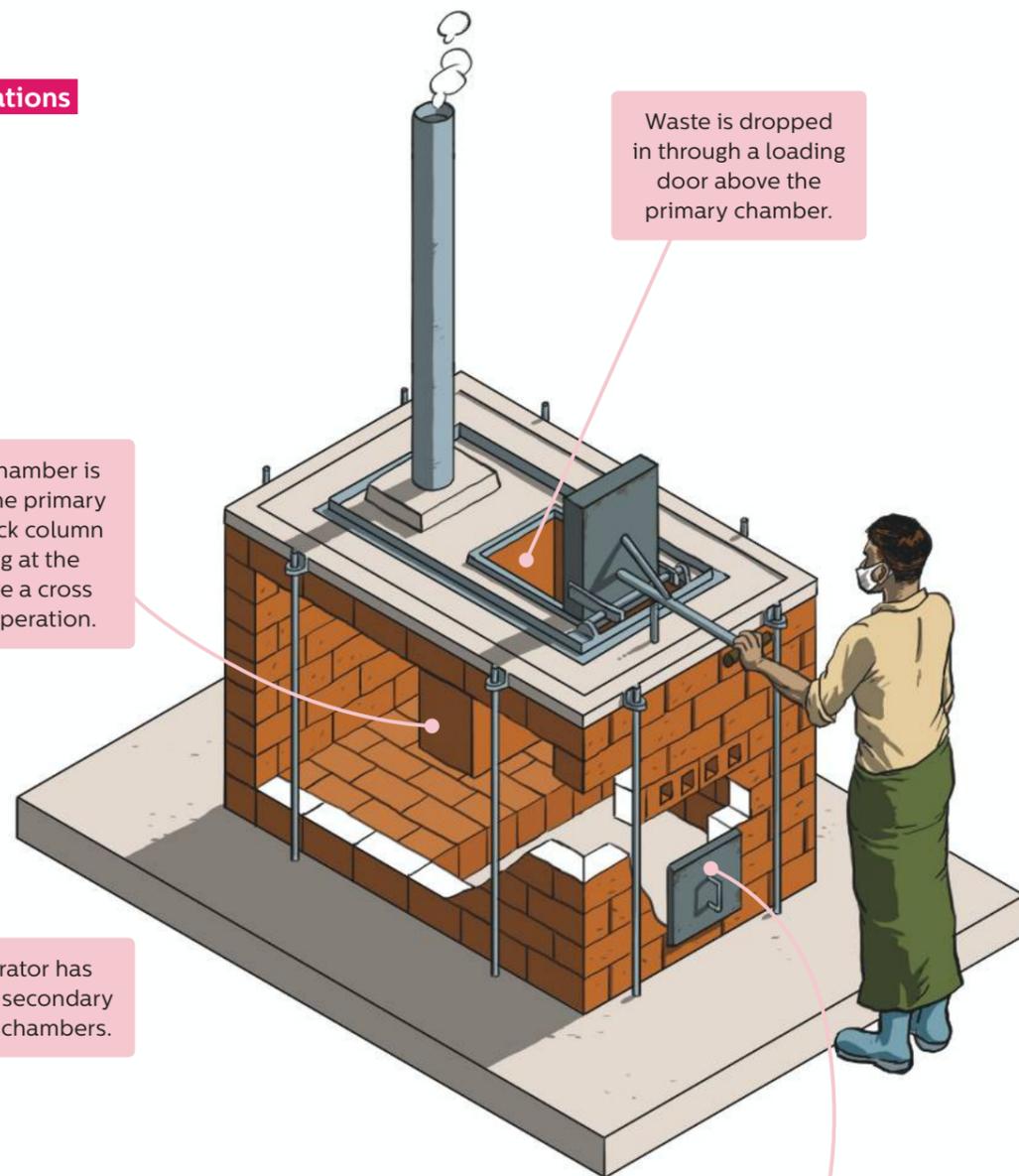
Design considerations



The remaining camps have two smaller De Montfort incinerators*, which are designed to dispose of medical waste (endorsed by WHO), and thus reach higher temperatures and are more efficient. This means they process waste faster, despite a smaller capacity than the larger incinerators, but require more frequent loading, which translates into more manual labour for incinerator workers.

*World Health Organization. (September 2004). *Managing Health Care Waste Disposal*. https://path.azureedge.net/media/documents/TS_waste_disposal_guide_part1.pdf

Design considerations



Waste is dropped in through a loading door above the primary chamber.

The secondary chamber is separated from the primary chamber by a brick column with an opening at the bottom to induce a cross draught during operation.

The incinerator has primary and secondary combustion chambers.

The front door lets in air and allows the operator to light the fire and to remove ash.

Quick Facts

The large incinerator can process 20 kg of dry waste per hour for 12 hours per day, and costs about **4,430 USD** (2020). The smaller De Montfort incinerator costs about **1,650 USD** (2020). [\(6B Incinerator BOQ and Drawings\)](#)



Incinerator workers bury organic waste and material not viable for burning.

Pollutants emitted by incinerators pose health risks for workers, and WASH agencies should take these concerns seriously. Organisational health and safety measures should be in place and followed, with training and PPE provided to all SWM workers. There are also specific immunisations that WASH agencies should consider providing for SWM workers, such as tetanus. The OXSI Community Mobilisation team provides training for incineration workers, which includes how to separate waste, how to dry waste before incineration, how to load waste into the incinerator to maximise combustion efficiency, and the importance of and rules about wearing proper PPE on the job.

Incinerator workers bury organic waste and material not viable for burning (e.g. rusty metal sheets) in a pit in the incinerator compound and collect recyclables to sell to a recycling shop. They sometimes bury ash, especially during the dry season so the wind does not spread it; they also allow farmers from the surrounding areas to use the ash on their soil. The burying of waste in an informal landfill is not ideal, and a better solution should be explored in future programmes.

| OXSI Challenges | OXSI Solutions |
|---|---|
| <p>In some locations, incinerators were too close to shelters, causing complaints about smoke. However, if located more remotely, SWM workers struggle to make multiple trips to the incinerators per day, and remote incinerators attract more thieves – in OXSI camps, materials from incinerators (metal doors, hardwood, roofing sheets) are frequently looted.</p> | <p>WASH agencies should carefully consider the siting of incinerators in consultation with communities. Place incinerators as far from shelters as possible, and consider typical wind directions to minimise smoke reaching shelters. If not possible to build incinerators far away, increase chimney height and reduce the number of days incineration takes place. WASH agencies can reduce looting by partnering with communities to build ownership of infrastructure and by making infrastructure more difficult to loot. OXSI engaged camp leaders to monitor the incinerators to prevent looting. In addition, OXSI slowly replaced incinerator components with sturdier and harder to remove materials, such as concrete instead of timber posts.</p> |

6.4 Incinerator Monitoring and Repair

Involving communities in monitoring and repair is not always feasible for technically complex or dangerous infrastructure such as incinerators.



OXSI monitors incinerators with a monthly functionality check.

Unlike other WASH infrastructure, OXSI does not “hand over” incinerators to communities, and therefore, communities do not participate in any monitoring or maintenance. Once again, the OXSI MEAL team conducts a monthly functionality check to report the status of each incinerator ([6C Incinerator Functionality Check](#)). The results of the functionality check are transmitted to the construction team, who schedule in the repairs into their monthly workplans. Communities can also request repairs through the Community Feedback Mechanism (CFM) at any time.

OXSI Functionality Check

| | |
|--|--|
| <p>Status of incinerator fencing</p> <p><input type="checkbox"/> good <input type="checkbox"/> needs maintenance</p> <p>Is there a collection/drying space inside the fencing?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>If yes, is there a concrete slab for collection/drying space?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>If yes, status of collection/drying space</p> <p><input type="checkbox"/> good <input type="checkbox"/> needs maintenance</p> | <p>Is the incinerator working?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>If no, write down problems</p> <p>Are there any cracks?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Are the doors in place?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Is there a roof over the incinerator?</p> <p><input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>If yes, status of roofing</p> <p><input type="checkbox"/> good <input type="checkbox"/> needs maintenance</p> |
|--|--|

6.5 Menstrual Waste Incinerators

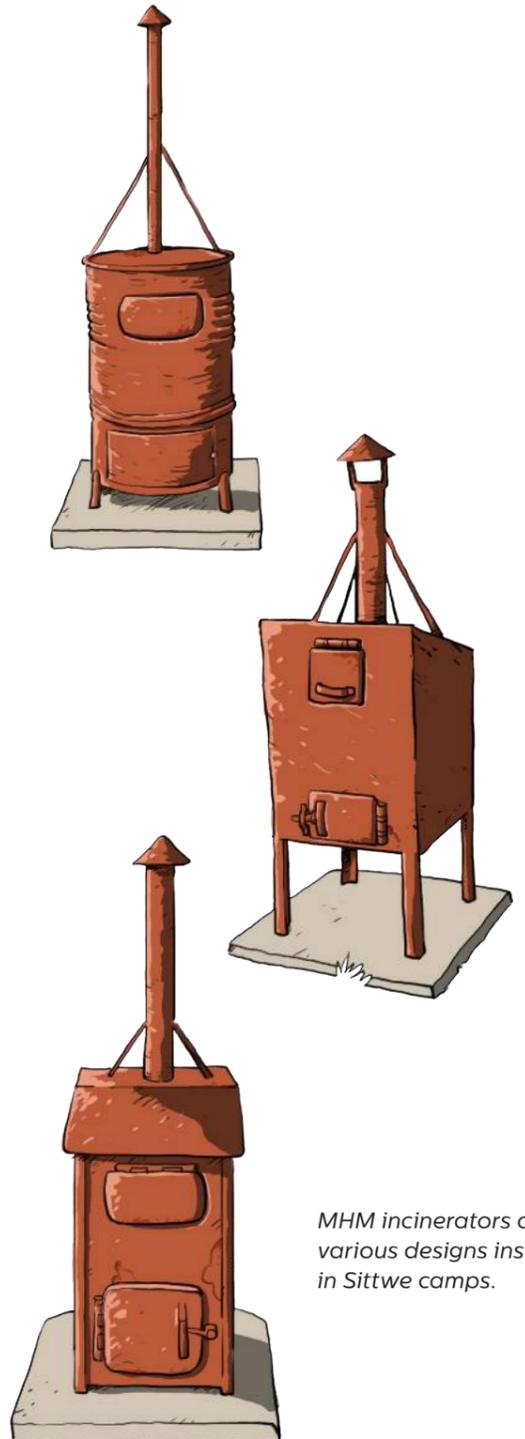
Although humanitarian actors have increasingly incorporated menstrual hygiene management (MHM) into emergency response, the distribution of menstrual materials continues to be the most common activity, which represents only one component of a complete MHM response.

This section focuses on OXSI’s approach to finding solutions in a challenging environment for menstrual material disposal and waste management – to learn about peer-to-peer MHM educational groups and to see the menstrual products OXSI delivers, see Sections 4.2 and 4.3, respectively.

Consultations with women and girls are essential to understand needs, habits, taboos, and preferences for MHM. Through this process, OXSI learned that women preferred to bury or burn used sanitary pads to prevent men, including men working at the incinerators, from seeing the sanitary products brought in with the other waste. Burying is not a preferred option in the camps due to the population density and the high water table, so OXSI worked with women to improve the other option: to make incineration of sanitary waste accessible, private, and fully handled by women.

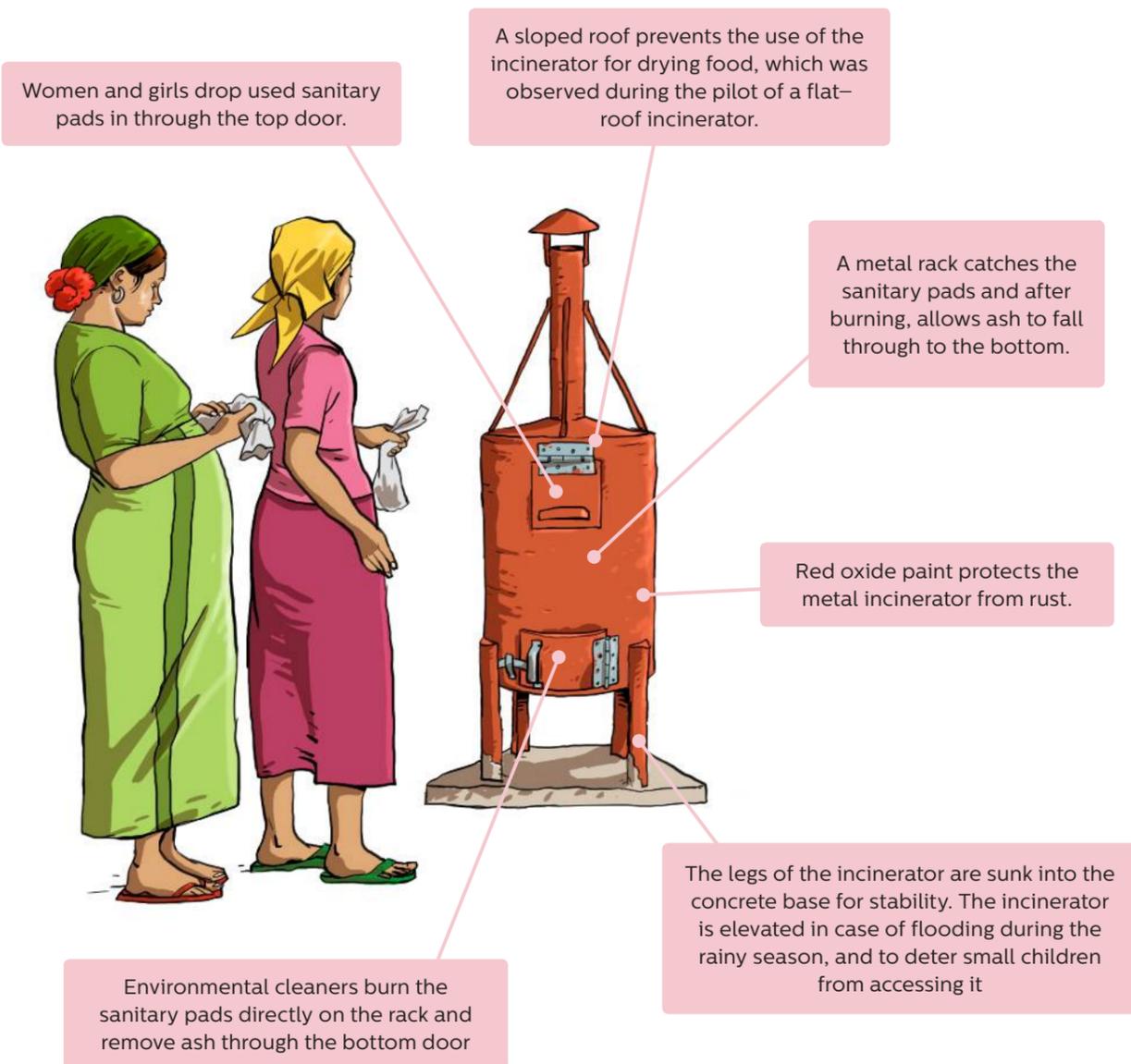
In a previous programme, Oxfam worked with women to conduct a pilot to design and test 24 small MHM incinerators in one camp. Female environmental cleaners checked the incinerators regularly and burnt sanitary products directly in the small metal incinerators, with no transport necessary. Women reported that they used and liked the boxes and requested more incinerators, so OXSI scaled up this process in other camps by consulting with women on incinerator design and locations.

Two Action from Community Engagement (ACE) groups (see Section 4.1) designed two more MHM incinerators with slightly different designs and manufactured 30 for one camp. These two groups contained a mix of men and women, and the men expressed just as much interest as women in working on this issue to help women and girls in their community. When scaling up MHM incinerators in all camps, women and girls heavily favoured the round MHM incinerator designed by the ACE group. OXSI installed over 300 MHM bins, about one for every 11 latrines.



MHM incinerators of various designs installed in Sittwe camps.

Design considerations



(6D MHM Incinerator Drawings)

Environmental cleaners, Community Mobilisation staff, or ACE members, depending on the camp, monitor and report on the functionality and use of the MHM incinerators and inform the Construction team if they need any repairs. This monitoring is not formalised like for other infrastructure, but since environmental cleaners routinely check on and burn the contents of the boxes, additional monitoring has not been necessary. Community Mobilisation teams and MHM groups continue to educate communities about the purpose of the MHM incinerators and to instruct children not to play with the incinerator bins.

Due to numerous challenges in camps, the MHM incinerators are not a perfect solution to ensure the desired level of privacy for women and girls. In most of the camps, latrines are shared by households and not sex-segregated (see Section 3.2), so both women and men see the MHM incinerators located near latrines. However, women and girls prefer the MHM incinerators over other solutions under the current circumstances, and OXSI continues to work with them through the MHM groups (see Section 4.2) to collect feedback and make adjustments in the design, use, and maintenance of the incinerators.

6.6 Cleaning Campaigns

In a protracted emergency, WASH agencies have the opportunity to work with communities to increase long-term engagement in WASH service provision.

This proves easier for some activities than for others. Communities often accept both women and men participating in the collection of solid waste, and it does not require technical skills or sophisticated tools. Even if employing environmental cleaners to collect solid waste, WASH programmes can improve ownership and accountability by organising regular camp cleaning campaigns to engage more people in the cleaning process. The OXSI Community Mobilisation teams organise cleaning campaigns and invite men, women, and older children to help clean up around their shelters. There are several types of cleaning campaigns, but all aim to bring people together and inspire them to take care of their environment:

- **Routine cleaning campaigns** are organised by OXSI Community Mobilisation teams weekly or bi-weekly, depending on the location and season. The team engages neighbouring shelters to participate in cleaning the area around their shelters with tools provided by OXSI or using their own tools (distributed by OXSI to every shelter). Environmental cleaners join the campaigns with pushcarts to take the waste to the incinerator.
- **Spontaneous cleaning campaigns** are sometimes conducted in response to a complaint, Transect Walk (see Section 4.5), or if there is waste around a borehole that fails a microbiological test (see Section 2.4). These cleaning campaigns are also organised after a storm or windy day to clean up debris.
- **Joint cleaning campaigns** are organised with OXSI and CMAs once a month. Both organisations contribute tools, pushcarts, environmental cleaners, and refreshments, and engage a large number of participants to join. [\(6E Camp Cleaning Campaigns\)](#)

- **Open Defecation (OD) campaigns** started in late 2019 as another way to engage communities in solving OD. OXSI held meetings with the community to develop a plan for the campaign to target problem areas once per month. These are similar to cleaning campaigns but focus on cleaning up OD only. The location for the OD campaign is identified through Transect Walks (see Section 4.5) as well as the results of the monthly latrine functionality check (see Section 3.3). The OD campaign is always conducted early in the month so as not to skew the functionality check OD data. [\(6F OD Cleaning Campaigns\)](#)



Environmental cleaners taking a pushcart of waste to the incinerator after a community cleaning campaign.

- **Drainage cleaning campaigns** are conducted as-needed, but especially as part of monsoon season preparedness to ensure that rainwater clears more quickly and does not cause flooding or stagnant water. Drainage cleaning campaigns are sometimes organised together with CMAs. OXSI negotiates with camp leaders to identify a dumping location for drainage waste, since it is too wet for the incinerator. Clearing drainage is more difficult than a routine cleaning campaign and usually attracts mostly male participants.



C7. Monitoring, Evaluation, Accountability, and Learning

Monitoring, Evaluation, Accountability, and Learning (MEAL) aims to comprehend and demonstrate the impact of humanitarian intervention, supports timely and evidence-based decision making, and allows humanitarian programmes to adjust to changing contexts. Humanitarian programmes need independent MEAL staff and processes in place to measure progress on programme indicators, present results to programme staff as well as to communities, and have flexibility to adapt policies and practices in response to feedback.

A MEAL approach in an acute emergency will look different than in a protracted crisis, but in all situations, monitoring, evaluation, and learning ultimately boil down to accountability. Accountability means that all service providers take account of, and are held accountable by, different stakeholders, primarily those affected by the exercise of such power. Characteristics of accountability should be highly visible in all aspects of WASH programming—as a mainstreamed component of the programme, OXSI embedded accountability in the project vision of increasing engagement and two-way communication. Monitoring is also highlighted throughout each infrastructure chapter. This chapter dives into a few more components of MEAL in the OXSI WASH programme: the development of a logical framework for the programme; a formal, trusted Community Feedback Mechanism; measuring perceptions; and learning and adapting in response to feedback.

7.1 Logical Framework Matrix

The logical framework matrix (logframe) is a management tool used to design, monitor, and evaluate interventions.

As much as possible, agencies should write the logframe with everyone involved in the project—greater inclusivity leads to better planning, understanding, and ownership of the project. One way to do this, as the OXSI MEAL team chose to do, is to conduct Logframe Development Workshops to involve key staff in the process of creating the logframe. This first required deep mutual understanding of the aims of the programme, unpacked from the Theory of Change (TOC), which was previously socialised and validated by key staff. The team then discussed how to measure progress against the TOC, and which aspects of the project would be standalone goals or activities and

which need to be mainstreamed throughout the project (some components fell into both categories, such as gender, accountability, and community engagement). It was also important for the logframe to include some “open” indicators, such as those defined by ACE groups (see Section 4.1), designed to be updated at specific points in the programme to allow adaptations. After the workshops, the MEAL team circulated the draft logframe to all staff, as well as technical experts supporting the project for feedback. The OXSI logframe is unique in its participative design, its flexibility to adapt in response to feedback, and in measuring processes as well as outcomes.

The OXSI WASH programme has seven outcomes:

-  Conflict-affected populations have access to and ownership and management over the provision of safe water in their communities
-  Conflict-affected populations have access to and ownership and management over the provision of safe sanitation in their communities
-  Conflict-affected community are aware of and promoting positive hygiene practices
-  Increased and strengthened influencing across various platforms at the local and national levels to amplify key concerns from conflict-affected communities
-  A strengthened culture of accountability and transparency exists in the delivery of WASH services to affected populations
-  Clear and comprehensive Gender and Protection mainstreaming throughout the project implementation
-  Emergency Planning implemented and Emergency Response ready to adapt and launch

(7A OXSI Logframe)

7.2 Community Feedback Mechanism

A Community Feedback Mechanism (CFM) is perhaps the most visible aspect of accountability in humanitarian responses.

Indicators of a good CFM include an accessible, trusted, and easy to use system to log feedback; an adequate response time; feedback on the outcome of the complaint (“closing the loop”); and programmatic changes in response to feedback, if necessary. During a humanitarian response, the responsibility of ensuring a CFM exists lies with Camp Coordination and Camp Management (CCCM) agencies, but every service provider needs to have systems in place to ensure two-way communication and accountability.

Not all systems for collecting and responding to feedback will apply to all contexts, so an assessment of communication channels should be conducted prior to setting up a CFM. Before the OXSI WASH programme started, Oxfam assessed the CFMs in place in the previous consortium, mostly complaint boxes and hotlines, and consulted with communities about the efficacy of the systems. With high illiteracy rates and low cell phone ownership in Sittwe camps, most people could not access complaint boxes and



Step 1: Feedback Given

hotlines. Communities overwhelmingly preferred to give feedback face-to-face (F2F) with staff, evidenced by the success of desk-based F2F mechanisms implemented by Camp Management Agencies (CMAs). OXSI built the new accountability system around this feedback, implementing a mobile F2F system designed to complement existing CMA systems (see Section 7.3), wherein dedicated staff roam around the camps to collect feedback. The OXSI system also emphasises collecting feedback as part of routine activities, which allows groups to report feedback together during hygiene promotion sessions or individuals to report privately during household visits.



Step 2: Input Feedback in Device

Multiple options now exist to streamline data collection using Information Communication Technology (ICT), and support from specialised accountability and technology experts can make the difference in setting up a successful CFM, especially if introducing new technology.

Tip

Although an accountability culture means that the entire team feels accountable, dedicated accountability positions, both staff and volunteer, have been recognised as having a positive impact on the culture and practice of accountability, especially when launching a new CFM.

One comprehensive system that easily ties together and documents all the steps of the feedback loop, from collecting feedback to closing the loop, can simplify the flow of feedback processing. OXSI set up the digital CFM in a platform called SurveyCTO, which staff access on tablets to collect feedback or on the computer to download data. The OXSI system not only collects complaints; it allows for case management.



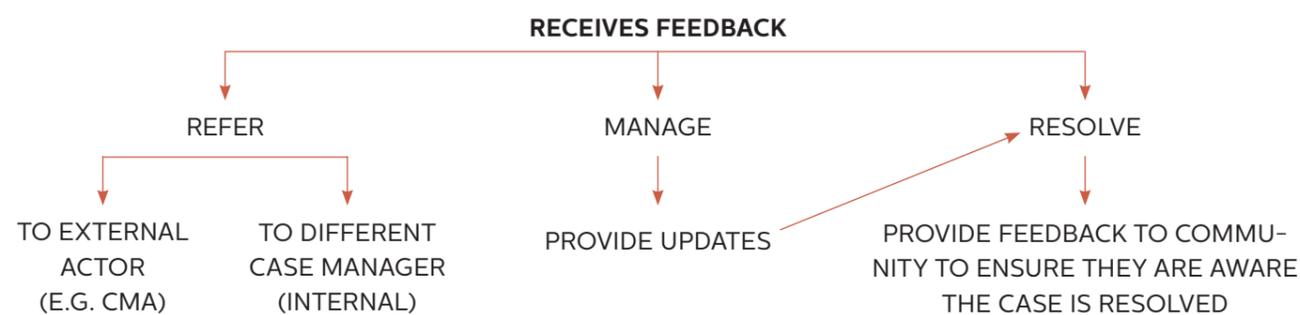
Step 3: Technical teams refer, manage, or resolve feedback

The person who initially collects the feedback records the case details and the system automatically sends the feedback to the proper department – construction, sanitation, community mobilisation, water quality, gender and protection, or MEAL. Case managers from each of these teams receive the feedback and include it in their action plan to resolve. Case managers ensure the feedback loop is closed before closing the case (see Section 7.5).



Step 4: Close the feedback loop

All of the OXSI staff received training for case management, and all case managers receive weekly reminders to handle pending cases. Generally, a case manager has a few options when receiving a case:



Step 5: Reporting and analytics

The OXSI accountability mechanism does not directly link to any external stakeholders, so referrals to external agencies must be handled by case managers for each individual case. The CMA and OXSI CFMs do not always “talk” to each other well, and timely referrals and follow up depend largely on the persistence of staff, which emphasises the need for well-trained staff.

The ICT experts worked together with the OXSI team to define categories of feedback. There are five categories, as listed below. Complaints get elevated into different categories based on the length of time the complaint has been unresolved.

| Category | Explanation |
|---|--|
| WASH Service Request | A request for service that falls within the ordinary work of the consortium. |
| Cat-1 : Positive feedback | Feedback which is positive about the programme activities or services received. |
| Cat-2 : Request for other assistance | A request for services that are not provided by the consortium but may be provided by other organisations. |
| Cat-3 : Minor dissatisfaction with activities | A complaint about the activities, services or infrastructure that the consortium is providing that has been unresolved for over two weeks. |
| Cat-4 : Major issue with activities | A complaint about the activities, services or infrastructure that the consortium is providing that needs urgent attention or that has been unresolved for a month or more. |

A success factor for the OXSI CFM is its link to operation and maintenance, making it a “living tool” that is frequently utilised by the whole team. For example, service requests for construction repairs are integrated into the construction team’s monthly work plan along with the results of monthly infrastructure functionality checks. Service requests will eventually phase out the need for frequent monitoring of infrastructure to create construction workplans. In this way, a functioning and well-used CFM indicates a community’s increased ownership over WASH infrastructure, and it helps WASH agencies to respond to community needs more efficiently.



Step 6: Programme change

Documentation as part of the accountability process is vital to measure performance of the accountability systems themselves. In OXSI’s system, the CFM data links with PowerBi, a data visualisation service, which produces reports showing the number of cases received; basic information on the complainant; the type of feedback; the number of cases managed, referred, and closed; and the length of time to close a case. This set up ensures that almost the full cycle of the CFM (except for closing the loop) is automatically documented. The system also shows who manages and closes each case, allowing for greater accountability.

Tip

The Community Feedback Mechanism is a key way to provide feedback to service providers but should not be the only way. WASH agencies can collect further feedback through routine Post-Distribution Monitoring assessments, satisfaction surveys, Focus Group Discussions on specific projects and activities, etc.

7.3 Safeguarding, Whistleblowing, and Sensitive Feedback

Sometimes, a separate system is needed to collect sensitive information.



OXSI designed the new F2F CFM to work in collaboration with CFMs already established by Camp Management Agencies (CMAs), which functioned well. OXSI was able to implement an almost entirely F2F CFM because camp residents have the option to report sensitive issues, such as complaints of staff behaviour, to CMAs without having to face OXSI staff to do so. OXSI trained enumerators to help people who approach them with protection or gender-based violence feedback to report them to the appropriate agency. When collaborating with other agencies, it is vital to make sure that data sharing agreements are in place and that both agencies have solid data privacy policies to ensure privacy and protection for the complainant.

In addition, OXSI collects safeguarding issues and whistleblowing complaints through two hotlines – one for Oxfam and one for SI–managed by safeguarding focal points, not through the CFM. Specially trained staff positioned in Sittwe and in Yangon answer the hotline and refer cases to be investigated according to internal procedures, while providing specialised support to the survivor. Oxfam also offers a global online reporting mechanism, but it is only accessible in a few languages and for those with access to the internet.



Focus on equity – gender, protection, and inclusion

Although staff responsible for collecting feedback should be close to the community to ensure a high level of trust, they may face increased risks and protection concerns if collecting sensitive feedback. Measures must be taken to set up safe reporting mechanisms to decrease risks to staff. In Sittwe camps, this meant bypassing camp-based safeguarding focal points and linking cases to staff outside of the camps.

7.4 Accountability Awareness

The success of a new CFM depends largely on the training of staff and the awareness and trust of the system by the community, not only on the design of the system.

To create a culture of accountability, all staff and communities need to understand the CFM and other reporting mechanisms. Communities must understand that there are specific ways to “talk” to service providers in ways that are documented and acted upon. Staff focusing on protection and gender mainstreaming in particular need to be involved in the design and implementation of reporting mechanisms. The OXSI Gender and Protection Coordinator organises regular awareness sessions on safeguarding and whistleblowing for camp-based staff and volunteers, while the MEAL team conducts trainings for data collectors, case managers, and all staff to better understand the CFM and discuss ethics and consent. The MEAL team also manages accountability focal points, who roam around camps to collect feedback on tablets.

OXSI launched the CFM as a pilot in one camp prior to scaling up in all locations. The pilot allowed close supervision and quick troubleshooting of problems, as well as an introduction to the system in practice for the staff.



Focus on equity – gender, protection, and inclusion

Household visits to collect feedback through the CFM ensures that those who are not able to come to offices, such as the elderly or people with disabilities, are reached and heard.

OXSI engaged Internews as a partner for one year of the programme to strengthen accountability and communication. Among other tasks, Internews worked on the Accountability Awareness campaign in camps, focusing on two main components:

- Capacity building and guidance to camp-based staff on accountability so that they can deliver key messages accurately and effectively to communities.
- Facilitating sessions with the community and conducting awareness sessions door-to-door to explain accountability and the CFM and the ways of utilising it. Door-to-door visits ensured that those not regularly participating in OXSI sessions were also aware of the system.

To facilitate awareness raising in camps, Internews produced an animated video and IEC about accountability, the CFM, and OXSI's services in Rohingya, Rakhine, and English. The extracted audio file can be sent to non-smart mobile phones, while the video is uploaded on tablets and smartphones and played at the end of most standard hygiene activities and events.

The concerted effort to spread awareness about the CFM and about the services provided by OXSI led to a spike in cases in the CFM. Throughout the programme, this pattern was seen with every increase of awareness raising sessions on accountability, suggesting that continued awareness sessions encourage communities to make use of the CFM.



Community members providing feedback to an OXSI MEAL staff, as demonstrated in a video created by Internews

7.5 Closing the Loop

Closing the feedback loop is often the most difficult part of a CFM for staff to remember and track. However, the mechanism cannot be effective without this component.

Transparency about how agencies resolve cases is integral to community trust, and accountability mechanisms only operate if there is trust. Feeding information back to communities about what they can expect when providing feedback, how it's handled, and clear protocols on responsiveness allow community members to make informed choices on whether or not to report feedback again.

It is helpful to have a clear schedule in place for when and how to get back to communities about their feedback results. For example, OXSI case managers check their accounts for new cases on specific days twice a week, and try to resolve, give an update, or refer all active cases by a specific day each week.

The next day, the MEAL team downloads the updated database and shares the results of non-sensitive cases with accountability field staff, who go out the following day to follow up with those who gave feedback that has been resolved or updated. Some cases are resolved simply by providing feedback to communities without any practical action, such as when there is a blockage that prevents OXSI from repairing broken infrastructure. In this case, staff may feel discouraged closing the loop when the problem

has not been solved, but it is vital for communities to understand why the problem persists so as not to lose trust in the agency and in the CFM.

Staff also encourage communities to continue filing complaints even if they know the issue cannot yet be solved, because agencies can use the complaints for advocacy with others to work on the complaint.

The Programme Management Unit (PMU), sometimes alongside a case manager, handles sensitive cases by directly contacting the person who filed the complaint. For all cases, there is a deadline to respond to communities within two weeks, even if the case has not been resolved.

OXSI works to improve accountability to communities through monthly meetings with camp leaders to provide project updates, answer questions, and hear concerns. This has shown to be particularly important in camps where blockages stalled work. Another way that OXSI practices accountability to communities internally is through "Hearing Sessions", organised with all camp-based staff and the PMU once a month to give and collect feedback on programme challenges, successes, and updates.



Focus on equity – gender, protection, and inclusion

The collection and processing of beneficiaries' personal data by humanitarian agencies can pose protection risks, especially if beneficiary data ends up in the wrong hands. Humanitarian agencies must have and follow data protection policies to ensure that only minimal and essential data is collected, stored safely, and accessed only by those who need it for planning or reporting purposes. When searching for a safe system for data collection, Oxfam conducted a feasibility assessment on digital protection, and found SurveyCTO to be one of the safest for collecting information. In addition, all data collectors and accountability staff received extensive training on data protection and digital protection rights.

7.6 Perception-based Assessments

A key aspect of accountability and learning in emergencies is listening to and acting upon the perceptions of affected communities. Without taking perceptions into account, there may be a large disconnect between how a humanitarian agency views its assistance and how affected people experience humanitarian aid.

In the past, Knowledge, Attitude, and Practices (KAP) surveys in the Sittwe restricted area consistently showed high levels of knowledge without evidence of corresponding behavioural changes. For the OXSI WASH programme, translating objectives on increasing community engagement, ownership, and satisfaction into indicators and specific follow-up actions required the development of several perception-based assessments to replace the KAP surveys. This shift to measuring satisfaction, participation, and overall impact of the programme on health (in addition to quantitative assessments such as infrastructure checks) also reflected the goal of the OXSI programme to place communities at the centre of decision-making. The perception-based assessments also sought to

highlight how higher engagement and satisfaction in activities results in positive behavioural changes that affect health.

The MEAL team developed each assessment using the same platform as the CFM, validated it with technical teams, piloted it, created a sampling strategy, and then launched each assessment. Following the data collection phase, the MEAL team analysed each set of data and compiled it to be presented and discussed with the entire OXSI team during Learning Reviews. The MEAL team also had to conduct extra training for enumerators to teach them how to conduct perception-based surveys, with a focus on ethics, consent, and data quality. These surveys are briefly described below.

Satisfaction Survey

The satisfaction survey is a comprehensive survey that focuses on perceptions of key WASH activities as well as learning from these activities. Although it incorporates elements of previous KAP surveys, it goes beyond the traditional KAP survey to also include information on consultation, participation, and satisfaction. The survey asks people about their perceptions on frequency and quality of consultations; participation in handovers, repairs, and other WASH activities and how useful they are; important practices to prevent diarrhoea; solid waste management behaviours; handwashing practices; whether or not there are enough WASH facilities and if they are safe and accessible; access to information; satisfaction with infrastructure design; sanitary pad disposal practices; and more. It also serves as a means of measuring the effectiveness of the accountability mechanism, by measuring transparency, information sharing, and awareness of the CFM.

The survey is conducted every six months on tablets using SurveyCTO and analysed by downloading the data into Excel. ([7B Satisfaction Survey](#))



The Satisfaction Survey collects peoples' perspectives on WASH activities and services.

Participation Survey

Many humanitarian agencies aim to have high participation in their programmes. Although most agencies report numbers of participants in activities and events, it is difficult to measure meaningful participation. The OXSI programme aims to increase community engagement and needed a way to measure beyond participation to peoples' perceptions on their involvement and decision-making in activities. The OXSI MEAL team developed the participation survey through consultations with communities, particularly women, to understand what meaningful participation means to them. The rungs of the participation ladder—consult, inform, demonstrate acceptance, negotiate, and take decisions—were decided together with communities. The format of the participation survey, consensus-based FGDs, was also preferred by women because they felt more comfortable expressing themselves in an FGD setting.



The Participation Survey is conducted through FGDs and requires consensus from all participants.

Every six months, the participation survey is conducted on paper both with OXSI staff and with communities through FGDs and compared to the baseline. For each activity, the group gives a rating from 1–4 on how much they were consulted, informed, demonstrated acceptance, negotiated, or took decisions in that activity. The group must reach consensus on each activity. Consensus ensures that one or two people do not dominate the FGD and speak on behalf of everyone else, something that happens frequently in FGDs unless carefully avoided. ([7C Participation Survey](#))

Pharmacy Assessment

The overall goal of WASH programming is to positively impact health outcomes. Although OXSI receives health data from the health cluster operating clinics in the Sittwe restricted area, feedback from communities showed that most people seek help at clinics only for severe illness. In addition, there are not enough clinics to serve the entire population, and many people cannot afford to travel to a clinic. Therefore, people frequently buy medicine from small pharmacies in camps. OXSI implemented a simple assessment to ask pharmacy owners every six months which medicines they sell the most, focusing especially on medicines to treat diarrhoea. Because most pharmacy owners do not keep meticulous records over months, this is classified as a perception survey. Although many other factors could influence whether or not people buy medicines and which medicines they buy (eg. availability, lack of income, closure of pharmacies, etc.), this assessment provides a snapshot of common health ailments in camps, and if, over time, people buy more or less medicine for specific ailments that are of interest to WASH agencies.

(7D Pharmacy Assessment)



The Pharmacy Assessment is conducted to keep track of the types of medicine most commonly sold in camps.

7.7 Learning and Adapting

One of the key reasons for collecting regular feedback is to learn and adapt programming to better meet needs of the community.

The changes may include the addition of a new activity or item to distribute, a different way to conduct an ongoing activity or distribution, a new or different way to share information, and so on. Even minor adaptations are vital in demonstrating to communities that agencies listen and respond to requests and to changing needs. In a multi-year programme, needs and approaches will change, and teams will learn and adapt continuously—therefore, it is important for programmes to have tools in place to reflect on activities with staff and communities and to support these changes.

The design of the OXSI MEAL approach itself developed from a change in the context and from feedback in the previous consortium. As the emergency in Sittwe became prolonged and was widely recognised as a human rights crisis, OXSI shifted from top-down aid delivery to more community-led processes to transfer as much agency and decision-making as possible to communities to avoid further disempowerment and dependence on external organisations. The MEAL tools, described in this chapter, thus evolved to reflect this change by focusing less on delivery targets and more on regular consultations with communities to check if activities meet needs, to involve more people in the design and maintenance of infrastructure, and to work together to identify and solve problems.

One opportunity to consult both teams and communities is a routine Learning Review conducted to dialogue about all collected data and how to use it among those involved in the response. The data evaluated can include internal processes, approaches, and harmonisation between actors, as well as programmatic results such as infrastructure functionality, PDMs, satisfaction surveys, pharmacy assessments, and participation surveys. In the OXSI WASH programme, each Learning Review identifies a series of recommendations that the team tracks in a Learning Review Matrix. These recommendations have included ways to improve coordination between teams, the creation of guidelines for specific activities, new approaches for solving blockages and building relationships with stakeholders, ideas for increasing community engagement, and many other recommendations focused on increasing the efficacy of the programme and meeting emerging community needs.

Some examples of changes made in response to feedback in the OXSI programme are below:

| OXSI Feedback | OXSI Adaptation |
|---|--|
| Through PDMs and the CFM, women requested more sanitary pads and underwear. | The programme adapted by including a dignity kit distribution every six months for the remainder of the programme. To enable women more choice and dignity in having a choice of colours and sizes of underwear, the programme adapted its distribution protocol to have staff do the distribution in small groups at household level (see Section 4.3). |
| The latrine functionality data and other monitoring found consistent evidence of open defecation (OD) in the camps. Through consultations, it also became evident that OD is practiced by children as well as the elderly and people with special needs who may not be able to get to latrines. | OXSI adapted to include formative research on OD to create strategic behaviour change programming to solve the issue (See Section 4.8). With Child Friendly Latrine construction already planned, the project also added an inclusive sanitation consultancy designed to assess needs and recommend tailored sanitation solutions for people with special needs (see Section 3.8). |
| Through a gender assessment and the CFM, the team learned that some women felt uncomfortable to share latrines with men. | Although communities had previously given preference to have family-shared latrines rather than sex-segregated public latrines during the latrine handover process, OXSI re-started the discussion at shelter level to propose other alternatives for family-shared and sex-segregated latrines. Focus group discussions held at household level allowed the decision to be made by each group of households rather than by WASH agencies (see Section 3.2). |
| Updated SPHERE standards dictated that agencies distribute more body soap, which required OXSI to change to unscented soap due to cost. Feedback from PDMs found that women in particular appreciated more soap but preferred the scented soap, which they also use as shampoo. | OXSI could not provide scented and unscented soap in each hygiene kit, so adapted by creating two separate hygiene kits. One of the kits includes scented soap and is distributed every three months (see Section 4.3). |



C8. Emergency Response: COVID-19

The COVID-19 global pandemic dramatically changed lives, economies, and ways of working in 2020. The World Health Organisation (WHO) declared the COVID-19 outbreak a global pandemic on March 11th and called upon governments around the world to scale up their response to contain the pandemic. As many cities and entire countries went into lockdown, the most vulnerable, including those living in densely populated camps, did not have the option to isolate or to work remotely. In addition to existing risks and threats, forcibly displaced and stateless populations faced a heightened risk of COVID-19 due to more densely populated conditions, lack of access to adequate health care, and restricted delivery of critical services.

Myanmar announced the first case of COVID-19 in the country on March 23 and shortly thereafter, the Government of Myanmar started to enforce regulations and a partial lock down to prevent the potential spread of the virus. The COVID-19 pandemic presented a new challenge for many humanitarian organisations and required fast adaptation of activities and ways of working to prevent transmission while continuing life-saving activities. In Sittwe camps, COVID-19 introduced additional challenges as the authorities used the pandemic as an excuse to further violate the rights of Rohingya and Kaman communities.

8.1 Contingency Planning

Many humanitarian organisations regularly develop contingency plans for potential emergencies, such as extreme weather events or conflict escalation.

OXSI updates its seasonal contingency plan annually and was prepared, while closely monitoring the development of COVID-19, to develop a contingency plan for responding to the pandemic.

Contingency plans that include clear “triggers” help teams know when to activate a specific part of the plan. For the COVID-19 plan, OXSI colour-coded the different levels of response according to easily-observable triggers:

Yellow:



Preparedness

Orange:



Risk reduction.
(pandemic announced; cases in Myanmar but outside of OXSI's area of work)

Red:



Response.
(cases declared in OXSI's area of work)

The contingency plan clearly indicates which activities continue and which are paused at each level of response. In addition, the plan includes activity guidelines that outline, at each level, specific changes to activities and ways of working to reduce the transmission of the virus while continuing to provide life-saving assistance. This also involved defining the necessary Personal Protective Equipment (PPE) needed for staff at each phase of the response for different activities based on their exposure risk. ([8A Activity Guidelines](#))

Together with the contingency plan, OXSI developed several SOPs and guidance notes to ensure that teams safely implemented programme activities. As with any modifications, OXSI involved gender, protection, and accountability staff in the creation of the guidelines and SOPs and focused on addressing risks to frontline staff and the groups most vulnerable to the crisis.

In addition, OXSI set up emergency teams composed of national staff from each department to carry out lifesaving activities in case of limited access to camps.



Focus on equity – gender, protection, and inclusion

The COVID-19 pandemic affects men and women differently, and this understanding is the first step to creating effective and targeted communication campaigns. The Gender and Protection Coordinator conducted training for all OXSI staff to discuss the additional challenges that women face during the pandemic. These challenges include a higher risk of contracting the virus because the majority of healthcare workers and caretakers in the home are women; an increase in domestic violence and limited ability to seek help due to isolation; lower knowledge and exposure to information; loss of autonomy and social support networks; and limited access to healthcare, especially for “non-essential” concerns. OXSI included this information in messaging for communities, and created a gender checklist for COVID-19 response activities for internal use. ([8B Gender Checklist](#)).

8.2 Adapting Activities

A new emergency response rolled out in an organisation's area of ongoing implementation may involve the cancellation or modification of activities and the introduction of new activities.

For the OXSI team, the development of the contingency plan involved creating some new activities (see next section) as well as dividing current activities into two broad categories:

- Critical life-saving assistance that had to continue during all levels of the COVID-19 response, while making sure staff conducted these activities as safely as possible.
- Activities considered too high-risk or not in line with COVID-19 infection prevention and control (IPC) measures that could either be paused or significantly altered to lower or prevent the risk of transmission. The contingency plan, along with activity guidelines, outlined the modifications taken to each of these activities at different risk levels.

Examples of OXSI life-saving activities that continued regularly during 2020 and the adaptive measures put in place include:

| OXSI Life-Saving Activity | Adaptive Measures during COVID-19 |
|---|---|
| Monthly distribution of hygiene kits | OXSI prepositioned several months' stock of hygiene kits in camps in case of loss of access. The first adaptation of the Hygiene Kit SOP included physical distancing during distribution, handwashing before entering the distribution area, etc. Once the situation reached Level 3 (response), the SOP was again adapted and staff began distributing the kits door-to-door while wearing PPE, distancing, and never entering households. (8C Hygiene Kit Door to Door Distribution) |
| Desludging of latrines and operation of the STS | Again, OXSI ensured adequate stock of materials in camps to operate the STS and carry out desludging activities. The Sanitation Team prepared to manually desludge overflowing latrines in all camps for a period of one month in case of access constraints. Sanitation staff split into two teams that alternated work days to reduce the total number of people in contact with one another. |
| Solid waste management | Instead of organising mass cleaning campaigns, OXSI engaged communities to take responsibility to clean their surroundings by themselves. OXSI environmental cleaners, dressed in appropriate PPE, still collect waste from public waste bins and deliver it to the incinerators, which continue to operate safely. |
| Hygiene promotion sessions | To avoid gathering people in large groups, OXSI switched to conducting hygiene promotion sessions through megaphones, audio files, and with door-to-door visits only, while wearing PPE, maintaining physical distance, and conducting discussions outside with a maximum of five people. Additional COVID-19 IEC was developed to facilitate information sharing. (8D COVID19 IEC) |

To ensure staff safety and to decrease risk for frontline staff in carrying out essential activities, all staff received cloth masks, and staff carrying out essential activities received additional PPE such as gloves, goggles, and even full body suits (for specific activities in case of a large outbreak in camps). OXSI provided training on how to use, dispose of, and care for the PPE. Handwashing facilities were installed in any OXSI camp offices that didn't already have them, near dedicated buckets for disposing of used PPE (regularly taken to incinerators).

In addition to modifying existing activities, OXSI introduced a new set of activities to curb transmission of COVID-19. These activities aligned well with OXSI's ongoing WASH activities and did not require extensive training, except for the new physical distancing guidelines, which initially proved difficult for teams accustomed to gathering communities for educational sessions.

The new activities included the distribution of communal handwashing stations and additional soap. OXSI provided a bucket with a tap to serve as a handwashing station for every two shelters, while the shelter residents contributed to the provision of handwashing stands, which could simply be a plastic stool to hold up the bucket. The communities also agreed to maintain the handwashing stations by refilling the water and taking turns contributing soap.

In addition to communal handwashing stations, OXSI started regular disinfection of WASH infrastructure components frequently handled by many people (eg. handpump handles, latrine door handles, etc.) and messaging on COVID-19 prevention using megaphones. OXSI conducted training of staff and communities about COVID-19 symptoms, transmission, and prevention.

As the pandemic response continued, it became necessary for agencies to track and measure progress and changes resulting from COVID-19 as well as from the response itself. OXSI worked closely with the Communicating with Communities (CWC) inter-agency group to develop and implement a community perception survey to track COVID-19 related information and use the findings to modify the response. OXSI integrated the questions into a Knowledge, Attitudes, and Practice (KAP) survey as a baseline assessment in late May 2020 to understand community perceptions and needs. The OXSI gender needs assessment carried out later in 2020 also examined the effects of COVID-19 on communities, staff, and the project. OXSI adapted its messaging to address the gaps found in these assessments, such as the need for more information about symptoms, how COVID-19 is transmitted, and what to do if someone develops symptoms.



The provision of handwashing stations and soap was key in the fight against COVID-19 transmission.

8.3 Modifications of Ways of Working

In some cases, a new emergency will also involve a change in ways of working, particularly when faced with access restrictions.

Due to the nature of the COVID-19 emergency, the preventive measures put in place by governments could decrease humanitarian access to vulnerable communities. From previous experience and given that access had become steadily more difficult for years, OXSI knew that entry to the camps could be denied, and in addition to changing WASH activities, also implemented adaptations to the ways of working in 2020.

Immediately, OXSI assessed the need for staff to go into camps on a daily basis and started to focus on ensuring that camp-based staff had everything needed to work independently in camps with frequent communication to staff outside. This required training for some staff and the provision of more laptops, cell phone credit, and the set up of electricity in camp offices that did not yet have it. Both Oxfam and SI enforced a work from home policy and scheduled office work attendance for critical operations only. With some international staff getting stuck outside of Myanmar or in Yangon for extended periods, it was also important to set up regular online meetings to ensure effective coordination mechanisms were in place within the consortium team at all levels and with other stakeholders.

The remote management systems put in place rely on the expertise of camp-based teams, some of whom had to quickly take on new responsibilities and learn new skills. The teams' adaptation and ability to continue to manage the programme uninterrupted validated OXSI's overall approach, which focuses on increased ownership and decision-making at community level, as well as the effort to slowly localise the response. In fact, the success of the management systems in place during most of 2020 informed OXSI's development of future programming to focus on strengthening technical expertise and facilitating processes to formalise partnerships and transition services to community groups or local entities in camps. OXSI also plans to support these community groups in camps in their discussions with duty bearers to identify durable solutions.

When the threat of COVID-19 limited staff access to camps, OXSI set up hotlines to receive complaints from communities through camp-based accountability staff. Each camp had a mobile phone for staff to receive feedback, and the phone number was posted on bulletin boards and spread by camp-based staff conducting COVID-19 awareness sessions. Feedback on cases was also given via the same channel. Although hotlines are not ideal in the camps, where cell phone ownership is low, particularly among women and girls, this provided a temporary alternative for those who did not feel comfortable going to OXSI offices to file complaints.



OXSI set up hotlines for collecting and responding to feedback for those who did not feel comfortable filing complaints face-to-face.

8.4 Coordination

Coordination between organisations, clusters, and the government is extremely important when facing a new emergency.

In Rakhine, an inter-agency task team was established at the end of March to work on a coordinated response. OXSI joined the taskforce to provide technical support for WASH-related activities and plans. The Rakhine State Government (RSG) organised a parallel task team, and while the two teams initially did not communicate well, the humanitarian task team quickly adapted to the instructions of the RSG.

Most other working groups operating in Sittwe also took on new tasks and activities during the COVID-19 pandemic. For example, the Communicating with Communities (CwC) working group regularly tracked

rumours and sent out reports to agencies. This was helpful for agencies to hear about and respond quickly to any misinformation being circulated. Protection agencies monitored and sent out reports about individual and community access to information, ability to respond to and prevent COVID-19, access to resources and services, and key protection risks linked to COVID-19. The Hygiene Promotion Technical Working Group coordinated on key messaging and IEC development and translation. Every cluster and working group discussed the COVID-19 response and worked together to fill gaps.



A coordinated response is a key protection principle and especially crucial at the start of a new emergency to ensure full coverage of needs.

8.5 Principled Programming

In a rapidly-evolving new emergency, humanitarian agencies must continue to hold themselves accountable in practising safe programming, adhering to humanitarian principles and standards, and upholding their values.

While many countries did their best to quell the spread of COVID-19, some struggling democracies and highly repressive states used the pandemic as an excuse to violate human rights. Due to the complex human rights crisis in Sittwe, OXSI remained vigilant during the COVID-19 response and continued to try to ensure principled action.

For example, when cases emerged in Myanmar, authorities requested the assistance of humanitarian actors to support COVID-19 quarantine and isolation centres, including the request to OXSI to provide WASH services. The set-up of these centres was not transparent in terms of management, conditions, and occupancy. OXSI had concerns that the centres pose protection risks for Rohingya communities and could cause harm as well as destroy trust between

communities and the organisations working in camps who would be perceived as collaborators in these facilities. At the same time, it was important that the facilities had proper WASH facilities, and OXSI's intervention could minimise the overall harm caused.

To assist with these difficult decisions, OXSI created a checklist to assess each situation on a case-by-case basis. The checklist was shared with other agencies and clusters to promote and influence a discussion on a principled humanitarian response that does not create further harm to strained communities. With the use of this checklist, OXSI assessed and confidently assisted several quarantine facilities in camps with the construction of latrines and bathing spaces, as well as with the provision of hygiene kits.

OXSI WILL not support: if ANY of the following criteria or conditions are met due to risk of causing harm, undermining our values & humanitarian principles:

There is direct support or active collaboration with armed actors, including the Police Force and other groups that might infringe humanitarian principles and OXSI values.

Support sites are where incidents of threats, coercion, violence, blackmail or sexual exploitation and abuse have occurred or suspected to have occurred.

Women and girls do not have access to care by preferred gender.

Sites do not have gender segregated facilities for women and girls who are quarantined/isolated from their households/families.

Family separation occurs without the best interests of the child or children in mind.

Individuals are forced to incur costs associated with their isolation/quarantine or associated processes.

No considerations for child protection and the safeguarding of vulnerable adults are taken into account.

**If any responses are YES, OXSI will NOT support.*

OXSI might support: if through our activities we are able to mitigate, reduce, or address the following conditions and/or risks (more analysis will be needed):

People in sites have limited access to communication and information and OXSI can ensure individuals have unfettered access to timely and relevant communication/ information.

Specific needs for vulnerable individuals exist and OXSI's support can ensure their specific needs are better understood and met appropriately.

Sites do not have gender separated facilities and OXSI's support can ensure increased gender and protection analysis, and the construction/installation of separate facilities for different genders with protection considerations.

There are unclear or unofficial plans regarding stay(s) and OXSI's support to site management will lead to the development and communication of a clear plan for people's stay.

Where OXSI can influence and ensure women and girls have access to care by preferred gender.

Where OXSI can influence and ensure family separation does not occur.

Where it is clear and communicated that individuals will not be forced to incur costs associated with their isolation/quarantine or associated processes.

Child protection and PSEA measures have been considered and a safeguarding complaints mechanism is in place.

**If some/all responses are YES, follow up with management to discuss further and if agreed, review the green criteria.*

OXSI WILL support: (community-led and government-led initiatives), IF we are informed and/or involved in the rationale for setting-up of facilities, management arrangements (with a focus on ensuring people's safety and protection during their stay), and ALL of the following criteria/conditions are met:

Sites are free from involvement of armed actors and other groups that might infringe humanitarian principles and OXSI values.

Communities in the surrounding area(s) of the quarantine or isolation centre and the main target group(s) of the centre have been consulted, informed, and acknowledge such arrangements as an appropriate solution for the specific local context to reduce the spread of infection in the community while respecting safety and dignity of the individuals hosted.

People admitted to the site(s) have done/do so voluntarily.

People in the site have unfettered access to timely and relevant communication and information.

The site has gender separated facilities for personal hygiene and sleeping.

Women and girls have access to care by preferred gender and their specific needs are considered.

Families and children/siblings are kept together.

Specific needs for vulnerable individuals are being met.

Costs associated with the stay are not incurred by individuals/families.

There is a clear and communicated plan for the stay, including details on transportation, admission and release processes.

Activities adhere to WHO standards and guidance, if applicable.

People in the site are safe and the site is free from incidents of threat, coercion, violence, blackmail or sexual exploitation and abuse, or suspected incidents.

People's dignity and privacy (including data privacy) are not infringed.

Site management is transparent and has community acceptance and/or involvement.

Verification is possible through MEAL activities or Protection Monitoring.

Child protection and PSEA measures have been considered and a safeguarding complaints mechanism is in place.

**If ALL responses are YES, proceed with support by completing the Safe Programming Matrix and discussing with management*

Introduction

- 1A Community Engagement Strategy
- 1B Gender Strategy

Water

- 2A Handpump BOQ and Drawing
- 2B Handpump Functionality Check
- 2C Handpump Handover Certificate
- 2D Water Quality Sample and Testing SOP
- 2E Shock Chlorination SOP
- 2F Targeted Household Visit SOP

Sanitation

- 3A 2-Door Latrine BOQ and Drawings
- 3B Household Latrine Handover FGD
- 3C Latrine Functionality Check
- 3D Community Construction Leads
- 3E Latrine Handover for Host Community
- 3F CFL BOQ and Drawings
- 3G Potty Hub Drawings
- 3H School Latrine Drawing
- 3I OXSI Desludging SOP
- 3J STS Operator Manual

Hygiene Promotion and Community Engagement

- 4A ACE Manual
- 4B MHM SOP
- 4C HK Distribution SOP COVID-19
- 4D Dignity Kit Distribution Pilot SOP
- 4E Community Transect Walk
- 4F Balancing WASH SOP

Solar Lighting

- 5A Solar Light BOQ
- 5B Solar Light Functionality Check
- 5C Solar Point Handover Certificate

Solid Waste Management

- 6A Waste Separation IEC
- 6B Incinerator BOQ and Drawings
- 6C Incinerator Functionality Check
- 6D MHM Incinerator Drawings
- 6E Camp Cleaning Campaign
- 6F OD Cleaning Campaign

Monitoring, Evaluation, Accountability, and Learning

- 7A OXSI Logframe
- 7B Satisfaction Survey
- 7C Participation Assessment
- 7D Pharmacy Assessment

Emergency Response: COVID-19

- 8A COVID-19 Activity Guidelines
- 8B Gender Checklist
- 8C Hygiene Kit Door-to-Door Distribution
- 8D COVID-19 IEC



COMMUNITY ENGAGEMENT STRATEGY

Humanitarian WASH, Sittwe Township
Oxfam & Solidarités International

INTRODUCTION

In addressing Water, Sanitation and Hygiene (WASH) needs in Sittwe Township, Oxfam and Solidarités International (referred to as 'OXSI') are working in partnership and with other actors to transition to community-managed WASH in 25 camps and villages, covering 53,650 women and 50,627 men. The programme runs from November 2017 - 2020.

Needs assessments and camp consultations conducted prior to the commencement of the project highlight the varied community dynamics that make up the 25 camps and villages. While most people are grouped together according to their families who came together after the violence in 2012, many people do not feel like they are part of a community, that they do not receive enough information about what is happening in the camp, and that they receive little outside information. It was identified that there is an urgent need to open space for dialogue, trust-building, and sharing with communities.

During the current and previous WASH programmes, latrines and boreholes have been "handed over" from WASH agencies to head of households to increase a sense of ownership and sustainability. A sense of ownership is indicated when diverse members of the community take care of, clean and maintain WASH infrastructure, as well as knowing how to ask for assistance for larger problems. Minor repairs and maintenance are handled by communities after training and an official handover are completed. Major repairs are currently reported to and handled by OXSI. However, in the baseline satisfaction survey, 62% of female respondents and 69% of male respondents said they had not been consulted about latrine upgrades or repairs. In addition, requests for major repairs remain low despite major repairs being needed in most camps. There is room for improvement in involving women and men, and where appropriate, boys, girls, elderly, and people living with disabilities, in the design and siting (when possible), maintenance, repair, and requests for repair of WASH infrastructure.

Annual Knowledge, Attitude and Practice (KAP) surveys conducted since 2015 show a gradual increase in the level of hygiene knowledge amongst IDPs. However, there continue to be concerning trends for sanitation and treatment of drinking water, areas where an acquisition of knowledge has not directly translated into changed practices. To impact these stubborn behaviours, a systematic, community-led approach is needed. The new partnership has already begun to transition the hygiene promotion approach from one-way messaging to dialoguing through peer groups and focus group discussions, and targeting activities for specific behaviour changes. However, researchers of behaviour change have highlighted the need to use multiple techniques to engage participants in activities that aim to change norms from the bottom-up.

PURPOSE

This strategy outlines the three key objectives in the community engagement programme, which are aimed at improving the three areas described above: trust building, ownership, and behaviour change.

The purpose of this document is to guide programming and the creation of operational plans to tackle each objective. This strategy is developed specifically to the Sittwe camps and villages context.

VISION

A healthy community that is taking ownership over maintenance of infrastructure and receives services from accountable duty bearers who are responsive to community needs and desires.

CORE VALUES

Gender Equality: we understand that women, men, girls, and boys have different needs, priorities, and experiences, and we take this into account in the design and implementation of all programmatic activities.

Accountability: we are committed to being accountable to the communities that we work with by providing relevant and timely assistance that is based on participation and feedback, which is used to learn and improve programming.

Participation: we aim to ensure that women, men, girls and boys, including the elderly and people living with disabilities, are engaged in decisions and activities that affect their lives.

OBJECTIVES

COMMUNITY
ENGAGEMENT
STRATEGY
OBJECTIVES

OBJECTIVE 1: Create opportunities for women, men, girls and boys, including elderly and people living with disabilities, to decide on, build, and implement campaigns targeting a WASH issue of their choice.

OBJECTIVE 2: Increase sense of ownership of WASH infrastructure built by NGOs by engaging women and men, and where appropriate, girls, boys, the elderly, and people living with disabilities, in the processes of designing, building, repairing, and maintaining WASH infrastructure.

OBJECTIVE 3: Improve hygiene practices by mainstreaming community engagement in standardized hygiene promotion activities.

OPERATIONAL TACTICS

Full operational plans for achieving each objective are attached in Appendices A-C. The operational plans are subject to change as needed. The table below summarizes the main points of the plans.

Objective 1:

| | |
|-------------------|---|
| WHAT: | A new process, Action from Community Engagement (ACE), has been piloted to operationalize objective 1. ACE aims to involve underrepresented groups who gather together in small groups (sensitive to key dynamics - grouped by sex, age, and role within the community) for a series of activities facilitated by OXSI community engagement teams. The groups work on activities in two main phases: Needs Identification and Campaign Building. The activities focused on needs identification help the group identify and break down a specific WASH issue, which then becomes the focus of the group-led campaign to tackle the issue. Within each campaign is an action plan detailing the steps needed to achieve the goal, a timeline of the steps, indicators, a monitoring and evaluation plan, and a budget. |
| WHO: | The Needs Identification and Campaign Building activities are carried out by small groups. The campaign is then implemented by the small group and any other community members they recruit. OXSI community engagement teams facilitate the implementation of activities and support the campaigns. Technical leads, such as the Gender and Protection, MEAL, and WASH Coordinators also help to train teams, monitor and adjust activities. |
| WHERE: | The goal is to implement ACE with at least two groups in each camp by the end of the project cycle. |
| WHEN: | At least one cycle per quarter. |
| MORE INFO: | The SOPs for each activity are included in Appendix A, but these are flexible tools which may or may not be useful for each group. |

Objective 2:

| | |
|--------------|--|
| WHAT: | The operational plan for objective 2 aims to increase a sense of ownership by engaging communities in the construction of new WASH infrastructure, as well as the maintenance and repair of existing infrastructure. The plan provides key times and messages for consulting and involving women and men, and where appropriate, boys, girls, elderly, and people living with disabilities, in the design and siting (when possible), maintenance, and repair of infrastructure. Infrastructure such as latrines and boreholes are handed over to households, with a repair system in place that, after receiving training, allows women and men to conduct minor repairs with materials provided by OXSI, and to report major repairs to OXSI through a complaints mechanism. |
| WHO: | OXSI construction, sanitation, and community engagement teams must work together to meet this objective, but community engagement teams lead on the effort to engage community members on new infrastructure, handovers, and |

| | |
|-------------------|--|
| | repairs. The construction team is responsible for training and ensuring availability of materials for repairs. Receiving, registering, and responding to feedback is the responsibility of the whole OXSI team, with technical support from the MEAL team. |
| WHERE: | In all camps and villages where OXSI operates. |
| WHEN: | At every stage of the project cycle. Some activities are only applicable when new infrastructure is constructed, but repairs and maintenance are always ongoing. |
| MORE INFO: | The SOPs for each activity are included in Appendix B. |

Objective 3:

| | |
|-------------------|---|
| WHAT: | The operational plan for objective 3 focuses on creating more opportunities for participation and community engagement within each of the existing hygiene promotion activities. These activities focus on important hygiene education, awareness raising, and outreach during emergencies. The purpose of these activities is to raise awareness and change hygiene behaviours, so the key audience is women and children. However, although the activities are responsive to existing gender roles and responsibilities, they also seek to challenge restrictive gender norms – for example, by promoting a more equitable split of household WASH duties and by increasing women’s involvement in decision making. |
| WHO: | OXSI community engagement teams, with feedback from technical leads, are responsible for carrying out hygiene promotion activities and for engaging communities in these activities. |
| WHERE: | In all camps and villages where OXSI operates. |
| WHEN: | At every stage of the project cycle. Each activity has a different schedule and frequency. |
| MORE INFO: | The SOPs for each activity are included in Appendix C, with notes about how to make each activity more participative. These SOPs are designed to change throughout the project cycle. |

GENDER STRATEGY – HARP December 2018-September 2020

1. INTRODUCTION

The purpose of this strategy is to plan how the WASH project funded by HARP will promote gender equality in all aspects of WASH. Its main focus is on gender, but with some references to protection.¹

2. WHY GENDER IN HUMANITARIAN RESPONSE IN RAKHINE

Integrating gender equality in humanitarian work is necessary for three reasons:

- Women and men are affected differently by conflict and other crises.
- Gender equality is in Oxfam's and SI's core values.
- Addressing gender is fundamental to achieving the project goals.

In the section below, we look at these reasons more in detail.

2.1 Men and Women are affected differently by the current situation

Oxfam and SI believes that while Myanmar's transition has had many benefits in terms of gender equality², this has not happened in conflict affected areas such as Rakhine State, because of intercommunal tensions, poverty and a lack of investment by the central government.

Partners' data and experience in the area as well as recent assessments from the WASH cluster and Protection Sector provided analysis on specific gender and inclusion vulnerabilities in Sittwe³. From these analyses we know that women in both communities (and especially Muslim ones) are isolated by their lack of education and Myanmar language skills as well as cultural norms⁴. Whilst women are the primary care-givers in the homes, responsible for cooking, collecting water, washing clothes and family hygiene and sanitation, they have very little decision-making power in their households and have limited access to information which is channelled to them through their husbands or community leaders.

2.2 Both Oxfam and SI believe in promoting gender equality

Oxfam's Humanitarian Position says that every person deserves dignity and respect, and to enjoy their rights to life and security. We must provide assistance and protection in each crisis where we work that are:

- Impartial: for every person, according to their needs, without discrimination because of race, gender, religion, age or anything else; and
- Independent: directed without influence from any interest group or political group.

Oxfam's humanitarian approach also includes a strong focus on Respect for Women's Rights and Gender justice. 'We respond to needs expressed by women and girls, as well as men and boys, and believe that equitable humanitarian aid can help challenge the inequality they face. Oxfam also

¹ This is because protection is here understood as being limited to mainstreaming of its 4 key elements: meaningful assessment, safety and dignity, empowerment/working with others, accountability.

² see Asian Development Bank report, Gender Equality and Women's rights in Myanmar, 'A situation analysis', 2016.

³ Note: the partners will also adhere to the WASH Minimum Commitments for the Safety and Dignity of Affected Populations as well as the Global WASH Cluster's monitoring minimum commitments framework.

⁴ Rapid Assessment Protection Situation of Women and Girls: Rakhine Humanitarian Response. Gender-Based Violence Area of Responsibility Rapid Response Team, Rakhine Humanitarian Response, February 2013.

believes that 'It is necessary to challenge discrimination, violence and injustice on the grounds of sexual orientation or gender identity, as well as the power imbalances that prevent LGBTI people from enjoying their rights'.

For SI, gender equality in humanitarian action is about effectively reaching all segments of the affected population. Humanitarian actors must therefore design programs to meet the needs of men, women, boys and girls and ensure that they all have safe and equal access to humanitarian assistance. SI also states that gender equality is about ensuring that the protection and assistance provided is planned and implemented in a way that benefits women and men equally, based on an analysis of their needs as well as capacities.

2.3 Addressing gender will help achieve the results of the project

For the project, it is necessary not only to ensure gender equality within humanitarian WASH programming but also enable women to take leadership roles. Evidence from other humanitarian programmes in the country show that targeting women and girls is not enough—men and boys need to be considered as agents to strengthen equality, women's empowerment, and leadership within communities.

3. INTEGRATING GENDER IN HARP

HARP's outcome 6 is: **Clear and comprehensive gender (and protection) mainstreaming throughout the project implementation.** In addition, the project documents refer to gender integration in all five other outcomes (see programme logframe). This strategy suggests a number of principles to realise these commitments.

Principles

Effective gender mainstreaming and the realisation of gender outcomes need:

- Willingness on the part of all to learn about gender equality and put its values and tools in practice.
- Gender synergies between the various components of the programme.
- Regular collaboration among different Consortium members and staff at different levels.
- Gender mainstreaming is the responsibility of all managers and staff, with support of the Gender and Protection Coordinator (GPC).

The approach to effectively mainstream gender and the realisation of the HARP gender commitments is based on two areas of work, one Operational (3.1) and one Organizational (3.2), each with several objectives, adapted from the programme goals.

Objective

3.1 Operational

Objective 1: Ensuring fair, safe and suitable access and use of WASH facilities and services for women, girls, men and boys. This will contribute to Outputs 1 and 2.

Objective 2: Changing WASH behaviour through community engagement and ownership by women, girls, men and boys. This will contribute to Outputs 1, 2, 3, and 5.

Objective 3: Promoting women's Participation (voice) and Leadership. This will contribute to Outputs 1 and 4.

3.2 Organizational: Internal to Oxfam and SI

Objective 1 PERSONNEL: HARP staff understands and applies the principle and practices of gender equality, in the community and within the organization.

Objective 2 SYSTEMS: All HARP systems (HR, logistics, facilities etc.) are fair and create a safe and respectful environment for people of different gender and backgrounds.

4. COORDINATION

Coordination is key to achieving our gender ambitions. In particular:

Regular exchange of ideas and information on gender between Oxfam and SI.

Coordination with relevant clusters and working groups on gender and protection.

Close collaboration with UN Women for exchange of information, support and resources such as training material, reports, etc.

Coordination with Gender staff based in Yangon (and Myitkyina) to ensure a common approach and understanding of gender equality.

Close coordination between Gender and Protection Coordinator and Advocacy staff.

5. RESPONSIBILITIES

The overall responsibility for the implementation of this strategy, monitoring progress and the use of budgets is with Programme Management Unit (PMU).

The Gender and Protection Coordinator is responsible for the activities in his/her action plan and those specified in this strategy.

All staff and managers of the Consortium are responsible for gender mainstreaming in their own work, supported by the Gender and Protection Coordinator.

The participation in and support of the Gender and Protection Coordinator should be at the earliest stages of any activity.

6. ACTION PLAN

| OPERATIONAL | | | |
|--|------------------|------------------|---|
| Objective 1: Ensure fair, safe and suitable access and use of WASH facilities and services for women, girls, men and boys | | | |
| ACTIVITIES | When | Resources needed | Responsible |
| ACTIVITY 1 | | | |
| Carry out regular Gender Assessments, either self-standing or as essential components of other assessments (PDMs, satisfaction surveys, etc.) | Regularly | Time, Budget | MEAL team and GPC |
| ACTIVITY 2 | | | |
| Incorporate the results of Gender Reviews and other Assessments (PDMs, satisfaction surveys, etc.), into the WASH programme to continuously and concretely address needs of women and girls, promote their dignity and comfort, and prevent GBV. Use the same results to identify emerging issues and innovative solutions. | Regularly | Time, Budget | Programme Teams supported by GPC |
| ACTIVITY 3 | | | |
| Identify individual women leaders, also trained within the Women Empowerment Programme, and support them to work with other women to directly: <ul style="list-style-type: none"> - Now: use feed-back mechanisms to improve access to and quality of water, hygiene kits (including the quality of soap), solar lights (so they are upgraded and replaced when they are broken), MHM disposal systems, etc. - And in the longer term: participate in the design and siting (when possible), maintenance, and repair of infrastructure, both at the training and hand-over stages. | Q1 2019 | Budget | Community Engagement Teams WEP with GPC |
| ACTIVITY 4 | | | |
| Research the extent and consequences of the practice of women bathing inside their shelter, already identified by a Gender Analysis, and practical ways to address it (including through advocacy with different stakeholders). | Q2 2019 | Budget | GPC |
| ACTIVITY 5 | | | |
| OXSI HARP should advocate at different levels to highlight the issue of actors working in OXSI camps in an uncoordinated way (eg. providing boreholes and phasing out without maintaining them or monitoring water quality) because this represents a public health risk. Find solutions for the lack of water during the dry season, especially in STMG. | Regular on going | | WASH Teams |

| | | | |
|--|--------------|----------------------------|--------------------------------------|
| ACTIVITY 6 HARP to improve access to latrines by: - Piloting latrines handover following the Basara camp model of separate household Female, Male latrines in all camps, to promote the safety and dignity of women and girls, and the use of MHM box. - Make sanitation facilities easily and safely accessible to children, the elderly, and people with mobility impairments. | From Q1 2019 | | WASH Team supported by GPC |
| ACTIVITY 7 Provide MHM boxes in DP, HMZ, BDP and TC camps and improve MHM sessions for men and women to encourage the use of MHM box everywhere. | From Q3 2019 | | SI Construction Teams and WASH Teams |
| ACTIVITY 8 Provide underwear for women and girls to improve hygiene and protect dignity as part of the yearly WASH NFI kit. | Once a year | Budget, Plan | Logistics Team with WASH Teams |
| Objective 2: Changing WASH behaviour through community engagement and ownership by women, girls, men and boys | | | |
| ACTIVITIES | | | |
| ACTIVITY 1 All community engagement activities (hygiene promotion sessions, events, and celebrations etc.): Fully engage women and girls, especially in leadership roles. Have men support women's engagement and leadership. Challenge restrictive gender norms around WASH. Promote a more equitable division of household WASH duties. | On going | Time, Tools | Community Engagement Teams with GPC |
| ACTIVITY 2 Develop activities to engage men and CMC members to change their attitudes and behaviour towards women, give space and opportunities to them in WASH and other community activities. | Q4 2019 | Time, Budget, Tools, Staff | GPC, WEP |
| ACTIVITY 3 Research (also using community engagement tools) the limitations young women and girls have in having needs met and voices heard on WASH issues, and use the evidence to work with women leaders and groups to campaign (in consultation with IRC who founded girl teenage groups in That Kay Pyin and Ohn Taw Gyi) | On going | Budget | GPC, WEP |

| | | | |
|--|-----------|-----------------------|--|
| Objective 3 Women's Participation (voice) and Leadership | | | |
| ACTIVITIES | | | |
| ACTIVITY 1 Map existing women's groups (formed by HARP and other organizations, including CMC), their role, activities and leadership, and assess opportunities and challenges | Q1 2019 | Time | GPC with WASH Teams and WEP |
| ACTIVITY 2 As soon as possible: Ensure that the groups' Actions Plans focus on campaigns on WASH, MHM, safe drinking water or hygiene promotion issues of their choice through Needs Identification and Campaign Building activities of ACE. Support the groups and their leaders with resources and advice, also encourage them to become self-help groups broader in scope (for example on family relations, early marriage, livelihood, etc.) | Q1 2019 | Budget, Tools | GPC with WEP and Community Engagement Teams with |
| ACTIVITY 3 HARP to carry out advocacy with government to include women in CMC committees, also as leaders. | Q1 2020 | Advocacy Plan | Project Coordinator |
| ACTIVITY 4 Monitor changes in women's voice and leadership and on the effectiveness of women' groups, and use the evidence for programme development and advocacy. | On going | Tools | MEAL Team and GPC |
| ORGANIZATIONAL | | | |
| Objective 1 PERSONNEL: HARP staff understands and applies the principle and practices of gender equality, in the community and within the organization. | | | |
| ACTIVITY 1 In recruitments, check existing capacities and attitudes on gender or willingness to learn. After recruitment, provide context specific gender inductions to all new staff. | On going | Tool (induction etc.) | Recruiting Manage, HR, GPC |
| ACTIVITY 2 Train male and female HARP staff in all technical aspects of the work, and give both equal chances to practice technical and other skills in project activities. This will increase the capacity of all staff, and facilitate women's participation in programme activities. | Annually | | All managers |
| ACTIVITY 3 Provide regular gender mainstreaming capacity building to staff (programme, HR, logistics, finance, etc.) giving priority to training on Humanitarian Gender Minimum | Quarterly | Time, Budget | GPC and safeguarding focal |

| | | |
|--|------------------|--------|
| Standards, so that they become familiar with its values and methodologies and responsible for its results. Include issues and mechanisms on safeguarding. | | |
| ACTIVITY 4 | | |
| Use short and innovative activities to change gender attitudes, and build confidence of all staff and managers (e.g. celebrations of 16 days of activism, 'gender café', speakers) | 3 Times per year | Budget |
| Objective 2 SYSTEMS: All HARP systems (HR, logistics, facilities etc.) are fair and create a safe and environment for people of different gender and backgrounds. | | |
| ACTIVITY 1 | | |
| Aim for gender balance in teams at all levels- including in camps - through recruitments by adopting clear job requirements, varied methods for disseminating vacancy information, and avoiding stereotypes about jobs for men or women. | As necessary | |
| ACTIVITY 2 | | |
| Check for gender contents in: participation diagnostic tool, latrine functionality survey, feed-back mechanisms, satisfaction survey, functionality checks, and all other formats used regularly. | Quarterly | Plan |
| ACTIVITY 3 | | |
| Establish Gender Focal points in the camps | Q3 2019 | |
| ACTIVITY 4 | | |
| Review HARP budget so that enough is transparently earmarked for gender activities, even where they are not specified in the current budget. | Q2 2019 | |

7. RISK MANAGEMENT

| Risks | Prevention or mitigation |
|---|---|
| All HARP teams, especially field teams, have competing demands which may make them reluctant to take on gender activities highlighted in the Gender Action Plan. | Share this strategy and Action Plan with all team leaders for consultation before approval. Share and coordinate work plans of all teams. Raise awareness of all teams of the importance of giving sufficient time to gender tasks. |
| Women's Groups and leaders involved in the Women Empowerment Project (WEP) have been receiving incentives. At the end of the WEP, incentives from HARP will endanger their participation and the work of groups and committees. | Consult senior manager for a budget review. Consult with WEP manager. |
| New gender activities, for example engaging men, may be difficult to implement with just one Gender and Protection Coordinator. | Train field staff and volunteers in appropriate methodologies. Share gender human resources with other Oxfam projects (UNDP, WEP, DPP etc.). Use short term consultant. |
| Recent budget amendments have not ensured that allocations have been kept for gender work. | Consult senior managers for a budget review. |
| Some activities are innovative (such as engaging men) and may be difficult to implement in conservative areas and with CMC. | Consult with field WASH teams. |

ACRONYMS

| | |
|------|--|
| ACE | Action from Community Engagement |
| BDP | Baw Du Pha |
| CMC | Camp Management Committee |
| DP | Dar Paing |
| GBV | Gender Based Violence |
| GPC | Gender and Protection Coordinator |
| HARP | Humanitarian and Resilience Programme |
| HMZ | Hman Zi |
| MEAL | Monitoring, Evaluation, Accountability, and Learning |
| MHM | Menstrual Hygiene Management |
| NFI | Non-Food Item |
| OTG | Ohn Taw Gyi |
| PDM | Post Distribution Monitoring |
| PMU | Programme Management Unit |
| STMG | Say Tha Mar Gyi |
| TC | Thae Chaung |
| WEP | Women Empowerment Programme |

Borehole Functionality Check - OXSI

| Field | Question | Answer |
|---|--|--|
| date <i>(required)</i> | Date of Information | |
| Enumerator_name <i>(required)</i> | Enumerator Name | |
| lead_agency <i>(required)</i> | lead Agency | Oxfam Oxfam SI SI |
| camp_name <i>(required)</i> | Camp name | camp_value camp_label |
| sector_block | Sector/block Number | 1 1 2 2 3 3 4 4 6 6 a A b B c C d D e E f F g G h H i I j J k K l L m M n N o O |
| infrastructure_type <i>(required)</i> | Infrastructure type | BH BH |
| referential_number <i>(required)</i> | Referential Number | |
| pump_design <i>(required)</i> | Pump design | dg_orange DG Orange dg_blue DG Blue No_HP No Handpump |
| Check and Skip | | |
| is_the_hand_pump_functional <i>(required)</i> | Is the borehole/Hand pump functional? | Yes Yes No No |
| BH_major_repair <i>(required)</i> | Borehole Major Repair | borehole_dried Borehole Dried flow_rate_slow(redrilling) Flow Rate Slow(redrilling) sandy Sandy water_colour_change Water colour change water_smelling Water Smelling pump_old Pump Old big_washer_set Big Washer Set square_washer Square Washer pillar/pillar_nut Pillar/Pillar Nut arm Arm arm_support Arm Support arm_clip Arm clip chlorination_ongoing Chlorination ongoing other Other |
| if_other_write_down_the_major_problems <i>(required)</i> | If other, Write down the major problems | |
| dose_the_borehole_need_to_be_maintained <i>(required)</i> | Does the borehole need to be maintained? | yes Yes no No |
| if_yes_write_down_the_minor_problem <i>(required)</i> | If yes, write down the minor problem | big_washer_set Big Washer Set square_washer Square Washer pillar_nut Pillar Nut Arm Arm arm_support Arm Support arm_clip Arm Clip sandy(softly) Sandy (softly) other Other |
| if_other_write_down_the_minor_problems <i>(required)</i> | If other, write down the minor problems | |

| Field | Question | Answer |
|---|---|---|
| around_the_borehole <i>(required)</i> | Apron slab dimensions: Is the apron width at least 0.5 m (2 feet) around the borehole ? | yes Yes no No |
| apron_slab_status <i>(required)</i> | Apron slab status | good Good (No crack, and no undercutting under the apron) fair Fair (No crack but minor plastering to be done) bad Bad (major crack, potential contamination, could lead water into source through apron) |
| condition_of_borehole_drainage <i>(required)</i> | Condition of borehole drainage | present_and_functioning Present and functioning present_and_not_functioning Present and not functioning (not clean, damaged) not_present Not Present |
| is_there_stagnant_water_around_borehole <i>(required)</i> | Is there stagnant water around borehole (less than 2m around slab)? | yes Yes no No |
| Soak_Pit | Is there any soak pit near borehole? | yes Yes no No |
| Soak_Pit_Functioning <i>(required)</i> | Is soak pit functioning? | yes Yes no No |

HANDPUMP HANDOVER CERTIFICATE

(A) Handpump Details

| | |
|------------------------|--|
| Location | |
| Handpump number | |
| Nearest shelter number | |
| Date of handover | |

(B) Handpump allocation

The above handpump has been allocated and is being handed over to the nearest households, listed below:

| No. | Shelter No. | Name of Head of Household | Male | Female | Total | Signature | |
|-------------------|-------------|---------------------------|------|--------|-------|-----------|----|
| 1 | | | | | | 1 | 2 |
| 2 | | | | | | | |
| 3 | | | | | | 3 | 4 |
| 4 | | | | | | | |
| 5 | | | | | | 5 | 6 |
| 6 | | | | | | | |
| 7 | | | | | | 7 | 8 |
| 8 | | | | | | | |
| 9 | | | | | | 9 | 10 |
| 10 | | | | | | | |
| Total for shelter | | | | | | | |
| No. | Shelter No. | Name of Head of Household | Male | Female | Total | Signature | |
| 1 | | | | | | 1 | 2 |
| 2 | | | | | | | |
| 3 | | | | | | 3 | 4 |

| 4 | | | | | | | |
|-------------------|-------------|---------------------------|------|--------|-------|-----------|----|
| 5 | | | | | | 5 | 6 |
| 6 | | | | | | | |
| 7 | | | | | | 7 | 8 |
| 8 | | | | | | | |
| 9 | | | | | | 9 | 10 |
| 10 | | | | | | | |
| Total for shelter | | | | | | | |
| No. | Shelter No. | Name of Head of Household | Male | Female | Total | Signature | |
| 1 | | | | | | 1 | 2 |
| 2 | | | | | | | |
| 3 | | | | | | 3 | 4 |
| 4 | | | | | | | |
| 5 | | | | | | 5 | 6 |
| 6 | | | | | | | |
| 7 | | | | | | 7 | 8 |
| 8 | | | | | | | |
| 9 | | | | | | 9 | 10 |
| 10 | | | | | | | |
| Total for shelter | | | | | | | |
| Total | | | | | | | |

(C) Conditions of handover

Responsibilities of the community

1. All the households in these shelters shall have equal access and right to use the handpump. People from other households, not listed here, also have the right to use the handpump at any time.
2. Households will ensure that the concrete platform around the handpump is regularly cleaned, and the drainage channel is kept clear.
3. Households commit not to steal, remove, or mis-use any part of the handpump. OXSI is not responsible for replacing stolen materials.
4. Households are jointly responsible for carrying out minor repairs to the handpump. OXSI can replace broken parts (see below), but the community is responsible for carrying out the repairs. Any repairs necessary should be implemented without due delay so that people's access to water is not affected.



Responsibilities of OXSI

1. OXSI commits to ensuring that the handpump is functioning at the time of handover.
2. After the handover, OXSI will continue to provide handpump spare parts **only** when the broken part is provided; unfortunately, OXSI will not replace pumps which are stolen.
3. After the handover, OXSI will continue to rehabilitate the concrete apron and drainage channel when needed, based on the results of a monthly functionality check carried out by OXSI.
4. After the handover, OXSI will continue to monitor water quality of the borehole twice per year, and conduct shock chlorination where needed to remove contamination.
5. OXSI will provide refresher training for communities so they are qualified to carry out repairs.

(D) Signature

In signing this Handover Certificate, all parties recognise and agree to the above conditions.

| Signature | Name | Signature |
|------------------|-------------|------------------|
| OXSI | | |
| CMC | | |
| Shelter | | |
| Shelter | | |
| Shelter | | |



WATER QUALITY TESTING LABORATORY IN SITTWE

STANDARD OPERATING PROCEDURE FOR WATER SAMPLING AND TESTING

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Introduction

Oxfam and Solidarités International (SI) are working in partnership (referred to as “OXSI”) to deliver Water, Sanitation, and Hygiene (WASH) services in 24 camps and villages in Sittwe for more than 100,000 people. As part of this programme, a new water quality testing laboratory has been established at the Oxfam office in Sittwe. Oxfam, as the lead for water quality testing, is responsible for collecting and transporting water samples from the field to the laboratory and carrying out tests to ensure that the water is safe to drink. The Oxfam Sittwe Water Quality Laboratory was established in late 2017, and testing began in January 2018.

In the previous programme, partners conducted blanket distribution of Ceramic Water Filters (CWFs) to each household in the camps. Based on a review of water quality testing results and the CWF study conducted in 2016 (1), there was sufficient data to show that the CWFs were not consistently producing safe water. In addition, they are a non-sustainable intervention with a short life span and high breakage rate, are not available in the local market, and not affordable to IDP households.

Instead, OXSI proposed to focus resources on testing boreholes, preventing contamination, and promoting safe water behaviours. Boreholes that fail water quality tests will be ‘closed’ for drinking water and remedial action taken to reduce contamination. Thus, the core objective of the Water Quality Laboratory is to provide reliable water quality testing for Sittwe IDP camps, with results which are quickly actioned, leading to improved water quality and/or less people drinking contaminated water. However, OXSI is only able to test, treat, and repair boreholes and handpumps managed by OXSI, and is not able to provide testing for the many “private” boreholes that have been drilled by individuals or other organisations.

The Water Quality Team (WQT) consists of two field-based water sample collectors and two water quality officers based in the lab in Sittwe (with frequent field travel), with oversight from a manager in the WASH team. Water quality testing is conducted twice a year, once in the dry reason, which starts in December and ends in May, and once in the rainy season, which usually starts in June and ends in November. Water samples are more likely to be contaminated in the rainy season than in the dry season in general because of the high water table; water serves as a good transport medium for faecal material to the pump sites.

The objective of this document is to explain the standard operating procedure (SOP) for collecting and testing water samples in camps and villages in Sittwe Township. All the water quality staff are responsible for reading and following the standard operating procedure (SOP) described in this manual. The laboratory manager, officers, and assistants are responsible for ensuring that sample collectors are abiding by the SOP in this manual.

Sampling

Because Oxfam and SI no longer distribute any type of household water treatment (eg. ceramic water filters), there is a need to ensure all handpumps are delivering clean water. However, only a statistically significant sampling of households is tested, with each area treated as an independent cluster. The purpose of the household samples is to provide insight into the safe water chain practices of different sites. Sites with poor results are prioritised for safe-water campaigns by the community mobilisation teams.

¹ Ceramic Water Filter Assessment, Rakhine, Myanmar Cluster, January 2016.

The number of boreholes and the sampling size of households in each area are shown in Appendix A. This table must be updated approximately every six months to reflect newly drilled boreholes and population changes. Only functional handpumps can be tested, so the number of tested boreholes is usually lower than the total number in each location. Some villages that are geographically close are grouped, and households are statistically sampled in each cluster of villages. In some villages, OXSI does not do water quality testing because there are no longer public OXSI-managed boreholes.

To have a practical protocol for collecting household samples in the field, it is sometimes useful to look at the ratio between the total number of boreholes and the statistical sampling size for households in each area. For instance, in STMG, the total number of boreholes is 198, whereas the sampling size for the households is 92, resulting in an approximate ratio of 2:1. That means that sample collectors collect two borehole samples for every one household sample—they collect a water sample from a borehole followed by a sample from a nearby household, then move on to the next borehole water sample without collecting a household water sample. They repeat the same process until all the boreholes are tested.

Household Sampling

The household sample size is calculated using the Cochran Formula:

$$n_0 = \frac{z^2 pq}{e^2}$$

where z is 1.96 for a 95% confidence interval, p is the estimated proportion of households to have the attribute in question (for a conservative estimate of variance, we use 50%), $q = 1-p$, e is the desired level of precision (in this case, 10%), and n_0 is the resulting sample size.

$$n_0 = \frac{(1.96^2)(0.5)(0.5)}{0.1^2} = 96 \text{ households}$$

For a smaller population that is known, or in this case, the number of total households in the area, we adjust Cochran's formula:

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

where N is the population size (in this case, the total number of households), and n is the new, adjusted sample size.

For example, the total number of households in Mingan Village is 151, so the sample size should be:

$$n = \frac{96}{1 + \frac{96 - 1}{151}} = 59 \text{ households}$$

When selecting households, sample collectors must choose a household where the members use the same borehole as the one that was just tested, but otherwise the sampling is random. By comparing the borehole and household samples, we can assess the impact of our interventions to improve practices

and ensure a safe water chain. For instance, if water from a borehole is clean but the corresponding household samples are contaminated, then it can be inferred that the household is not collecting, transporting, and/or storing water safely to avoid contamination. On the other hand, if the household samples are clean but the corresponding borehole is contaminated, it indicates that water treatment at the household level (such as the use of filter, chlorine, etc.) is effective.

If a handpump is not operational, the sample collectors make a note of it and do not collect a sample from that pump. In cases where the number of existing functional handpumps is much less than expected, the sample collectors need to collect more household samples correlated to other handpumps to fulfil the minimum requirement of household samples. The number of household samples is not dependent on the number of handpumps in each area, just on the number of households.

When collecting a household sample, the sample collectors conduct a rapid household water sanitary survey, which is also used to correlate with the microbiological results and identify key risks for remedial messaging to focus on. The survey, which is included in full in Appendix B, includes the source of water, the type of container used for storage, the type of treatment (if any) the family uses, and other information.

Sampling Materials

Materials required for sample collection each day are:

- 40 clean empty water bottles, approximately 0.6 liters
- Ice boxes large enough to fit all the water bottles
- Ice
- Hand sanitiser
- Water sample analysis data sheets or tablet to collect data
- List of handpumps for each area and the number of household samples needed
- Markers, pens, and tape for marking water bottles and filling out data sheets

Sampling Procedure

Some sample collection materials are prepared and delivered to the area of sampling a day in advance so that the sample collectors can begin sampling by 9am. The Oxfam laboratory then sends additional clean water bottles, data sheets, and the ice box to the location around 9am of the testing day.

Dedicated and trained part-time camp-based sample collectors are responsible for sample collection. Two people are required to carry out the task: one person collects water samples and another person looks for the corresponding households, as well as fills in the required information in the tablet. Sometimes a female volunteer also accompanies the water collectors to assist with carrying out sample collection in households where women in the household are not comfortable with allowing the male sample collectors inside.

The ID for a water sample is comprised of the date of collection in combination with a serial number which is used for laboratory work. The serial number starts with “1” for the first sample of the day, whether it is from a borehole or a household. On a new day of water sample collection, the first sample collected is labelled as serial number “1”, the second sample “2”, and so on.

It takes approximately five minutes to collect a water sample at each location. Typically, 30-40 samples are collected each day, Monday through Thursday. In the case of holidays or workshops causing the team to fall behind schedule, additional sampling and testing is done on Friday, with the results read on Saturday.

Borehole sampling

For collection of a water sample from a borehole, sample collectors follow these steps:

1. Clean hands using hand sanitiser.
2. Pump out water for 30 seconds to purge and rinse the pump setup.
3. Rinse a clean water bottle with water from the pump two times.
4. Collect water (at least 500 mL) into the bottle, making sure that the top of the water bottle and the bottle cap does not touch anything.
5. Assign a serial number for the sample and note the number on the water bottle and in the water quality analysis data sheet. Label the bottle (as shown in Figure 1) with the date and the time of water collection, the pump number, and assigned serial number.
6. Place the filled water bottle in the ice box.
7. Record the serial number in the water quality analysis sheet in the tablet along with the other information.



Figure 1. Labelled water bottles

Household sampling

For collection of a household water sample, the collectors follow these steps:

1. Select one or two households who use the borehole where a sample was just collected (based on how many household samples are needed in the location).
2. Clean hands using hand sanitiser.
3. Fill a clean water bottle with at least 400 mL of water from the water container used for drinking in the household. Do not dip the bottle into the water container in the household. If there is a ceramic water filter installed on a water container, collect the filtered water sample only. If the household generally scoops out the water with a cup or ladle, use the same method to fill the water bottle. (In case the family prefers that you do not enter the household, instruct someone in the household on how to collect the water sample).
4. Assign a serial number for the sample and note the number on the water bottle and in the water quality analysis data sheet. The label on the water bottle should include the date and the time of water collection, barrack number, and room number, along with the serial number.
5. Place the filled water bottle in the ice box.
6. Fill in the necessary information in the household water quality analysis sheet in the tablet (Appendix B).

The water samples are placed inside the ice-filled box, and a water-proof folder containing the water quality analysis sheets or tablet is carried separately. The box and the folder/tablet are transported to the laboratory within six hours. Water samples are collected and processed on the same day, with results available within 24-hours.

Water Quality Testing

Microbiological testing is carried out for all samples, but pH and specific conductivity are only measured for borehole samples. The conductivity provides an indication over time of possible saline intrusion caused by over extraction of the shallow aquifers. The pH indicates the chlorine dose required for effective shock chlorination. In the beginning of the programme, only 5% of boreholes were tested for arsenic once a year, since it was not historically a problem in the Sittwe area; after several test results showed high arsenic levels, the team started to test 10% of boreholes in May 2019.

Table 1. Testing overview

| | Frequency | Sampling Method |
|--|--|---|
| Microbiological Testing | | |
| Routine borehole testing in camps and villages | Twice per year – dry season and rainy season | 100% of OXSI boreholes in camps and villages |
| Follow up borehole testing in camps and villages | All failed boreholes after remedial action | 100% of failed OXSI boreholes after remedial action |

| | | |
|---|--|---|
| Routine household testing in camps and villages | Twice per year – dry season and rainy season | 95% C.I. and 10% accuracy. Each site is an independent cluster |
| Other Testing | | |
| Specific Conductivity | Once per year – dry season | 100% of OXSI boreholes |
| pH | Twice per year—dry and rainy season | 100% of contaminated OXSI boreholes |
| Arsenic | Once per year, changed to twice per year in 2019 | 5% of OXSI boreholes in each site; changed to 10% of OXSI boreholes in 2019 |

In the first year of the project, the WQT tested for Thermotolerant Coliforms (TTC) as a proxy indicator for *E.Coli*; the decision to switch to testing *E.Coli* was made in 2018. *E.Coli* is considered the best indicator of faecal contamination because unlike other coliforms, it is almost exclusively of faecal origin.

Microbiological Testing Instructions

Materials

- Potakit (Components, shown in Figure 2, include 20 aluminium petri dishes, 200 membrane pads, 200 membranes, 38.1g Membrane Lauryl Sulfate Media, lighter, filter assembly base, filter funnel and locking collar, flexi rack system, hand lens, lubrication grease, media measuring device, membrane forceps, membrane pad dispenser, pistol grip hand pump with rubber tubing, polypropylene bottles, sample cup and cable, incubator, upper and lower O rings)



Figure 2. Components of the Potakit.

Additional equipment:

- Oven
- Methanol
- Lighter
- Electric kettle
- CHROMAgar broth powder
- Hand sanitiser
- Dishwashing liquid
- Surgical gloves
- Tissue paper
- Face masks
- Masking tape
- Markers and pens

The instructions below are adapted from Potaflex Instruction Manual produced by Wagtech²

Preparation

1. Assembly of components



Figure 3. Assembly of filtration apparatus

1. Hand Vacuum Pump
2. Filtrate Flask
3. Sampling Cup
4. Graduated Aluminium Reservoir Tube
5. Membrane Support & Compression Holder
6. Sealing Gaskets
7. Bronze Sintered Support

² Potaflex User Manual, downloadable from: <https://www.palintest.com/products/potaflex/>



Figure 4. Assembly of the reservoir tube filtration base

2. Preparation and use of MLSB media

In the first year of the project, the Water Quality Laboratory used Membrane Lauryl Sulfate Broth (MLSB). The steps to prepare the MLSB are:

- 2.1 For 200 tests, dissolve 38.1g of Membrane Lauryl Sulfate Broth (MLSB) in 500 ml distilled water in a flask or beaker.
- 2.2 Heat the mixture (but do not boil) or stir to ensure the powder is fully dissolved.
- 2.3 Pour the medium into the 50ml plastic bottles provided (ensure they contain no residues of previous MLSB or cleansing agent).
- 2.4 Replace bottle tops but leave them slightly loose – do not tighten. Sterilise bottles upright in an autoclave.
- 2.5 Sterilise at 121°C for 10 minutes, or place bottles in a pressure cooker and maintain steam at pressure for 15 minutes. Remove bottles, allow to cool, tighten the tops and then store in the cool and dark.
- 2.6 When the media has cooled to room temperature, pour about 2mls onto each membrane pad to sufficiently saturate the pad.
- 2.7 When the pad is fully saturated, pour off any excess MLSB.

- 2.8 The dissolved media should remain stable for 6-8 weeks. However, if there are any signs of contamination (e.g. yellowing, cloudiness, etc.), discard it.
- 2.9 Ideally, to reduce the possibility of contamination, use the bottle of media only on a daily basis and use a fresh bottle on each subsequent day. However, if this is not possible, then the bottle must be resealed immediately, and the media may be re-sterilised by boiling in a water bath for 15 minutes.
- 2.10 Clean empty media bottles thoroughly before re-use. Any residues should be washed out with hot water; cleaned with a little detergent; rinsed several times in clean water; dried and stored in a clean environment with the tops replaced.
- 2.11 The MLSB solution may be applied to the pads for up to 6 hours before sampling, if stored in a cool environment.
- 2.12 If the MLSB powder is stored in dry, cool conditions, it should have a shelf life of 5 years.

3. Preparation and use of Chromogenic media

After the first year of the programme, the WQT switched to a different media in order to grow *E. Coli*. The chromogenic media is prepared from a powder with these steps, adapted from the supplier manual³:

- 3.1 Disperse slowly 25.5g of powder base in 1L of purified water.
- 3.2 Swirl or stir gently to homogenise.
- 3.3 Heat and bring to boil (100 °C) while swirling or stirring regularly.
DO NOT HEAT TO MORE THAN 100 °C. DO NOT AUTOCLAVE AT 121 °C.
- If using an autoclave, use it without pressure.
- For the 100 °C heating step, mixture may also be brought to a boil in a microwave oven: after initial boiling, remove from oven, stir gently, then return to oven for short repeated bursts of heating until large bubbles form.
- 3.4 Cool down to room temperature.
- 3.5 The prepared media is referred to as CHROMAgar Liquid ECC.
- 3.6 Prepared broth can be kept for up to 1 month under refrigeration (2/8 °C) if properly prepared and protected from light and contamination.

Aseptic Procedures

General hygiene and aseptic procedures are of paramount importance. Everything must be kept clean and sterile, particularly on the following surfaces:

- Inner surface of the sampling cup
- Inner surface of the filter funnel
- Filter membrane and support pads
- Upper surface of the membrane support
- Inside of the petri dishes
- Support pad dispenser arm and forceps

³ Manual available here: https://www.chromagar.com/fichiers/1543248473NT_EXT_038_NOTICE_LECC.pdf

1. Dry the filtration unit and sampling cup dry by using clean tissue paper.
2. Pour 1ml methanol into the sampling cup and swirl
3. Place the sample cup in a normal upright position away from anything flammable.
4. Using a lighter, ignite the methanol. Whilst the methanol is burning, invert the filtration unit into the sample cup.



Figure 5. Ignite the methanol and then invert the filtration unit into the sample cup.

5. Wait for at least 5 minutes to ensure that the sample cup and filtration unit are sterile. Methanol burns anaerobically to form formaldehyde, which ensures complete sterilisation.
6. Pour any residual solution away.
7. The above sterilisation procedures (points 1-6) should be carried out immediately before sampling and after the filtration of each sample.
8. Sterilise the aluminium petri dishes in boiling water prior to use. After sterilisation, ensure that the dishes are allowed to dry. Other methods of sterilisation can be employed, including autoclaving, or placing the aluminium dishes in an oven at 300°C for 30 minutes or 150°C for 60 minutes.
9. Pads are supplied sterile in cartridges of 100. A sterile pad dispenser is supplied for introducing the pads into the petri-dishes. Immediately when a cartridge is finished, a new one should be attached to the dispenser. Do not leave the dispenser unattached and if no pad dispenser is available, use sterile forceps (see Figure 6).
10. Before handling a membrane filter with the forceps, it should be flame sterilised thus: hold the forceps tips in a flame for 5 seconds and allow to cool before handling the membrane (Figure 7).

Processing Samples

1. All samples must be incubated within 6 hours of sampling.
2. Dispense a growth pad into a sterile petri dish and saturate with MLSB. If using CHROMagar Liquid ECC, add 2 mL of the liquid medium with the pipette.



Figure 6. Dispense a growth pad into a sterile petri dish and saturate with MLSB.

3. Loosen the filter funnel and remove from the base support.
4. Sterilise the forceps using a flame and allow to cool. Using the forceps, place a sterile membrane onto the bronze membrane support, grid side up. If the membrane tears or becomes contaminated, discard it and use a new one.

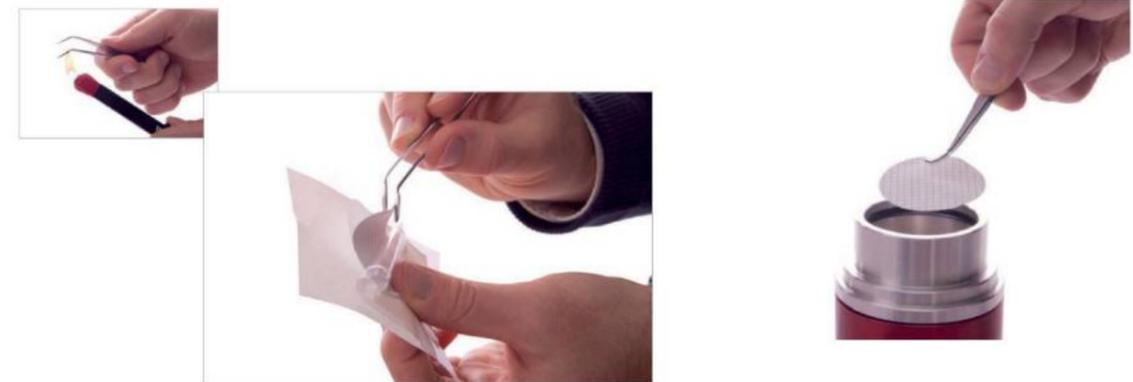


Figure 7. Sterilise the forceps and then place a sterile membrane onto the bronze membrane support.

5. Lock the membrane in place by pushing the filter funnel firmly down into position.
6. Pour the water sample into the filter funnel up to the 100 ml line.



Figure 8. Pour water sample up to 100ml line

7. Connect the hand vacuum pump to the filtration unit base and pump to suck the water sample through the membrane.



Figure 9. Apply hand pump to pass the water through membrane.

8. When all the water has been filtered, release the vacuum pump and use the sterile forceps to take the membrane from the filtration unit.



Figure 10. Use the sterile forceps to take the membrane from the filtration unit.

9. Place the membrane on top of the pad which has been saturated with MLSB media or CHROMAgar Liquid ECC.



Figure 11. Place the membrane on top of the pad saturated with MLSB or CHROMAgar Liquid ECC.

10. Replace the petri-dish lid and label with the sample number.
11. Repeat the process for all the samples and then place samples into the incubator.
12. It is important to note that when the last sample has been processed, a resuscitation period of between 1 hour to 4 hours must be observed before incubating. This allows any physiologically stressed coliforms to recover before culturing.
13. To incubate faecal (thermotolerant) coliforms, set the incubator temperature to 44°C. If using CHROMAgar Liquid ECC to incubate *E. Coli*, set the incubator temperature to 37°C.
14. The minimum incubation period is 14 hours following a 4-hour resuscitation. For *E.Coli*, incubate for 18-24 hours.

Counting Coliforms and Recording the Result

1. Following incubation, switch off the power and remove the petri dishes from the incubator.
2. Place the petri dishes on a flat surface.
3. Remove the lids and count all the colonies that are the right colour (see below), irrespective of size. Use a hand lens, if necessary.
4. Count the colonies within a few minutes, as the colours are liable to change on cooling and standing.

For thermotolerant coliforms grown on MLSB:

- Count the yellow colonies and ignore colonies that are not yellow (e.g. pink or transparent). Record the results as colonies per 100 ml.



Figure 12. Count the yellow thermotolerant colonies (with a hand lens, if needed).

For *E. Coli* grown on CHROMagar Liquid ECC:

- Count the blue colonies only. Record the results as colonies per 100 mL.

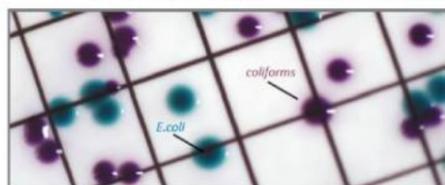


Figure 13. Typical colony appearance, showing *E. Coli* as bright blue, after incubation on CHROMagar Liquid ECC.

A test that has more than 10 colonies of either TTC or *E. Coli* is considered a failed test and will be targeted for remedial action. The results are entered into a database that is accessible to the remedial action team, who you must alert about boreholes that fail the microbiological test.

Camp-based community mobilisation staff are also immediately alerted and visit the hand pump and its users within 24 hours. The users are informed of the water quality test result and told that the borehole water is not safe for drinking but can be used for other purposes. A sign or irremovable tag is placed on the contaminated hand pump as a reminder to the community (Appendix C). If deemed necessary, the community mobilisation team will also organise a cleaning campaign around the hand pump. Within a week, SI will conduct a follow-up sanitary inspection to identify possible contamination routes such as cracks in the apron, a loose riser pipe, or stagnant water short-circuiting. If no obvious contamination route exists, the hand pump is shock chlorinated and the water quality is tested again within one week. If the result is acceptable, the camp-based staff will inform the community and remove the red tag on the hand pump. If the borehole fails the re-test, it will continue to be 'closed' for drinking water. Where the repair team identifies possible contamination routes, a repair will be conducted. Following the completion of the repair, the hand pump will be shock chlorinated, again tested after a week, and then either 'opened' or remain 'closed'. The flow chart outlining this process is shown in Appendix E.

Quality Control Measures for Microbiological Testing

| Microbiological Quality Control Measures | |
|--|---|
| Duplicate plate testing | 20% of samples (1 in 5) to have duplicate plate testing. Results checked against normal distribution frequency tables. Reduce to 1 in 10 samples if continuously passing. |
| Sterilisation (Manifold) blanks | 10% to 20% of samples to have a sterilisation blank to check operator performance in sterilisations and preventing false contamination. |
| Stack (Media) blanks | Each bottle of growth media or once per day, media blanks to check media is not contaminated. |
| Incubator temperature calibration | Conducted weekly using the equipment quality control check form. |

Microbiological Testing Quality Control Checks

Duplicate Plate Testing: Duplicate plate testing involves processing two samples from the same water sample to check the variation. It is important to note that due to the way that bacteria spread out in water, both samples are unlikely to have an identical result. The difference between the two results can be checked on normal distribution frequency tables. The laboratory should process duplicate plates for at least 20% (1 in 5) of water samples. If the duplicate plates are outside of the normal distribution range, that sample must be discarded and a re-test must be done.

If more than 10% of duplicates during the past week are outside of the normal distribution range, the rate of duplicate samples should be increased by 10% (e.g. to 30%). If the following week less than 10% of duplicate are outside of the normal distribution range, the rate of duplicates can be reduced by 10% (e.g. from 30% to 20%). However, the rate of duplicates should never drop below 20%. The normal distribution table can be found in Appendix D.

Sterilisation Blanks: Sterilisation blanks involve testing 100ml of sterilised water. The purpose is to check the integrity of the sterilisation processes. The water used as the blank must be first boiled for 3 minutes, then placed into bottles and then autoclaved to ensure the bottle is also sterile. Bottled water should not be used as the blank. Sterilisation blanks should be conducted for between 10-20% of samples; e.g. one for every 5 to 10 real samples. If the sterilisation blank shows any colonies, all samples correlated to that blank sample must be marked in the spreadsheet as being invalid and must be re-tested.

Stack/Media Blanks: A stack blank involves placing media on an absorbent pad, without a filter, and incubating with the sample set. For Membrane Lauryl Sulphate Broth, if the pad turns from a red/orange to a yellow colour it indicates that the media is contaminated. For the CHROMagar Liquid ECC media, if there is any growth observed on the plate, the media is contaminated. If this happens, the media must be thrown out and all samples from that day must be marked in the spreadsheet as being invalid and must be re-tested. One stack blank should be conducted each day for each unique bottle of growth media used.

Other Tests

All borehole samples will also be checked for pH and Total Dissolved Solids (TDS) or electrical conductivity. The pH confirms if certain locations or boreholes would require higher than normal chlorine dosing. The conductivity will provide an indication over time of possible saline intrusion caused by over extraction of the shallow aquifers.

pH Testing Instructions

The pH of all failed borehole samples should be measured because the failed boreholes will be shock chlorinated, and the effectiveness of chlorine is controlled, in part, by pH. The WQT can take the pH of all handpump samples if samples cannot be kept overnight until the microbiological results are finalised.

Materials:

- pH probe
- pH 7.00, pH 4.01, and pH 10.01 buffer solutions (for calibration)
- 300 mL measuring cups, one for each sample taken that day



Figure 14. Palintest Multi-Parameter Pocket Meter

- Paper for recording results, pen, tape for labelling
- 1. pH testing should be done after microbiological samples are plated. Only 10mL of each sample is needed.
- 2. pH Probe Calibration: Calibration of the pH probe must be conducted at least once a week. As the probe gets older, the calibration may need to be done more frequently. See the Calibration section for more details.
- 3. It is good practice to test all samples in a batch after calibration. Set up 15-20 cups in a row, label them, then pour in samples.
- 4. On the pH meter, press the ON/OFF button to switch the sensor on. Dip the electrode into the sample, making sure the sample fully covers the electrode. Stir and let the reading stabilise. Record the reading or press HOLD/ENT button to freeze the reading.

Specific Conductivity Testing Instructions

Specific Conductivity is taken for all borehole samples. The specific conductivity measurement is an indicator of saltwater intrusion, the movement of saline water into freshwater aquifers. This is a risk in the Sittwe camps, where many camps are quite close to the bay.

Materials:

- Conductivity meter
- 1413 uS/cm buffer solution (for calibration)
- Small measuring cups
- Paper for recording results, pen, tape for labelling
- 1. Specific conductivity testing should be done after microbiological samples are plated. Only 10mL of each sample is needed and the same sample can be used that was used for pH testing.
- 2. Specific conductivity calibration: Calibration of the conductivity probe does not need to be done as often as pH, but it is good practice to do it once a week, the same as the pH probe calibration. As the probe gets older, the calibration may need to be done more frequently. See the Calibration section for more details.
- 3. It is good practice to test all samples in a batch after calibration. Set up cups in a row, label them, pour in samples.
- 4. On the conductivity meter, press the ON/OFF button to switch the sensor on. The “MEAS” indicator appears when the meter is in measurement mode. Dip the electrode into the sample, making sure it is completely immersed. Stir and let the reading stabilise. Record the reading in the upper part of the display (automatically temperature compensated to normalised temperature of 25 °C); press HOLD key to freeze the measurement. The lower display shows the temperature of the sample.

Arsenic Testing

The WHO recommended limit of arsenic in drinking water is 10 ppb. However, perhaps because arsenic is naturally present at high levels in the groundwater in parts of Bangladesh and Myanmar, the National Drinking Water Quality Standards for Myanmar published by the Ministry of Health in September 2014 state that the requirement for arsenic in Myanmar is 50 ppb. The WQT uses this standard for Myanmar as the basis for a pass/fail arsenic test, but the programme is advocating for a larger arsenic study in

Sittwe camps. If a result is higher than 50 ppb, immediately disable the handpump so that it cannot be used. Inform residents about the closure of the handpump and put up a sign (Appendix C). If feasible, test boreholes around the contaminated borehole radially to map the contamination patterns and determine levels in nearby boreholes. If there is a borehole with lower arsenic levels nearby to the contaminated borehole, encourage residents to use the one with lower levels.

In the beginning of the programme, 5% of boreholes were tested for arsenic; that percentage increased to 10% after high concentrations of arsenic were found in several boreholes.

To perform an arsenic test, use the Palintest Digital Arsenic Test Kit and the provided instructions, attached in Appendix F. The only exception to the instructions is that if a sample shows concentrations higher than 100 ug/L based on the colour chart, simply record the result as “>100ug/L”. If the sample seems to be lower than 100 ug/L based on the colour chart, use the DigiPAS to get a more accurate reading.

Calibration of Equipment

The following calibration instructions are specific to the Palintest Multi-Parameter Pocket Meter, which measures pH, conductivity, TDS, salinity, and temperature. The instructions below are adapted from the supplier’s instruction manual.

pH Calibration

To calibrate the pH probe, you must use a solution with a known pH value, also known as pH reference or buffer pH solution. The accuracy of your pH measurements is dependent on how accurately the pH probe is calibrated, so make sure to pay particular attention to this step.

We use USA standard buffer solutions, pH 4.01, pH 7.00, and pH 10.01. Use **at least two** standard buffers, always starting with pH 7.00. Because our water samples are usually close to a pH of 8.00, it is better to use pH 10.01 as the second buffer solution.

1. Press the “ON OFF” button to turn meter on and “MODE ENT” to select pH mode.
2. Rinse the sensor with clean water. Select the first pH buffer (pH 7.00) and pour some into a small, clean container. Pour enough that you can cover the entire pH sensor tip.
3. Immerse the sensor into your pH buffer solution, stir gently, and press “CAL”. The primary display will show the un-calibrated pH value, while the secondary display should search for and lock on the closest automatic calibration value.
4. Allow the primary display to stabilise, then press “MODE ENT” to confirm the calibration value. The primary value will blink briefly before the secondary value automatically scrolls through the remaining pH buffers available for calibration.
5. Repeat steps 2-4 with the other pH buffer, either pH 4.01 or pH 10.01.
6. Press “CAL” to return to measurement mode.
7. Pour out the buffer solutions. Do not re-use buffer solutions.

To check the frequency that calibration needs to be performed, do the following:

1. Perform a calibration on day 1. On the following day, simply soak your electrode in the original buffers you performed calibration with and note the readings.
2. Keep doing this procedure every day until the difference between the measurement and the standard is more than 0.30 (for example, the reading says 9.70 in the pH 10.01 buffer).

3. Take note of the number of days that went by since day 1 of calibration. If 5 days went by, proceed to calibrate every 4-5 days to ensure accurate results.
4. As the pH electrode gets older, proceed to do this test monthly to confirm number of days required between calibrations.

Conductivity Calibration

As with pH calibration, to ensure accurate results, calibrate the same probe using a certified conductivity standard solution. First, make sure the conductivity is set to "A.Cal" (Automatic Calibration) with these steps:

Your instrument allows customisation of various settings. To access the setup mode:

- 1 With the instrument off, keep the **MODE ENT** pressed down while you press and release **ON OFF** (Setup) will appear, then as you release **MODE ENT**, **PR-R** (Parameter) will appear.
- 2 Press **HOLD** or **CAL** to choose **PR-R** (Parameter Setup) or **SYS-E** (System Setup) menu.
- 3 Press **MODE ENT** to enter the selected setup menu.

IMPORTANT It is necessary to save your Parameter and System changes in order for them to take effect.

- 1 When you are finished making your desired changes, press both **HOLD** and **CAL** at the same time and keep them pressed until you see "SA" (Save) on the display.
- 2 With the primary display "SA" and secondary display "YES", press **SR YES**, press **MODE ENT** to save the changes. The instrument will resume measurement mode with new setting(s).

Note: If auto-shut off is used, changes will be automatically saved 8.5 minutes after the last change was made.

1. "A.Cal" (Automatic Calibration), choose "YES".
2. "SPC" (Single-Point Calibration), choose "YES".

To calibrate:

1. Press the "ON OFF" button to turn meter on and "MODE ENT" to select conductivity mode.
2. Rinse the sensor with clean water. Pour the 1413 uS/cm buffer solution into a small, clean container. Pour enough that you can cover the entire sensor tip.
3. Immerse the sensor into your buffer solution, stir gently, and press "CAL". The primary display will show the un-calibrated conductivity value, while the secondary display should search for and lock on the closest automatic calibration value.
4. Allow the primary display to stabilise, then press "MODE ENT" to confirm the calibration value. The primary value will blink briefly before returning to measurement mode.

Temperature Calibration

The temperate of the incubators must be checked at least once per week.

To test the temperature calibration of the Potakit incubator, the incubator chamber should be filled with water and the special incubator cap with a hole used to insert the thermometer. The incubator should be left for 1-hour before checking the temperature. The allowed variance is $44 \pm 0.5^{\circ}\text{C}$.

Appendix

Appendix A: Locations and Sampling Numbers (to be updated bi-annually)

| No. | Name of Camp / Village | Total households | # of targeted households for testing | # of OXSI boreholes for testing |
|-----|-----------------------------|------------------|--------------------------------------|---------------------------------|
| 1 | Baw Du Pa | 2327 | 92 | 130 |
| 2 | Baw Du Pa village | 22 | - | - |
| 3 | Bar Sar Rar | 397 | 77 | 25 |
| 4 | Dar Paing | 2005 | 92 | 84 |
| 5 | Dar Paing Village | 958 | 87 | 23 |
| 6 | Thay Chaung | 1139 | 89 | 45 |
| 7 | Thay Chaung Lathama Village | 587 | 83 | 18 |
| 8 | Thay Chaung Muslim Village | 1009 | 88 | 16 |
| 9 | Thay Chaung Rakhine Village | 155 | 60 | 10 |
| 10 | That Kay Pyin 1 | 640 | 84 | 48 |
| | That Kay Pyin 2 | 360 | 76 | 44 |
| 11 | That Kay Pyin Village (IDP) | 299 | 73 | 23 |
| 12 | Maw Thin Nyar | 656 | 84 | 46 |
| 13 | Hman Zi | 400 | 78 | 29 |
| 14 | Kaung Doke Kar | 400 | 78 | 55 |
| 15 | Ohn Taw Chay | 677 | 84 | 80 |
| 16 | Ohn Taw Gyi 1 | 920 | 87 | 109 |
| | Ohn Taw Gyi 3 | 1448 | 90 | 92 |
| | Ohn Taw Gyi 6 | 360 | 76 | 25 |
| 17 | Ohn Taw Gyi Village | 200 | 65 | 7 |
| 18 | Say Tha Mar Chay village | 92 | 47 | 7 |
| 19 | Say Tha Mar Gyi Village | 235 | 68 | 11 |
| 20 | Say Tha Mar Gyi | 2280 | 92 | 198 |
| 21 | Sat Yoe Kya 1 (CDN) | 249 | 69 | 20 |
| 22 | Min Gan | 151 | 59 | 12 |
| 23 | Sat Yone Su 1 | 72 | - | - |
| 24 | Sat Yoe Kya 2 | 420 | - | - |

Appendix B: Water Quality Analysis (Raw Source and Household Water) Form (on tablet)

| Field | Question | Answer | |
|---|-------------------------------------|-------------------------------|------------------------|
| Collection_Date | Collection date | | |
| Collector_Name | Water collector name | | |
| SN_WS | Serial number of water sample | | |
| Camp_Name | Camp/Village name | (drop down list of locations) | |
| Water_Sample_Source | Water sample source | HH | Household |
| | | HP | Handpump |
| HP_Number_of_Water_Sample | Hand pump number of water sample | | |
| <i>Question relevant when: selected(\${Water_Sample_Source}, 'HP')</i> | | | |
| Water Sample Collection From Household | | | |
| <i>Group relevant when: selected(\${Water_sample_source}, 'HH')</i> | | | |
| Household_Leader_Name | Head of household | | |
| Barrack_No | Barrack number | | |
| Room_No | Room number | | |
| HP_Number | Handpump used (handpump number) | | |
| Water_Container | Type of water container | B | Bucket |
| | | P | Pot |
| | | G | Gorra |
| | | CWF | Ceramic Water Filter |
| Container_Clean | Is the water container clean? | Clean | Clean |
| | | N_Clean | Not Clean |
| CC_Present | Is container cover present? | Present | Present |
| | | Absent | Absent |
| CWF_Present | Is the ceramic filter present? | Using | Present and in use |
| | | Present_Not_use | Present but not in use |
| | | Not_present | Not present |
| CWF_Good_Not | Is the CWF working properly? | Working_Properly | Working properly |
| | | Not_working | Not working |
| <i>Question relevant when: not(selected(\${CWF_Present}, 'Not_Present'))</i> | | | |
| Water_Treatment | Is there any other water treatment? | None | None |
| | | WTU | Water Treatment Unit |
| | | Aquatab | Aquatab |
| | | WG | Water Guard |
| | | Boiling | Boiling |
| | | Chlorination | Chlorination |
| | | Sedimentation | Sedimentation |
| Other | Other | | |

| | | |
|--|------------------------------|--|
| FRC | For chlorination, FRC (mg/L) | |
| <i>Question relevant when: selected (S{Water_Treatment}, 'Chlorination')</i> | | |
| Mention_Specific | If other, specify | |
| <i>Question relevant when: selected (S{Water_Treatment}, 'Other')</i> | | |
| Comments | Comments | |

Appendix C: Signs to Inform Communities about Contaminated Boreholes



Figure 15. A sign to be placed on handpumps where water samples have failed microbiological testing (removed after shock chlorination and re-test).

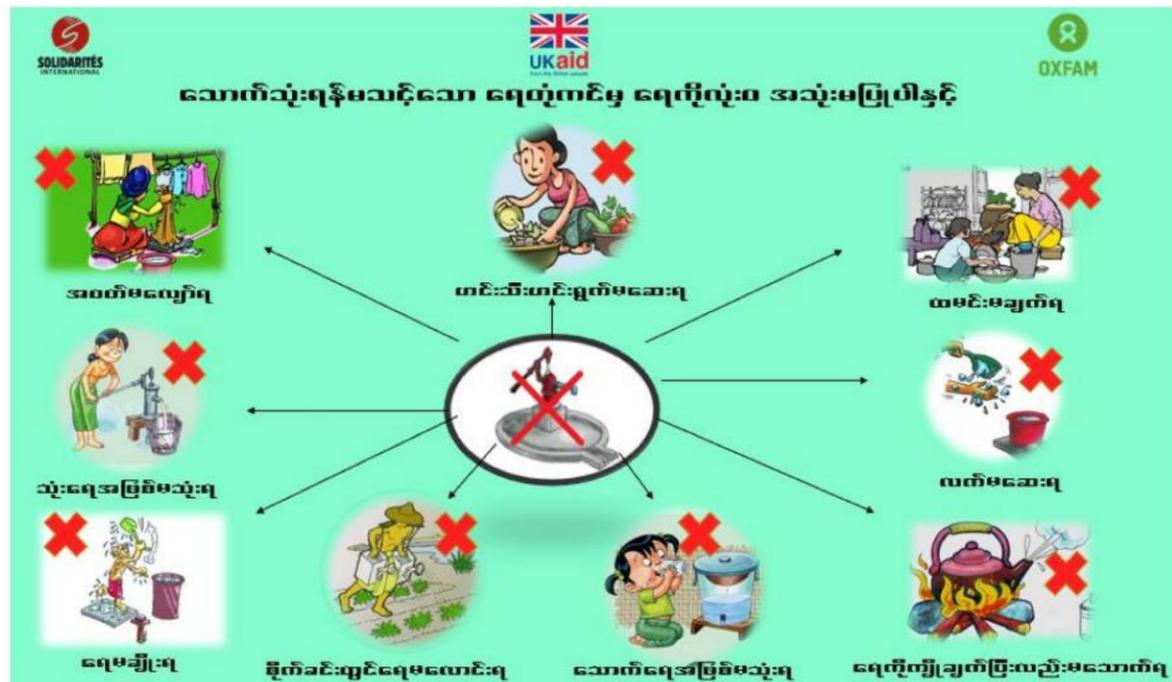


Figure 16. A sign to be placed on handpumps where water samples have failed arsenic testing (handpump disassembled so it cannot be used).



Figure 17. A sign to be placed on handpumps that are closed for cleaning/repair.

Appendix D: 95% Confidence Interval Counts (0-100)⁴

| Count1 | Count2Min | Count2Max | Count1 | Count2Min | Count2Max | Count1 | Count2Min | Count2Max |
|--------|-----------|-----------|--------|-----------|-----------|--------|-----------|-----------|
| 0 | 0 | 5 | 37 | 22 | 56 | 74 | 52 | 100 |
| 1 | 0 | 7 | 38 | 22 | 58 | 75 | 52 | 102 |
| 2 | 0 | 9 | 39 | 23 | 59 | 76 | 53 | 103 |
| 3 | 0 | 11 | 40 | 24 | 60 | 77 | 54 | 104 |
| 4 | 0 | 12 | 41 | 25 | 61 | 78 | 55 | 105 |
| 5 | 0 | 14 | 42 | 26 | 63 | 79 | 56 | 106 |
| 6 | 1 | 16 | 43 | 26 | 64 | 80 | 57 | 107 |
| 7 | 1 | 17 | 44 | 27 | 65 | 81 | 58 | 108 |
| 8 | 2 | 19 | 45 | 28 | 66 | 82 | 58 | 110 |
| 9 | 2 | 20 | 46 | 29 | 67 | 83 | 59 | 111 |
| 10 | 3 | 22 | 47 | 29 | 69 | 84 | 60 | 112 |
| 11 | 3 | 23 | 48 | 30 | 70 | 85 | 61 | 113 |
| 12 | 4 | 24 | 49 | 31 | 71 | 86 | 62 | 114 |
| 13 | 5 | 26 | 50 | 32 | 72 | 87 | 63 | 115 |
| 14 | 5 | 27 | 51 | 33 | 73 | 88 | 63 | 117 |
| 15 | 6 | 28 | 52 | 33 | 75 | 89 | 64 | 118 |
| 16 | 6 | 30 | 53 | 34 | 76 | 90 | 65 | 119 |
| 17 | 7 | 31 | 54 | 35 | 77 | 91 | 66 | 120 |
| 18 | 8 | 32 | 55 | 36 | 78 | 92 | 67 | 121 |
| 19 | 8 | 34 | 56 | 37 | 79 | 93 | 68 | 122 |
| 20 | 9 | 35 | 57 | 38 | 80 | 94 | 69 | 123 |
| 21 | 10 | 36 | 58 | 38 | 82 | 95 | 69 | 125 |
| 22 | 10 | 38 | 59 | 39 | 83 | 96 | 70 | 126 |
| 23 | 11 | 39 | 60 | 40 | 84 | 97 | 71 | 127 |
| 24 | 12 | 40 | 61 | 41 | 85 | 98 | 72 | 128 |
| 25 | 13 | 41 | 62 | 42 | 86 | 99 | 73 | 129 |
| 26 | 13 | 43 | 63 | 42 | 88 | 100 | 74 | 130 |
| 27 | 14 | 44 | 64 | 43 | 89 | | | |
| 28 | 15 | 45 | 65 | 44 | 90 | | | |
| 29 | 16 | 47 | 66 | 45 | 91 | | | |
| 30 | 16 | 48 | 67 | 46 | 92 | | | |
| 31 | 17 | 49 | 68 | 47 | 93 | | | |
| 32 | 18 | 50 | 69 | 47 | 95 | | | |
| 33 | 19 | 52 | 70 | 48 | 96 | | | |
| 34 | 19 | 53 | 71 | 49 | 97 | | | |
| 35 | 20 | 54 | 72 | 50 | 98 | | | |
| 36 | 21 | 55 | 73 | 51 | 99 | | | |

⁴ Rapid Assessment of Drinking Water Quality: A Handbook for Implementation. World Health Organization, UNICEF. October 2012.

Appendix E: Communication Flowcharts

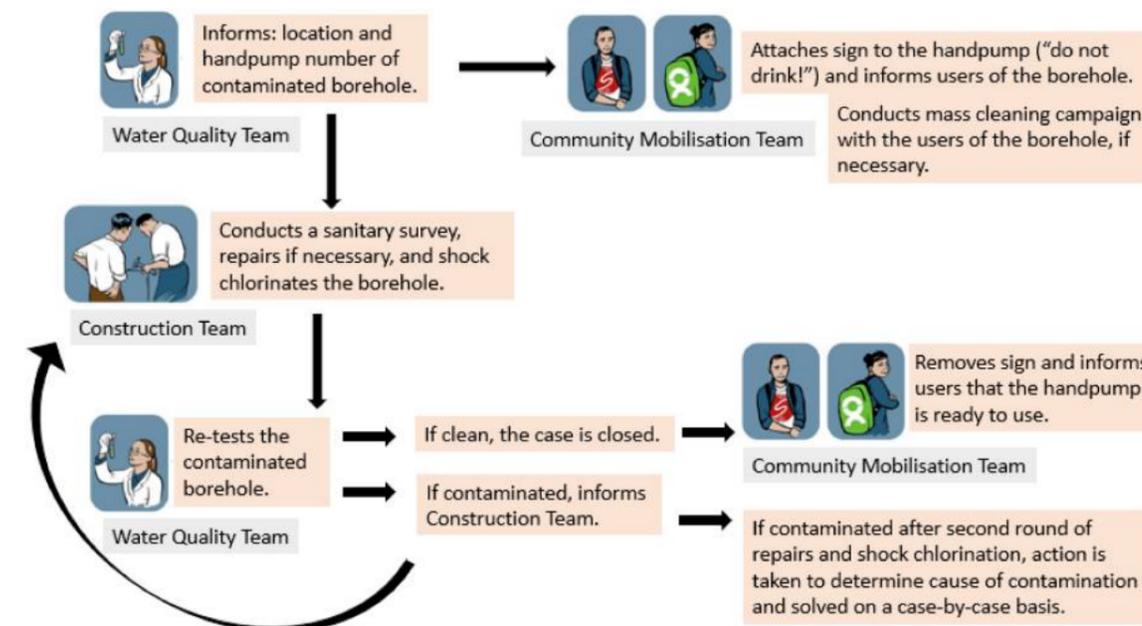


Figure 18. Flowchart showing actions and communication when a borehole fails the microbiological test.

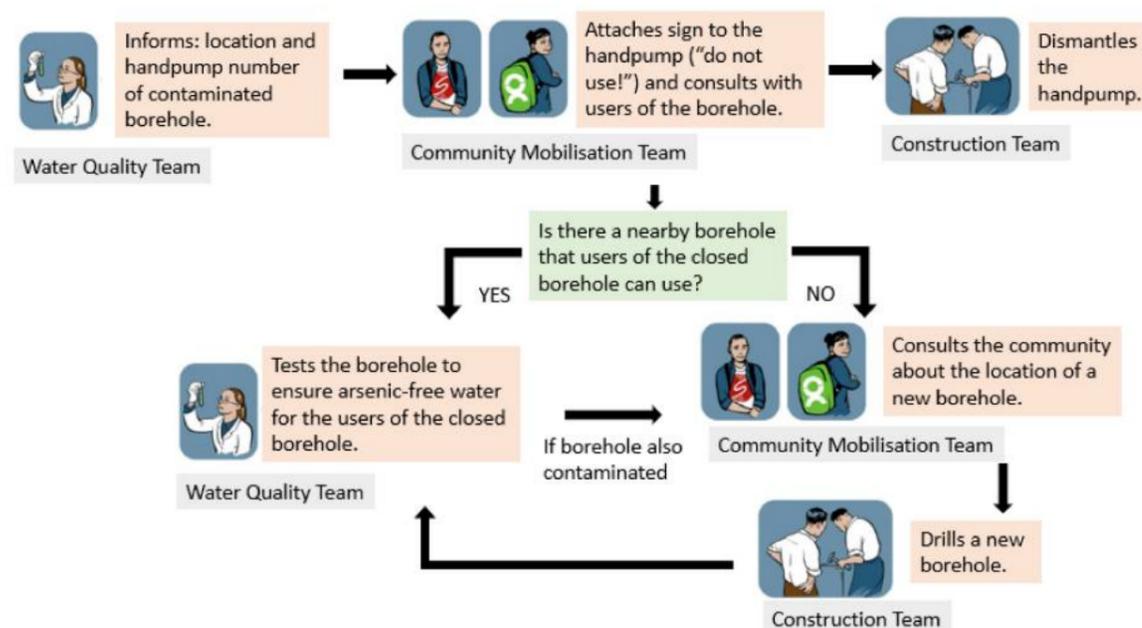


Figure 19. Flowchart showing actions and communication when a borehole fails the arsenic test.

Appendix F: Instructions for performing an arsenic test

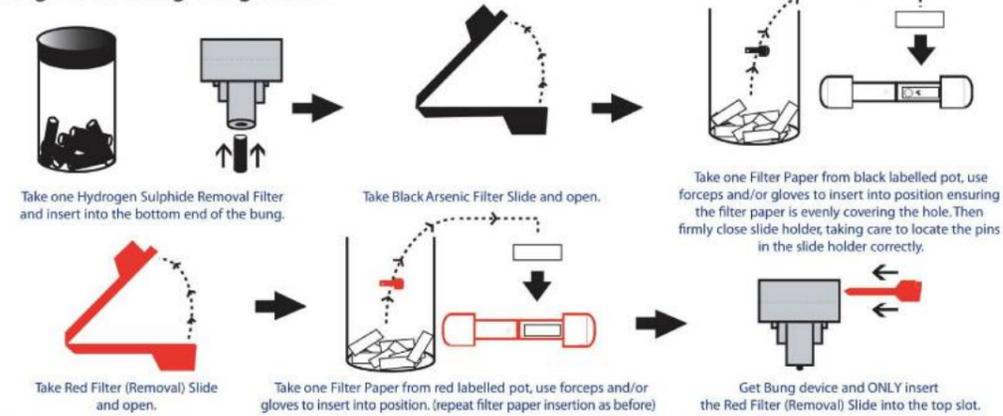
DigiPAS Operation Manual

Palintest
Leaders in Water Analysis Technology

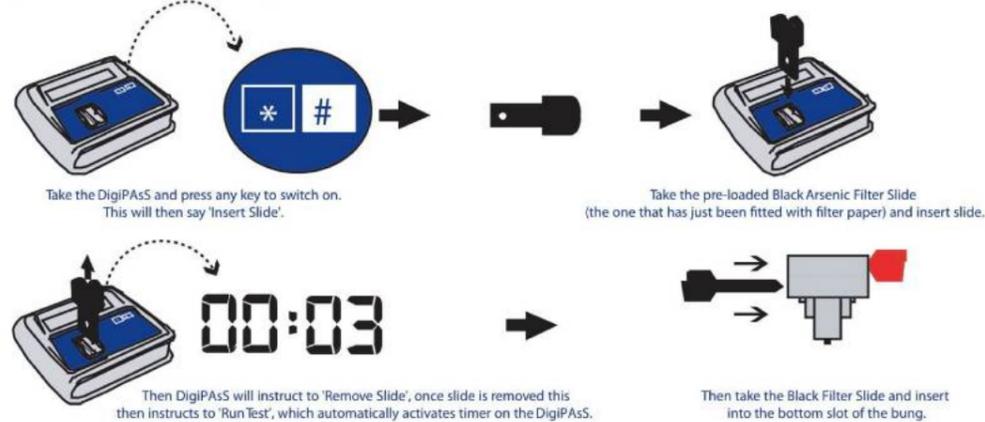
Operation Equipment Key



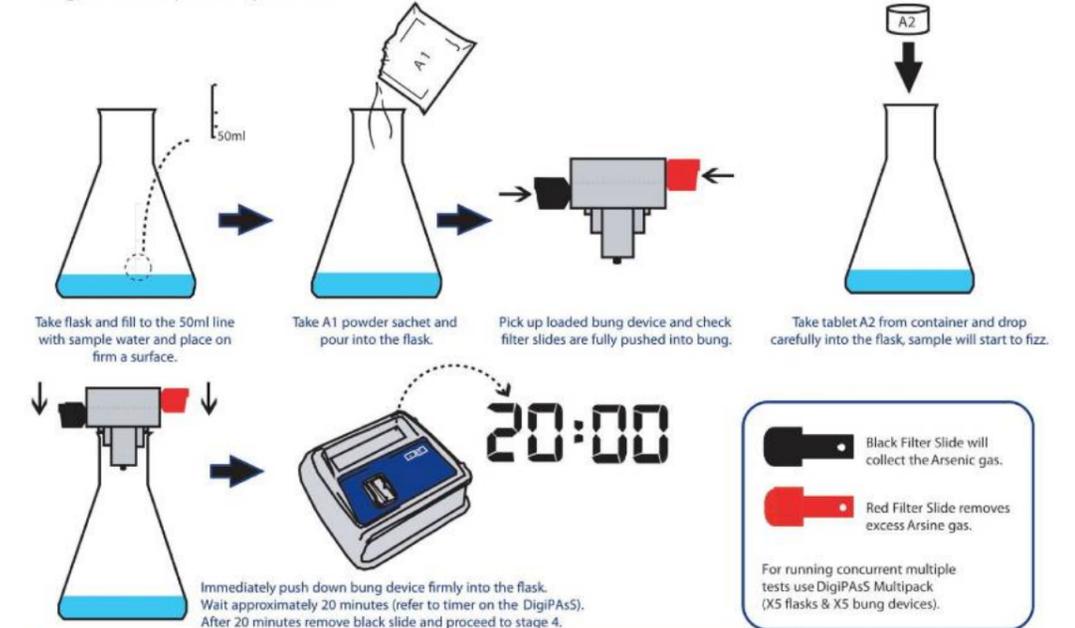
Stage 1: Loading bung device



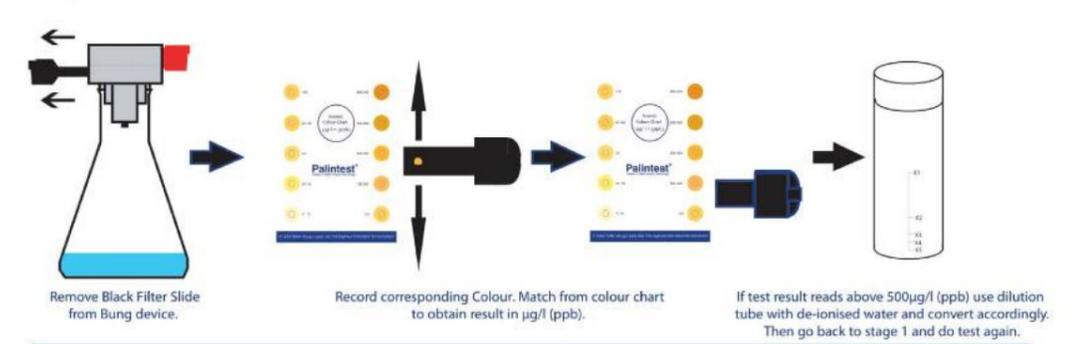
Stage 2: Calibrating the DigiPAS



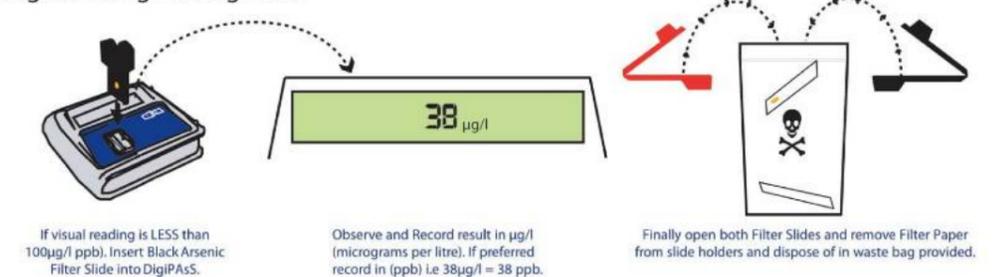
Stage 3: Sample Preparation



Stage 4: Arsenic Measurement



Stage 5: Using the DigiPAS



e mail: export@palintest.com website: www.palintest.com

If you have any enquiries regarding the DigiPAS please contact Palintest's nearest local in country agent or at the above e-mail address.

Troubleshooting



| | | |
|--|--|--|
| | ALWAYS ensure to insert Filter Slides in their allocated slots in the bung device. | |
| | NEVER insert Red Filter Slide (removal) in the DigiPAsS. | |
| | ALWAYS handle filter paper, with gloves and/or forceps. | |
| | ALWAYS insert correct Filter Paper into its appropriate Filter Slide. | |
| | Take filter paper from pot marked for Black Filter Slide. | |
| | Take filter paper from pot marked for Red Filter Slide. | |
| | NEVER use a broken Filter Slide. Discard and use new one for a gas tight seal. | |
| | ALWAYS make sure Filter Slides are fully pushed into the bung device. | |

| | | |
|--|---|--|
| | IMMEDIATELY insert bung device into flask within 0-2 seconds after powder A1 and tablet A2 have been dropped into the flask, to obtain accurate result. | |
| | When removing filter paper from slide one should only observe a perfectly symmetrical colour stain, i.e yellow circle. If yellow stain goes beyond circle this suggests a gas leak which will give a low result. Repeat test ensuring Black Filter Slide is closed properly to maintain gas tight seal. | |
| | If internal cotton wool turns black within the Hydrogen Sulphide Removal Filter, DISCARD in waste bag and insert NEW FILTER. | |
| | If low battery indicator is displayed, change battery within the next 10 tests. | |
| | After every test rinse flask with water from next sample. Swirl, shake and discard solution ready for next test. | |
| | At the end of each day clean the flask with the brush provided. | |

e mail: export@palintest.com website: www.palintest.com

If you have any enquiries regarding the DigiPAsS please contact Palintest's nearest local in country agent or at the above e-mail address.

Shock chlorination of boreholes in camps

Introduction

As part of the Water Quality Strategy for the WASH Programme, remedial action is taken every time that a borehole water sample fails a microbiological test. Remedial actions include a sanitary inspection to identify probable causes of contamination, any repairs to the handpump or apron needed, shock chlorination of the handpump, and finally a water quality re-test to ensure the water is safe to drink again. This document focuses on the procedure for shock chlorination of boreholes.

Shock chlorination is the use of a one-off, high dose of chlorine to disinfect a borehole or well. This is usually done in the following cases:

- After construction or after repair. In both cases, there is a likelihood of contaminating the water source and so chlorination should be done as a precautionary measure.
- After a failed bacteriological test—when the water source is known to be contaminated, it must be disinfected.

Shock chlorination should disinfect the water, but it does not always work if there is an underlying problem causing re-contamination, such as a cracked apron or sanitary seal. Prior to shock chlorination, the team should conduct a sanitary inspection to identify probable causes of contamination and take mitigating steps to prevent it from reoccurring.

The chlorine compound used is granular calcium hypochlorite with 65% active chlorine. Granular chlorine is more stable, which allows it to be stored for longer periods than liquid chlorine. Chlorine must be stored in a cool, dry, well-ventilated, and dark location.

A recommended dose for shock chlorination is 250 ppm of active chlorine for a disinfection time of 12 hours¹. To know exactly the correct dose, the amount of water in the borehole must be calculated or approximated; however, it is unreasonable to measure the water level in every borehole that we shock chlorinate. We know that OXSI boreholes are approximately 30 ft deep, with a casing pipe diameter of 2". In the wet season, the water table is only about 2.5 ft below ground level, while in the dry season, it is around 8 ft below ground level. This means that the maximum volume of water sitting in the borehole at rest is only between 13.5 – 17 L.

Because granular calcium hypochlorite contains 65% active chlorine, one heaped teaspoon (about 14g) dissolved in 1 L of water makes a 0.91% solution (9,100 ppm). When added to 17 L in the borehole during the wet season, this results in a concentration of about 500 ppm active chlorine. When added to 13.5 L in the borehole during the dry season, the concentration is even higher, at almost 630 ppm active

¹ "Shock Chlorination of Wells: Technical Brief" Oxfam in Myanmar, 2016. Based on Lifewater guidance (<https://lifewater.org/wp-content/uploads/2018/10/Lifewater-HandPumpRepair-Manual.pdf>) which in turn references a Canadian standard (MOEE, 1987). This states that a chlorine dosage of 250 mg/l is maintained for at least 12 hours for newly constructed wells, but a dosage of at least 50 ppm is used in future.

chlorine.

These concentrations are higher than recommended; however, at the time of writing, the granular chlorine had been in storage for quite some time and is expected to have lost potency, making these concentrations significantly lower. When new stocks are purchased, make sure to adjust the quantity of granular calcium hypochlorite.

Team

Shock chlorination is done by members of the construction team who are familiar with how to dismantle handpumps and are trained in shock chlorination. Typically, 1-2 workers perform several shock chlorinations per day. It is ideal if they are accompanied by a member of the Community Mobilization team, who can answer questions from the community during the procedure and ensure that people understand not to use the handpump overnight.

Materials

- 1) Tools for handpump dismantling: a hammer, chisel, spanner set, and pliers.
- 2) Granular chlorine (1 spoonful for every borehole), carried in a small plastic container.
- 3) 1 plastic spoon
- 4) Gloves
- 5) 1 clean, empty 1L bottle

Procedure

- 1) After the Water Quality Team informs the Construction Team that shock chlorination is needed, the Construction Team communicates to the Community Mobilization team about the date and which boreholes will be shock chlorinated. The Community Mobilization team confirms with the Construction team the location and number of the borehole(s).
- 2) The Community Mobilization team asks for permission to shock chlorinate the borehole by talking to the community members who use the HP. They carefully explain to the community the procedure and why it is important.

Key messages:

- We have tested the water and found that it is currently unsafe to drink.
- The community needs to clean around the handpump (to prevent further contamination), but we also need to chlorinate it now to kill the harmful bacteria in the water and prevent disease.
- We are asking your permission to chlorinate the borehole to make the water safe to drink.
- This process will take 12 hours (one night). During this time, the handpump handle and other parts will be removed, so the community will not be able to use this handpump.
- Together we can identify a nearby borehole that can be used during this time.
- The next day, we will pump out all the chlorinated water until there is no remaining taste or smell of chlorine. The water is then safe to drink.
- Cleaning is critical to ensure this doesn't happen again. The water under ground can easily be contaminated by dirty water on the surface seeping into the soil around the handpump, so the

area must be kept clean, not used for washing laundry, and kept free of stagnant water.

- Put on gloves and prepare the chlorine solution: fill the 1 L bottle with clear water and add 1 spoon of chlorine powder. Close and **shake the bottle for 30 seconds.**



- Remove the sign on the handpump that informs people not to use the water for drinking. Save the sign to put back on the handpump after shock chlorination.
- Dismantle the handpump.



- Pour chlorine solution into the suction pipe.



- Agitate by pumping several times, until a chlorine smell is detected, then stop immediately—do not pump out the chlorinated water.

- Dismantle the handpump so that no one can use it and leave overnight.
- Return **the day after** and reconnect the pump.
- Pump until the chlorine smell is removed.
- Fix the sign on the handpump that tells people not to use the handpump for drinking. This sign will be removed once the water from the borehole is re-tested and is confirmed to be clean.
- Communicate with the Water Quality Team to re-test the handpump within one week of the shock chlorination. The Community Engagement Team will inform the community if the water test has passed and the handpump can be used for drinking.

Note: While their borehole is being shock chlorinated, if the community has any problems using a different handpump due to conflict with the users of the other handpump, this issue should be raised first with the Camp Management Committee and then with OXSI. All OXSI handpumps are open to the public and no one can stop others from using any OXSI handpump.



Fix this poster to the handpump before and after shock chlorination. The water should not be used for drinking, brushing teeth, or washing food that will not be cooked until a re-test confirms that it is clean.

Targeted Household Visit Standard Operating Procedure

Introduction

At the beginning of the programme, blanket household visits were conducted as a hygiene promotion tool. Community Facilitators would visit each household one by one to teach people about good hygiene behaviour. However, in mid-2018, the approach was changed to “target” households where the water quality test had failed. It was believed that this would lead to more focus and engagement during the visits and behaviour change around water safety behaviours. Targeted household visits are also conducted for special situations, such as to follow up with diarrhoea cases or to systematically inform households about something important. This document addresses only the targeted household visits that are conducted in response to a failed water quality test.

Note: in this document, “drinking water” refers to any water that is directly consumed, as well as water that is used in cooking and to wash fresh fruits and vegetables that will be eaten raw. “Domestic water” is water used for bathing, washing clothes, washing dishes, and other cleaning in the house.

Objectives

The main objective of the targeted household visit is to improve behaviours around water collection, transport, storage, and use, in order to minimize the risk of contaminating drinking water. In the targeted household visit, the results of the household’s water test are shared with the household in order to provide “proof” that the household’s water behaviours could be improved, and good practices are shared with the help of the Water Safety Flipchart to ensure that the household members have the knowledge for how to improve their water behaviours.

Standard Operating Procedure

1. The list of households where the water quality test failed are shared with the Community Mobilisation team by the Water Quality Team once a week. Plan the targeted household visit for the following week.
2. Prepare for the household visits and report your plan to your line manager, who will check the weekly workplan and schedule the visits.
3. When you arrive at the first household, introduce yourself and ask if it is a suitable time to have a household visit. Explain that you work for OXSI and give a brief overview of the work that OXSI is doing, allowing people to ask any questions.
4. Explain that you are visiting this household today because a recent water quality test showed that the water in the household is not clean, (in most cases, the water from the borehole test is clean). Explain that you would like to ask some questions about water behaviours and to give suggestions on how to keep water clean.

5. Ask to see where the household keeps drinking water and check for the following, while using the Water Safety Flipchart to explain good and bad behaviours:

- a. Does the water container have a cover? If there is a cover, praise the household for this behaviour and let them know that water should always be covered, because a cover keeps the water from being contaminated while it is stored. If they don’t have a cover, encourage them to make a cover using a designated plate or pot lid.
- b. Does the water container have a tap? If they have a container with a tap but are not using it for drinking water storage, encourage them to do so. A container with a tap is the safest way to store water so that it does not get contaminated from using a ladle/cup to scoop out the water.



All the water containers shown are covered, and the ladle is hung up.

- i. If no tap and the water container is small enough, the next best method is to pour the water from the container to a drinking cup.
- ii. If no tap and the water container is too big to pour, use a ladle or a cup with a handle to scoop water from the container, but do not store the ladle/cup in the water. If possible, hang it somewhere where the part of the cup/ladle that goes into the water is not touching anything. If your hands or the part of the cup/ladle that touches your hands enter the water, you will contaminate the water.

6. If the household uses a Ceramic Water Filter (CWF), take a look at it (open the lid) and ask how long they have been using the CWF. Give the following directions:
 - a. If they have been using the CWF for more than one year (or if they received it from Oxfam or SI), tell them to stop using it. Take out and dispose of the brown ceramic pot, clean the white bucket with water and soap, and use the bucket without the ceramic filter inside.
 - b. The ceramic pot should be cleaned once per month, without soap. See the Frequently Asked Question section for a step-by-step guide for how to clean the CWF.
 - c. If there are any cracks in the brown ceramic pot, tell the household to stop using it and discard it.
7. Ask the household if they use the same container for domestic and drinking water. If yes, encourage them to use a separate container and to make sure everyone in the household knows which container is for drinking water and which one is for domestic water.
 - a. If they have a container with a cover and a tap, this one should be used for drinking water.
8. Ask the household to see which container they use to get water from the handpump. Ask if they do anything before fetching water.
 - a. If they mention cleaning the container, praise them for this behaviour and let them know it is correct. If they don’t mention ever cleaning the container, encourage them to clean the container once a week with soap and water.

9. Ask the person who usually gets the water from the handpump to see how they carry the water container.
 - a. Make sure they are not putting their hands on any part of the container that will contain water or where water will flow from the container to another cup. Show the Water Safety Flipchart as an example of how to properly carry the gorra to avoid contamination.
10. Thank the household members for their time and ask if they have any questions. (See Frequently Asked Questions on the last page of this document).
11. When you finish the household visit, fill out the reporting format with the number of the household, participants, session (1 session = 1 HH visit).



Frequently Asked Questions

1. What does it mean that my water test failed?

If your water test failed, it means that the water that was tested in your household was contaminated with *E.Coli*, which is a germ that can make people sick. It likely happened if someone in the household had dirty hands and then touched the water with their hands.

2. How can I know if my water is clean?

Germs in the water are so tiny that they are impossible to see, so you usually can't see if your water is clean or not. By following the advice given during this household visit and always carrying your water correctly, keeping your water containers clean and covered, and using a clean ladle/cup or tap, you can keep your water clean.

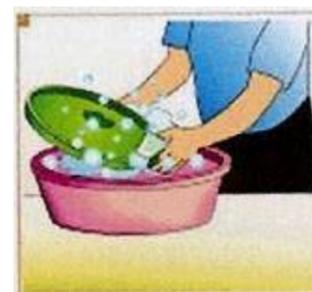
3. When will OXSI distribute new Ceramic Water Filters?

OXSI does not have any plans to distribute new CWFs.

4. When will OXSI test my water again?

OXSI conducts household water tests randomly, twice a year. Your household may get tested again in six months or one year, but it's possible that it won't be tested again at all.

5. How do I clean the Ceramic Water Filter?



The ceramic pot should be cleaned once per month or when the flow rate begins to slow down.

Clean the inside surface of the lid with soapy water and let it dry. Place the lid on a level surface with the clean side facing up.



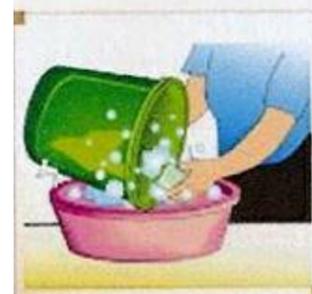
Carefully lift the ceramic pot out of the receptacle and set it on the lid. Touch only the rim when lifting the ceramic pot.

Do not touch the outside of the ceramic pot with dirty hands and do not set it on an unclean surface.



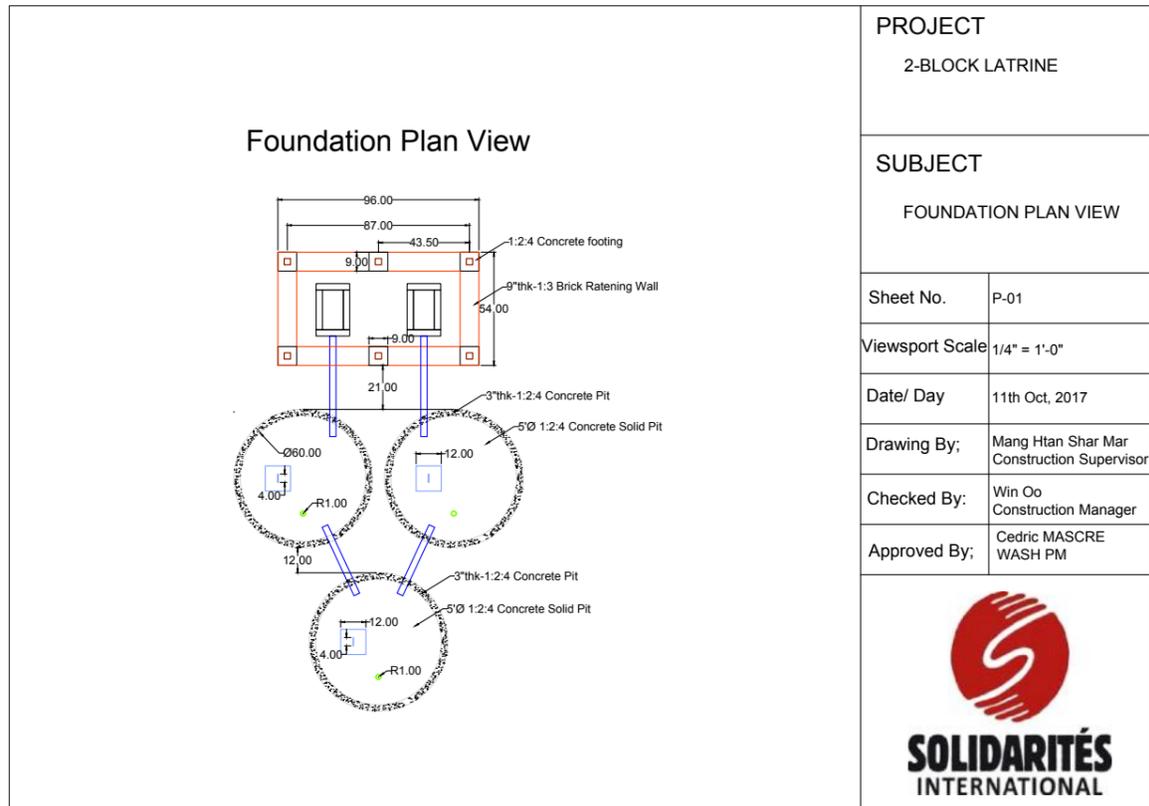
Scrub the inside of the ceramic pot with a cloth or soft brush and rinse with clear water. **Do not use soap** to clean the ceramic pot.

Clean the receptacle tank and spigot with soapy water.

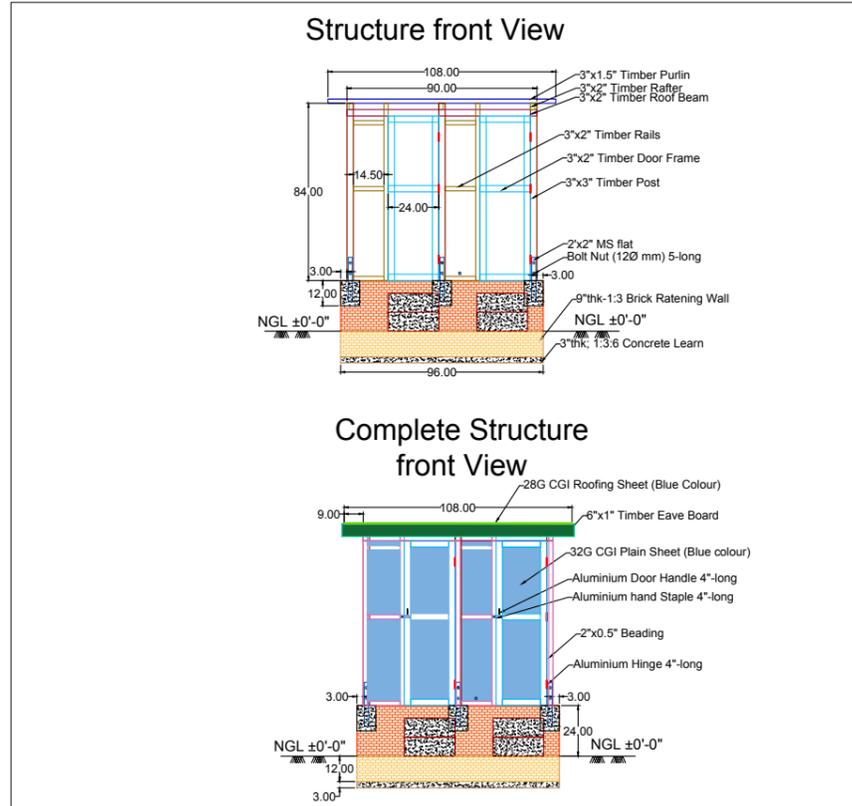


Put the ceramic pot into the receptacle tank immediately after cleaning to prevent recontamination.

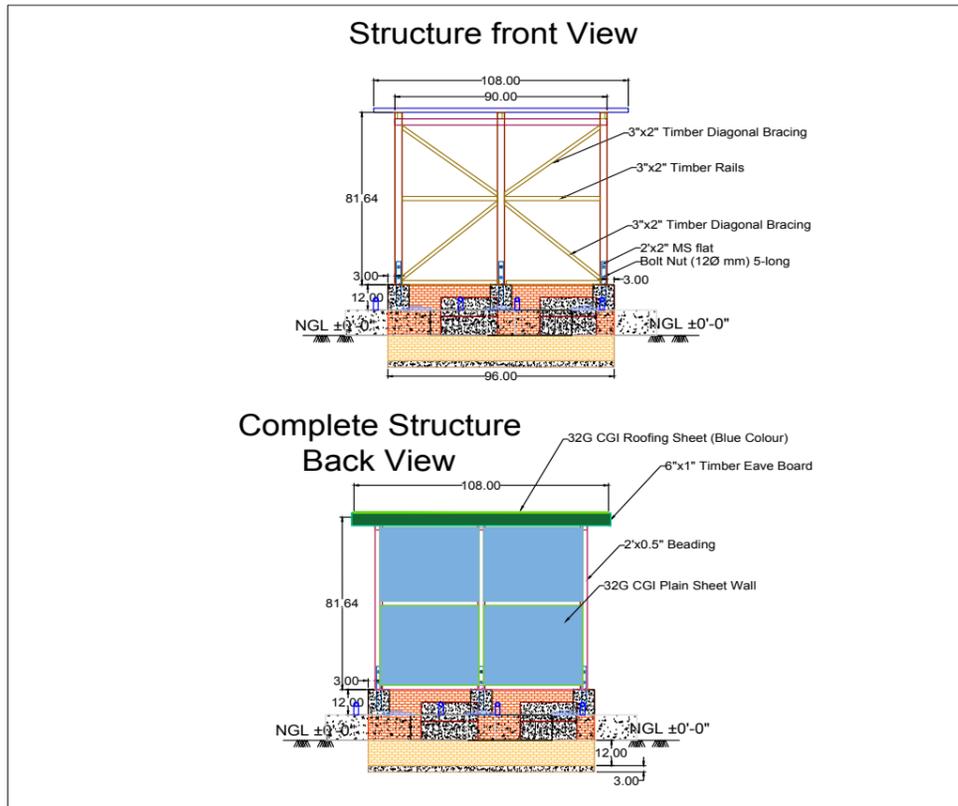
The pot does not have to be dried after cleaning.



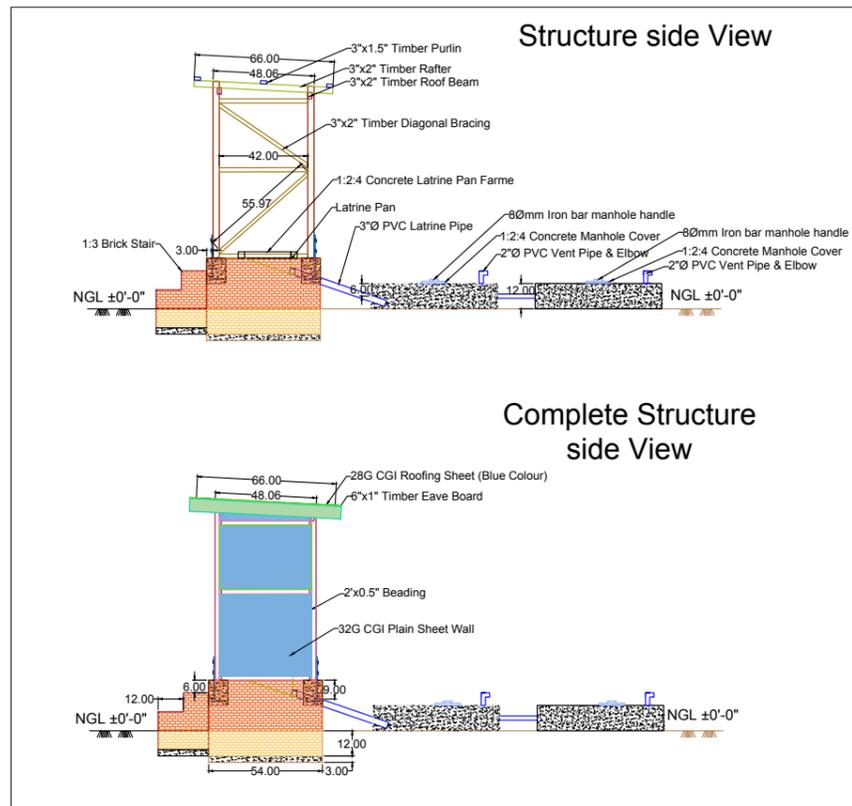
| | |
|--|---|
| PROJECT 2-BLOCK LATRINE | |
| SUBJECT FOUNDATION PLAN VIEW | |
| Sheet No. | P-01 |
| Viewspot Scale | 1/4" = 1'-0" |
| Date/ Day | 11th Oct, 2017 |
| Drawing By; | Mang Htan Shar Mar Construction Supervisor |
| Checked By; | Win Oo Construction Manager |
| Approved By; | Cedric MASCRE WASH PM |
| | |



| | |
|---|---|
| PROJECT 2-BLOCK LATRINE | |
| SUBJECT STRUCTURE FRONT & COMPLETE VIEW | |
| Sheet No. | P-02 |
| Viewspot Scale | 1/4" = 1'-0" |
| Date/ Day | 11th Oct, 2017 |
| Drawing By; | Mang Htan Shar Mar Construction Supervisor |
| Checked By; | Win Oo Construction Manager |
| Approved By; | Cedric MASCRE WASH PM |
| | |



| | |
|---|---|
| PROJECT 2-BLOCK LATRINE | |
| SUBJECT STRCTURE SIDE & COMPLETE VIEW | |
| Sheet No. | P-03 |
| Viewspot Scale | 1/4" = 1'-0" |
| Date/ Day | 11th Oct, 2017 |
| Drawing By; | Mang Htan Shar Mar Construction Supervisor |
| Checked By; | Win Oo Construction Manager |
| Approved By; | P-01 |
| | |



| | |
|---|---|
| PROJECT 2-BLOCK LATRINE | |
| SUBJECT STRCTURE SIDE & COMPLETE VIEW | |
| Sheet No. | P-03 |
| Viewspot Scale | 1/4" = 1'-0" |
| Date/ Day | 11th Oct, 2017 |
| Drawing By; | Mang Htan Shar Mar Construction Supervisor |
| Checked By; | Win Oo Construction Manager |
| Approved By; | P-01 |
| | |

| Activity: Latrine Construction with SI Design - 1 block, 2 rooms | | | | | |
|--|--|------|------|-----------------|-------------|
| No | Item | Unit | No. | Unit cost (MMK) | Amount |
| A Material | | | | | |
| Latrine Structure | | | | | |
| 1 | Brick | No. | 1050 | 140 | MMK 147,000 |
| 2 | Cement | bags | 8 | 8,500 | MMK 68,000 |
| 3 | Sand | suds | 1 | 26,500 | MMK 26,500 |
| 4 | Gravel | suds | 0.1 | 90,000 | MMK 9,000 |
| 5 | Blue plain metal sheet (4' x 100' x 28 G) | roll | 0.4 | 103,000 | MMK 41,200 |
| 6 | CGI sheet for roofing (2' x 6' x 28 G) | shts | 6 | 3,900 | MMK 23,400 |
| 7 | Nail 1.5" | viss | 0.3 | 2,600 | MMK 780 |
| 8 | Nail 2" | viss | 0.3 | 2,600 | MMK 780 |
| 9 | Nail 2.5" | viss | 0.75 | 2,500 | MMK 1,875 |
| 10 | Nail 3" | viss | 0.75 | 2,500 | MMK 1,875 |
| 11 | 2.5" Roofing nail with washers | viss | 0.5 | 3,700 | MMK 1,850 |
| 12 | Twist flat | No. | 9 | 500 | MMK 4,500 |
| 13 | Crude oil (earth oil) - varnish | gal | 1 | 3,500 | MMK 3,500 |
| 14 | Mosquito net (4' x 100') | roll | 0.2 | 9,500 | MMK 1,900 |
| 15 | Plastic latrine pan + 3" pvc elbow 45 degree x 2 | No. | 2 | 3,200 | MMK 6,400 |
| 16 | PVC elbow, 2" dia, 90 degrees | No. | 3 | 1,000 | MMK 3,000 |
| 17 | PVC tee, 2" dia, 90 degrees | No. | 4 | 1,000 | MMK 4,000 |
| 18 | PVC pipe, 3" dia, 19.5' long, 8.5 class | No. | 0.5 | 12,800 | MMK 6,400 |
| 19 | PVC pipe, 2" dia, 19.5' long, 8.5 Class | No. | 1 | 7,000 | MMK 7,000 |
| 20 | Aluminium hinge - 4" | No. | 6 | 550 | MMK 3,300 |
| 21 | Aluminium handle - 6" | No. | 4 | 700 | MMK 2,800 |
| 22 | Padlock, medium size, SP Brand (best qual | No. | 2 | 2,300 | MMK 4,600 |
| 23 | Metallic strap (2' x 2" x 4 mm) | No. | 6 | 2,300 | MMK 13,800 |
| 24 | Bolt and nut, 8 arner, 4" with washers | set | 12 | 500 | MMK 6,000 |
| 25 | Aluminium hasp and staple - 4" | set | 2 | 550 | MMK 1,100 |
| 26 | Aluminium bolt tower - 6" | set | 2 | 700 | MMK 1,400 |
| 27 | Metallic mesh 3mm (2" x 2" x 6' x 80') | roll | 0.1 | 133,000 | MMK 13,300 |
| 28 | Hard wood first class - 3" x 3" x 15' | No. | 3 | 13,600 | MMK 40,800 |
| 29 | Hard wood first class - 3" x 2" x 18' | No. | 1 | 10,200 | MMK 10,200 |
| 30 | Hard wood first class - 3" x 2" x 15' | No. | 9 | 8,500 | MMK 76,500 |
| 31 | Hard wood first class - 3" x 2" x 12' | No. | 1 | 6,800 | MMK 6,800 |
| 32 | Hard wood first class - 3" x 1.5" x 12' | No. | 3 | 6,800 | MMK 20,400 |
| 33 | Hard wood first class - 3" x 1" x 15' | No. | 4 | 6,800 | MMK 27,200 |
| 34 | Hard wood first class - 6" x 1" x 18' | No. | 1 | 10,200 | MMK 10,200 |
| 35 | Hard wood first class - 6" x 1" x 12' | No. | 1 | 6,800 | MMK 6,800 |
| 36 | Hard wood first class - 2" x 0.75" x 12' | No. | 20 | 1,700 | MMK 34,000 |
| Latrine Pits x 3 | | | | | |
| 37 | Cement | Bag | 15 | 8,500 | MMK 127,500 |
| 38 | Sand | Sud | 0.6 | 26,500 | MMK 15,900 |
| 39 | Gravel | Sud | 1.2 | 90,000 | MMK 108,000 |
| 40 | 3"Ø PVC pipe | Ft | 15 | 656 | MMK 9,846 |
| 41 | 2"Ø PVC pipe | Ft | 12 | 359 | MMK 4,308 |
| 42 | 3"Ø PVC elbow 45° | Pcs | 3 | 1,400 | MMK 4,200 |
| 43 | 2"Ø PVC elbow 90° | Pcs | 3 | 1,000 | MMK 3,000 |
| 44 | 2"Ø PVC tee | Pcs | 3 | 1,500 | MMK 4,500 |

| Activity: Latrine Construction with SI Design - 1 block, 2 rooms | | | | | |
|--|-------------------------------------|-------|------|-----------------|----------------------|
| No | Item | Unit | No. | Unit cost (MMK) | Amount |
| 45 | Old engine oil (to coat iron mould) | Liter | 18 | 1,200 | MMK 21,600 |
| Latrine Pit Covers x 3 | | | | | |
| 46 | Cement | Bag | 3 | 8,500 | MMK 25,500 |
| 47 | Sand | Sud | 0.15 | 26,500 | MMK 3,975 |
| 48 | Gravel | Sud | 0.3 | 90,000 | MMK 27,000 |
| 49 | MS rod, 8 mm Ø | Ft | 240 | 200 | MMK 48,000 |
| 50 | Binding wire, 18 G | Viss | 0.3 | 3,000 | MMK 900 |
| 51 | 2"Ø PVC pipe | Ft | 3 | 359 | MMK 1,077 |
| 52 | 2"Ø PVC elbow 90° | Pce | 6 | 1,000 | MMK 6,000 |
| A Sub material costs | | | | | MMK 1,049,466 |
| B Labour charges | | | | | |
| 1 | Workers | DW | 39 | 4,800 | MMK 187,200 |
| 2 | Masons | DW | 13 | 6,200 | MMK 80,600 |
| 3 | Carpenters | DW | 4 | 6,200 | MMK 24,800 |
| B Sub labor costs | | | | | MMK 292,600 |
| TOTAL AMOUNT | | | | | MMK 1,342,066 |

Focus Group Discussion for Latrine Handovers

AIM: To gain feedback about the process of latrine handovers and discuss the possibility of segregating latrines by gender.

Process

There should be two or three staff members for each FGD: a facilitator, a note taker, and an observer (optional). The staff for each FGD should match the gender of the group.

The roles of the FGD team are listed below:

- The facilitator should be guiding the discussion
- The note taker should be capturing the findings
- The observer (optional) should be monitoring the FGD and taking photos if permission has been gained

Recruitment:

- Participants need to be recruited and informed ahead of time about the time, date, and location of the FGD. Participation in the FGD is always voluntary.
- Two FGDs for every two barracks: male and female group, FGDs occur **at the same time**.
- One male and one female from each room in each barrack.
- **The two groups come together at the end to make a final decision for their two barracks.**
- If a final decision is reached, the latrine handover process can be done right away on the spot (have latrine kits and documents ready).

Introduction

Welcome to our FGD and thanks for taking the time to join us today. My name is I am the FGD facilitator, I am here to guide the discussion. This is who will be our note taker if permission is gained to do this, and this is who will be our observer and help us to run the FGD.

We are here to gain feedback on the latrine handover process, to discuss the option of segregating latrines by gender, and to make a final decision on latrine handover together, if we all agree.

We would like your permission to take notes and take photos. Can you raise your hands if:

1. If you give permission for us to take notes. (The notes will not contain your names or any private information.)
2. If you give permission for us to take photos during the FGD

The note taker needs to record if permission from the whole group has been given. Only use a method of recording data if consent has been given.

As we will be taking notes (if permission is gained) we ask that people talk one at a time as otherwise we will not understand what is being said. Please feel free to leave at any time if you choose.

There are some rules for FGDs which I would like you all to remember:

- There are no right or wrong answers
- Only one person should speak at a time
- You don't need to agree with others, but you must listen respectfully as others share their views

Do you have any questions before we begin?

Why are we here?

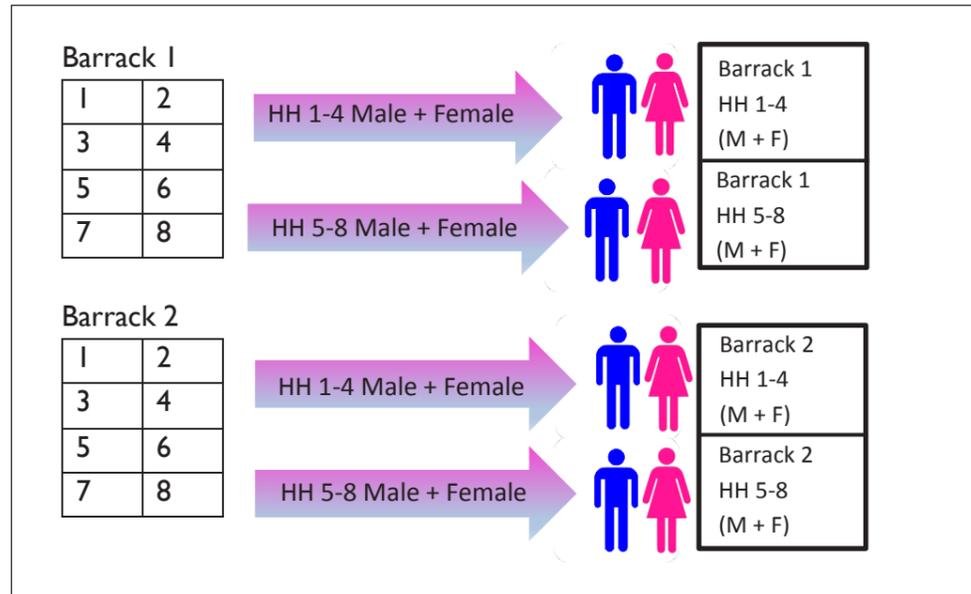
Oxfam/SI has received a lot of feedback about the way that latrines are handed over to households. In the past, one latrine room has been handed over to half of a barrack (4-5 households). Members of the community, especially women and girls, have expressed that they would like the latrines to be segregated by gender for their comfort and safety. (Explain the three scenarios illustrated below). Please note that in both of the proposed new scenarios, **the same number of people would be sharing one latrine.**

We are here to facilitate for your two barracks to reach a decision about latrine handovers – the decision is completely up to you!

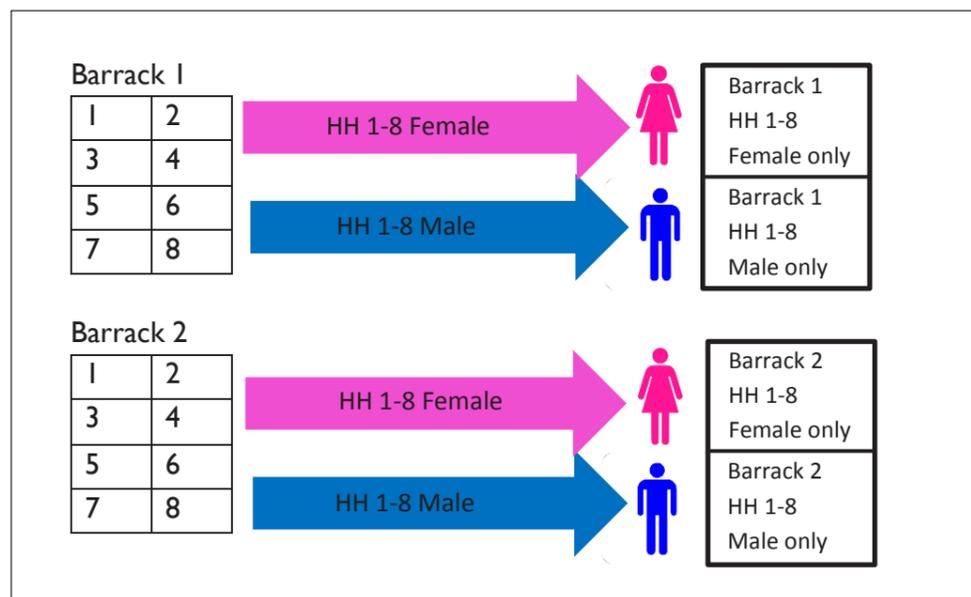
Questions

1. Which scenario do you prefer? (Ask people to vote, count the number of votes for each)

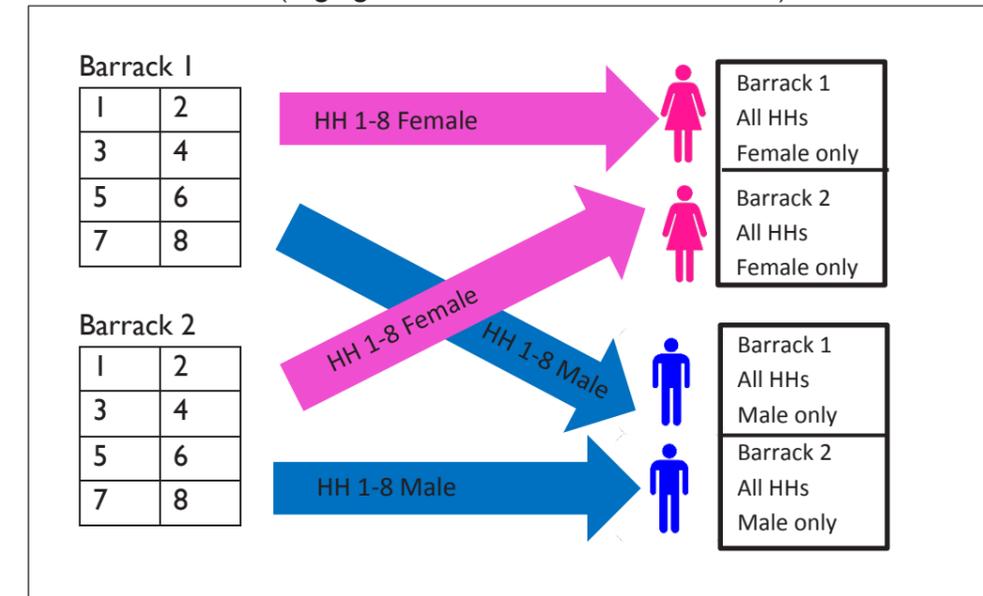
SCENARIO 1 (Current)



SCENARIO 2 (Segregated, one block for one barrack)



SCENARIO 3 (Segregated, two blocks for two barracks)



2. Those of you prefer scenario 1, why?
3. Those who prefer scenario 2, why?
4. Those who prefer scenario 3, why?
5. **(Join with the other FGD group for the final discussion and decision)** Can you reach a decision all together to do the handover using one of these scenarios? *Scenarios 1 and 2 can be decided by one barrack, but scenario 3 has to be decided by two barracks together.*

The group should all agree on one of the scenarios for a decision to be made. If a decision is not made by consensus, ask what follow-up steps can be taken and record the main discussion points (eg. if someone important is missing from the discussion, the group may ask to postpone the decision – in that case, decide a date and time to follow up).

If a decision is reached, groups can receive their keys, latrine kits, etc, and sign the handover documents.

To close the session, the facilitator should thank the participants for their time and ask the note taker to summarize the main points from the discussion.

Summary of Session

Date of FGD:

Time of FGD:

Facilitator:

Note Taker:

Observer:

Number of people:

Barrack numbers:

Male or female: M/F

Permission gained for note taking: Y/N Permission gained for taking photographs: Y/N

| Question No | Answers given |
|-------------|--|
| 1. | Scenario 1 – Scenario 2 – Scenario 3 – |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

Latrine Functionality Check - OXSI

| Field | Question | Answer | |
|---|--|----------------------|----------------------|
| date <i>(required)</i> | Date of Information | | |
| Enumerator_Name <i>(required)</i> | Enumerator Name | | |
| camp_name <i>(required)</i> | Camp Name | camp_value | camp_label |
| sector_block | Sector/block | 1 | 1 |
| | | 2 | 2 |
| | | 3 | 3 |
| | | 4 | 4 |
| | | 6 | 6 |
| | | a | A |
| | | b | B |
| | | c | C |
| | | d | D |
| | | e | E |
| | | f | F |
| | | g | G |
| | | h | H |
| | | i | I |
| | | j | J |
| | | k | K |
| l | L | | |
| m | M | | |
| n | N | | |
| o | O | | |
| infrastructure_type <i>(required)</i> | Infrastructure type | LT | LT |
| latrine_reference <i>(required)</i> | Latrine Reference | | |
| type_of_latrine <i>(required)</i> | Type of latrine | single | Single |
| | | double | Double |
| | | 4-block | 4-block |
| | | block | |
| room_reference <i>(required)</i> | Room Reference | a | A |
| | | b | B |
| | | c | C |
| | | d | D |
| | | N_N | No Number |
| Latrine_Functioning <i>(required)</i> | Is the Latrine functioning? <i>Functional = IDPs are able to use, so provide privacy, safe pipes and pits in a good state. Non-Functional = Pipe and pit is broke and sludge is spreading and pit is full or overflowing Under Maintenance = A latrine is under maintenance and it cannot be used so far.</i> | Yes | Yes |
| | | No | No |
| | | under_maintenance | Under Maintenance |
| sub_category <i>(required)</i> | If Latrine is not functioning, which sub-category it falls under? | construction | Construction |
| | | sanitation | Sanitation |
| If_construction <i>(required)</i> | If construction, mention the problem below | Upgrade | Upgrade |
| | | Major_Repair | Major Repair |
| Construction_major_repair <i>(required)</i> | What type of major repair? | foundation | Foundation |
| | | Footing | Footing |
| | | LP | Leg/Post |
| | | floor | Floor |
| | | Frame | Frame |
| | | Wall_Beading | Wall Beading |
| | | Door | Door |
| | | Walling | Walling |
| | | Roofing | Roofing |
| | | Pan | Pan |
| | | Pipe | Pipe |
| | | Pit | Pit |
| | | stair | Stair |
| Other | Other | | |
| Other_copy <i>(required)</i> | If Other, Please Specify | | |
| If_sanitation <i>(required)</i> | If Sanitation, specify the problems below | main_pit_overflowing | Main pit overflowing |
| | | soak_pit_overflowing | Soak pit overflowing |
| | | pan_full | Pan full |
| | | pit_full | Pit full |

| Field | Question | Answer | |
|--|---|---|---|
| Does_latrine_need_to_be_repaired_minor <i>(required)</i> | Does latrine need to be repaired minor? | by_agency | by agency |
| | | by_community | by community |
| | | No_repair | No repair |
| Minor_repair_by-agency <i>(required)</i> | Minor repair by agency | Beading_for_Walls | Beading for walls |
| | | Door_Hinge | Door Hinge |
| | | Roof | Roof |
| | | Walling | Walling |
| | | door | Door |
| | | holes_leakage | Holes on the pit/ leakage |
| | | manhole_cover_main_pit | Manhole cover: main pit |
| | | manhole_cover_soak_pit | Manhole cover: soak pit |
| | | pipe_connection_missing | pipe connection missing between main pit and soak pit |
| | | stair | Stair |
| | | handle | Handle |
| | | Inside_lock | Inside Lock - Bolt towel |
| | | Outside_lock | Outside Lock - Hasp and staple |
| | | Other | Other |
| | | Pad_lock | Pad Lock |
| | | Minor_repair_by_community <i>(required)</i> | Minor repair by community |
| Other <i>(required)</i> | If Other, Please Specify | | |
| Being_used <i>(required)</i> | Is the latrine being used? | yes | Yes |
| | | no | No |
| latrine_Clean <i>(required)</i> | Is the latrine clean? | yes | Yes |
| | | no | No |
| Identification_of_main_pit <i>(required)</i> | Identification of main pit | a | A |
| | | b | B |
| | | c | C |
| | | d | D |
| | | same_a | Same A |
| | | same_b | Same B |
| | | same_c | Same C |
| | | No_main_pit | No main pit |
| | | Status_of_main_pit <i>(required)</i> | Status of main pit |
| | | Not_Functioning | Not Functioning |
| Replace_Main_Pit <i>(required)</i> | Does the main pit need to be replaced? | yes | Yes |
| | | no | No |
| Status_Main_Pit_Cover <i>(required)</i> | Status of main pit cover | Functioning | Functioning |
| | | Nonfunctional | Unfunctioning |
| Identification_of_soak_away_pit <i>(required)</i> | Identification of soak away pit | a | A |
| | | b | B |
| | | c | C |
| | | d | D |
| | | same_a | Same A |
| | | same_b | Same B |
| | | same_c | Same C |
| | | no_soak_away_pit | No soak away pit |
| Status_of_soak_away_pit <i>(required)</i> | Status of soak away pit | Functioning | Functioning |
| | | Not_functioning | Not functioning |

| Field | Question | Answer | |
|--|---|---------------|---------------|
| Replace_Soak_away_pit <i>(required)</i> | Does soak away pit need to be replaced? | yes | Yes |
| | | no | No |
| Status_Soak_away_pit_cover <i>(required)</i> | Status of soak away pit cover | Functioning | Functioning |
| | | Nonfunctional | Unfunctioning |
| Faeces <i>(required)</i> | Is there any faeces within 15ft around latrine? | yes | Yes |
| | | no | No |

Community Construction Leads for Latrine Maintenance Improvement

Overview

This document describes the OXSI plan to improve latrine maintenance in the Sittwe IDP Camps. This Latrine Maintenance Improvement Plan is designed to reduce the number of latrines requiring maintenance as well as reduce the Complaints Response Mechanism (CRM) response time.

The Latrine Maintenance Improvement Plan involves recruiting Community Construction Leads. These Community Construction Leads are responsible for carrying out repairs on latrines. The Community Construction Leads only repair latrines in response to CRM service requests. Examples of tasks that the Community Construction Leads carry out are listed below:

- Pit patching
- Patching of peepholes using plain metal sheet
- Replacement of CGI roofing sheet

The latrine maintenance tasks are determined by the Construction Team. Each week, the Construction Team are provided with a list of the construction related CRM service requests by the Construction CRM Case Manager. After receiving the list, the Construction Officers and Construction Agents visit the latrines that are on the CRM list to verify that the CRM data is correct. The Construction Officers and Construction Agents then make a list of tasks for the Community Construction Leads to complete. The Community Construction Leads are paid to fix latrines using Task Contracts (just like the Task Contracts used for borehole redrilling). The Task Contract lists exactly how many latrines need to be fixed and what needs to be fixed on each latrine to receive payment.

Materials for the repairs are provided by SI. The Construction Agents determine the quantity of materials to give to the Community Construction Leads based on the maintenance tasks that require completion. The Community Construction Leads are also provided with the tools that they require to carry out the maintenance tasks. The Construction Team keeps record of what tools the Community Construction Leads are given. The Community Construction Leads are required to return the tools on Friday afternoon each week.

After the Community Construction Leads finish the work listed on the Task Contract, the Construction Officers and Construction Agents check that all work on the Task Contract has been completed and that it is done to a high standard. The Community Construction Leads are not paid until their work has been checked and approved. The Construction Team records on the list of construction related CRM service requests when a Community Construction Lead has completed a task. This list is sent to the Construction CRM Case Manager once per week so that he can close the CRM cases using Survey CTO. The Construction Team also informs the relevant ComMob staff in each camp office once a case is closed. The ComMob staff then informs the person that made the service request that it has been resolved.

Currently the Construction Team tells the Community Construction Leads what latrines require repairing.

However, it is planned to work with the ComMob Team and MEAL Team to improve this process. When the ComMob staff tells the person that made the service request that it has been resolved, they should explain that the case has been closed by a Community Construction Lead and provide the name of the person and how he/ she can be contacted for future latrine maintenance requests. They should tell the person that if they have a service request in the future, they should inform the Community Construction Lead. The MEAL Team should then work with the Community Construction Leads so that they know how to ensure service request they receive are entered into the CRM. The Community Construction Leads will have an incentive to support with entering service requests into the CRM because if there are more service requests, then they are able to fix more latrines and make more money.

The number of Community Construction Leads recruited in each camp will be based on the size of the camp and the volume of latrine maintenance tasks that require completion. The Community Construction Leads are able to work in groups of two or three to complete maintenance task (e.g. one skilled carpenter and one skilled mason). If the Community Construction Leads are completing maintenance tasks in groups, the Construction Team will determine how payment should be divided before the work is started based on the duties carried out by each person in the group. The Construction Team will pay each person in the group individually to ensure each person gets the correct amount.

Selection Criteria

The selection criteria for the Community Construction Leads is provided below:

- The Community Construction Lead must live in the sector of the camp that he/she is responsible for. It is hoped that this will increase the sense of ownership of the work they complete because they will be helping their neighbours.

- People with disabilities who have the capacity to complete the work will get preference. If required, the Construction Team will provide training to increase their capacity.

- Women who are interested in working as Community Construction Leads will get preference. If required, the Construction Team will provide training to increase their capacity.

- People with previous experience working for SI will get preference in selection as Community Construction Leads (e.g. skilled daily workers who have done good work in the past).

- The Community Construction Leads must be respectful and follow the instructions given by the Construction Team.

- All Community Construction Leads must be > 18 years of age.

Payment

The amount that the Community Construction Leads are to be paid to complete different maintenance tasks is summarised in the table below:

| Maintenance Task | Payment (MMK) |
|---|---------------|
| Patching of peephole using plain metal sheet (one side of wall including beading) | 1,000 |
| Replacement of 1 × plain metal sheet (including beading) | 1,000 |
| Replacement of 1 × CGI roofing sheet | 800 |
| Replacement of mosquito mesh (one side, including beading) | 700 |
| Fixing broken stairs | 1,000 |
| Replacing broken stairs | 6,000 |
| Replacement of damaged hardwood (minor) | 500 |
| Replacement of damaged hardwood (one side of wall) | 1,000 |
| Replacement of latch, door hinge, etc. | 500 |
| Replacement of damaged PVC pipe | 500 |
| Repairs to floor (minor) | 1,000 |
| Repairs to floor (major) | 6,000 |
| Replacement of toilet pan | 1,000 |
| Pit patching (minor repair) | 500 |
| Replacement of pit air vent | 300 |
| Replacement of manhole (plastering only) | 500 |

FAMILY LATRINE DONATION

| VILLAGE | | DATE of donation | | | |
|---------------------------------|------------------------------------|------------------|-------------|------|--|
| | | | | | |
| # OF HOUSEHOLDS in the compound | # OF BENEFICIARIES in the compound | | | | |
| | 0-5 years | 6-14 years | 15-64 years | 65 + | |
| | | | | | |

A copy of the file is needed for:

| | | | |
|---------------------------|-------------------------------------|----------------------------|-------------------------------------|
| Household Representative: | <input checked="" type="checkbox"/> | Solidarites International: | <input checked="" type="checkbox"/> |
|---------------------------|-------------------------------------|----------------------------|-------------------------------------|

This document gives all the information regarding the donation of materials and tools to build one (01) latrine.

Household representative designated below agree to:

- Take responsibility of all materials and tools received for the construction of the latrine;
- Take responsibility to follow the design and construction instructions given by the SI Team;
- Take responsibility to dig the pit of the latrine 7' deep and install the bamboo reinforcement;
- Take responsibility and assume the ownership of the latrine;
- Take care of the cleaning of the latrine;
- Take care of the overall maintenance of the latrine: padlocks, locks, roofing, etc.
- Take responsibility to dig another pit when pit is full and re-install the structure onto the new pit;
- Fairly share the responsibility and the cleaning between all the members of the household.

OXSI agrees to:

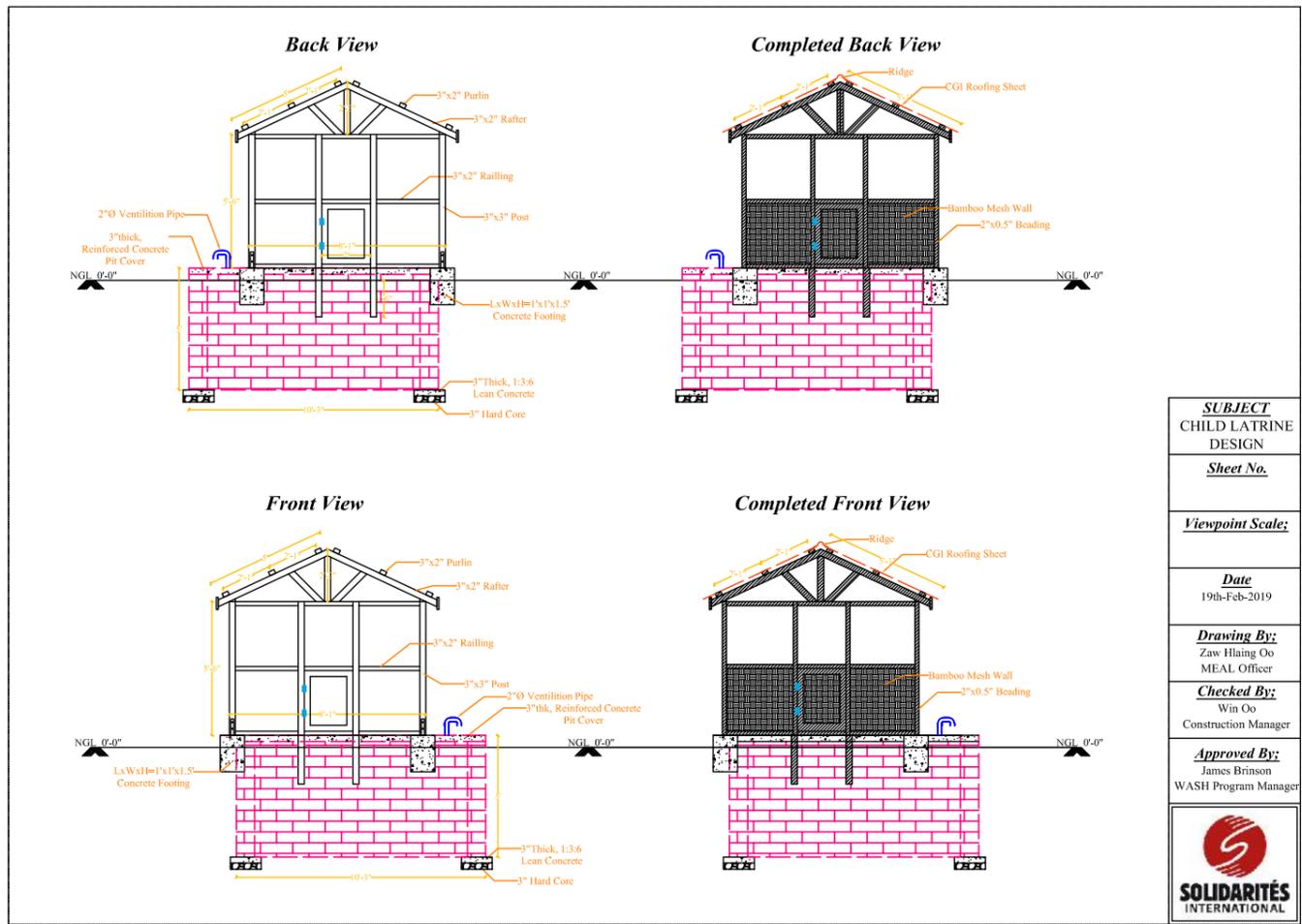
- Provide all materials and tools needed for the construction of the family latrine;
- Provide the technical support all along the building process (digging, bamboo pit reinforcement design, superstructure guidelines).

MATERIALS GIVEN FOR FAMILY LATRINE CONSTRUCTION

| | | |
|--|-------|------|
| H-wood-3"x3"x12' | Pcs | 4 |
| H-wood-3"x2"x12' | Pcs | 7 |
| H-wood-4"x2"x12' | Pcs | 1 |
| H-wood-6"x1"x12' | pcs | 6.0 |
| H-wood-3"x1"x15' | Pcs | 2 |
| H-wood-2"x1/2"x12' | Pcs | 9 |
| 2" D Bamboo-15' | Pcs | 50 |
| 2" D Wooden Pole-12' | Pcs | 3 |
| 2' x 6' CGI Roofing Sheet-STAR BRAND | Sheet | 4 |
| 4'x100' CGI plain Sheet,28 G Blue Colour | Sheet | 33 |
| 1.5 "-Wire Nail | Viss | 0.25 |
| 2 "-Wire Nail | Viss | 0.25 |
| 2.5 "-Wire Nail | Viss | 0.25 |
| 3.5 "-Wire Nail | Viss | 0.25 |
| 2.5"-Roofing Nail with washers | Viss | 0.25 |
| 6" Tower Bolt with Screw-ALUMINIUM | Pcs | 1 |
| 4" Butt & Hinge with Screw-ALUMINIUM | Pcs | 3 |
| 4" Hand Staple with Screw-ALUMINIUM | Set | 1 |
| 6" Door Handle with Screw-ALUMINIUM | Pcs | 2 |
| Plastic Latrine Pan | Pcs | 1 |
| 3" D PVC Pipe x4' -8.5 CLASS | Ft | 4 |
| 6'x6' -36 Sft- Tarpaulin (Pit Cover) | Pcs | 1 |

LATRINE HANDOVER

| Name | Signature |
|-----------------|-----------|
| From household: | |
| From OXSI: | |



SUBJECT
CHILD LATRINE DESIGN

Sheet No.

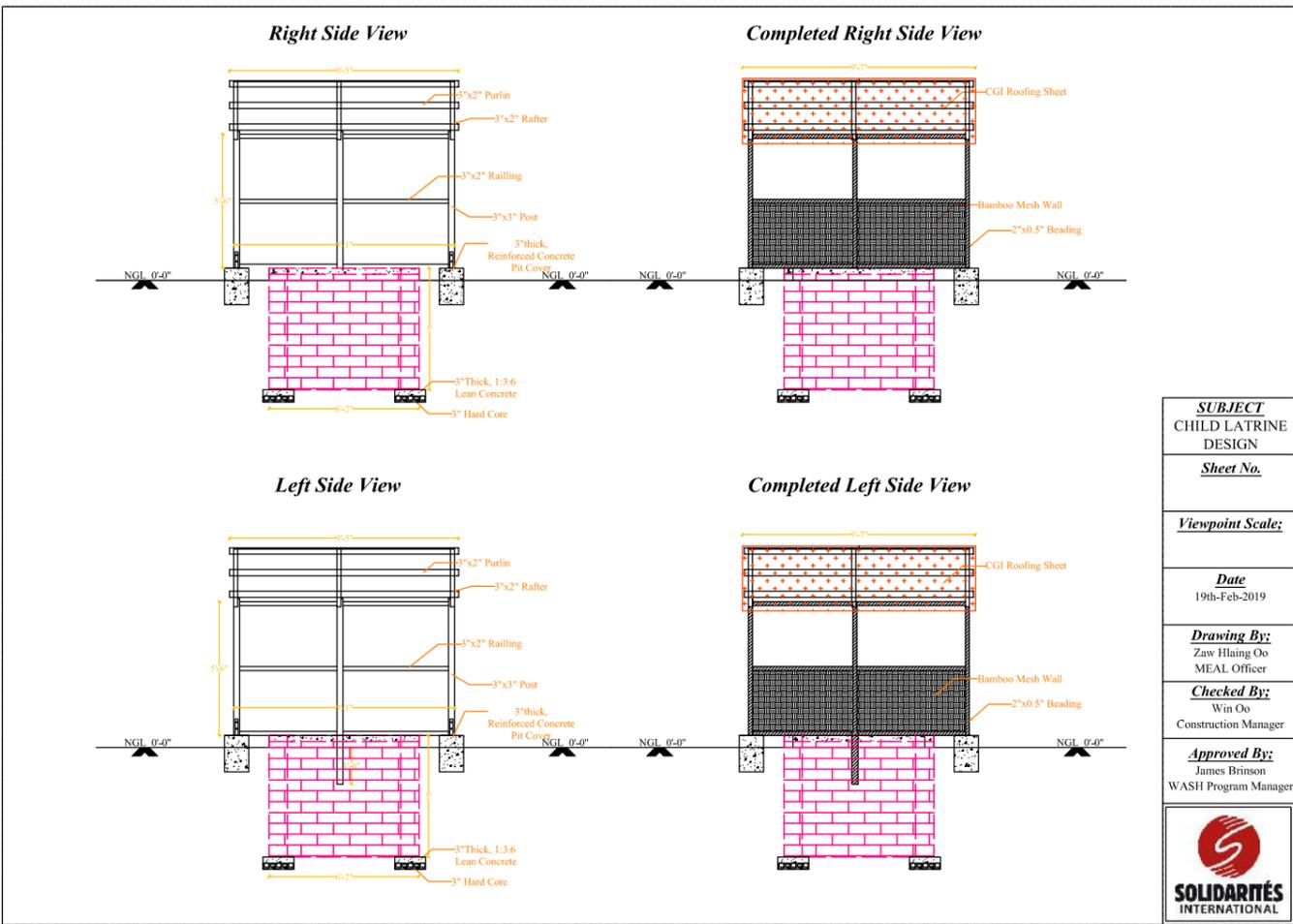
Viewpoint Scale:

Date
19th-Feb-2019

Drawing By:
Zaw Hlaing Oo
MEAL Officer

Checked By:
Win Oo
Construction Manager

Approved By:
James Brinson
WASH Program Manager

SUBJECT
CHILD LATRINE DESIGN

Sheet No.

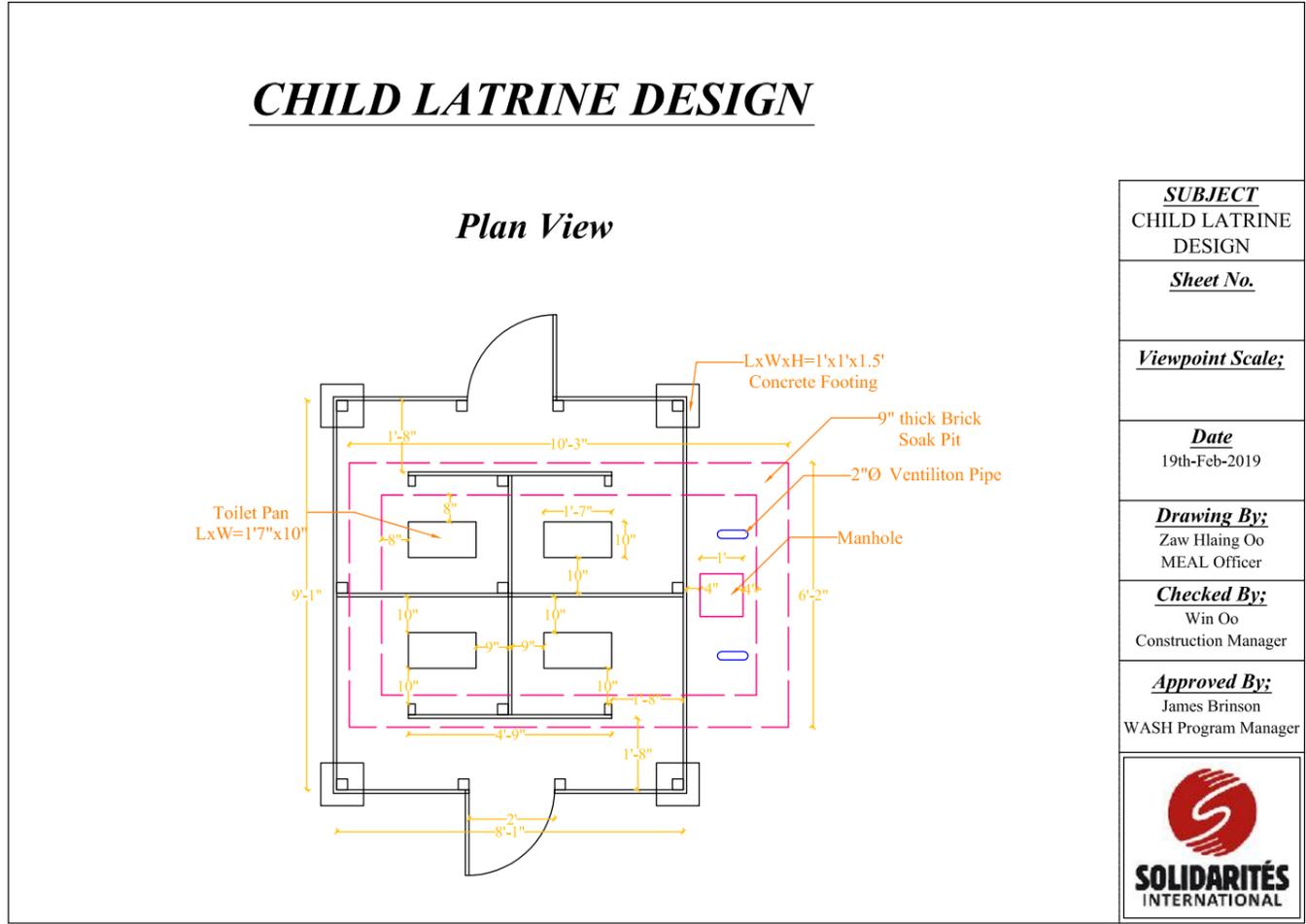
Viewpoint Scale:

Date
19th-Feb-2019

Drawing By:
Zaw Hlaing Oo
MEAL Officer

Checked By:
Win Oo
Construction Manager

Approved By:
James Brinson
WASH Program Manager

SUBJECT
CHILD LATRINE DESIGN

Sheet No.

Viewpoint Scale:

Date
19th-Feb-2019

Drawing By:
Zaw Hlaing Oo
MEAL Officer

Checked By:
Win Oo
Construction Manager

Approved By:
James Brinson
WASH Program Manager



PROJECT -- CFL CONSTRUCTION
LOCATION -- SITTWE
Bill Of Quantity For Pit (10.6.2019)

| No. | Description | Qty | Unit | Rate (MMK) | Amount (MMK) |
|--|-------------|------|------|------------|----------------|
| Materials | | | | | |
| 1 | Brick | 1695 | No | 140 | 237,300 |
| 2 | Cement | 9 | bags | 8000 | 72,000 |
| 3 | Sand | 0.4 | suds | 26500 | 10,600 |
| 4 | Gravel | 0.1 | suds | 85000 | 8,500 |
| Total Materials Costs | | | | | 328,400 |
| Labours | | | | | |
| 1 | Workers | 11 | No | 5000 | 55,000 |
| 2 | Masons | 6 | No | 7000 | 42,000 |
| Total Labours Costs | | | | | 97,000 |
| Materials + Labours Costs for Pit | | | | | 425,400 |

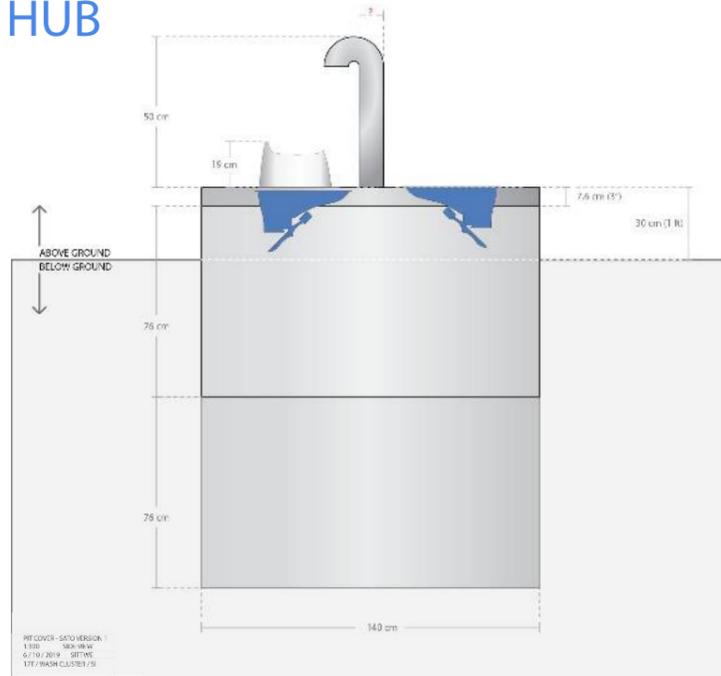
Bill Of Quantity For RC-Slab(Pit Cover) and Structure- (26.6.2019)

| No. | Description | Qty | Unit | Rate (MMK) | Amount (MMK) |
|------------------------------|---|-------|-------|------------|----------------|
| Materials | | | | | |
| 1 | CGI Plain Sheet 4'x80'x28 Gates | 0.1 | roll | 98000 | 9,800 |
| 2 | CGI Sheet for roofing(2'x6'x28 Gates) | 12 | Shts | 3800 | 45,600 |
| 3 | Nail 1.5" | 0.25 | viss | 3000 | 750 |
| 4 | Nail 2" | 0.5 | viss | 2500 | 1,250 |
| 5 | Nail 3" | 0.5 | viss | 2500 | 1,250 |
| 6 | Roofing Nail 2.5" | 0.25 | viss | 3500 | 875 |
| 7 | Twist Flat | 15 | Nos | 200 | 3,000 |
| 8 | Plastic Latrine Pan | 4 | Nos | 1800 | 7,200 |
| 9 | 2" D PVC Elbow-45 | 2 | Nos | 500 | 1,000 |
| 10 | 2" D PVC Elbow-90 | 2 | Nos | 500 | 1,000 |
| 11 | Hinge-4" | 4 | Nos | 600 | 2,400 |
| 12 | Handle-6" | 4 | Nos | 600 | 2,400 |
| 13 | Locker(medium size)with adapted padlock | 2 | Nos | 3000 | 6,000 |
| 14 | Bolt Nut 8-arnner-4" with washers | 8 | Set | 600 | 4,800 |
| 15 | Hasp Stapl | 2 | Set | 700 | 1,400 |
| 16 | Bolt Tower | 2 | Set | 600 | 1,200 |
| 17 | 2" Square mesh 3mm D(x6'x100') | 0.3 | roll | 130000 | 39,000 |
| 18 | Hard wood first class-3"x3"x15' | 5 | viss | 13000 | 65,000 |
| 19 | Hard wood first class-3"x2"x15' | 12 | viss | 8000 | 96,000 |
| 20 | Hard wood first class-3"x1"x12' | 3 | No | 3500 | 10,500 |
| 21 | Hard wood first class-6"x1"x12' | 14 | No | 6500 | 91,000 |
| 22 | Hard wood first class -2"x.5"x12' | 17 | No | 1600 | 27,200 |
| 23 | Ready Made Concrete Footing-2' | 4 | Set | 17000 | 68,000 |
| 24 | Bamboo Post | 100 | Posts | 350 | 35,000 |
| 25 | Cement | 6 | bags | 8000 | 48,000 |
| 26 | Sand | 0.2 | suds | 26000 | 5,200 |
| 27 | Gravel | 0.4 | suds | 90000 | 36,000 |
| 28 | 12 mm Rebar(11'-13Nos,6'-23Nos) | 281.0 | Ft | 350 | 98,350 |
| 29 | Binding Wire 18G | 0.5 | viss | 3500 | 1,750 |
| Total Materials Costs | | | | | 710,925 |

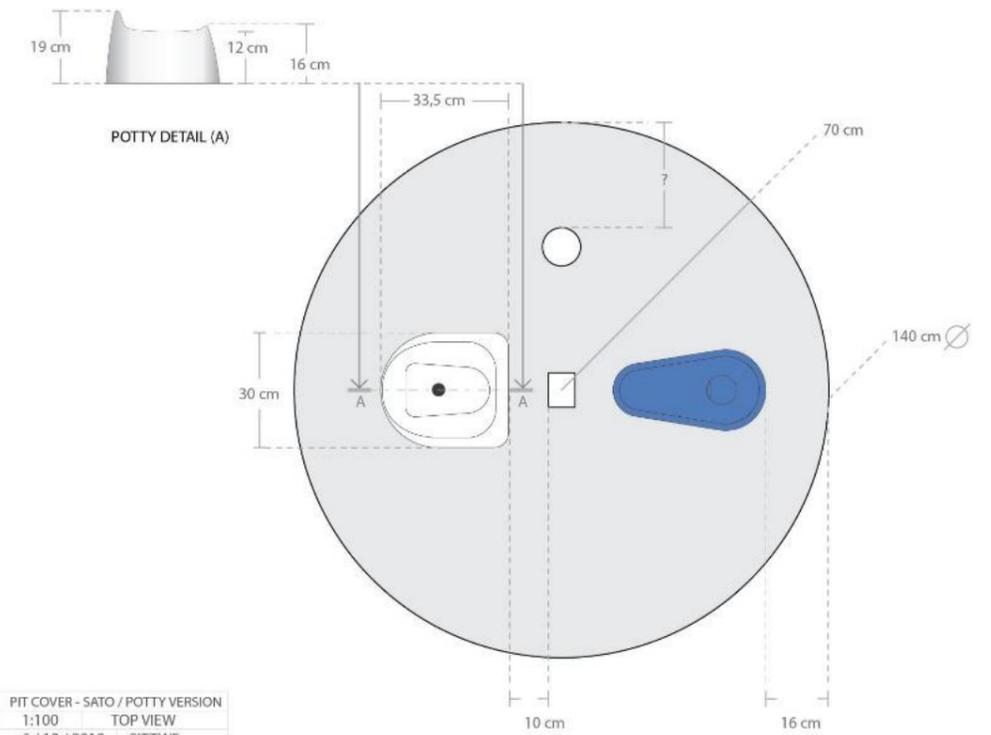
| No. | Description | Qty | Unit | Rate (MMK) | Amount (MMK) |
|--|-------------|-----|------|------------|------------------|
| Labours | | | | | |
| 1 | Workers | 8 | No | 5000 | 40,000 |
| 2 | Masons | 1 | No | 7000 | 7,000 |
| 3 | Carpenter | 3 | No | 7000 | 21,000 |
| 4 | Steel Fixer | 2 | No | 7000 | 14,000 |
| Total Labours Costs | | | | | 82,000 |
| Materials + Labours Costs for structure | | | | | 792,925 |
| Materials + Labours Costs for Pit+Structure | | | | | 1,218,325 |

POTTY HUB

Build 3 to install in STMG

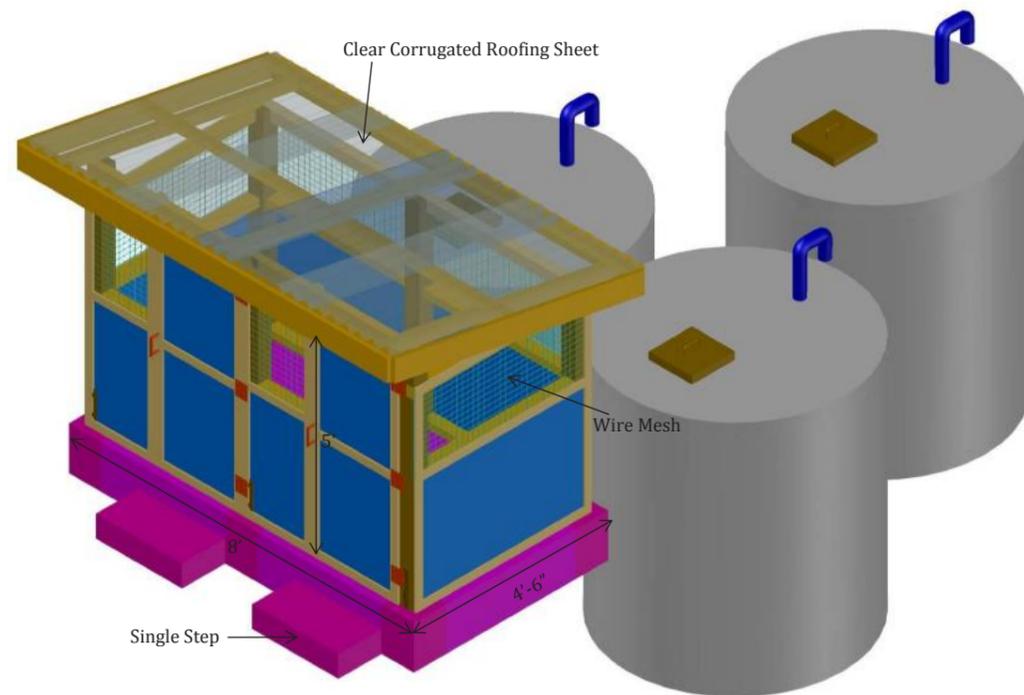


POTTY HUB



School Latrine Design Drawing

3D Isometric View



Note : In OTG Camp, handles will be installed for kindergarten students to hold onto while defecating

| |
|---|
|  |
| <p><i>Project</i> School Latrines</p> |
| <p><i>Subject</i> 3D Isometric View</p> |
| <p><i>Date</i> 29-May-19</p> |
| <p><i>Drawing By</i> Zaw Hlaing Oo Technical Construction Supervisor</p> |
| <p><i>Checked By</i> Win Oo Construction Manager</p> |
| <p><i>Approved By</i> James Brinson WASH Program Manager</p> |

Standard Operating Procedure for Desludging in Sittwe Camps

Updated March 2021

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1. Introduction

Solidarités International (SI) is in charge of sanitation activities, which include desludging of pit latrines and wastewater transportation and treatment, for 13 camps in Sittwe Township. The purpose of this document is to provide guidance on desludging operations, with wastewater treatment covered in a separate document.

In the 13 camps, there are 4,000+ latrines and even more pits (the number of pits is larger than the number of latrines because some latrine pits are connected to soakaway pits) that must be desludged regularly. In villages inside the restricted area, latrines are not desludged; instead, families are responsible for covering their latrine pit when it is full and moving the latrine superstructure over a new pit. While providing materials for latrine construction to villages, SI focuses most sanitation activities in camps, where approximately 20 people share one latrine.

Crowded living conditions, a long rainy season, and a high water table are a few factors that make desludging challenging and unpredictable in the camps. In addition, latrine pits are of different sizes and thus have different desludging rates, and the desludging tractors cannot access all pits, requiring labourers to push carts by hand to access certain areas. Finally, the Sludge Treatment Site (STS) is operating at capacity, which means desludging rates cannot be increased, even while camp population grows (an upgrade of the STS is planned in 2021).

SI has developed solutions to these problems with a combination of different desludging approaches. “Regular desludging”, using a tractor and a pump, is used to desludge the majority of pits. When tractors cannot access certain pits, sanitation workers use pushcarts with barrels and pump sludge into the barrels, a process referred to as “manual desludging with a pump”. And finally, when a pump is not able to remove a hard layer of sludge, “manual desludging” with shovels is done to remove and bury the hard sludge layer. These different approaches are explained in this document, with detailed guidance for implementing staff.

2. Overview of Procedure

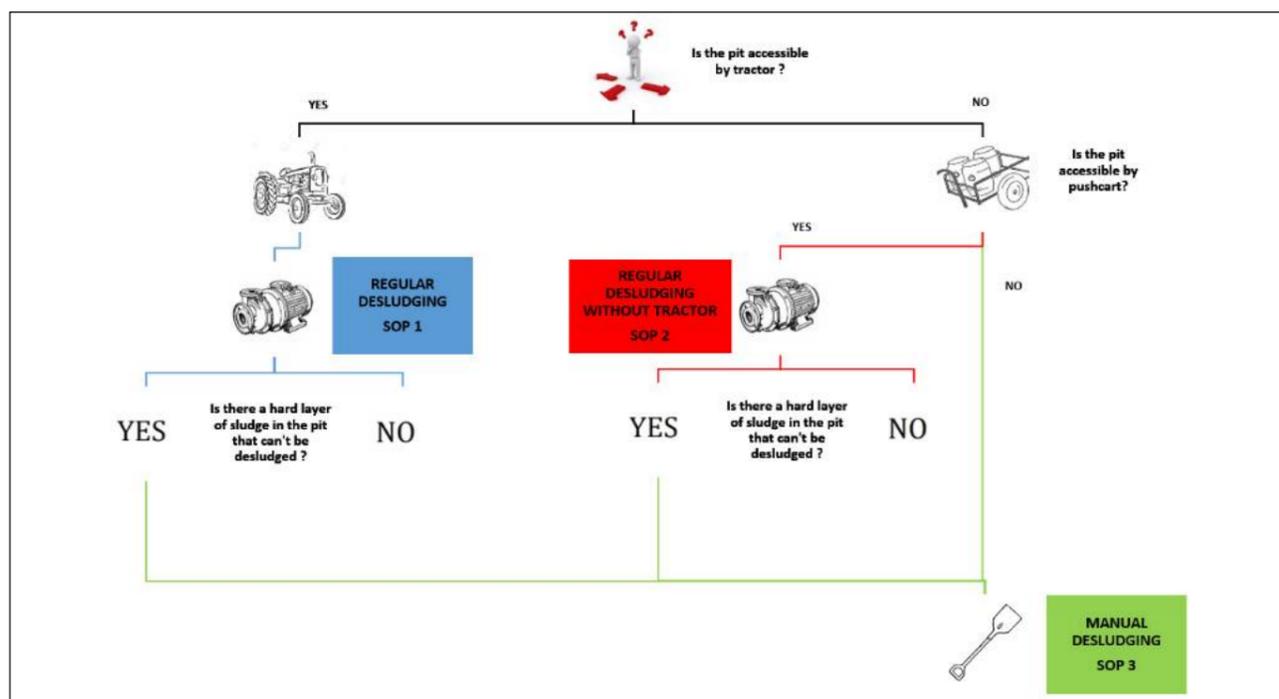


Figure 1 Overview of desludging procedure

3. Worker Safety

In order to minimize or fully eliminate contact with sludge and with chemicals, workers must follow strict protocols while desludging. Agents are responsible for enforcing the rules, and daily workers must follow the agent's instructions. Every person working on desludging should receive training on hygiene and on these standard operating procedures for desludging prior to beginning work. The training should cover the principles of transmission and prevention of faecal-related diseases, as well as how to handle dangerous substances like sludge, chlorine, and lime.

Personal Protective Equipment (PPE): The mandatory PPE includes boots, gloves, glasses, shorts, T-shirt, and face mask. Boiler suit, raincoat, makala (bamboo hat), and cap are optional for regular desludging, but a boiler suit is mandatory for manual desludging (with and without a pump). All PPE items can be re-used by one worker each day, except for the face mask, which is disposable and a new one must be used each day.

- Remove PPE before eating, drinking, or smoking.
- Do not wear PPE at home or outside the work environment.
- Boots, gloves, glasses, and masks can be removed between two tractor trips.

All desludging workers are provided with:

1. Work clothes and PPE (2 shorts, 2 makalas, 1 boiler suit, boots, gloves, glasses, masks), which should be used only during the desludging process.
2. 1 bar body soap per month
3. 1 bar laundry soap per month
4. Raincoat (provided to all OXSI staff)



Figure 1: PPE -- boiler suit, glasses, gloves, boots, and mask. Raincoat optional.

For each person on the tractor (usually 2 people), if they do not provide it themselves, the following is provided: 2 boiler suits, face mask, gloves, and boots.

3.1 Exposure to Dangerous Substances

During and after work:

- Wash hands thoroughly with soap and water after removing gloves.
- If you have any wounds, cover them with clean, dry, and waterproof bandages.
- Smoking, chewing betel, tobacco, or gum during working time is forbidden.
- Avoid touching your face, mouth, eyes, ears, nose, open sores, or cuts.
- Wash hands with soap and water before eating and drinking.
- Eat in areas away from desludging activities.
- After each working day, take a shower at the STS before changing into your home clothes.

The table below shows brief instructions for actions to take if someone is exposed to sludge, chlorine, or lime. All desludging workers should be familiar with the actions to take.

Table 1 : Instructions in case of exposure to dangerous substances.

| If... | Sludge | Chlorine | Lime |
|----------------------------------|--|--|--|
| <i>Skin is exposed to...</i> | Remove contaminated clothing and shoes. Wash the skin thoroughly with soap and water. | Flush with water for at least 15 minutes while removing contaminated clothing and shoes. Seek medical assistance if skin irritation continues. | Brush off the lime and wash exposed skin with large amounts of water. If skin burns occur, administer first aid and seek medical assistance. |
| <i>Eyes are exposed to...</i> | Rinse the eye with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical assistance if eye irritation continues. | | |
| <i>Lungs are exposed to...</i> | Immediately get into fresh air and rest. Seek medical assistance. Apply artificial respiration if breathing has stopped. | | |
| <i>Substance is ingested...</i> | Clean mouth with water and drink a lot of water. Do not induce vomiting. Seek medical assistance. | Drink water or milk immediately. Seek medical assistance. | Clean mouth with water and drink a lot of water. Do not induce vomiting. Seek medical assistance. |
| <i>Clothes are exposed to...</i> | Change clothes and take a shower. Wash clothes with water and laundry soap. | | |

4. Preparation

4.1 Preparing Materials

- Refer to each separate SOP for a full list of materials needed.
- All the materials needed should be kept together in a designated location at the STS.
- All desludging workers must change into their work clothes and PPE prior to beginning work.
- To prepare the chlorine solution (responsibility of sanitation agents):
 - o Make fresh chlorine solution every day.
 - o Work in a well-ventilated room, or preferably, outside in the shade and protected from the wind.
 - o Wear proper PPE (boots, gloves, glasses, shorts, T-shirt, and face mask).
 - o Pour the water into the backpack sprayer, then add the chlorine (not the other way around), making sure the water does not splash out as you do so.
 - o Mix well using a stirrer that is clean and used only for this purpose.
 - o Close the backpack sprayer tightly.
 - o Label the container with the concentration (eg. "0.5% chlorine solution").
 - o Try to keep the backpack sprayer out of the sun as much as possible.

Table 2 : Preparation of chlorine solution

| To make... | Chlorine powder (65% active chlorine) | Aquatab powder (50% active chlorine) |
|--|---|--|
| <i>0.5% chlorine solution (for disinfecting tools and contaminated surfaces)</i> | Add 11 spoonfuls (~150g) chlorine powder into the 18L backpack sprayer. | Add 13 spoonfuls (~180g) Aquatab powder into the 18L backpack sprayer. |
| <i>0.05% chlorine solution (for disinfecting clothes and PPE)</i> | Add a little less than 1 spoonful (~11g) into the 14L bucket | Add 1 spoonful (~14g) into the 14L bucket |

4.2 Schedules

- A monthly plan is made to identify desludging priority locations based on the monthly functionality check and service requests in OXSI camps. In non-OXSI camps, a plan for desludging is given to SI to be incorporated into the overall monthly plan.
- Regular desludging without a tractor is done when the tractor is not able to access the latrine pits in the schedule.
- Manual desludging is planned separately, upon request from sanitation workers or the households who are using the latrine.
- Pits to be desludged each day are assigned by the sanitation agents.
- The date of desludging is communicated to the community by the Community Mobilization team prior to desludging.
- Desludging is a critical activity and happens 6 days a week, almost every week of the year except for a few holidays

SOP 1: Standard Operating Procedure for Regular Desludging

5. Standard Operating Procedure for Regular Desludging

“Regular desludging” is the method used to desludge the majority of pits, using a pump and a tractor. A team of sanitation workers pumps sludge to a large tank on the tractor, which is then taken to the STS to be emptied. This is the preferred method for desludging because it is faster and limits exposure of workers to sludge. This chapter explains in detail the full procedure for this method of desludging.

5.1 Team

Each desludging team is comprised of at least 5 people (per pump):

- 1 pump operator
- 3 labourers for handling the pump and hose (1 dedicated operator of the chlorine sprayer)
- 1 tractor driver

5.2 Materials

| Item | No. needed per team | Description |
|-------------------------------------|---------------------|--|
| Desludging pump | 1 | Manual diaphragm pump with hose, foot valve, and strainer |
| Sludge transportation tank | 1 | 1.5 m3 tank secured onto the tractor |
| Tractor | 1 | Tractors are used to transport the sludge to the STS |
| Crow bar | 1 | To open the manhole and/or pit cover |
| Hammer | 1 | To open the manhole and/or pit cover |
| Shovel | 1 | To clean up spills |
| Personal Protective Equipment (PPE) | For each staff | Reusable PPE: boots, shorts, makala, heavy-duty rubber gloves, safety glasses, rain coat (for rainy season) Disposable PPE: face mask |
| Chlorine sprayer | 1 | For disinfecting around the latrine after desludging, and for disinfecting tools after use |
| Chlorine | 1 | Chlorine solution is used for disinfecting around the latrine after desludging, and for disinfecting tools and clothes |
| Stirrer | 1 | Used to mix the chlorine and water (can be a bamboo stick) |
| Permanent marker | 1 | To label the chlorine sprayer and to label PPE with workers' names |
| Water bucket | 2 | 14 L buckets filled with water, to be used for cleaning equipment and washing hands |
| Soap bar | 1 | For washing hands during and after work |
| Mortar | ~ 1 kg | To seal the manhole cover after desludging (about 250g cement, 1kg sand per day) |
| Lime | ~ 1 kg | Hydrated lime can be used to cover accidental spillage of sludge |
| Water | | Collected at nearby hand pumps in the buckets, for washing hands and rinsing equipment |
| Body soap | | For all sanitation workers to shower after each work day |
| Laundry soap | | For all sanitation workers to wash clothes after each work day |

SOP 1: Standard Operating Procedure for Regular Desludging

5.3 Procedure

1. Ensure there are no children in the desludging area for the entire day and that no one is using the latrine connected to the pit to be desludged.
2. Ensure all workers are wearing the proper PPE: boots, gloves, glasses, and face mask.
3. Evaluate the pit to see if there are any broken or cracked parts. Fix any minor repairs directly, with assistance from construction supervisors if needed. If major repairs are needed, report to the construction team to arrange the repair.
4. Evaluate the pit to see if it is overflowing. If so, record in the database that the pit is overflowing, and try to identify the reason (step 13: check for hard layer of sludge; and step 14c: check if pipe is blocked) and report to the necessary team for follow up (arrange for manual desludging, ask construction team to carry out repairs, etc.)
5. Prime the pump, if needed.
6. If the pit cover has a manhole, then open it to access the pit. If an opening is not present, remove the entire pit cover by breaking the mortar seal with a crowbar and hammer. It may also be possible to remove the ventilation pipe and insert the desludging hose into the pit through the ventilation pipe hole. Inform your line manager if the pit cover is broken.
7. Place the end of the hose for the desludging pump with the strainer inside the pit. Make sure to place the foot valve of the pump at the bottom of the pit when pumping.
8. Connect the end of the hose from the pump to the pipe leading to the tank on the tractor.
9. The pump operator should start the pump at normal speed.
10. Add water to the pit to decrease the viscosity of the sludge for easier pumping (only do if needed as this creates more sludge that needs to be treated).
11. Desludge the latrine pit as much as you can.
12. When you finish with one pit, stop the pump.
13. If there is a hard layer of sludge at the bottom of the pit that can't be pumped out and takes up more than a quarter of the pit, report to a sanitation agent that the pit needs manual desludging. Refer to Standard Operating Procedure for Manual Desludging.
14. If a soakaway pit is present:
 - a. Check if it has a manhole cover – if yes, check if the soakaway pit also needs to be desludged and report to the sanitation agent. The sanitation agent will call another tractor if needed.
 - b. If there is no manhole on the soakaway pit, no further action is needed, unless there is liquid coming into the main pit from the soakaway pit — in which case, fully desludge the soakaway pit as well by removing the pit cover. The sanitation agent will call another tractor if needed.
 - c. Check the pipe between the main pit and the soakaway pit to ensure it is not clogged and unclog with a bamboo stick, if needed.
15. Clean the foot valve with water (without chlorine) over the pit manhole between each pit desludged.
16. Replace the manhole cover or the pit cover and seal it shut with plaster. * If the ventilation pipe has been removed, replace and seal it.

SOP 1: Standard Operating Procedure for Regular Desludging

17. After sealing the pit opening, cover any spilled sludge around the pit with 0.5% chlorine solution. Anyone handling chlorine **must** wear gloves, goggles, and a mask. A 2-inch layer of soil can also be used to cover sludge spills. For large spills, see Section 8. Handling Spills.
18. Spray the top of the pit cover with 0.5% chlorine solution. Anyone handling chlorine **must** wear gloves, goggles, and a mask. If there is any sludge on the tractor, clean it with the chlorine solution as well.
19. Make sure no chlorine gets inside the pit, to not kill any active bacteria in the pit.
20. Once the tank on the tractor is full, transport the tank to the STS.
21. The tractor and tank should be sprayed at the STS with 0.5% chlorine solution so that all elements which may have been in contact with sludge are disinfected.

* Note: if there are multiple pits next to each other that need to be desludged, you can simply replace the manhole cover or pit cover, move to the next pit, and seal and disinfect the area *after* the tank on the tractor is full and the tractor leaves to the STS. This allows the team to make one large batch of plaster for all the pits. However, make sure that no one enters the area where you are working, and that you are close enough to see the pits that have been desludged and not yet sealed and disinfected.

22. At the end of the day:
 - a. Empty the sludge inside the pipes into the last pit of the day by pouring water through the pipes.
 - b. Bring back all of the materials to the specified location (either field office or STS), depending on where you are working.
 - c. Clean all the tools, the pump foot valve, and the pipes with 0.5% chlorine solution, leave for 10 minutes, and then rinse with water before storing.
 - d. All workers must clean all their PPE after each working day: soak boots, gloves, and glasses in 0.05% chlorine solution for 10 minutes and then rinse with water on the concrete slab provided at the field offices or STS.
 - e. Take a shower at the field office or STS before putting on different clothes that you will wear home.
 - f. Soak the t-shirts and shorts for 10 minutes in 0.05% chlorine solution and then wash with water and laundry soap.
 - g. Dry and store all PPE properly at the field office or STS.
 - h. Throw away disposable face masks in the designated bin.
 - i. Report any damaged equipment immediately (agents should ensure replacement of damaged parts).
 - j. After cleaning the PPE and tools, clean the slab at the field office or STS with 0.5% chlorine solution.

SOP 2: Standard Operating Procedure for Regular Desludging without a Tractor

Standard Operating Procedure for Regular Desludging without a Tractor

For areas that are not accessible to a tractor, a method called “regular desludging without a tractor” has been developed. This desludging process is similar to regular desludging, but instead of pumping sludge to a tank on the tractor, the team pumps sludge to barrels that sit on a pushcart. The pushcart is then wheeled to the nearest location accessible to the tractor, where the sludge is transferred from the barrels to the tank on the tractor. In rare cases, the pit is also not accessible to a pushcart, in which case, the sludge is pumped into a nearby freshly-dug pit and backfilled with soil. This chapter explains in detail the full procedure for this method of desludging.

6.1 Team

Each desludging team is comprised of at least 6 people (per pump):

- 1 pump operator
- 3 labourers for handling the pump and hose (1 dedicated operator of the chlorine sprayer)
- 1 pushcart operator
- 1 tractor driver

6.2 Materials

| Item | No. needed per team | Description |
|-------------------------------------|---------------------|---|
| Desludging pump | 1 | Manual diaphragm pump with hose, foot valve, and strainer |
| Pushcarts | 1 - 3 | When needed |
| Blue sludge barrels | 2 per pushcart | Plastic 40-gallon barrels with sealed lids |
| Sludge transportation tank | 1 | 1.5 m3 tank secured onto the tractor |
| Tractor | 1 | Tractors are used to transport the sludge to the STS |
| Sludge bucket | 1-2 | 14L buckets to transfer sludge from blue barrels to tractor tank |
| Crow bar | 1 | To open the manhole and/or pit cover |
| Hammer | 1 | To open the manhole and/or pit cover |
| Shovel | 1 | To clean up spills |
| Personal Protective Equipment (PPE) | For each staff | Reusable PPE: boiler suit, makala, heavy-duty rubber gloves, safety glasses, boots, rain coat (for rainy season) Disposable PPE: face mask |
| Chlorine sprayer | 1 | For disinfecting around the latrine after desludging, and for disinfecting tools after use |
| Chlorine | 1 | Chlorine solution is used for disinfecting around the latrine after desludging, and for disinfecting tools and clothes |
| Stirrer | 1 | Used to mix the chlorine and water (can be a bamboo stick) |
| Permanent marker | 1 | To label the chlorine sprayer and to label PPE with workers' names |
| Water bucket | 2 | 14 L buckets filled with water, to be used for cleaning equipment and washing hands |
| Soap bar | 1 | For washing hands during and after work |
| Mortar | ~ 1 kg | To seal the manhole cover after desludging (about 250g cement, 1kg sand) |

SOP 2: Standard Operating Procedure for Regular Desludging without a Tractor

| | | |
|--------------|----------|--|
| | | per day) |
| Lime | ~ 1-2 kg | Hydrated lime can be used to cover accidental spillage of sludge |
| Water | | Collected at nearby hand pumps in the buckets, for washing hands and rinsing equipment |
| Body soap | | For all sanitation workers to shower after each work day |
| Laundry soap | | For all sanitation workers to wash clothes after each work day |

6.3 Procedure

1. Ensure there are no children in the desludging area for the entire day and that no one is using the latrine connected to the pit to be desludged.
2. Ensure all workers are wearing the proper PPE: boiler suit, boots, gloves, glasses, face mask.
3. Evaluate the pit to see if there are any broken or cracked parts. Fix any minor repairs directly, with assistance from construction supervisors if needed. If major repairs are needed, report to the construction team to arrange the repair.
4. Evaluate the pit to see if it is overflowing. If so, record in the database that the pit is overflowing, and try to identify the reason (step 14: check for hard layer of sludge; and step 15c: check if pipe is blocked) and report to the necessary team for follow up (arrange for manual desludging, ask construction team to carry out repairs, etc.)
5. Prime the pump, if needed.
6. If the pit cover has a manhole, open it to access the pit. If an opening is not present, remove the entire pit cover by breaking the mortar seal with a crowbar and hammer. It may also be possible to remove the ventilation pipe and insert the desludging hose into the pit through the ventilation pipe hole. Inform your line manager if the pit cover is broken.
7. Place the end of the hose for the desludging pump with the strainer inside the pit. Make sure to place the foot valve of the pump at the bottom of the pit when pumping.
8. Connect the end of the hose from the pump to a blue barrel on the pushcart.
9. The pump operator should start the pump at normal speed.
10. Add water to the pit to decrease the viscosity of the sludge for easier pumping (only do if needed as this creates more sludge that needs to be treated).
11. When one barrel is full and you need to move to the next barrel, slow down the pump to minimize spills. It is advised not to fill all the barrels to the top, or the pushcart will be too heavy to move.
12. Desludge the latrine pit as much as you can.
13. When you finish with one pit or all the barrels are full, stop the pump.
14. If there is a hard layer of sludge at the bottom of the pit that can't be pumped out and takes up more than a quarter of the pit, report to a sanitation agent that the pit needs manual desludging. Refer to Standard Operating Procedure for Manual Desludging.

SOP 2: Standard Operating Procedure for Regular Desludging without a Tractor

15. If a soakaway pit is present:
 - a. Check if it has a manhole cover – if yes, check if the soakaway pit also needs to be desludged and report to the sanitation agent.
 - b. If there is no manhole on the soakaway pit, no further action is needed, unless there is liquid coming into the main pit from the soakaway pit – in which case, fully desludge the soakaway pit as well by removing the pit cover.
 - c. Check the pipe between the main pit and the soakaway pit to ensure it is not clogged and unclog with a bamboo stick, if needed.
16. Clean the foot valve with water (without chlorine) over the pit manhole between each pit desludged.
17. Replace the manhole cover or the pit cover and seal it shut with plaster. * If the ventilation pipe has been removed, replace and seal it.
18. After sealing the pit opening, cover any spilled sludge around the pit with 0.5% chlorine solution. Anyone handling chlorine **must** wear gloves, goggles, and a mask. A 2-inch layer of soil can also be used to cover sludge spills. For large spills, see Section 8. Handling Spills.
19. Spray the top of the pit cover with 0.5% chlorine solution. Anyone handling chlorine **must** wear gloves, goggles, and a mask. If there is any sludge on the tractor, clean it with the chlorine solution as well.
20. Make sure no chlorine gets inside the pit, to not kill any active bacteria in the pit.
21. Once the barrels on the pushcart are full, make sure the barrel lids are closed tightly and take the pushcart to meet the tractor at the nearest accessible location. If there are access issues preventing the use of a pushcart, go to Step 25.
22. To transfer sludge from the blue barrels: use buckets to scoop out sludge from the barrels into the tank on the tractor. Make sure the buckets are designated specifically for this purpose and not used for anything else. Once the barrels are light enough to lift, empty the sludge directly from the barrels into the tank on the tractor.
23. Transport the tank to the STS.
24. The tractor, tank, pushcart, and barrels should be sprayed with 0.5% chlorine solution so that all elements which may have been in contact with sludge are disinfected.
25. If the use of a pushcart is not possible:
 - a. Dig a pit (4' deep maximum) next to the latrine. The location should be well chosen—if not possible to do it right next to the latrines that are being emptied, then dig the pit with special attention to the boreholes around, ensuring there is a minimum of 30 meters (100 feet) distance from the new pit to any boreholes.
 - b. Dump the sludge from the blue barrels into the dug pit, or pump directly from the pit into the dug pit. Never fill the dug pit more than half full.
 - c. Spread 20 Kg of lime for every 4,000 L of sludge in the dug pit. Volume of one 4.5' internal diameter by 2.5' high pit ring is 1,126, therefore 5.63 kg of lime should be added for every pit ring of sludge removed. Estimate how many pit rings of sludge are contained in the dug pit and add the correct amount of lime based on this estimation. Anyone handling lime **must** wear gloves, goggles, and a mask.
 - d. Mix the lime thoroughly with the sludge in the pit.

SOP 2: Standard Operating Procedure for Regular Desludging without a Tractor

e. Close the dug pit by backfilling with soil.

* Note: if there are multiple pits next to each other that need to be desludged, you can simply replace the manhole cover or pit cover, move to the next pit, and seal and disinfect the area at the end of your work in that area. This allows the team to make one large batch of plaster for all the pits. However, make sure that no one enters the area where you are working, and that you are close enough to see the pits that have been desludged and not yet sealed and disinfected.

26. At the end of the day:

- a. Empty the sludge inside the pipes into the last pit of the day by pouring water through the pipes.
- b. Bring back all of the materials to the specified location (either field office or STS), depending on where you are working.
- c. Clean all the tools, the pump foot valve, and the pipes with 0.5% chlorine solution, leave for 10 minutes, and then rinse with water before storing.
- d. All workers must clean all their PPE after each working day: soak boots, gloves, and glasses in 0.05% chlorine solution for 10 minutes and then rinse with water on the concrete slab provided at the field offices or STS.
- e. Take a shower at the field office or STS before putting on different clothes that you will wear home.
- f. Soak the boiler suits for 10 minutes in 0.05% chlorine solution and then wash with water and laundry soap.
- g. Dry and store all PPE properly at the field office or STS.
- h. Throw away disposable face masks in the designated bin.
- i. Report any damaged equipment immediately (agents should ensure replacement of damaged parts).
- j. After cleaning the PPE and tools, clean the slab at the field office or STS with 0.5% chlorine solution.

SOP 3: Standard Operating Procedure for Manual Desludging

6. Standard Operating Procedure for Manual Desludging

“Manual desludging” is done when a pit accumulates a layer of hard sludge that a pump is not able to remove, which decreases the usable volume in the pit and causes the pit to need more frequent desludging. Manual desludging is done rarely, representing only about 1-2% of total desludging, and is only carried out during the dry season. The desludging team digs a hole near the pit and manually transfers the hard sludge from the latrine pit to the hole, then backfills with soil. This chapter explains in detail the full procedure for this method of desludging.

7.1 Team

Each desludging team is comprised of at least 5 people for taking off the pit cover, digging the hole, and shovelling sludge into the hole (1 of these is a dedicated operator of the chlorine sprayer).

7.2 Materials

| Item | No. needed per team | Description |
|-------------------------------------|-------------------------------------|---|
| Rake | 2 | To spread/mix lime with sludge |
| Mattock | 2 | To break up the hard sludge |
| Sludge bucket & rope/sticks | 2 | 14L buckets to transfer sludge into dug pit. Rope or sticks used to lift the buckets out of the pit. |
| Crow bar | 1 | To open the manhole and/or pit cover |
| Hammer | 1 | To open the manhole and/or pit cover |
| Shovel | 4 | To break up and shovel hard sludge into the buckets |
| Personal Protective Equipment (PPE) | For each staff | Reusable PPE: boiler suit, makala, heavy-duty rubber gloves, safety glasses, boots, rain coat (for rainy season) Disposable PPE: face mask |
| Chlorine sprayer | 1 | For disinfecting around the latrine after desludging, and for disinfecting tools after use |
| Chlorine | 1 | Chlorine solution is used for disinfecting around the latrine after desludging, and for disinfecting tools and clothes |
| Stirrer | 1 | Used to mix the chlorine and water (can be a bamboo stick) |
| Permanent marker | 1 | To label the chlorine sprayer and to label PPE with workers' names. |
| Water bucket | 2 | 14 L buckets filled with water, to be used for cleaning equipment and washing hands |
| Soap bar | 1 | For washing hands during and after work. |
| Mortar | ~ 1 kg | To seal the manhole cover after desludging (about 250g cement, 1kg sand per day) |
| Lime | ~ 6 kg / pit ring of sludge removed | Hydrated lime is mixed with sludge in the dug pit and also used to cover accidental spillage of sludge |
| Water | | Collected at nearby hand pumps in the buckets, for washing hands and rinsing equipment |
| Body soap | | For all sanitation workers to shower after each work day |
| Laundry soap | | For all sanitation workers to wash clothes after each work day |

SOP 3: Standard Operating Procedure for Manual Desludging

7.3 Procedure

1. Ensure there are no children in the desludging area for the entire day and that no one is using the latrine connected to the pit to be desludged.
 2. Ensure all workers are wearing the proper PPE: boiler suit, boots, gloves, glasses, face mask.
 3. Evaluate the pit to see if there are any broken or cracked parts. Fix any minor repairs directly, with assistance from construction supervisors if needed. If major repairs are needed, report to the construction team to arrange the repair.
 4. Remove the entire pit cover by breaking the mortar seal with a crowbar and hammer. Inform your line manager if the pit cover is broken.
 5. Follow the protocols outlined in Sections 5.3 or 6.3 to remove any liquid sludge that has accumulated inside the pit since the last desludging with a pump and a tractor, if available and accessible.
 6. Dig a pit (4' deep maximum) next to the latrine. This pit is for burying the sludge. The location should be well chosen—if not possible to do it right next to the latrines that are being emptied, then dig the pit with special attention to the boreholes around, ensuring there is a minimum of 30 meters (100 feet) distance from the new pit to any boreholes.
 7. Using shovels and buckets, move the dry sludge from the latrine pit to the dug pit. Never fill the dug pit more than half full.
 - a. Spread 20 Kg of lime for every 4,000 L of sludge in the dug pit. Volume of one 4.5' internal diameter by 2.5' high pit ring is 1,126, therefore 5.63 kg of lime should be added for every pit ring of sludge removed. Estimate how many pit rings of sludge are contained in the dug pit and add the correct amount of lime based on this estimation. Anyone handling lime **must** wear gloves, goggles, and a mask.
 8. Mix the lime thoroughly with the sludge in the pit.
 9. Close the dug pit by backfilling with soil.
 10. Replace the pit cover onto the latrine pit, leaving the manhole open.
 11. Clean the tools with water above the manhole so the water goes in the pit.
 12. Plaster shut the latrine pit cover and manhole cover. *
 13. Spray the top of the pit cover with 0.5% chlorine solution. Anyone handling chlorine **must** wear gloves, goggles, and a mask. Make sure not to spray chlorine on any areas that have lime. **Do not mix lime and chlorine!**
 14. Spray chlorine or cover with soil any sludge that has dripped between the dug pit and latrine pit.
- * Note: if you are desludging multiple pits next to each other, you can simply replace the manhole cover or pit cover, move to the next pit, and seal and disinfect the area at the end of your work in that area. This allows the team to make one large batch of plaster for all the pits. However, make sure that no one enters the area where you are working, and that you are close enough to see the pits that have been desludged and not yet sealed and disinfected.
15. At the end of the day:
 - a. Bring back all of the materials to the specified location (either field office or STS),

SOP 3: Standard Operating Procedure for Manual Desludging

- depending on where you are working.
 - b. Clean all the tools with 0.5% chlorine solution, leave for 10 minutes, and then rinse with water before storing.
 - c. All workers must clean all their PPE after each working day: soak boots, gloves, and glasses in 0.05% chlorine solution for 10 minutes and then rinse with water on the concrete slab provided at the field offices or STS.
 - d. Take a shower at the field office or STS before putting on different clothes that you will wear home.
 - e. Soak the boiler suits for 10 minutes in 0.05% chlorine solution and then wash with water and laundry soap.
 - f. Dry and store all PPE properly at the field office or STS.
 - g. Throw away disposable face masks in the designated bin.
 - h. Report any damaged equipment immediately (agents should ensure replacement of damaged parts).
 - i. After cleaning the PPE and tools, clean the slab at the field office or STS with 0.5% chlorine solution

7. Handling Spills

If sludge spills at the worksite, desludging workers are responsible to take care of it as described above (using chlorine or soil). If a spill happens on the way to the STS, drivers or those pushing pushcarts are responsible for taking immediate action. Drivers should receive training about actions to be taken in case of spillage.

Instructions for drivers:

1. In the tractor, always carry the following:
 - a. 2 bags (25kg/bag) of lime
 - b. 1 shovel
2. Cover the spilled excreta with a 2-inch layer of soil or lime. While handling lime, you **must** wear gloves, goggles, and a mask.

8. Record Keeping

Desludging teams should keep records of the following information:

1. Date
2. Camp name
3. Tractor number (if desludging with tractors)
4. Pit reference
5. Overflowing pits
6. Quantity of sludge removed (number of tanks or barrels, or approx. volume of the pit)

9. Conclusion

In the crowded Sittwe camps, safe excreta disposal is critical to reduce public health risks, especially diarrheal disease among children. Although there are many challenges to desludging and transportation, these guidelines present solutions to desludge thousands of latrines while keeping workers and the public healthy and safe.

For more information on what happens next, refer to the Sludge Treatment Site Operations Manual.

Operator’s Manual

Sludge Treatment Site (STS) – Sittwe camp

This document will be reviewed after each upgrade and any changes in the operation of the STS

Last revision: 09/2020



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2 Abbreviations

ABR: Anaerobic Baffled Reactor

AM: Activity Manager

ERF: Emergency Response Fund

HARP: Humanitarian Aid and Rescue Project

HBT: Hopper Bottom Tank

IDP: Internally Displaced People

OCHA: United Nations Office for the Coordination of Humanitarian Affairs

PM: Program Manager

RAT: Rapid Assessment Team

SI: Solidarités International

STS: Sludge Treatment Site

WASH: Water, Sanitation, and Hygiene

TS: Total Solids

TSS: Total Suspended Solids

COD: Chemical Oxygen Demand

NO₃: Nitrate

NH₄: Ammonium

P: Phosphorus

3 STS history

The construction of the STS was done under the supervision of John Fitzgerald, WASH PM. The site was found in September 2013, and the total size of the land is 120 000 ft² (see document STS-Survey-Site 5.docx).

The land renters were compensated for the loss of agriculture up to 620,000 MMK (half the total amount going to each of the two land renters). The contract remains active for the complete period that the Sludge Treatment Site is operating, and the payment covers the total losses with no further legal or financial obligations from Solidarités International (See document Land Compensation Agreement – STS vu JF).

The construction of the STS started in late December 2013 and was completed in March 2014. A contractor made it (contract MYA/HMSF/WAS/037/SIT/13 - supplier name Ko Mr. Ko Tin Hlaing), for 80,000,000 MMK (approx. 64,000 Euros). The contract was signed on 17th September 2013 with a delivery period of 60 days, but was delayed due to the site approval process (See document Explanation Letter_final disposal site)

The STS started operating in March 2014, and its first operational problems appeared less than a year later.

From July to December 2015, Manuel Kraehenbuehl (WASH AM) produced several documents regarding the STS:

- 151008_STS_Assessment report_final version
- 151026 STS work safety guidelines
- 151211 Instruction on lime treatment on the STS
- 151211 Lime for disinfection
- 151212 STS wastewater analysis

In January 2016, a consultancy led by Elio de Bonis provided recommendations to improve the treatment performance and operation process (see document SI Sittwe Final Report).

Brice Pageaud (WASH PM) implemented some of the consultant's recommendations (see document 201703_STS activity form).

In 2018 and 2019, Marine Ricau (Sanitation AM) produced several documents regarding the operation of the STS:

-Activity_form_STS_June 2018_update 0419

-CW cleaning and planting SOPs

-Drying beds cleaning SOPs

-ABR cleaning SOPs

-Maturation pond desludging SOPs

In December 2018, Veolia Foundation did a mission to set up a laboratory in the STS and provided recommendations to improve the operation process (see document Technical Support Mission STS - SI Myanmar _ EBA ROV 122019).

In February 2020, the Veolia Foundation carried out a mission to support SI in the implementation of the future upgrade (see document SHARED_Field Support Mission STS - SI Myanmar _ ADSh March2020).

At the same time, Jules Gouron (Sanitation AM) implemented some of the consultant's recommendations (see document SHARED_Detailed Construction Recommendations V1_ADSh).

In 2019 and 2020, Jules Gouron (Sanitation AM) produced several documents regarding the operation of the STS and future implementation:

- Construction Workplan STS Upgrade V2 14 September 2020

- STS Operation Guideline (translated in Zawgyi and Myanmar)

- New version of maintenance task & operation task

- Map STS_Jules_new design

- **New version:** ANALYSES STS AUGUST 2020 Final V

- **All the drawings for future upgrade (including Hydraulic Profile):**

see: <https://drive.google.com/drive/u/1/folders/1SUXKAt2dLlupyhab3-yUABzRslit6b-d>

- Final report STS&Desludging15092020

- Methodology to sieve the sand for future Drying Beds

| 2014 | 2015 | 2016 | 2017 | 2018 | 2019 (see STS log book) | 2020 |
|-----------------------------------|---|---|---|--|--|--|
| Ramp access | | | | | Rehabilitation and elevation of the road access | New chain to protect the tractors against falls. |
| Dumping station | Installation of roof | Removing of two baffles & roof rehabilitation | | Renewal of the solid sludge outlet pipe | Redesign of the reception channel & construction of a small room for data recorder & installation of wooden stairs near outlet pipes to get access to dumping station easily | Installation of a protective fence to prevent any possible falls. |
| Retention tank -> HBT | Rehabilitation of leaks | Construction of two brick wall in both sides as support to avoid big crack | Replacement by one HBT | Addition of a second HBT | Retention tank emptied, HBTs emptied and cleaned & installation of wooden stairs to get access to HBTs | Paint for inside the HBT & improve Scum board by adding a bord & roof rehabilitation |
| ABR | | Cleaning all chambers | | Cleaning of the gravel | Cleaning of the gravel | Increase the number of desludging in the chambers |
| Constructed wetlands 1 | Planting of three types of plants (didn't grow) | Cleaning of gravel | Cleaning of gravel | Cleaning and sorting of gravel according to size | Rehabilitation of the Inlet & planting & adding two brick layers in brick wall to avoid liquid overflowing | Cleaning of the gravel |
| Maturation ponds | | Planting water hyacinth | | | Installation of a gravel filter at the outlet (currently not used) & rehabilitation of leaks | |
| Infiltration trenches 1 -> Basins | | | | | Removing and installation of basins | Rehabilitation of infiltration basins to avoid landslide |
| Drying beds | | Addition of two emergency drying beds & Lime treatment pilot with Onion Tanks | Pilot for two vertical filter planted bed Roof rehabilitation with steel structure | Installation of wooden platforms in Drying beds to carry sludge baskets easily to pushcarts | Cleaning the gravel and replacement of the sand from beds 2, 3 and 5 & Installation of wooden stairs to get access easily to drying beds. | Cleaning the gravel and replacement of the sand from beds 1, 4 and 6 |
| Secondary Constructed wetland | | | | Height of concrete wall was raised up to 1 foot on all four sides to prevent entry of sand in the rainy season | Cleaning and sorting of gravel according to size & planting | |

| 2014 | 2015 | 2016 | 2017 | 2018 | 2019 (see STS log book) | 2020 |
|--------------------------|------|--------------------------------------|--|---|--|--|
| Infiltration with gravel | | | Replacement by infiltration trenches 2 | | | Rehabilitation of Infiltration pipes |
| Dry sludge storage | | | Addition of two storage boxes | Rehabilitation of concrete wall and roof in old storage | Rehabilitation of one wall | Construction of 5 new rooms |
| Incinerator | | Construction of new incinerator | | | Installation of Chimney extension in existing incinerator | Installation of the chimney extension and construction of a second incinerator |
| Water Tower | | Rehabilitation with steel structure | | | | |
| Warehouse | | | | Rehabilitation of old warehouse | Construction of new warehouse & storage to keep firewood and other materials | |
| Shower room | | | | | Rehabilitation of the whole shower room including roof and wall | |
| Office | | | | | Rehabilitation of roof and bamboo wall | Rehabilitation of roof and bamboo wall |
| STS Compound | | Fence rehabilitation of STS compound | | | | |
| Laboratory | | | | Set up | | |

Figure 1: Construction chronology of STS modules by year

4 Technical description

4.1 Overview of the STS

The Sludge Treatment Site (STS) is operating since 2014. It treats the faecal sludge from about 90,000 forcibly-displaced people living in Sittwe camps, six days a week. Several improvements were made over the years to reach its current functioning. The faecal sludge is pumped from the pit latrines into a 1.5m³ plastic tank, which is then transported to the STS by tractors.

At the STS, the plastic tank is emptied into the reception tank of the dumping station where the volume is measured. The sludge is then directed into two hopper bottom tanks that work in parallel. There the sludge settles and is separated between a liquid and a thicker part. The liquid part goes to the anaerobic baffled reactor, where the biodegradation of organic material happens thanks to the microorganisms contained in the settled sludge. It then goes to the horizontal flow constructed wetlands, where the particles are filtered out and the microorganisms further degrade the organics. The wastewater then goes into the maturation ponds, where it is treated by naturally-occurring processes and the influence of solar light, wind, microorganisms, and algae. It is then infiltrated into the ground through infiltration basins. The thicker sludge that has settled into the hopper bottom tanks is diverted into the drying beds, where the water is drained through the sand and gravel to the bottom of the bed, and evaporation happens at the surface of the sludge. The liquid drained then goes through a horizontal flow constructed wetland and infiltration trenches. The dried sludge remaining on top of the drying beds is removed manually and stored in storage units to further dry. It is then incinerated and the ashes are given to farmers as a soil amendment.

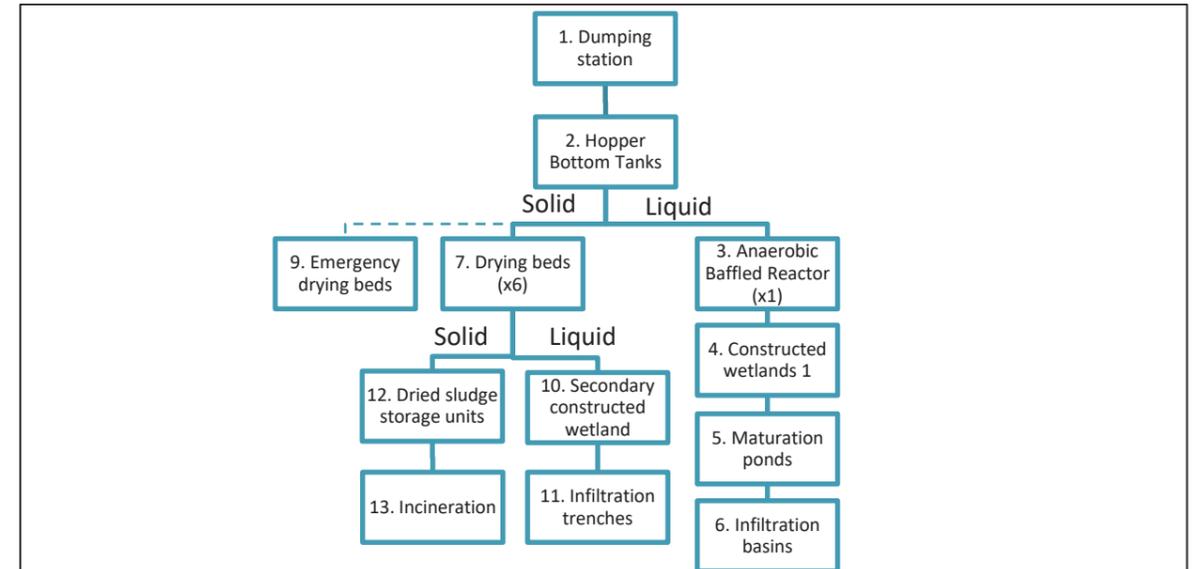


Figure 2: Current Treatment System Overview

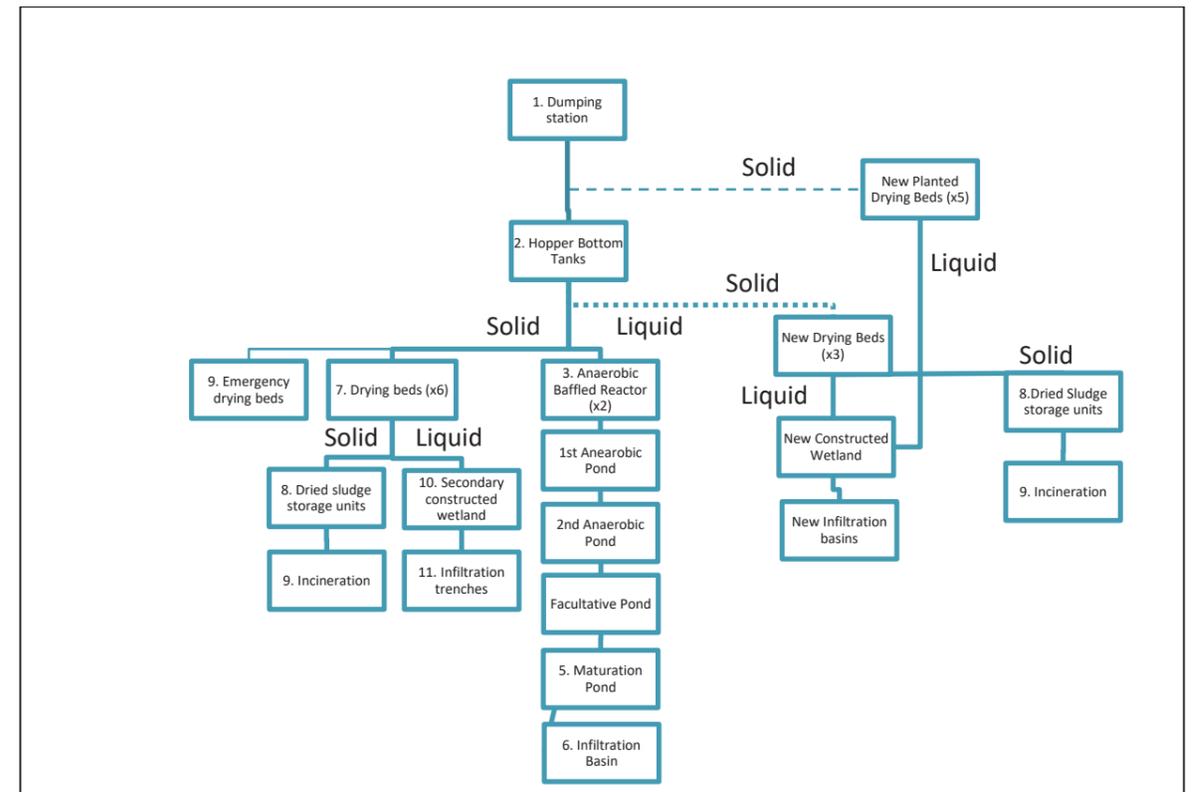


Figure 3: New Treatment System Overview



Figure 4: STS Map



4.2 FAECES LINE MODULES

4.2.1 Dumping station

The dumping station is the first module of the STS where the tractors empty the plastic tank at the rear by means of a valve at the bottom. The dumping station is composed of two emptying concrete tanks where the plastic tank is emptied, a screen to remove the solid waste, a channel, and an outlet tank where the scum is trapped. The volume dumped is measured with a wooden stick and recorded in a notebook. It is then recorded in the Weekly "SitRep" report.

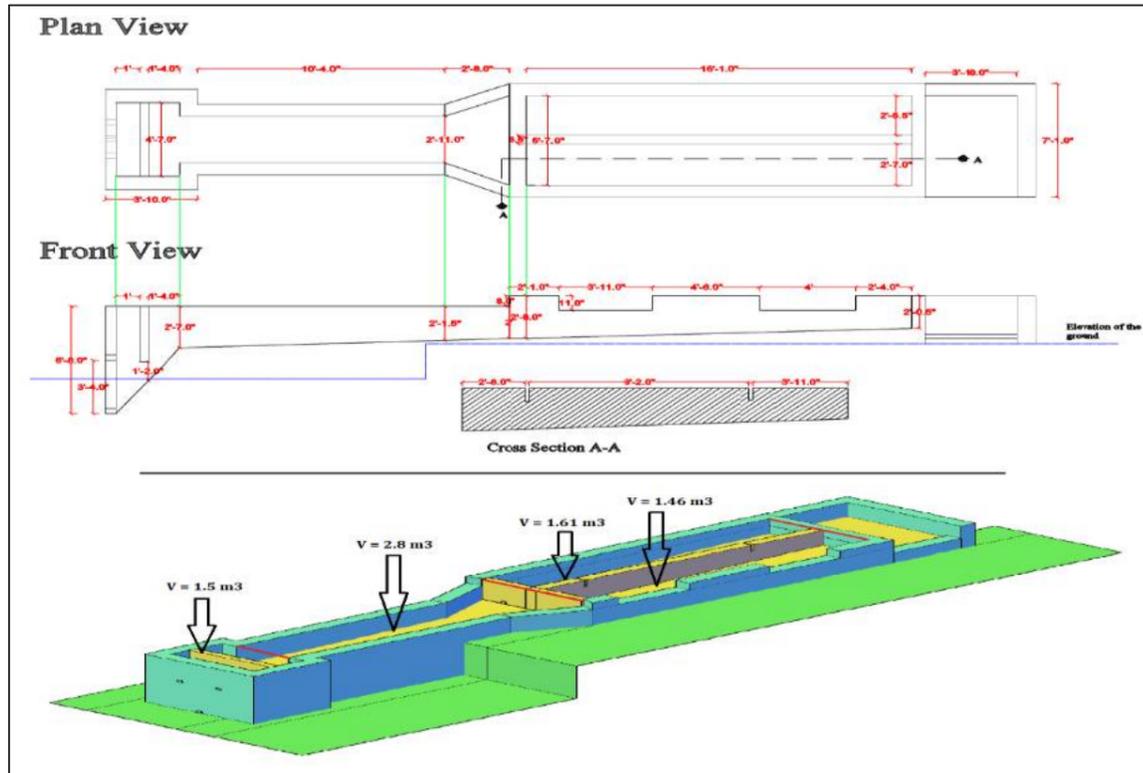
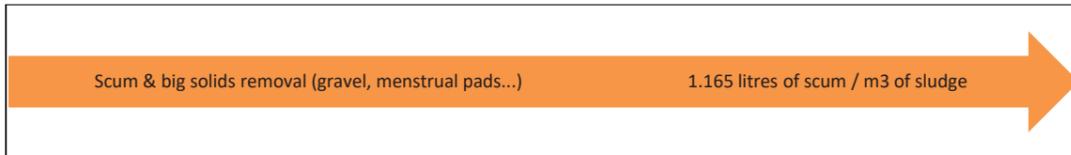


Figure 5: Design Dumping Station



Main Objective & Reduction at the Dumping Station

4.2.2 Hopper Bottom Tank

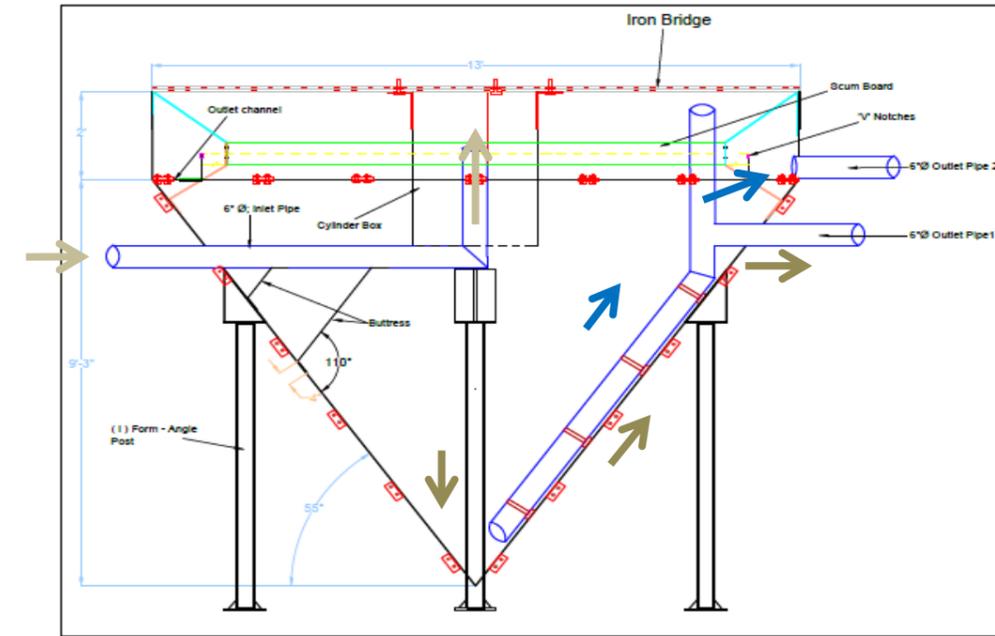
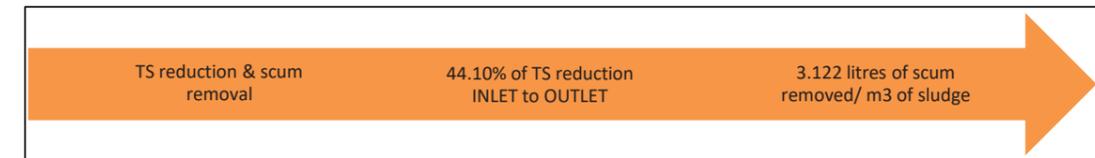


Figure 6: Drawing of the functioning of the hopper bottom tank

The Hopper Bottom Tank (HBT) is the second module of the STS. It provides mechanical primary treatment which consists mainly of sedimentation and flotation of inorganic material (biological degradation of settled solids partially occurs). The HBT is in a cone shape, with the sludge entering at the top inside a cylindrical box to prevent the disturbance of the scum. The solids and sludge settle and accumulate at the bottom while the scum (lightweight materials like fats and grease) rises to the surface. A scum board prevents the scum from flowing into the liquid outlet pipe. The solid outlet pipe connects at the bottom and the solids flow out with hydraulic pressure.

The aim of the HBT is to reduce the Total Solids (TS) content from the faeces in order to dry it on Drying Beds. Note: TS is not to be confused with Total Suspended Solids (TSS).



Main Objective & Reduction in the HBT

4.3 LIQUID LINE MODULES

4.3.1 Anaerobic Baffled Reactor

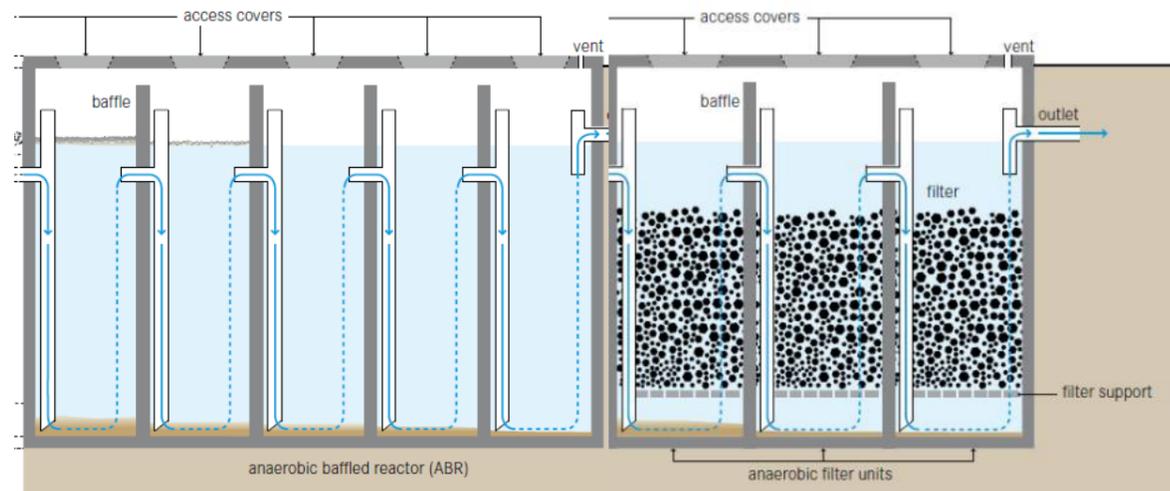
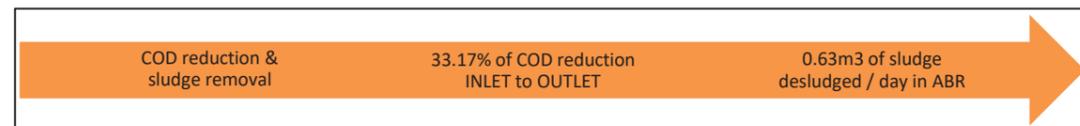


Figure 7: Drawing of the functioning of the ABR

The Anaerobic Baffled Reactor (ABR) is the first module of the STS liquid waste treatment line. It provides biological secondary treatment which is the biodegradation of organic material by the microorganisms contained in the settled sludge. The ABR is divided into four rows of 12 successive chambers each, with two common inlet chambers and one common outlet chamber. Three parallel down pipes are located at the inlet of each chamber, leading the incoming flow toward the bottom of the chamber. The inflow is forced to pass through the activated sludge where anaerobic bacteria are feeding from the organic material contained in the inflow to be treated. The last four rows of chamber contain a filter media, and thus act as an anaerobic filter, or a fixed-bed biological reactor. As liquid waste flows through the filter, particles are trapped and organic matter is degraded by the active biomass that is attached to the surface of the filter material.

The aim of this step is to reduce the Chemical Oxygen Demand (COD). Pollutants settle at the bottom and are pumped to be dried on the Drying Beds.



Main Objective & Reduction in the ABR

4.3.2 Constructed wetlands 1

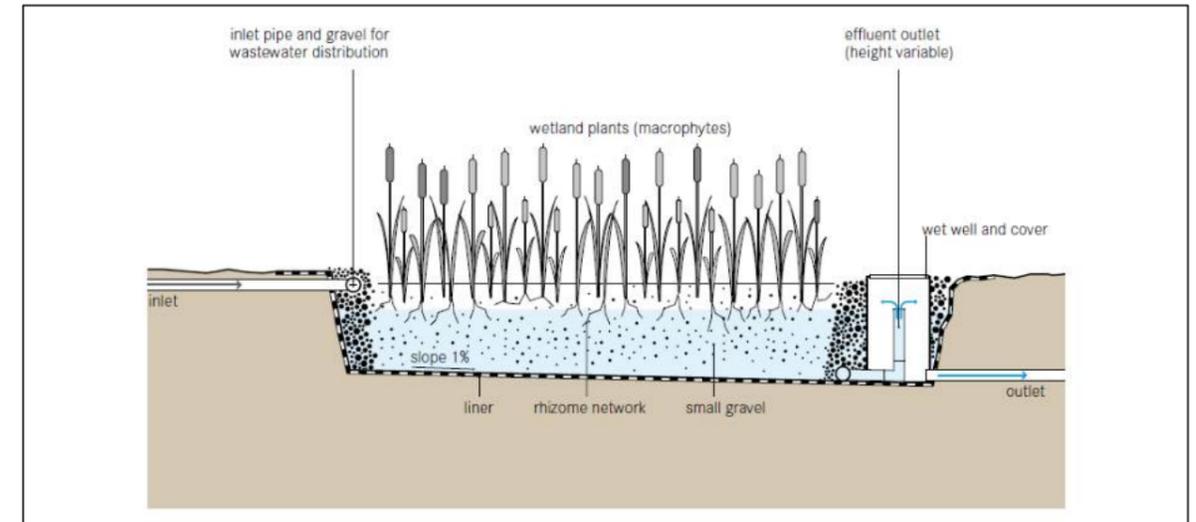


Figure 8: Drawing of the functioning of a standard constructed wetland

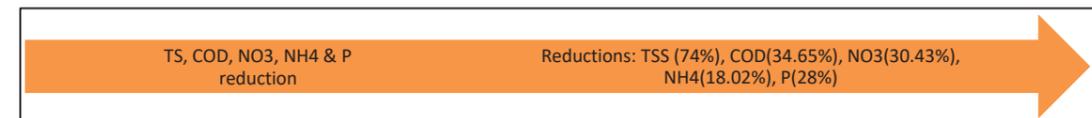
The horizontal flow constructed wetlands (HFCW) is the second module of the STS liquid waste treatment line. It consists of two large gravel and sand-filled basins that are planted with wetland vegetation. As waste flows horizontally through the basin, the filter material filters out particles and microorganisms degrade the organics. The filter media acts as:

- a filter for removing solids,
- a fixed surface upon which bacteria can attach,
- and a base for the vegetation.

Although facultative and anaerobic bacteria degrade most organics, the vegetation transfers a small amount of oxygen to the root zone so that aerobic bacteria can colonize the area and degrade organics as well. The plant roots play an important role in maintaining the permeability of the filter.

The pre-treated waste from the ABR is loaded continuously onto the surface of the HFCW through perforated pipe system. The water flows horizontally through the filter layer to the other bottom side of the bed where it is collected in a drainage pipe system. The wastewater is treated by a combination of biological and physical processes.

The aim of this step is to reduce the TSS, COD, Nutrients (NO₃; NH₄), and Phosphorus (P).



Main Objective & Reduction in the CW1

4.3.3 Maturation ponds

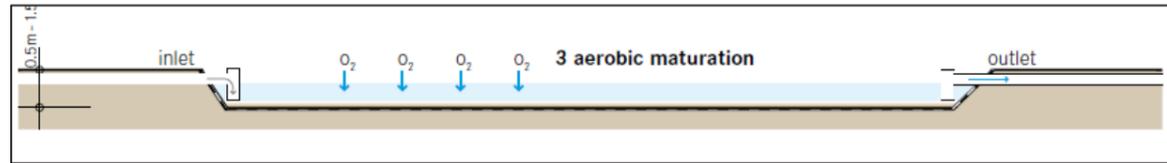
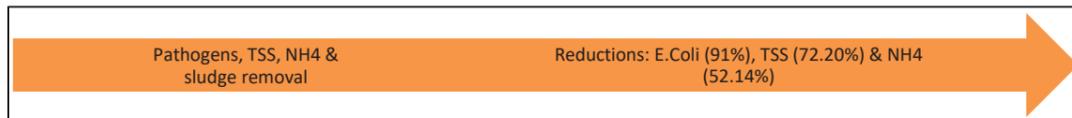


Figure 9: Drawing of the functioning of the stabilization ponds

The maturation ponds are the third module of the STS liquid waste treatment line. It consists of two large, man-made water bodies in which waste is treated by naturally-occurring processes and the influence of solar light, wind, microorganisms, and algae.

Algae growing on the surface provides the water with oxygen leading to aerobic oxidation of the organic pollutants. Due to the algal activity, pH rises leading to inactivation of some pathogens and volatilization of ammonia.

The aim of this step is the removal of pathogenic bacteria and viruses (especially *E.Coli* & Helminth eggs) as well as Ammonia. TSS is reduced as well due to sedimentation.



Main Objective & Reduction in the Maturation Pond

4.3.4 Infiltration basins

The final module of the liquid waste treatment line of the STS is infiltration basins. The waste infiltrates into the ground through two infiltration basins that are filled alternatively.

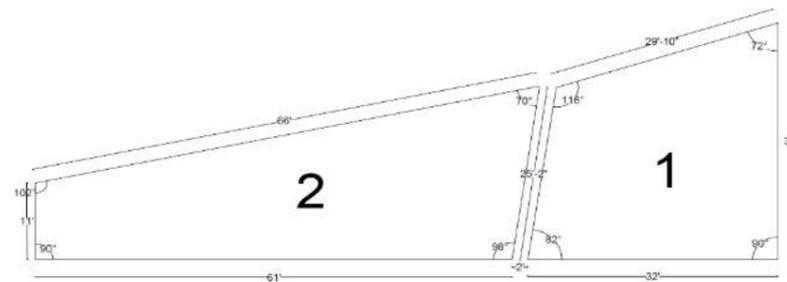


Figure 10: Design Infiltration Basins

4.4 SLUDGE LINE (SOLID)

4.4.1 Drying beds

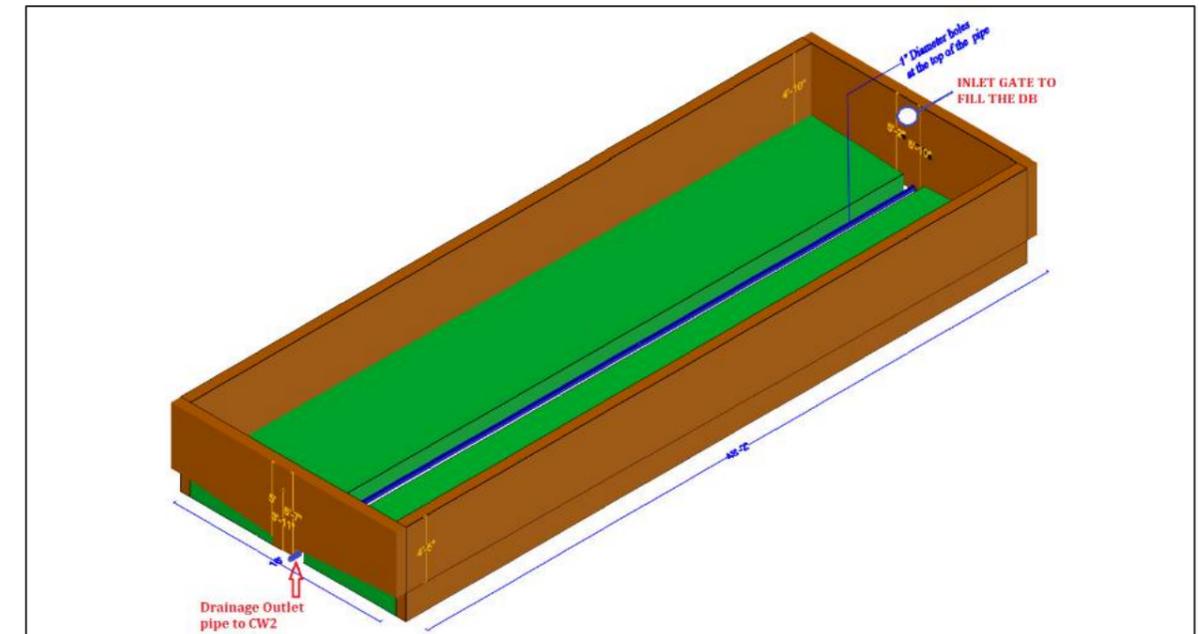


Figure 11: Drawing of the functioning of a standard drying bed (empty)

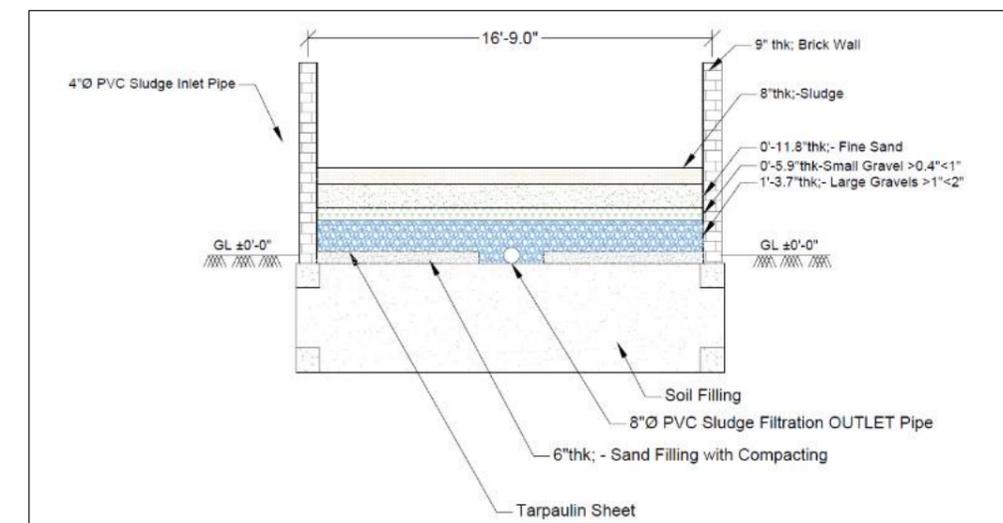


Figure 12: Drawing - Section view of a standard drying bed (Full of sludge)

The drying beds are the first module of the STS sludge treatment line. They are shallow unplanted filter beds with media consisting of sand and gravel. An underdrain pipe at the bottom of the beds collects the leachate which is conveyed to the next treatment module. Sludge from the HBT (and from other modules when they are deslugged: dumping station, ABR, CW, and maturation ponds) is discharged onto the surface for dewatering. The drying process is based on the drainage of liquid through the sand and gravel to the bottom of the bed and evaporation of water from the surface of the sludge to the air. The leachate is then directed to a horizontal flow constructed wetland. After reaching the desired dryness, the sludge is removed from the bed manually.

4.4.2 Dried sludge storage

This is the fourth module of the sludge treatment line of the STS. The sludge from the drying beds is stored to dry further.

4.4.3 Incinerator

This is the fifth module of the sludge treatment line of the STS. The sludge is incinerated and the ashes are given to farmers as a soil amendment.



Figure 13: 3D View of Incinerator

4.5 SLUDGE LINE (LIQUID)

4.5.1 Secondary constructed wetland

The secondary constructed wetland is the second module of the sludge treatment line of the STS. It treats the leachate from the sludge drying beds. It is the same module as the horizontal constructed wetlands.

4.5.2 Infiltration trenches 2

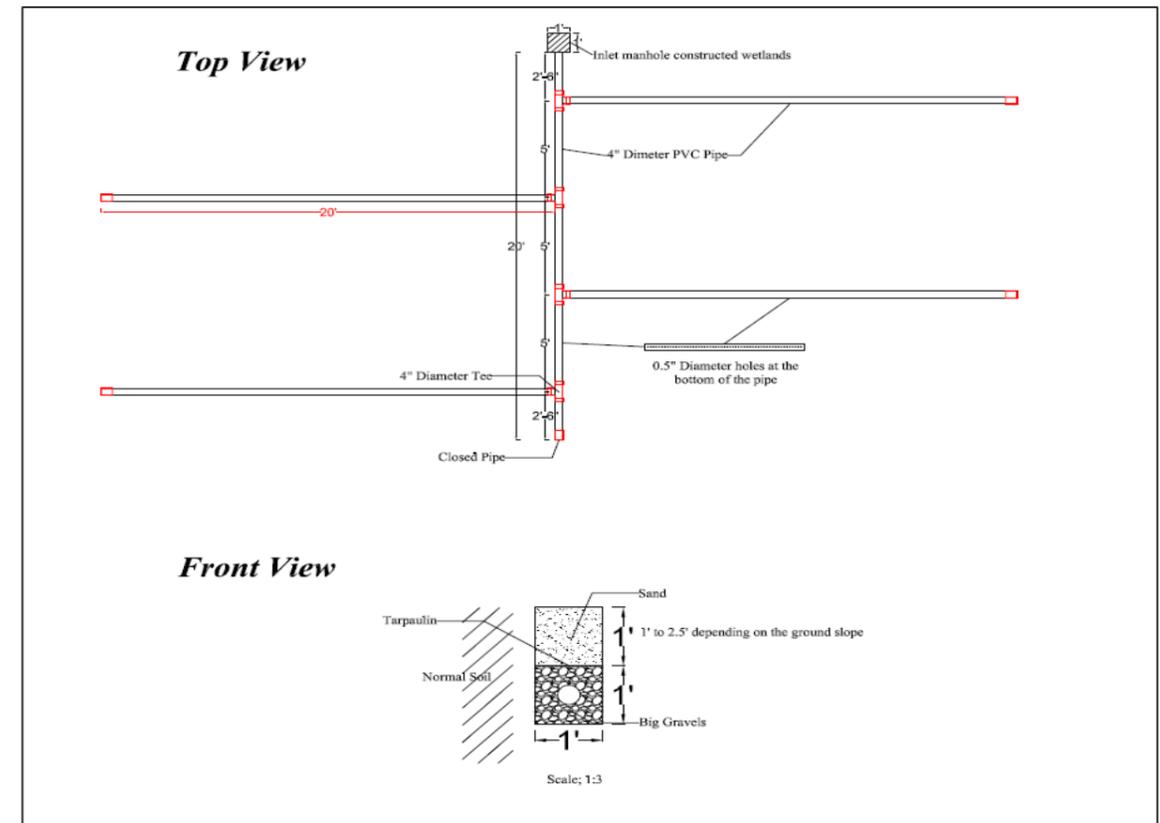


Figure 14: Drawing of the functioning of standard infiltration trenches

This is the third module of the sludge treatment line of the STS. The wastewater infiltrates into the ground through infiltration pipes settled into trenches filled with gravel.

5 Operation

5.1 General

Opening hours: 8am-5pm

Lunch break, two shifts: 12am to 1pm, and 1pm to 2pm

Human resources:

One STS agent and nine STS workers: From Monday to Thursday—one agent and nine workers; from Friday to Saturday—one agent and four or five workers.

A sanitation agent replaces the STS agent for his weekly day off.

One sanitation supervisor for supervision of the STS and desludging activities.

Watchmen day and night.

Record keeping:

A logbook used to be kept in the STS to record all maintenance and upgrade works done in the STS.

Weekly operation sheets are filled by the STS officer to record all the operation tasks done in the STS:

| | | OPERATION BOOK - WEEK | | | | | | |
|---|--|--|--|--|--|--|--|--|
| DAILY | Dumping station | Remove the scum accumulated in the tank every morning before the first tractor | | | | | | |
| | HST | Remove the scum before opening the solid outlet | | | | | | |
| | | Number of times the solid outlet was opened | | | | | | |
| | OVI | Height emptied from each HST | | | | | | |
| | | Ensure the mist pipes flow is evenly distributed | | | | | | |
| | Infiltration | Clean the mist pipes | | | | | | |
| | | Alternate the basins opening at 11:30am and 5pm | | | | | | |
| | Drying beds | Clean the distribution channel after the opening of the HST | | | | | | |
| | Sludge storage | The HST was desludged on that number | | | | | | |
| | | Turn the sludge piles to ensure a better drying of all the sludge | | | | | | |
| Jec CV | Ensure the mist pipes flow is evenly distributed | | | | | | | |
| | Clean the mist pipes | | | | | | | |
| WEEKLY | Inspection | Quantity of buckets collected | | | | | | |
| | All STS | Keep the concrete surface and platforms of all modules | | | | | | |
| | | Clean the outside of all the pipes | | | | | | |
| | HST | Clean the floor and tidy the equipment in the office | | | | | | |
| | | Inspect around the treatment modules and remove the plants and roots which might interfere and damage the infrastructure | | | | | | |
| | OVI | Keep the STS clean: waste removing, stock tidying, etc. | | | | | | |
| | | Apply water to the wormery twice a week | | | | | | |
| | Drying beds | Clean up accumulation of sludge on baffles, walls and channels | | | | | | |
| | | Clean the outside of the HST | | | | | | |
| | Jec CV | Clean the inspection site | | | | | | |
| Inspect the surface of the basin to ensure water level is below the surface | | | | | | | | |
| MONTHLY | All STS | Remove the weeds and plant's roots | | | | | | |
| | | Clean the inspection site | | | | | | |
| | HST | Inspect the pipes for any leakage | | | | | | |
| | | Inspect the concrete parts of each treatment module and repair or report any leakages, cracks, settlement of structure, etc. | | | | | | |
| | OVI | Clean the roof steel structures (dumping station and drying beds) | | | | | | |
| | | Keep the STS clean: grass cutting | | | | | | |
| | Drying beds | Add dried sludge to the wormery when the level is less than 6" | | | | | | |
| | | Drain the settled sludge when it has accumulated to the height of 2' in the tank | | | | | | |
| | Sludge storage | Remove the scum when its thickness reaches 2" | | | | | | |
| | | Remove the sludge when the gutter has reached a thickness of 3/2" | | | | | | |
| Infiltration | Remove the sludge accumulated in the ponds when the level reaches 1' | | | | | | | |
| | Remove the solid waste accumulated in the pond | | | | | | | |
| Drying beds | Remove the boards built up at the bottom of the basins | | | | | | | |
| | Top-up the sand layer when 2" are missing from the 14" high sand layer | | | | | | | |
| Sludge storage | The sludge was removed from bed number | | | | | | | |
| | The dried sludge is stored in the unit number | | | | | | | |
| Inspection | The sludge was removed from unit number | | | | | | | |
| | Quantity of ashes given to farmers (50kg rice bags) | | | | | | | |

Figure 15: Logbook in STS

5.2 Operation and maintenance procedures

General

| Time interval | Tasks |
|--------------------|--|
| Weekly operation | <ul style="list-style-type: none"> Sweep the concrete surfaces and platforms of all modules Clean the outside of all the pipes Clean the floor and tidy the equipment in the office Inspect around the treatment modules and remove the plants and roots that might interfere and damage the infrastructure Keep the STS clean: waste removing, stock tidying, etc. Add water to the wormery twice a week |
| Monthly operation | <ul style="list-style-type: none"> Inspect the pipes and repair any leaks Inspect the concrete parts of each treatment module and repair or report any leaks, cracks, settlement of structure, etc. Keep the STS clean: waste removing, grass cutting Clean the roof steel structures (dumping station and drying beds) |
| Routine operation | <ul style="list-style-type: none"> Add dried sludge to the wormery when the level is less than 6" |
| Annual maintenance | <ul style="list-style-type: none"> Clean the external walls and slab of the modules either with a high pressure hose or with a brush and water Control the corrosion on the metal parts: scrap rust, paint metal surfaces, repair corroded concrete reinforcement Apply one coat of water paint and two coats of quality gloss paint on the metal parts to avoid corrosion Apply a coat of paint on the external PVC pipes to protect them from weathering |

5.2.1 Dumping station

The tractors climb up the ramp backward and reach the dumping station. The tank is emptied in one of the reception tanks by opening the ball valve (Figure 16). Two tractors can be emptied in parallel in the two reception tanks. The volume of sludge transported is measured in the tank, which is then opened by a gate valve (Figure 16). The volume is recorded in “Monitoring WIDE” report and “Lab analysis”.



Figure 16: Emptying of tractors in the Dumping Station & Emptying of the reception tanks

Operation and maintenance procedures

| Time interval | Tasks |
|-------------------|---|
| Daily operation | <ul style="list-style-type: none"> Remove the scum accumulated in the tank every morning before the first tractor |
| Routine operation | <ul style="list-style-type: none"> Clean the screen grids from all solids accumulated: sludge is disposed of in the drying beds, solid waste is incinerated separately from the dried sludge Drain settled sludge when it has accumulated to the height of 1' in the tank |

Troubleshooting

| Problems | Solutions |
|-------------------------|---|
| Outlet pipes clogged | Open totally the gate valve (11 turns of the handle) Hit inside the pipe with a bamboo stick, through the Y Use the water pump to apply pressurised water |
| Accident with a tractor | Contact the owner to repair the damages caused in the STS |

5.2.2 Hopper Bottom tank



Figure 17: Hopper Bottom Tanks

The two HBT are running in parallel. Only one HBT will be running in case of a problem or maintenance on the other one.

For each HBT, the sludge outlet pipe is opened once a day in the morning, before the first tractor has been emptied in the dumping station. Depending on the expected number of tractors coming to the STS, the sludge outlet pipe is opened again after 15, 30, and 45 tractors have arrived to the STS (see operation and maintenance procedures below).

The scum is removed manually every morning (Figure 18) and disposed of in the drying beds.

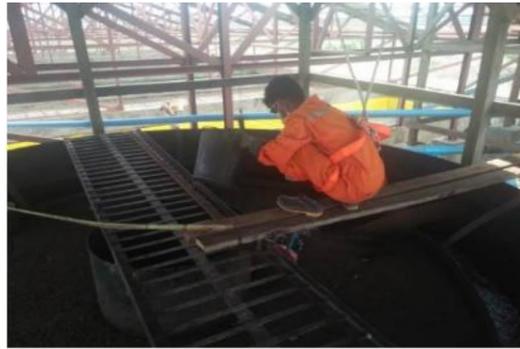


Figure 18: Scum Removal in HBT

Operation and maintenance procedures

| Time interval | Tasks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------|---|--|--|--|----------------------------|---|---|--|--|----------------------------|---|---|---|--|----------------------------|---|---|---|---|--|---------------------|--------------------|---------------------|----|----|
| Daily operation | <ul style="list-style-type: none"> The quantity of sludge to be extracted per day depends on the number of tractors coming to STS: <table border="1"> <thead> <tr> <th></th> <th>Morning extraction</th> <th>Extraction after 15 tractors</th> <th>Extraction after 30 tractors</th> <th>Extraction after 45 tractors</th> </tr> </thead> <tbody> <tr> <td>Less than 20 tractors</td> <td>x</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Between 20 and 35 tractors</td> <td>x</td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>Between 35 and 50 tractors</td> <td>x</td> <td>x</td> <td>x</td> <td></td> </tr> <tr> <td>Between 50 and 65 tractors</td> <td>x</td> <td>x</td> <td>x</td> <td>x</td> </tr> </tbody> </table> <p>The table below gives the level to be drained in each HBT for each extraction, depending on the number of HBTs running.</p> <table border="1"> <thead> <tr> <th></th> <th>1 HBT running alone</th> <th>2 HBTs in parallel</th> </tr> </thead> <tbody> <tr> <td>Level to be drained</td> <td>7"</td> <td>4"</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Close the HBT inlet during the opening phase. Remove the scum every morning before opening the solid outlet and dispose of it in the drying beds Clean the inlet and outlet liquid pipes | | Morning extraction | Extraction after 15 tractors | Extraction after 30 tractors | Extraction after 45 tractors | Less than 20 tractors | x | | | | Between 20 and 35 tractors | x | x | | | Between 35 and 50 tractors | x | x | x | | Between 50 and 65 tractors | x | x | x | x | | 1 HBT running alone | 2 HBTs in parallel | Level to be drained | 7" | 4" |
| | Morning extraction | Extraction after 15 tractors | Extraction after 30 tractors | Extraction after 45 tractors | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Less than 20 tractors | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Between 20 and 35 tractors | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Between 35 and 50 tractors | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Between 50 and 65 tractors | x | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 HBT running alone | 2 HBTs in parallel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Level to be drained | 7" | 4" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weekly operation | <ul style="list-style-type: none"> Clean up internal build-up of sludge on baffles, walls, and channels Clean the outside of the HBT Ensure the inlet flows are equal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|-----------------------|---|
| Bi-annual maintenance | <ul style="list-style-type: none"> Empty totally both HBTs Every year, paint inside the HBT with anti-corrosive paint |
|-----------------------|---|

Troubleshooting

| Problems | Solutions |
|---|---|
| It is not possible to remove the scum in the inlet cylinder box: it is not accessible because of the bridge | Not an issue. It is automatically partially removed when desludging |
| The solid outlet HBT pipe has no flow coming because of pipe or valve blockage | Remove and clean the valve/pipe |
| The inlet flow is not equal in HBT1 and HBT2 | Adjust the gate valve opening by turning it |

5.2.3 Anaerobic Baffled Reactor



Figure 19: Anaerobic Baffled Reactor

The liquid waste comes out of the HBT in discontinuous flow.

Operation and maintenance procedures

| Time interval | Tasks |
|-------------------|---|
| Routine operation | <ul style="list-style-type: none"> Remove the scum when its thickness reaches 2" Remove the sludge when the layer has reached a thickness of 3'6": remove all the sludge in chambers 1 and 2 (inspection twice a week), leave a minimum of 1'8" layer of sludge in chambers 3 to 10 (monthly inspection), and 1' in the other chambers without gravel |

| | |
|---------------------------|---|
| | <ul style="list-style-type: none"> Remove the sludge when water passes through the by-pass (upward) |
| Bi annual maintenance | <ul style="list-style-type: none"> Remove the sludge in the chambers with gravel |
| Every 5 years maintenance | <ul style="list-style-type: none"> Wash the filter media in the chambers with gravel (See ABR cleaning SOPs) |

Troubleshooting

| Problems | Solutions |
|----------------------------------|--|
| Leak from the outlet pipe | Change the pipe or remake the glue connection |
| Pipes inside the ABR get clogged | Hit the inside of the pipe with a bamboo stick |

5.2.4 Constructed wetlands 1



Figure 20: Constructed wetlands (The two beds run in parallel)

Operation and maintenance procedures

| Time interval | Tasks |
|------------------|--|
| Daily operation | <ul style="list-style-type: none"> Ensure the inlet pipes flow is evenly distributed Clean the inlet pipes |
| Weekly operation | <ul style="list-style-type: none"> Clean the inspection pits |

| | |
|---------------------------|---|
| Routine operation | <ul style="list-style-type: none"> Remove the solid sludge on the surface when the flow is making a drainage |
| Every 5 years maintenance | <ul style="list-style-type: none"> Replace or wash the filter media when it is clogged or when efficiency is reduced (See CW cleaning and planting SOPs) |

Troubleshooting

| Problems | Solutions |
|--|--|
| Surface sludge | The hard part is removed by hand, the liquid part is removed by motor pump into the maturation ponds |
| Concrete walls leak | Plaster the leaks |
| Outlet pipe clogged | Use the water pump to put pressurised waste from the stabilization pond |
| Uneven distribution of the inlet pipes | Improve the levelling of the distribution pipes with the level measurement tool |

5.2.5 Maturation ponds



Figure 21: Maturation Ponds

The two ponds are used in series. The quantity of sludge inside the ponds can be measured with the sludge measuring tool and the boat.



Figure 22: Measuring the quantity of sludge accumulated

Operation and maintenance procedures

| Time interval | Tasks |
|---------------|--|
| Routine | <ul style="list-style-type: none"> Remove the sludge accumulated in the ponds when the level reaches 1' (See Maturation pond desludging SOPs) Remove the solid waste accumulated in the pond |

Troubleshooting

| Problems | Solutions |
|---------------------|-------------------|
| Concrete walls leak | Plaster the leaks |

5.2.6 Infiltration basins

The two basins are used alternately.

Operation and maintenance procedures

| Time interval | Tasks |
|---------------|--|
| Daily | <ul style="list-style-type: none"> Alternate the basins opening at 12:30pm and 5pm |
| Routine | <ul style="list-style-type: none"> Remove the solids built up at the bottom of the basins |

Troubleshooting

| Problems | Solutions |
|-------------|---|
| Overflowing | If it is the rainy season, cover the basins with tarpaulin. |



Figure 23: Infiltration basins (Full)

5.2.7 Drying beds



Figure 24: Unplanted Drying Beds

The beds are alternately receiving sludge from the HBT (or from other desludging operations in the STS). The sludge goes through an open channel to the drying beds.

One bed is filled for around 5 days and then is left to dry for around 3.5 weeks (one drying cycle). The dry sludge is then manually removed by four or five workers (Figure 25), and transported to the drying area with open buckets and pushcarts (Figure 25). The leachate is collected at the bottom of the beds and diverted to the secondary constructed wetland.



Figure 25: Workers removing and transporting dry sludge to storage

Operation and maintenance procedures

| Time interval | Tasks |
|-----------------------|---|
| Daily operation | <ul style="list-style-type: none"> • Clean the distribution channel after the opening of the HBTs |
| Weekly operation | <ul style="list-style-type: none"> • Remove the weeds and plant roots |
| Routine operation | <ul style="list-style-type: none"> • Select an empty bed and fill it for several consecutive days until its level reaches 8". • When the sludge is dry enough to be removed (maximum 4 weeks), remove it manually without removing sand. Report any damage/holes on the tarpaulin. • The rotation of sludge drying beds have to be managed in order to always have a bed available before the previous bed filling phase is finished. • Top-up the sand layer when 2" are missing from the 14" high sand layer. The fresh water sand has to be previously cleaned with clean water. |
| Bi annual maintenance | <ul style="list-style-type: none"> • Remove the roof after the rainy season, and put it back before the first rain |
| 5 years maintenance | <ul style="list-style-type: none"> • Replace or wash the filter media when it is clogged or when efficiency is reduced (See Drying beds cleaning SOPs). • Patch the holes in the Drying Beds (tarpaulin) or change it if needed. Make sure the tarpaulins are correctly fixed to the walls. |

Troubleshooting

| Problems | Solutions |
|----------|-----------|
| | |

| | |
|-------------------------------|---|
| Workers are bitten by insects | Properly wear PPE Engine oil on gloves and boots (less insects but the workers are still being bitten. Mosquito repellent and using rakes didn't work) |
|-------------------------------|---|

5.2.8 Secondary constructed wetland



Figure 26: Secondary Constructed Wetland

Operation and maintenance procedures

| Time interval | Tasks |
|---------------------------|--|
| Daily operation | <ul style="list-style-type: none"> • Ensure the inlet pipes flow is evenly distributed • Clean the inlet pipes |
| Weekly operation | <ul style="list-style-type: none"> • Clean the inspection pits • Inspect the surface of the basin to ensure water level is below the surface (no saturation) |
| Every 5 years maintenance | <ul style="list-style-type: none"> • Replace or wash the filter media when it is clogged or when efficiency is reduced (See CW cleaning and planting SOPs) |

Troubleshooting

| Problems | Solutions |
|----------|-----------|
| | |

| | |
|---------------------------------------|---|
| Surface sludge | The hard part is removed by hand, the liquid part is removed by motor pump |
| Uneven distribution of the inlet pipe | Improve the levelling of the distribution pipes with the level measurement tool |

5.2.9 Infiltration trenches

No operation or maintenance performed.

Troubleshooting

| Problems | Solutions |
|-------------|--|
| Overflowing | Inspect the trenches (pipes, tarpaulin, media) and rehabilitate if necessary |

5.2.10 Dried sludge storage



Figure 27: Dried Sludge Storage Units

The dried sludge from the drying beds is stored to dry further until it can be incinerated. One unit can store dried sludge from 1 to 2 drying beds.

Operation and maintenance procedures

| Time interval | Tasks |
|-------------------|---|
| Daily operation | • Turn the sludge piles to ensure better drying of all the sludge |
| Routine operation | • Select an empty storage unit and fill it for several consecutive days until it is full. |

5.2.11 Incineration



Figure 28: Incinerator

The ashes from the incineration of the sludge are stored nearby; they are meant to be given to the farmers but they don't accept it.

Operation and maintenance procedures

| Time interval | Tasks |
|-------------------|---|
| Routine operation | • The fire is started with broken tires, rubber, and pieces of wood. • Incineration: |

| | |
|--|--|
| | <p>Fill the incinerator with the oldest dried sludge, for a quantity of about 40 buckets per day, 6 days/week. Remove the ashes and clean the incinerator after each operation. Store the ashes in the storage unit dedicated to it.</p> <p>• The rotation of storage units has to be managed in order to always have a unit available before the previous unit filling phase is finished.</p> |
|--|--|

6 Monitoring plan

All the information is recorded through Survey CTO and is gathered in the document Analyses STS.

6.1 Analysis planning

| | TS (g/l) | TSS (mg/l) | COD (mg/l) | NH4 (mg/l) | NO3 (mg/l) | P (mg/l) | E. Coli (nb/ml) |
|---|--------------------------------|------------|------------|------------|------------|----------|-----------------|
| Inlet HBT | 3/week | | 1/week | | | | |
| Outlet liquid HBT | 3/week | | 1/week | 1/week | 1/week | 2/month | |
| Outlet solid HBT (morning, 15, 30 tractors) | 3/week | | | | | | |
| Outlet ABR | 2/month | | 2/month | 2/month | 2/month | | |
| Inlet maturation ponds | | 2/month | 2/month | 2/month | 2/month | | |
| Outlet STS | | 1/week | | | | | 2/month |
| Outlet STS filtered | | | 1/week | 1/week | 1/week | 2/month | |
| Inlet secondary constructed wetland | | 2/month | 2/month | 2/month | 2/month | | |
| Outlet secondary constructed wetland | | 1/week | 1/week | 1/week | 1/week | 2/month | 2/month |
| Dried sludge from drying beds | When removed from a drying bed | | | | | | |

| | | | | | | | |
|--|---|--|--|--|--|--|--|
| Dried sludge from storage (for Incineration) | 1/week | | | | | | |
| ABR sludge | When the first and second chambers of the ABR are desludged | | | | | | |

6.2 Sampling instructions

| Collection point | Instructions |
|--------------------------------|--|
| HBT inlet | Take the sample from the HBT 1, when a tractor is emptying the barrels (starting from the second tractor of the day). Let the volume trapped in the Y pipe be drained first. |
| HBT outlet liquid | Take the sample from the HBT 1 after 1pm. Let the volume trapped in the Y pipe be drained first. |
| HBT outlet solid | Take the sample from the HBT 1 during the desludging phase of the HBT. Let the volume trapped in the pipe be drained first. |
| Outlet ABR | Anytime, when there is flow. |
| Inlet maturation pond | Anytime, when there is flow. |
| STS outlet | Anytime, when there is flow. |
| STS outlet FILTERED | Anytime, when there is flow. |
| Inlet wetland II | Take the sample after 1 pm. |
| Outlet wetland II | Anytime, when there is flow. Remove the water from the pit before taking the sample. |
| Dried sludge from drying beds | When the dried sludge is removed from a drying bed. |
| Dried sludge from storage unit | Take a sample from one of the buckets incinerated. |
| ABR sludge | At the outlet of the pump. |

E.Coli: Fill half of a one-liter sample and send it to Oxfam lab before 1pm the same day. Label the bottles with the location where the sample was collected, the date, and time.

6.3 Other data monitored

Every day:

- Tractor number
- Tractor arrival time
- Camp name
- Organization
- Volume of sludge transported
- The HBT was desludged to the bed number
- Level of sludge in the six beds: report the level of the sludge reached on the wooden measurement tool.
- Daily sum of total sludge discharged at the STS (see Analysis Lab report)

Once a week:

- Sludge quantity in the first two chambers of the ABR: to measure with the sludge measurement tool.

Once a month:

- Sludge quantity in all chambers of the ABR: to measure with the sludge measurement tool.

When necessary:

- In which bed sludge is removed
- At which incinerator chamber sludge is stored
- In general, the approximate volume of sludge (Barrel quantity for instance) which is being removed either from ABR, Maturation Pond...in order to check the volume of sludge that should be removed from HBT.

For each Sludge Drying Bed:

- The quantity/quality of sludge at the beginning and at the end of each cycle for each drying bed and duration of this cycle (see drying cycles of drying beds report).

The farmer's information is recorded and kept at the STS when ashes are taken:

STS Dry Sludge Distribution Follow Up



| Date | Name of the Farmer | Camp/ Village | Which kind of Agriculture | Quantity of Dry Sludge | Signature |
|--------|--------------------|---------------|---------------------------|------------------------|-----------|
| ရက်စွဲ | လယ်မား အမည် | စခန်း/ ရွာ | စိုက်ပျိုးရေး အမျိုးအစား | မစင်္ကြံချာကု ပမာဏ | လက်မှတ် |
| | | | | | |
| | | | | | |

- 15) A shower with soap must be taken and clothes must be changed before leaving work - before lunch and at the end of the day
- 16) The safety harness has to be worn when operating on Hopper Bottom Tanks
- 17) The mask with particle filter has to be used during the incineration process
- 18) The STS workers shouldn't enter the incinerator when starting the fire

7 Health and Safety

7.1 Health and safety measures

- 1) Wearing boots, gloves, glasses, boiler suits and masks is mandatory during work activities at the STS
- 2) The STS officer should report any damaged equipment and ensure its replacement
- 3) Wounds should be covered with clean, dry, waterproof bandages
- 4) Boots, gloves, and glasses have to be cleaned with chlorine after the end of the working day
- 5) Boiler suits should be soaked for 10 minutes in chlorine solution, before being washed with water and laundry soap, once a week
- 6) Masks have to be thrown away after one week of use
- 7) All protective equipment has to be properly dried and stored in the shower house
- 8) It is forbidden to wear the protective equipment outside the work environment
- 9) It is forbidden to smoke, chew betel, tobacco, or gum during working time
- 10) Eating on the dumping station is forbidden
- 11) The gloves should be cleaned with chlorine and water between tractors
- 12) In case of contact with sludge, the skin should be washed thoroughly with soap and water, and the eyes flushed thoroughly
- 13) In case of getting sprayed or soaked down with sludge, the clothes have to be changed and the skin cleaned with soap and water – a shower should be taken if necessary
- 14) The hands should be thoroughly washed with soap and water after removing the PPE, and before eating, drinking and smoking

7.2 Security measures

- 1) Only the following employees are **authorized to enter the STS office**:
 - a. SI agents
 - b. SI officers
 - c. SI supervisors
 - d. SI activity managers
 - e. SI managers
 - f. SI field coordinator
 - g. SI human resources and finance department employees

- 2) The following persons are **not authorized to enter the office**, unless expressly asked by a manager, and always in the presence of the person in charge of the office at the moment:
 - a. SI STS workers
 - b. SI watchman
 - c. SI daily workers
 - d. Employees from other organizations
 - e. Visitors

- 3) The STS office has to be systematically locked (doors and windows) when the STS agent (or sanitation agent in case of absence of the STS agent) leaves the office.

- 4) The STS officer is responsible for the office key management and has to inform his line manager in case of any issue.
- 5) Any employee who witnesses a breaking of the rules has to inform one of SI managers directly.

In case of non-respect of these rules, disciplinary measures will be taken.

Action from Community Engagement (ACE)

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Introduction

A major focus of the HARP WASH programme in Sittwe is to transition to community-led WASH service provision through effective two-way communication, community engagement, and community mobilisation. Although the project aims to mainstream community engagement concepts and principles throughout all project activities, it also includes “standalone community engagement” activities. These activities are being implemented under the project name of “Action from Community Engagement (ACE)”.

The ACE process uses tried and tested tools with small groups, who identify and break down major issues and then design and implement a campaign to tackle the identified WASH issue. The objectives of ACE are to build trust and teamwork, actively listen, increase problem solving skills, increase sense of community and ownership, foster two-way communication, and engage women, men, girls and boys, including elderly and people living with disabilities in the creation of WASH campaigns. The end goal of each ACE process is a campaign led by the ACE group to solve a WASH issue identified by the group.

Activities

The activities in ACE are designed to be completed by the same group in the order specified because they build upon each other. The first three activities the group does together—Community Mapping, Photovoice, and Problem Tree—are “needs-identification” activities, which help the group explore, prioritize, and break down WASH issues in their community. The second phase of ACE is the “campaign-building” phase and includes Action Plan and Timeline, Budget, and Indicators and Monitoring Plan, activities which help the group plan the campaign to tackle one of the WASH problems identified earlier. Below is the list of activities outlined in this manual. The reporting format is attached in Appendix A: Reporting Format.

Phase I:

- Facilitator Training
- Community Meeting
- Recruitment
- Group Induction Meeting

Phase II:

- Community Mapping
- Photovoice
- Problem Tree
- Action Plan and Timeline
- Budget
- Indicators and Monitoring Plan
- Implementation of Campaign
- Debrief

Activities Step by Step

Facilitator Training

Please note, this guidance document is designed to accompany the ACE facilitator training.

All the activities in the ACE process should be led at the community level, by camp-based staff. Take the time to train at least two male and two female facilitators to lead each ACE group. The training can be done in three sessions:

- Photovoice facilitator training
- Training on needs-identification tools
- Training on campaign-building tools

Photovoice training should be conducted by someone who is trained in and familiar with the tool, and the training requires more time to cover sensitive issues like consent, story-telling, and freedom of expression. The other ACE tools can be taught using the information in this guide by facilitators with experience using the tools who can also share more examples, pictures, and stories from conducting ACE.

Community Meeting

The community meeting is designed to introduce and inform the larger community about the start of the ACE project. The details of each activity do not need to be explained, but it's important to ensure that community leaders are aware of the goals and steps of ACE and know how to contact OXSI if they have any questions.

- Who should join? CMC, religious leaders, shelter leaders, etc.

Content of meeting:

- Introduce yourself
- Explain the purpose of ACE: to engage small groups in a series of activities to identify needs and design and implement a WASH campaign of their choice, through building trust, confidence, and teamwork.
- Explain the steps of ACE: needs-identification activities (community mapping, photovoice, problem tree), campaign-building activities (action plan and timeline, budget, monitoring and evaluation plan, indicators), and finally campaign implementation by the ACE group.
- Encourage the leaders to spread the word about ACE to people who may be interested to join. ACE is not meant for people in positions of power, because their presence may jeopardize the involvement and comfort of other participants; however, they can spread the word to others to join the induction session to learn more details about the ACE process. Men, women, youth, elderly, and people with disabilities are all encouraged to join ACE, and to join the induction session to learn more details. Give information about when and where the induction session will occur. Emphasise that ACE primarily focuses on WASH issues, but other issues can be explored as well.
- Allow time for people to ask questions and give recommendations, giving the opportunity also to people that usually are not heard in these meetings.
- Thank people for participating, and provide refreshments.

Recruitment

Each ACE group can be comprised of different people – in the past, there have been ACE groups of men from a specific area in one camp, of women of all ages or of younger women, of men and women mixed, etc. It's important for the group of participants to have things in common and to feel comfortable with each other, which is why it's recommended to focus the group recruitment by age, gender, location, etc.

In addition to the community meeting, to recruit participants, reach out through normal channels (through community facilitators during routine hygiene promotion activities, community leaders, CMC meetings, etc.) and invite people to learn more at the group induction meeting.

ACE groups should not be more than 15 people, because it is difficult to facilitate a large group.

Group Induction Meeting

In the induction meeting, the purpose is to provide more detailed information of the entire ACE process for those who may be interested to join. After the meeting, each individual can decide if he/she would like to participate. Participation in ACE is completely voluntary and participants can leave the group at any time. Remind people that this is a longer time commitment than most OXSI activities and that there is no payment involved. Be very clear about the incentives provided.

Incentives

- Incentives are there not to create participation but to reward it. Therefore, incentives are small enough to thank people for their time and not to be the sole reason that people join activities.
- Each individual session: tea/coffee break + snack
- Photovoice: any photographs that individuals would like to keep can be printed and gifted
- After Needs Identification sessions complete (Community Mapping, Photovoice, Problem Tree): small gift
- After Campaign Planning sessions complete (Action Plan and Timeline, Budget, M&E and indicators): small gift

The ACE groups will be made depending on the preferences of the group. For example, they can be sex-segregated or not; mixed ages or split by youth and adults; split by geographical area of the camp, etc. If there are more than 15 people interested and/or if they prefer split groups, more than one ACE group is formed per camp. For the attendees who are interested to join, agree on a date and time for the meetings. The group should try to have one meeting per week (1-2 hours long) but can also meet more frequently if they want.

Community Mapping

Introduction

- Mapping has been historically done by those in power who disregard needs/perspectives of local people.
- Community mapping represents the spatial knowledge of local communities.
- Local inhabitants possess expert knowledge of their local environments.
- Maps created by local communities represent the place in which they live, showing those elements that communities themselves perceive as important.

Objectives

- Produce a map that depicts local knowledge and information.
- Understand which services are accessible to the ACE group and which have been interrupted.
- Identify areas which expose the ACE group (or other community members) to a risk.
- Improve understanding of community dynamics through mapping and discussion of important places, services, and interactions.
- Understand areas and issues that are important to this group of participants.

Steps

The following steps can help the ACE group to create their map:

- The group agrees on symbols which can represent places.
- The group decides on scale—how much of the camp to include in their map. (Create borders first, such as roads, fields)

- The group discusses and draws/writes the places that are important to them. They could include schools, mosques, houses, distribution sites, health clinics and/or pharmacies, traditional healers, markets, etc. *Note: The map doesn't have to be "perfect" in scale or proportion.*
- The group includes WASH facilities or areas that are important to them: latrines, handpumps, open defecation areas, solid waste areas, stagnant pools, drainage channels, etc.
- The group indicates whether each place is accessible and if the facilities are destroyed or functioning.
- *Note: It's not only about mapping what is visible. The group can include potential resources, challenges, safe and unsafe areas, important areas for socializing, etc.*
- The group decides where to keep the map and how to best share this information with the wider community, if they want to.

Discussion

The following questions can be asked to facilitate discussion after the mapping is done. Feel free to add or change the questions, and allow the group to share other ideas and thoughts they had during the activity.

- Are there groups of people living in specific locations?
- Discuss any community groups – where do they normally meet? Who are they?
- Are there major gaps in terms of WASH?
- What type of support is needed to address these gaps (eg. latrines, water)?
- What are the challenges that you face to solving the problems by yourselves?
- What types of resources are available in the community (eg. skills, knowledge, material, time, motivation) to fix these problems?

Notes for facilitator

- Make sure that everyone in the group has a chance to contribute to this activity. Some places may be important or accessible to some participants and not to others, which is natural. Every participant's experience can be mapped on the same map.
- After the map is finished, ask the ACE group to agree on a title for the map and write it at the top, and write the date on the bottom or back of the map.
- Hang up the map and take a picture together with participants, if permission is granted.

Photovoice

Note: The photovoice activity requires more than one session, typically three. A separate training for the facilitators of photovoice needs to be conducted prior to beginning this activity; the below guidelines are just instructions for guidance during the sessions.

Introduction

- Photovoice is a method that allows people to represent their community and life through photography.
- Photography is a flexible tool that crosses cultural and linguistic barriers.
- Photos describe realities, communicate perspectives, and raise awareness of issues that may not be easily communicated otherwise.
- In the ACE process, photovoice is used as a visual aid to help participants identify and discuss the issues they see, and to prioritize one issue to work on in their campaign.

Objectives:

- Learn photography skills

- Tell stories and share ideas
- Visualise needs and prioritise issues

Session 1

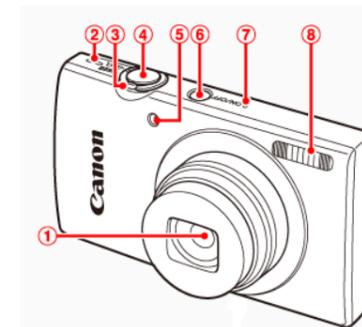
Steps for facilitator:

- Explain the purpose of the activity
- Ask if everyone wants to participate; explain consent form
- Give each person who wants to participate a camera
- Explain how to use the cameras and allow everyone to practice
- Explain important instructions for using cameras in the camp (see below)
- Explain the theme: take pictures of what best represents *attitudes and practices around water and sanitation that influence health in the community*
- Explain when to return the cameras
- Explain the next session

How to use the camera

Guide the ACE group to practice the following:

- How to turn the camera on/off
- How to zoom in/out
- How to focus
- How to take a picture
- How to see the gallery
- How to delete a picture



1. Lens
2. Speaker
3. Zoom lever
4. Shutter button (to take picture)
5. Lamp
6. Power button
7. Microphone
8. Flash

Important instructions

Make sure the group understands these important instructions for taking pictures in the camps:

- Be discreet taking pictures
- Don't take pictures of policemen, checkpoints, or sensitive areas
- If someone asks you about the camera, explain that you are photographing WASH needs in the camp
- Ask permission to photograph someone
- Do not take pictures of small children who cannot consent
- Do not give the camera to anyone else; you are responsible for returning it
- Take a lot of pictures!

Notes for facilitator:

- Have people sign out the cameras with signature or fingerprint.
- People can return cameras every evening to the office if they don't want to be responsible for them overnight.

Session 2

Preparation

Before session 2, the facilitator needs to transfer the photographs from each camera to a laptop. Create a folder for each participant and move all their photographs there. Delete the photographs from the camera SD card.

Resources needed for Session 2:

- People: 1-2 facilitators, 2-3 assistants, 1 note taker
- Papers and pens
- Four laptops

Steps

- Split the ACE group and facilitators into four groups: 2-4 participants, 1 facilitator or assistant, and 1 laptop per group.
- Each participant looks at his/her photos on the laptop.
- Each participant chooses 2-3 photos that best represent his/her views on the theme (attitudes and practices around water and sanitation that influence health in the community)
- Each participant adds a "photostory" for ONE of his/her pictures. The assistant can write it for them if needed.
 - Ask the participant to think about the following questions to help write:
 - What do you see happening here? (Describe)
 - What is actually happening here? (What is the unseen story behind the picture?)
- *Note: writing a photostory may require a separate session if participants took many pictures and choosing pictures takes an entire session.*
- The facilitator should ask each participant if they are okay with sharing the 2-3 pictures they chose and their photostory.
- Have ALL participants sign the consent form (Appendix B: Photovoice Consent Form). The consent form allows each participant to choose with whom each of their photos and photostories is shared with. Even if they don't want to share their pictures, they should indicate this in the consent form.

Notes for facilitators and assistants:

- Help participants who are not able or comfortable to write a photostory. They can also record a photostory on a phone to ensure it is transcribed correctly.
- If helping a participant, make sure you read what you have written down back to them and that they agree with the way you have written down the photostory.

Session 3

Preparation:

- For those who have given consent, print the photos in Sittwe office (by Sittwe staff)

Sharing Photos & Discussion

Each participant who wants to can share his/her pictures with the other ACE group members and OXSI facilitators.

Below are some discussion questions to ask the group after the sharing. This discussion is geared toward helping the group prioritise the issues they saw in the pictures and to reach consensus on one issue they would like to work on as a group.

- What are your reactions to the pictures that people shared?
- What issues/ideas do you see in the most pictures? Make a list.
- Prioritise the problems in the list, starting with the one that you feel is most important to you and the one that you most want to work on together.

Explain that the most important issue identified is the one the group will focus on for the next activity, the Problem Tree, and make sure everyone agrees.

Problem Tree

Introduction

- Big problems are difficult to tackle because they often have several root causes.
- The Problem Tree activity helps to break down and see the causes and consequences of one big problem.
- After this activity, the group can focus their campaign on one of the causes of the problem where they have influence.

Objectives

- See all the causes of the problem
- Identify which causes you (the ACE group) can overcome, and which ones are out of your control
- See all the effects of a problem
- Come to an agreement about which cause you as a group want to work on

Steps

The following steps will help the ACE group create their Problem Tree:

- The group draws a large tree and writes/draws the chosen problem on the trunk.
- The group identifies all the main causes of the problem, and writes/draws these along large roots of the tree, indicating that they are 'root' problems.
- The group selects one of the main causes and asks, 'Why does this happen?' This question will help identify the 'secondary' causes. The group draws or writes the 'secondary' causes as small roots coming off the larger root of the tree. Repeat this process for each of the other main causes.
- The group identifies the main effects of the problem, and writes/draws each effect as a large branch of the tree.
- The group selects one of the main effects and asks, 'Why does this happen?' to identify the 'secondary' effects. The group writes/draws the 'secondary' effects as small branches coming off the larger branch of the tree. Repeat this process for the other main effects.

Discussion

Ask the group the below questions to facilitate discussion and to reach consensus on their WASH campaign.

- Did you learn a cause or effect of this problem that you had not considered before?
- Does this exercise help you think about possible solutions to this problem?

- Look at the main roots of the problem. Which ones are you able to control and influence? Which roots do you need support with addressing?
- With the root(s) that you can control, what are the steps needed to solve the issue? These steps will help you in the next activity, the Action Plan.

Notes for facilitator:

The group can repeat the Problem Tree activity for another problem if they would like to explore other campaign ideas. Sometimes a group will do this if they feel they don't have enough control over any of the causes identified by the Problem Tree, or if they are not interested or excited about creating a campaign focused on one of the causes.

Action Plan & Timeline

Introduction

- Now that the group has chosen the issue they want to work on and identified a cause of the issue where they have some influence, it's time to plan their WASH campaign to work on the issue, starting with an action plan and timeline.
- An action plan provides a detailed outline of the tasks required to accomplish the goal.
- The timeline puts in place deadlines to accomplish each of the steps in the action plan.
- The action plan and timeline can be written down or agreed on verbally. The facilitator can help to take notes to remind each participant about their agreed-on tasks.

Steps

- Start from the end: What is your goal? (Make it specific)
- The group lists the action steps needed to reach the goal.
- The group chooses action steps that are concrete, measurable, and attainable.
- The group should include the step of informing community leaders and getting permission to carry out the campaign.
- The group identifies who is responsible for each action step and who will be supporting them.
- The group provides a clear schedule for completing action steps (start and end dates).
- The group lists the resources necessary for accomplishing action steps (tools, support, time, skills).

Budget

Introduction

- The budget must be created to purchase anything needed for the campaign.
- If the group is constructing something for their campaign, get the support of the construction technical staff for this activity.
- Labour costs can be included in the budget if specialists are needed (eg. technical supervision) but for unskilled labour tasks, encourage ACE members to contribute and to get volunteers from the community to help as well.
- The budget made by the ACE group is not final; it will need to be approved by managers and may be altered.
- This is an activity that requires writing; if needed, the OXSI facilitator should help the ACE group to write down their budget in order to get it approved. As the facilitator, make sure to read back the budget items and check for approval from the group frequently.

Steps

If the group needs help to make a budget, provide a template and go through the following steps:

- Make a table with 5 columns: "Item", "Quantity", "Unit", "Unit Price", and "Total Price" (see example below).
- The group creates a list of materials needed for the campaign in the "Item" column, and indicates the number of each item needed in the "Quantity" column.
- In the "Unit" column, the group decides how to count each item. For example, for cement you could write "bag", and for a broom, "piece" or "each".
- With the help of the technical staff if needed, the group finds out the unit price for each item and writes it in the "Unit Price" column.
- The group multiplies the "Unit Price" by the "Quantity" column and writes the result in the "Total Price" column.
- The group submits the budget to the manager to check and order the items.

Example budget line:

| Item | Quantity | Unit | Unit Price MMK | Total Price MMK |
|----------------|----------|-------|-------------------|--------------------|
| Packaged snack | 75 | Piece | 100 | 7,500 |

Indicators & Monitoring Plan

Introduction

- Indicators are clues, signs, or markers that show how close a program is to its desired path and outcome.
- Indicators are developed by the group to measure the process or impact of their campaign; therefore, they are specific to each campaign.
- The group decides when and how to monitor their indicators.
- The indicators need to be shared to OXSI managers, but will not be checked by OXSI; it is up to the group to monitor them.

Steps

- Discuss as a group – in the future, how will you know if you made progress or if your campaign improved the problem you were trying to solve?
- The group agrees on 2-3 indicators, things they will measure to assess their progress.
- The group agrees on how often to measure/monitor the indicators (This can change over time – for example, once a week for 3 months, then once a month after that).
- The group agrees on who will measure it (eg. specific individuals or the whole group) and how the information will be shared among the group.

Implementation of Campaign

Once the group has completed their action plan and timeline, budget, indicators, and monitoring plan, they are ready to start their campaign. Each campaign is different and may require different levels of support from facilitators, logistics, the larger community, and technical staff. Encourage the group to meet during and after the campaign to check in and get support if needed.

Debrief

Introduction

After the campaign is over, arrange one more meeting to have a conversation with the group about the entire experience. The objective of the debrief is to share experiences and get feedback.

Discussion

First, give a refresher of the activities that were accomplished together. Explain that this meeting is for having an informal conversation about what the participants learned and how ACE can be improved next time. Ask people to be honest and open about their feedback.

Some questions to ask may include:

- How was your experience with the ACE activities?
- Did you feel that the ACE activities were different than other Oxfam/SI activities? If yes, how?
- What did you like? What did you dislike?
- Did you achieve what you wanted to in your campaign? (Discuss indicators of success for each campaign)
- What did you learn through participating in ACE?
- Would you be interested in continuing to meet as a group to discuss other issues with each other and OXSI?

After the discussion, distribute the gifts and the ACE certificates (Appendix C: ACE Completion Certificate), and thank people for participating!

Appendix

Appendix A: Reporting Format

Appendix B: Photovoice Consent Form

Appendix C: ACE Completion Certificate



Action from Community Engagement (ACE) Report Template

Camp Name:

Name of group:

Community Meeting

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Introduce yourself
- Explain the purpose of ACE
- Explain the steps of ACE
- Allow time for people to ask questions and give recommendations

Notes from discussion:

Feedback/lessons learned:

Photo of session (optional):



Group Induction Meeting

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Give an overview of the entire ACE process
- Decide on specific days and times for activities each week
- Explain about incentives:
 - Each individual session: tea/coffee break + snack
 - Photovoice: any photographs that individuals would like to keep can be printed and gifted
 - After Needs Identification sessions complete (Community Mapping, Photovoice, Problem Tree): small gift
 - After Campaign Planning sessions complete (Action Plan and Timeline, Budget, M&E and indicators): small gift

Notes from discussion:

Feedback/lessons learned:

Photo of session (optional):



Community Mapping

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Produce a map that depicts local knowledge and information.
- Understand which services are accessible to the ACE group and which have been interrupted.
- Identify areas which expose the ACE group (or other community members) to a risk.
- Improve understanding of community dynamics through mapping and discussion of important places, services, and interactions.
- Understand areas and issues that are important to this group of participants.

Notes from discussion:

Feedback/lessons learned:

Photo of map:



Photovoice (session I)

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Explain the purpose of the activity
- Ask if everyone wants to participate; explain consent form
- Give each person who wants to participate a camera
- Explain how to use the cameras and allow everyone to practice
- Explain important instructions for using cameras in the camp (see below)
- Explain the theme: take pictures of what best represents *attitudes and practices around water and sanitation that influence health in the community*
- Explain when to return the cameras
- Explain the next session

Notes from discussion:

Feedback/lessons learned:

Photo of session (optional):



Photovoice (session 2)

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Each participant will look at his/her photos on the laptop and choose 2-3 photos that best represent his/her views on the theme
- Each participant will create a “photostory” for ONE of his/her pictures.
- *Note: writing a photostory may require a separate session if participants took many pictures and choosing pictures takes an entire session.*
- ALL participants will sign the consent form. Even if they don’t want to share their pictures, they should indicate this in the consent form.

Notes from discussion:

Feedback/lessons learned:

Photo of session (optional):

Attach consent forms

Photovoice (session 3)

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Each participant who wants to can share his/her pictures with the group.
- Discuss what issues/ideas you see in the most pictures, make a list.
- Prioritize the problems, starting with the one that is most important and the one that the group most wants to work on together.

Notes from discussion:

Feedback/lessons learned:

Photo of session (optional):

Attach powerpoint with photos and photostories if participants consented to share



Problem Tree

Date:
Number of participants:
Facilitators:
Participant List (attach or paste):

Objective of meeting:

- Taking the problem selected from the last photovoice session, see all the causes of the problem
- Identify which causes you (the ACE group) can overcome, and which ones are out of your control
- See all the effects of the problem
- Come to an agreement about which cause you as a group want to work on

Notes from discussion:

Feedback/lessons learned:

Photo of problem tree:

Action Plan and Timeline

Date:
Number of participants:
Facilitators:
Participant List (attach or paste):

Objective of meeting:

- Develop an action plan: Main steps needed to achieve your goal
- Develop a timeline: When will you do each of the steps?
- Write down any support needed

Action Plan and Timeline, notes from discussion*

| Action step | Who is responsible | Resources needed | Due Date | Remarks |
|-------------|--------------------|------------------|----------|---------|
| | | | | |

**add more rows or columns as needed*

Feedback/lessons learned:

Photo of session (optional):



Budget

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Create a budget for the campaign, to be submitted for approval

Budget and notes from discussion*

| Item | Unit | Unit cost | Quantity needed | Total cost (Unit cost x Quantity) |
|------|------|-----------|-----------------|-----------------------------------|
| | | | | |

**add more rows or columns as needed*

Feedback/lessons learned:

Photo of session (optional):

Monitoring Plan and Indicators

Date:

Number of participants:

Facilitators:

Participant List (attach or paste):

Objective of meeting:

- Decide how to monitor the success of the campaign (2-3 indicators of success)
- Decide the frequency of monitoring your indicators and for how long (example: once a month for 6 months)
- Decide who will monitor the indicators

Monitoring plan and indicators, notes from discussion*

| Indicator | Frequency of monitoring | Who will measure? |
|-----------|-------------------------|-------------------|
| | | |

**add more rows or columns as needed*

Feedback/lessons learned:

Photo of session (optional):



Debrief after campaign

Date:
 Number of participants:
 Facilitators:
 Participant List (attach or paste):

Objective of meeting:

- Give a refresher of the activities that we accomplished together
- Have an informal conversation about what the participants learned and how we can improve ACE next time. Ask people to be honest and open about their feedback.

Notes from discussion:

Feedback/lessons learned:

Photo of session (optional):

CONSENT FORM

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<Participant Name/Pseudonym>
 အမည်မှန်/ကလောင်အမည်

<Date>
 ရက်စွဲ

Oxfam and Solidarites International
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Action from Community Engagement Project
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- I want my Work to be shown with a nickname:
- ခါတ်ပုံများနှင့် ခါတ်ပုံမှ အခြေခံသော ပုံပြင်များအားအသုံးပြုသောအခါ ကျွန်တော်/မ၏ ကလောင်အမည်ဖြင့်သာ အသုံးပြုစေလိုပါသည်။

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.....

.....

Name:

Witness:

အမည်

သက်သေ

Signed:

Date:

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နေ့စွဲ



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Menstrual Hygiene Management – Guideline

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1. Introduction

1.1 Menstrual Health Matters

Appropriate menstrual hygiene management (MHM) requires women and girls to have access to water and soap, clean material to absorb or collect menstrual blood, privacy to change sanitary cloths or pads, and facilities for safely disposing of used materials or a place to dry them if reusable. Men, women, boys, and girls also need greater awareness of menstrual hygiene to dispel myths and break taboos around menstruation. Although MHM primarily refers to the logistical components of managing menstruation, the issue has numerous medical, educational, economical, and cultural implications.

Gender inequality is one of the main reasons why menstrual hygiene has been neglected. Unequal power relations between men and women result in women's and girls' voices not being heard in decision-making platforms, and have led to restrictive cultural taboos, stigma, and shame around menstruation. Addressing both the practical and strategic needs of women and girls related to menstruation and menstrual hygiene requires comprehensive programmes that target women and girls and men and boys.

1.2 What is the OXSI MHM Project?

To improve MHM in camps, OXSI has two goals that are implemented in parallel:

1. Encourage women in the camp to meet and discuss any issues as a self-help group, led by women trained by OXSI to pass on accurate information about healthy menstrual practices.
2. Provide access to safe and dignified disposal of sanitary pads in a participatory design and implementation process to increase community ownership and applicability.

Although the programme is currently geared toward women and girls to ensure they feel knowledgeable and comfortable to speak openly about MHM, the programme will add on a component to create sessions for men and boys to be trained and to have discussions on MHM, WASH, and gender. Men and boys can contribute significantly towards changing cultural norms and taboos around menstruation and are often involved in decisions relating to women's menstrual hygiene needs. It might be difficult at first to talk with men about MHM due to reluctance, prejudices, myths, and misconceptions surrounding the issue, but through regular meetings and communication, things will change.

2. Guidelines

2.1 MHM peer-to-peer groups

The peer-to-peer awareness raising model is built on the beliefs that people living in camps know their needs and can be agents of change among their peers. The leaders of the groups take the initiative to pass on information to empower others, build relationships, and inspire collective problem-solving and self-reliance. The peer-to-peer model allows communities to learn from their peers in a safe and comfortable environment and allows trainers to reach a huge number of women with awareness sessions.

MHM trainers receive special training to conduct MHM peer-to-peer sessions. The goals of the training are to provide clear information on menstruation; to help women recognize symptoms and learn about ways to alleviate them; to recommend healthy hygiene practices specific to menstruation time; to suggest healthy practices to maintain well-being during menstruation; and to recommend ways to properly dispose of sanitary protection materials. The trainers are also given IEC and other resources to use during their peer-to-peer sessions.

2.1.1 Recruitment of trainers

The trainers who lead MHM groups are volunteers. Recruit trainers by inviting women to an **informational session** to learn more about the program.

Key messages for the informational session:

- OXSI is looking primarily for female volunteers to lead meetings with other women to discuss menstrual hygiene management and other hygiene issues.
- As a leader, you will be trained on important messages on menstrual health by the OXSI team.
- You can organize your own group, in your own time, in any location that is convenient for you.
- You will hold 1-2 small meetings per month with 5-10 participants. The participants do not receive anything from OXSI for attending the meetings, they are voluntary.
- During each group meeting, you can discuss the topics suggested by OXSI, and you can also discuss other topics of interest to you and the group.
- You will give feedback about your sessions to OXSI staff, including the number of sessions and the number of participants. You can also choose to share any issues or concerns that came up during the meetings.
- This is not a paid position.
- OXSI will hold monthly refresher meetings/trainings, where you can learn new information, discuss any issues that came up during your sessions, and receive support from OXSI staff and from other trainers.
- If you're interested, please join the first training (give date and time of training).

2.1.2 Training of trainers

Arrange trainings for leaders to learn about MHM. This can be covered in one full day or split up into several trainings. The training(s) should cover:

1. Overview of OXSI MHM groups (structure, meetings, etc)
2. The basics of menstruation
3. Menstruation and health
4. Menstruation, taboos, and myths, and impact on women and girls
5. Sanitary protection materials and disposal (including a discussion about safe and dignified options for changing and washing)

The powerpoint for the trainers is included in Appendix A. Additional informational handouts prepared by WaterAid are provided in Appendix B. Frequently Asked Questions and answers are provided in Appendix C, and Myths and Facts in Appendix D—both of these can be added to by the facilitators or participants if other questions or myths arise. Some sanitary products and pictures are included in Appendix E. All of this information should be shared with the trainers over time, but not in the first training session, to increase retention of information.

2.1.3 Peer-to-peer MHM sessions

Make sure trainers feel comfortable to carry out sessions after the training. Offer to have OXSI staff accompany new trainers for their first session, if they request additional support. One idea is to have two trainers do their first two or three sessions together, so they can support each other until they feel comfortable leading a session alone.

Guidelines for trainers to conduct peer-to-peer sessions are included in Appendix F, and IEC to accompany the sessions is included in Appendix G.

It's important to emphasize that although the focus is on MHM, other topics can also be discussed during these meetings.

2.1.4 Trainers' monthly meeting/refresher training

Ensure that the women trainers feel supported and encouraged by holding **monthly meetings** in OXSI camp offices. These meetings should be used to share feedback about the sessions, answer any questions, and for the trainers to foster relationships and connections to one another. The monthly meetings can also be used as a chance to conduct refresher trainings when needed. The planning of sessions for the month ahead should also be done during the monthly meetings, with support from OXSI staff.

Some ideas of questions to ask and games to play during these meetings are included in Appendix H.

2.2 Sanitary Pad Disposal Boxes/Incinerators

In parallel with the establishment of MHM peer-to-peer groups, a proper sanitary pad disposal method needs to be developed with participation from women and girls. In the past, women have preferred to bury or burn used sanitary pads, because if they dispose of them with the other solid waste materials, men who work at the incinerators will see their used sanitary products, and this can cause embarrassment or shame. Burying is not a preferred option in the camps due to the high water table, so OXSI is attempting to scale up the small incinerator box design that was piloted in STMG Camp. With this design, small boxes are placed near latrines, and a female environmental cleaner checks the boxes and burns the contents directly inside the incinerator box when it is full. This method has been working well in several camps but needs to be scaled up to all camps. In some locations, women are still either unaware of the MHM incinerator boxes, or do not use them because they are too far from their latrine.

To introduce incinerator MHM boxes in a new camp, it is advised to have MHM group lead the process, either by making decisions between themselves or by opening the conversation with their peer-to-peer groups. A questionnaire (Appendix I) can be used to decide the preferences women and girls have, and several designs from Sittwe camps (Appendix J) suggested for women to choose from (they can also make changes or create an entirely new design).

Appendix 2: Frequently Asked Questions

| Question | Answer |
|---|--|
| What is puberty and adolescence? | <ul style="list-style-type: none"> • Between the ages of 10-14, most girls and boys notice changes in their bodies. • These physical and emotional changes are called 'puberty' or 'adolescence' and take place over several years. • At this age, girls and boys are often called 'adolescents'. |
| What happens to a girl's body when she reaches puberty? | <ul style="list-style-type: none"> • Puberty starts when extra amounts of hormones begin to be produced in the body. These hormones lead to changes in the body. Apart from causing physical changes, they cause emotional changes too. So a growing girl may feel happy one moment, and angry, sad, or confused the next moment. • Puberty is the time when girls begin to produce eggs and boys begin to produce sperm. It is the time when children develop into young women and men, and their bodies start maturing so that one day they can have children and start their own families. However, this does not mean that adolescent girls are ready to have children, because other changes will still be happening in their bodies. If a young woman's body is not ready for childbirth, it can cause many health problems for her and her baby. • A girl's breasts start to grow and her hips get rounder. Hair starts to grow under her arms and between her legs. She starts to menstruate (also known as a monthly period). • Menstruation means that a girl's body is growing up and is preparing for the future when she might want to get pregnant and have a baby. During menstruation, the lining of the uterus comes out along with blood through the vagina. • Hormone changes can also cause an increase in spots and pimples just before or during a girl's monthly period. |
| When does a girl get her first period? | <ul style="list-style-type: none"> • Changes take place in girls and boys at different times. Generally, changes start later for boys than girls. Some people start puberty before the age of 10, sometimes as young as 8, while others start after 17. • For some, changes may take place in a year or less. For others, they can take as long as 6 years. |
| Do boys get periods? | <ul style="list-style-type: none"> • No, boys do not get periods. This is because boys' bodies are different inside to girls', and they cannot become pregnant. |
| What is the monthly cycle? | <ul style="list-style-type: none"> • The monthly cycle from the first day of a girl's menstrual period is usually 28 days (one month) but can vary between 21 to 35 days. • For many years after a girl starts having her period, it is normal to not get it every month. • In the middle of the cycle, one of a girl's ovaries releases an egg – a process called 'ovulation'. The egg moves into the uterus through the fallopian tube. At the same time, body tissues and blood cells |

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| | <p>start lining the walls of the girl's uterus, all of which the girl will not feel happening. If the girl was to have sex at this time, and sperm from the man fertilised the egg, the girl could become pregnant. However, if the egg is not fertilised, the uterus lining gently dissolves and leaves the girl's body through her vagina.</p> |
| How long should a girl's period last? | <ul style="list-style-type: none"> • All girls are different – one girl might have a 3-day period, another might have a period which lasts 7 days. • The length of time might change over the first few months as it takes a while for the body to get used to this change. |
| Can anyone tell when a girl gets her period? | <ul style="list-style-type: none"> • No, not unless she tells someone. When a girl gets her first period, she should tell her mother (or sister or another adult she can trust), so that somebody can answer the questions she may have. |
| How much blood does a girl lose during her period? | <ul style="list-style-type: none"> • Although it may look like a lot of blood, it ranges from only a few teaspoons to a third of a cup of blood each month. |
| What does it mean if a girl misses her period one month? | <ul style="list-style-type: none"> • If a girl who menstruates every month misses a period, and she has had sexual intercourse, it may mean she is pregnant. But girls can also miss periods if they are feeling stressed, if they become too thin or they have been travelling. It is also possible when girls' bodies are developing that their period may not be regular at first and can skip months. |
| Does having a period hurt? | <ul style="list-style-type: none"> • Some girls feel no pain at all when they have their period, some have slight pains below their naval and in their lower back, and some have a lot of pain and may need to take pain relieving medicine. Usually, any pain is not bad and does not last long. Cramps are caused by the muscles of the uterus contracting. It is this contraction that pushes out the lining of the uterus each month. |
| What is PMS? | <ul style="list-style-type: none"> • PMS is short for pre-menstrual syndrome. Not all girls get this, but many do for a few days before they start their period. This is because changes in the levels of hormones in a girl's body can affect her mood or increase her sensitivity to emotions. Some feel sad, while others feel irritable and get angry for no real reason. Some girls' breasts feel swollen and sore. This is natural and should not be a worry. |
| Can I get pregnant during my period? | <ul style="list-style-type: none"> • Yes, you can. Make sure to use protection if having sex. |
| What should I do when I get my first period? | <ul style="list-style-type: none"> • Talk to other girls and women, such as your mother, sister, aunt, grandmother, female friend, or an older woman in your community. • Don't be afraid. It can be scary to see blood, but it is normal and natural. • If you are at school, tell a female teacher or a fellow student. • Feel proud! Your body is developing into that of a young woman. |
| How often should I change my sanitary protection? | <ul style="list-style-type: none"> • It depends on what material you are using and the heaviness of your flow, which can change each day. • Change the cloth, pad, cotton, or tissue every 2-6 hours or more frequently if you feel that the flow is getting heavy. |

| | |
|---|---|
| How should I capture the blood? | <ul style="list-style-type: none"> • Place a cloth, pad, cotton, or tissue on your underwear. • Never insert the material inside your vagina. |
| How should I dispose of sanitary protection material? | <ul style="list-style-type: none"> • If you are re-using a cloth, put it into a plastic bag until you can wash it with hot water and soap and then dry it in the sunshine or iron it. • If you are using a pad, tissue or cotton, or want to dispose of your cloth, wrap it in paper to make a clean package and put it in the bin so it can be burned later. • Do not drop pads or cloth in the latrine pit as this can cause problems with emptying the pit. |
| How should I keep myself clean during my period? | <ul style="list-style-type: none"> • Every day (morning and evening if possible) wash your genitals with soap and water. • Keep unused cloths and pads clean (wrapped in tissue or plastic bag) for future use. • Pat the area dry with a cloth, and put a fresh cloth, pad, cotton, or tissue on your underwear. • If using toilet paper, always wipe from front to back after defecation. |

Appendix 3: Myths and Facts

| Myth | True or False? | Fact |
|---|----------------|--|
| Menstruation is something that should not be talked about | False | Menstruation is normal and a natural part of the reproductive cycle of women and girls. There is no reason to feel shame when talking about menstruation! |
| Menstruating girls and women are unclean because the blood is dirty or rotten | False | Menstrual blood is healthy and clean, and menstruating girls/women can stay clean by maintaining proper hygienic practices and avoiding infections during menstruation. |
| Improper disposal of used sanitary materials make a girl menstruate continuously for life | False | A girl cannot menstruate continuously for life. However, girls should ensure that used sanitary materials are disposed of in a proper and hygienic manner. |
| Disposal of used sanitary materials by burning or burying leads to infertility | False | Disposal of used sanitary materials by burning or burying is safe and hygienic. When burying, make sure sanitary materials are buried deep enough to avoid being dug up by animals and sufficiently far away from water sources. |
| Menstruating girls should not eat certain foods | False | Menstruating girls can eat normally. They should try to get more iron-rich foods such as tofu, lentils, green leafy vegetables, and cashews to replace iron losses due to bleeding. |
| You should not shower, bathe, or wash your hair during menstruation | False | Bathing during your period is necessary. It prevents a girl from infection. There is no reason not to wash your hair during menstruation. |
| A woman or girl should sleep separately during her menstrual period | False | There is no reason why a woman or girl should sleep separately during her menstrual period. |
| A woman or girl should not cook during her menstrual period | False | A woman can continue to cook during her menstrual period, as well as do all other normal activities. She should ensure good personal hygiene as usual. |
| Starting menstruation means you are ready to marry | False | Menstruation is an important stage in a girl's maturation, but it does not mean a girl is ready for marriage. |
| A woman or girl should not look at her reflection during menstruation | False | There is no reason why a woman or girl should not look at her reflection during menstruation. |
| A girl can get pregnant by sitting next to a boy or by a boy touching her longyi | False | Pregnancy happens when a man's sperm fertilizes a woman's egg, which most commonly happens during sexual intercourse. A girl cannot get pregnant just from sitting next to a boy or by a boy touching her longyi. |
| If a menstruating girl touches a certain plant, it will die | False | There is no reason for any plants to die just from being touched by a menstruating girl. |
| Menstruation is a kind of illness | False | Menstruation is completely natural and is NOT an illness. |

| | | |
|--|-------|--|
| An evil spirit causes the symptoms that women and girls experience during menstruation | False | Symptoms are caused by hormonal changes and other changes in the body that happen right before and during menstruation. |
| All women and girls should have the same symptoms | False | Many women and girls experience different symptoms during menstruation. |
| If a boy or man sees blood on a used sanitary pad, something bad will happen to him | False | Nothing bad will happen just because a boy/man sees a used sanitary pad, and nothing bad will happen to the girl/woman who the pad belongs to. |

Appendix 4: Some examples of sanitary products

| | |
|--|--|
| <p>Strips of cloth, tissues, towels</p>  | <p>Strips of cloth and other locally available materials are often used as sanitary protection. They are re-usable but need to be cleaned and dried well (preferably in the sun) to ensure they remain hygienic. Tissues are also sometimes used but fall apart when wet and are difficult to hold in place.</p> |
| <p>Disposable sanitary pads</p>  | <p>There is a wide range of commercially-available disposable sanitary pads, with options for light or heavy flow days, as well as day or night use. Most commercial pads have a sticky backing that sticks to underwear and keeps them from bunching up or moving out of place. Some varieties come with “wings” (to wrap around underwear) or without. These are designed to be used once and then disposed.</p> |
| <p>Re-usable sanitary pads</p>  | <p>Re-usable pads come in different shapes and colors, and usually have a button or snap to hold them in place around the underwear. Some come with a waterproof bag for soiled pads, or with extra cloths that can be inserted into the pad holder, the number depending on how heavy the flow is. As with cloth, these need to be cleaned and dried well to remain hygienic.</p> |

Appendix 5: Guidelines for trainers for peer-to-peer sessions

Congratulations! You’ve finished the training and you’re ready to lead your own MHM peer-to-peer session. Here are some guidelines to help you get started.

Step 1: Collect the materials you’ll need

- Optional: Reference handbook that you received during your training (Appendix 1)
- Optional: FAQ list (Appendix 2) and Myths/Facts list (Appendix 3)
- Optional: These guidelines
- Examples of sanitary protection materials (Appendix 4)
- IEC booklets to distribute to all participants (Appendix 6)
- Empty participant list
- Tally sticks

Step 2: Find a place to hold the meeting. It can be at your house, at a friend’s house, outside, or in a more public place. If you’d like to use an OXSI office for your meeting, just ask an OXSI staff.

Step 3: Recruit 5-10 women or girls to join your session.

Step 4: Inform OXSI staff about the time and location of your session

Step 5: Start the session! Here are some ideas for how to structure your session:

Introduction

- Introduce yourself and have others introduce themselves. Ask people to say something about themselves, like their favorite food or how they’re feeling at the moment.
- Explain the purpose of the session – to talk about menstrual hygiene, answer any questions, and to learn what is true and what is a myth.
- Mention that other topics can be raised, as well.
- Explain that you will give the information to OXSI staff only about the number and gender of participants that are present at the session, unless people give you permission to share about other issues that are raised.
- Ask if any participants can fill the participant list. If not, use the tally sticks to count the number of participants.

Give information

- Follow the handouts that you received in your training: start by explaining what menstruation is, the female reproductive system, and the menstrual cycle. Explain what MHM is, then explain how to stay healthy during menstruation and different health risks during menstruation. Lastly, review different sanitary protection materials and how to dispose of them properly.
- If sanitary pad disposal boxes/incinerators have been built in your area, encourage participants to use them. Collect any feedback about repairs needed or reasons why women and girls are not using the bins, if applicable. If the boxes/incinerators have not yet been built, encourage participants to join FGDs organized by OXSI to give feedback on the design and locations of the boxes to be installed.

Facilitated discussion

- Open up the conversation to questions, feedback, and experience sharing from participants. Refer to the Frequently Asked Questions page that you received during your training if you don't know the answer to a question.
- Here are some questions to ask participants to encourage discussion:
 - o Share your experience of your first menstrual period. How did you feel?
 - o What are some myths that you have heard about menstruation?
 - o What kind of sanitary products do you use, and what would you prefer to use? Where do you change sanitary products and what are your challenges with changing? Where do you wash yourself during menstruation, and what are your challenges with washing?
- Encourage participants if they want to discuss other topics outside of MHM.
- Collect information about the date, location, number and gender of participants to give to OXSI staff later.
- Ask participants to share the most important piece of information they learned.
- Thank everyone for coming and close the session.

Step 5: Share the participant list with OXSI staff, as well as the most important piece of information learned, and any other feedback received during the session that participants consented for you to share with OXSI staff.

Appendix 6: IEC for peer-to-peer sessions



A brochure which explains the basics of MHM and is provided by OXSI staff to trainers to use during peer-to-peer sessions.

Appendix 7: Trainers' Monthly Meeting

It's important to frequently check in with MHM trainers to ensure they feel supported, valued, and motivated. People will lose interest if they feel they are not learning anything new or providing information of value. We recommend setting up a monthly meeting for trainers. The goals of the meeting include:

- Share feedback on sessions and get questions answered
- Plan for sessions in the coming month and brainstorm new ideas
- Connect with other women
- Have fun!

The following information should be collected and recorded:

- Date, time, and location of session
- Names of participants (participant list)
- Notes from the discussion

Questions to facilitate discussion:

- Share your experience about conducting peer-to-peer session(s) this month. Who attended? Where did you hold the session? What went well and what was challenging?
- Is there anything that came up in your sessions that you didn't know how to answer?
- Is there any topic you would like to know more about?
- What do you plan to do next month? Is there anything you will do differently?

Appendix 8: FGD guidelines for participatory design and implementation of MHM boxes

| | | | |
|--------------------|--|------------|--|
| Camp Name | | Date | |
| Facilitator | | Note Taker | |
| Total Participants | | Place | |

| Sr. | Question | Answer |
|-----|--|--------|
| 1 | How many women and girls of menstruating age are in your household? | |
| 2 | What kind of materials do you use for menstrual hygiene management in your family monthly? | |
| 3 | How many do you use? | |
| 4 | What kind of materials do you like for menstrual hygiene management? Why? | |
| 5 | Do you know how to use the materials you have? | |
| 6 | Where do you dispose used materials? | |
| 7 | Do you dispose in the latrine? If yes, why? | |
| 8 | Do you dispose in the public MHM Box? | |
| 9 | If not, why? | |
| 10 | Do you know the disadvantage of disposing into the latrine? | |
| 11 | What is the main challenge you face in disposing used materials? | |
| 12 | Where do you want to dispose used materials? | |
| 13 | Where do your female household members dispose used materials? | |
| 14 | Do you explain to your female household members how to dispose used materials? | |
| 15 | If not, why? | |
| 16 | How can you help your family members and neighbours with disposing used materials? | |

| | | |
|----|---|--|
| 17 | What kind of support do you need? | |
| 18 | Have you ever seen an MHM Box before? Do you like it and do you think it is useful? | |
| 19 | What suggestion do you want to give in terms of the MHM box design? | |
| 20 | Would you like to see MHM box design from OXSI? Please select the pictures you like most. | |
| 21 | How do you propose to empty used materials inside MHM boxes? | |
| 22 | Can you suggest the locations where MHM Boxes should be installed? | |

Extra comments and suggestions:

Appendix 9: Sanitary pad disposal incinerator box designs

The pilot in STMG tested three sanitary pad disposal box designs, pictured below.



Figure 1. A bin where disposed sanitary pads must be collected (bottom) and taken to the incinerator by environmental cleaners. This wasn't ideal because the workers at the incinerator were all men and would see the disposed sanitary products.



Figure 3. An incinerator bin built using a recycled oil barrel. Sanitary protection materials can be directly burnt inside by female environmental cleaners.



Figure 2. A smaller incinerator bin, only 1' x 1' x 3'.



Figure 4. A bin (not an incinerator) built by CDN in OTC and KDK1 camps.



Figure 5. A cylindrical incinerator bin designed by an ACE group in TKP



Figure 6. A rectangular incinerator bin designed by an ACE group in TKP

OXSI Hygiene Kit Distribution Standard Operating procedures in the context of the COVID19 outbreak- March 2020

As the Novel Coronavirus (COVID-19) continues to spread in an unpredictable manner, it presents a growing risk to OXSI personnel and beneficiaries, particularly during Hygiene Kit (HK) distributions.

This document aims to guide the revision of HK distribution Standard Operating Procedures (SOPs) in the COVID-19 context in OXSI WASH program operation, to minimize the risk of exposure of staff and beneficiaries. Adjustments to existing HK distribution SOPs should be in alignment with country-specific guidance shared by the relevant health authorities and partners (e.g. Ministry of Health, WHO), where available.

The following recommendations will go into effect immediately as preventative measures, even when no cases of COVID19 have been confirmed in camps.

RECOMMENDED ACTIONS BEFORE AND DURING HK DISTRIBUTION

- **Cluster shelters in a group;**
 - Group two longhouses into one group (maximum 20 head of HHs)
 - Allocate different times for each group of shelters.
 - Prepare normal HK voucher/coupon
 - Distribute the voucher (coupon) to each household ahead of the date of the distribution and inform each household to come to the distribution site at their allocated time.
- **Organize and clearly mark the allocated spaces at the distribution site or OXSI office compound (see Annex 1: Sample site plan for HK distribution sites in the COVID-19 environment)**
 - Identify and mark with tape/rope and signs the entrance, area for handwashing, the temperature check, covered area for those with fever, waiting area, HK collection point, and exit.
 - The allocated area should be spacious enough to allow beneficiaries to sit/stand at least one meter apart from each other. Thus, mark the standing/sitting points in one-meter increments.
 - Set up hand washing area with adequate supply of water and soap.
 - **Optional:** Allocate areas for body temperature checks by health personnel. *This must be agreed with Camp Management Agencies and health actors operating in the camp.*
 - **Optional:** Establish sheltered/covered area with chairs for beneficiaries that do not receive clearance at the body temperature check point. *The people identified with high fever will then be managed by the health staff at the distribution site.*
 - Ensure that there are clearly marked entrance and exit points in the distribution area.
- **Inform staff about the new HK distribution protocol**
 - Inform staff about the protocol and ensure that everyone is aware of his/her responsibility at the distribution site.
 - Ensure **at least** 4 staff are present at the distribution site: 1 person directing people at the entrance to the hand washing stand; 1 person taking temperatures; 1 person checking vouchers and getting a signature/thumb print on the distribution list; 1 person handing out HKs.
- **Do not allow crowding around the distribution point**
 - At the entrance, one staff should check vouchers against the schedule to ensure that people have come at their designated time to collect HKs. If they have come at the wrong time, ask them to return at their designated time. If they say they are not able to come at their

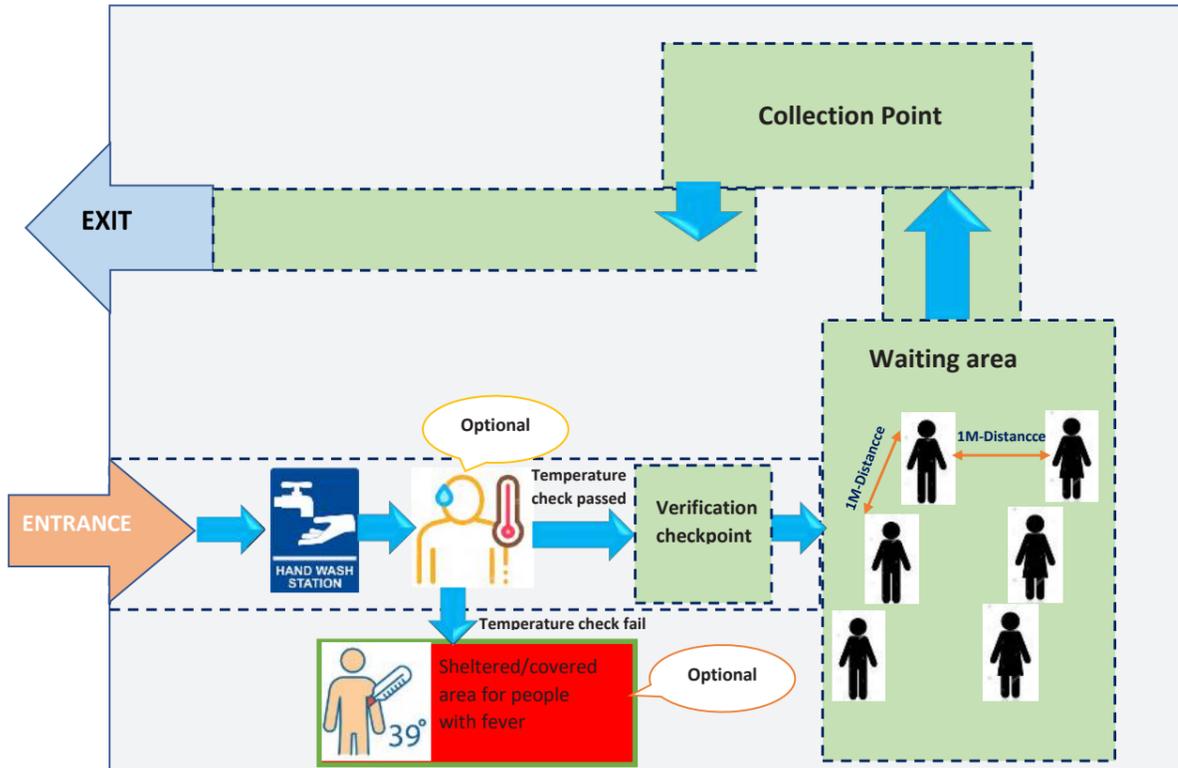
- designated time, be flexible and let them collect their HK if the distribution area is not too crowded.
- Instruct beneficiaries to maintain a distance of one meter from each other throughout the distribution process.
- Using rope or tape, cordon off a one-meter area around the desk at the collection point to ensure that the collection point is accessible to only one beneficiary at a time.
- **Manage the flow of traffic at the distribution site**
 - Upon arrival at the distribution site, direct beneficiaries to the hand washing area and then to the temperature check area to have their body temperature assessed using a noninvasive thermometer (*Optional as stated above*).
 - If a beneficiary has a fever (38°C or above), they should be directed to the specified sheltered/covered area for a follow up by health personnel at the distribution site (*Optional as stated above*).
 - Beneficiaries cleared at the temperature check area are to be directed to the verification checkpoint.
 - Beneficiaries should not pass through the distribution point more than once.
- **Consider hygiene measures**
 - There should be no physical contact between people at the distribution site.
 - OXSI staffs/distributer at the collection point should place the HK items on the tarpaulin/table at the distribution point and step back, permitting the beneficiary to collect the HK.
 - Following the collection of the HK, beneficiaries are to be directed to exit the collection site and encouraged to depart the distribution site.

SPECIFIC INSTRUCTIONS FOR STAFF AT THE DISTRIBUTION SITES

- Monitor the entry of beneficiaries into the distribution point channel.
- Instruct beneficiaries to maintain a distance of one-meter at all points during distributions.
- Ensure that the hand washing point is supplied with appropriate quantities of handwash solution
- Ensure that all beneficiaries wash their hands at the hand washing point and (if available) body temperature checks before approaching the verification checkpoint.
- If a beneficiary presents high temperature (38°C or above), they must be directed to the sheltered/covered area and referred to the relevant health authorities.
- Oversee and assist with organizing HKs before distributions are scheduled to start.
- Step back from the HK and direct the beneficiary to collect the HK and leave via the marked exit route.
- Instruct the beneficiaries to leave the distribution site immediately after the collection of HK.
- On completion of distribution, ensure that the distribution point (room/ area/ tarpaulin) is swept clean and spray the table or tarpaulin with disinfectant (0.2% chlorine solution). See Annex 2 for instructions on how to make disinfectant.
- Remove all tapes, ropes, signage.
- Remove and store the hand wash station in the office.
- It is mandatory that all staff at the distribution site follow good hygiene practices: wash hands with soap and water, cough/sneeze into elbow or a tissue, leave space between yourself and others when possible.



Important Note: All OXSI staff are responsible for complying with all aspects of the SOPs identified at the country level. If any individual (OXSI staff) demonstrates symptoms of COVID-19, they should avoid contact with others and not be present at the distribution sites.



Annex 2: Instructions for making disinfectant solution (0.2% bleach solution) from liquid bleach

Disinfectant solution (0.2% chlorine solution) can be made from a variety of chlorine bases available in the market. All washing and disinfecting solutions must be prepared at the OXSI offices prior to dispatching to the distribution point and marked clearly.

Use for: Floors, surfaces, materials, aprons, boots, dishes (after cleaning)

| If you have... | Add... | To... | Then... | Remarks |
|--|--------------------------------|-----------------|---|---|
| Sodium dichloroisocyanurate (NaDCC) granules, 55% active chlorine | 4 level 20 ml measuring spoons | 20 litres water | Mix for 10 seconds and wait 30 minutes before use | 72 grams in 20 litres 430 grams in 120 litres |
| Sodium dichloroisocyanurate (NaDCC) tablet, 1 g of active chlorine/tablet | 40 tablets | 20 litres water | Mix for 10 seconds and wait 30 minutes before use | 2 tablets per litre |
| Calcium hypochlorite (HTH®) granules, 65-70% active chlorine | 4 level 20 ml measuring spoons | 20 litres water | Mix for 10 seconds and wait 30 minutes before use | 60 grams in 20 litres 360 g in 120 litres of water |

Notes: Do not prepare too much solution at a time (to avoid wasting unused solution). Make new solution each day.



Cautionary Note: Concentrated chlorine and bleach are highly toxic substances that can cause irritation and inflammation to eyes, throat and nose. When mixing and using 0.2% disinfecting solution, appropriate PPE (including impermeable coverall, apron, N95 mask, goggles and double glove ie. inner disposable latex gloves and outer heavy-duty latex gloves) must be worn.

Dignity Kit Distributions SOP

Introduction:

OXSI received an opportunity to conduct a one-time distribution of items to benefit women and girls in camps. These dignity kits consist of (per household): 4 female underwear, 2 packs of sanitary pads, and 1 nail clipper.

Typically, distributions are done at camp offices, where someone from each household (typically male) picks up items. To allow women and girls to participate comfortably, ask questions, and to choose colors and sizes that they prefer, OXSI is piloting a new way of distributing items at the household level.

Sessions will be held with groups of 8-10 households at a time (either one shelter or one side of two shelters and session held in between), women and girls only, led by female Community Facilitators. Each session will take approximately 30 min.

We will also be collecting information on sizes to have a more accurate order for the next round of distributions.

Preparation:

- Staff training on the process and to coordinate logistics.
- Create a schedule for each camp: how many sessions per day? Who will lead sessions?
- Communicate this schedule to communities (get support from CMAs)
- Create a box for each session: 2 packs of sanitary pads/household; 1 nail clipper/household; 120 underwear (12 packs: 4-5 packs of L, 2-3 packs XL, 2-3 packs of XXL).
 - Underwear comes in packs of 10, and we ordered 3 sizes. To give 10 HHs the chance to have 4 underwear of any size, we need to take $3 \times 4 \times 10 = 120$ for each distribution. Take 4-5 packs of L and 2-3 packs of both XL and XXL, for a total of 12 packs. You will return 80 to the box for longhouses with 10 households or 88 for longhouses with 8 households.
 - Toward the end of the underwear supply, not everyone will get the size of her choice; write down the preferred size for the next distribution.
- Make sure that someone is responsible to check boxes out and back in into the office using the format provided.
- Print distribution lists (include the household and shelter number, how many women and girls over 12 years old live in each household, the sizes preferred and the sizes received, as well as signature/fingerprint for items received).

Session:

- Facilitator to take box from office, count items with one other person present (both sign/fingerprint).
- Take box to shelter, assemble group.
- Introduce yourself, explain the distribution process.
- Explain how to use sanitary pads.
- Explain about future MHM project (except in STMG): Oxfam and SI will be having consultations with women about the design of MHM Boxes, which will be placed near latrines for women to dispose of sanitary pads. We will also be organizing peer-to-peer MHM groups, which will be conducted at shelter-level, like this distribution. In the MHM groups, we can discuss the use of

sanitary pads, disposal of pads, symptoms of menstruation, hygiene during menstruation, and any questions that women or girls have about menstruation. It is also a platform to discuss any other issues around women's health and hygiene.

- Distribute items and have participants sign the list (see example below).
- Write down the preferred size for the next distribution.
- Answer any questions from participants.
- Return box to office, count any extra items with the receiver in the office and write them down on the form (both sign/fingerprint).



Dignity Kit Distribution Log

Location: _____ Date: _____

Before-session count:

_____ L _____ XL _____ XXL underwear

_____ nail clippers _____ sanitary pad packs

Name of receiver (facilitator): _____ Name of witness: _____

Signature/fingerprint: _____ Signature/fingerprint: _____

Facilitator: _____ Number of participants: _____

| Barrack # | Room # | Head of Household Name | Items received | | | | | | | | | Signature/fingerprint |
|-----------|--------|------------------------|---------------------|---|----|--------------------|---|-----|---------------|---------------|--|-----------------------|
| | | | Underwear Requested | | | Underwear Received | | | Nail clippers | Sanitary pads | | |
| | | | L | X | XX | L | X | XXL | | | | |
| 200 | 2 | | 4 | 0 | 0 | 2 | 2 | 0 | 1 | 2 | | |
| | | | | | | | | | | | | |
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Notes:

After-session count:

_____ L _____ XL _____ XXL underwear

_____ nail clippers _____ sanitary pad packs

Name of facilitator: _____ Name of receiver at office: _____

Signature/fingerprint: _____ Signature/fingerprint: _____

Community Transect Walk

Introduction

A Community Transect Walk is a participative tool for observing and discussing with communities any resources, problems, land use, and features in an area of the community. It was popularized as one of the tools of the Community-Led Total Sanitation (CLTS) approach. The activity involves some WASH staff and community members walking through specific areas to identify WASH issues and opportunities. The issues identified are split into two categories: those that the community can solve without help, and those where support from the WASH agency is needed. Lastly, the group develops a community action plan to solve the issues identified during the Transect Walk, with tasks assigned to community members or the WASH agency.

Objectives:

- Observe the current conditions in the community
- Identify WASH issues
- Make a plan to manage the issues properly

Preparation

1. Identify the area to walk: cover an area around 3-5 shelters, and plan a path so that you are moving in one direction (eg. east to west or south to north), but the path can change depending on the needs seen in the community and the suggestions of participants.
2. Set a time of 1 to 1.5 hours for each session.
3. Get any materials ready (eg. attendance sheet, paper for notes).
4. Inform the community in the area that will be covered. Invite volunteers in advance to participate in the activity. Identify the location and time to meet.
5. Ensure two facilitators are available for the activity: one for facilitation and one for taking notes.

Steps

1. Upon meeting the participants at the start location, explain the activity in detail.
2. Provide note paper and pens to participants if they want to take notes of any issues they see. Participants can also raise concerns verbally during the Transect Walk (for the note taker to write down).
3. Walk together along the planned path and observe latrines, handpumps, drainage channels, waste collection points, and anything else along the way.
4. The facilitator should ask questions to engage the participants in spotting any issues and to ask how they feel. For example, if some garbage is spotted on the ground, a facilitator could ask, "Is this a good place to throw garbage from the household? What should be done with it?"
5. Facilitators should give time for the group to stay in areas that generate more interest and discussion; it is not necessary to finish the planned route, so take your time!
6. After finishing the walk, collect any notes from participants and combine them with the notes from the note taker.
7. Read out loud the observations from the notes, and write down the issues that need to be solved.

8. Ask the participants for their input on the action plan based on the issues identified together. The action plan is for both communities (to solve community-level problems) and for the WASH agency (to follow up with issues the community cannot solve alone). The action plan should have steps to take for each issue, who is responsible, and a deadline to finish each step (see template below).
9. Read out loud the plan.
10. Make an agreement for how to follow up on the steps of the action plan (next Transect Walk to check progress, feedback from complaints made to OXSI, etc.)
11. Collect participant list, including name, household number, shelter number, and male/female.
12. If relevant, announce the date and time of any other upcoming activities (awareness sessions, cleaning campaigns, etc.)

Note: If an issue is observed during the Transect Walk that is resulting from one or two households only, the facilitator should arrange a separate, private household visit at another time (or directly after the Transect Walk). Individuals or specific households should not be shamed for "bad behaviour". Use IEC to facilitate discussion on positive hygiene behaviours.

Note: Children should be encouraged to participate in Community Transect Walks. Children can give valuable feedback and assist with identifying any issues, just like adults.

Action Plan Template

| No | Action point | Deadline to response | Led by | Participants | Support required from OXSI |
|----|--------------|----------------------|--------|--------------|----------------------------|
| | | | | | |

Balancing WASH SOP

Note: this SOP is designed to accompany an in-person training on the Balancing WASH activity as well as gender training.

Aim: The overall objective of the activity is to encourage more gender equality in WASH related activities. Specifically, the activity will aim to raise awareness on the inequitable distribution of labour in WASH related work.

Recruitment:

- Participants need to be recruited and informed ahead of time about the time, date, and location of the activity. Participation in the activity is always voluntary and people can leave at any time.
- Male and female participants (maximum 16 people total).
- Encourage partners (husband/wife) to join session together.

Materials needed:

- Flip chart paper (at least 2 pages per activity)
- Markers, tape
- IEC for the activity (activity icons and household members icons), flipchart of good/bad WASH behaviours
- Attendance sheet
- Refreshment (maximum 1000MMK per person)

Description:

Balancing WASH is a participatory exercise using IEC materials and will involve a group of men and women (from the same household or extended family if possible). Below are the steps of the activity:

1. The facilitators will introduce themselves and explain the activity briefly – tell the participants that they will split into two groups (men and women). You don't have to explain that the activity will look at WASH tasks or gender roles, as this may cause the participants to change the way they complete the time-use assessment.
2. Ask for permission to take notes and pictures and allow participants to ask any questions before you begin.
3. Clarify the difference between two types of IECs: Pictures of people represent family members and pictures of the activities represent the daily tasks of the household. Facilitators need to make the pictures of the WASH activities clear one by one.
4. Explain the actual activity here: Each group looks at who in the household completes which activity. So, firstly, fix the icons representing family members person by person on the top of the flip chart and then place the icons representing activities under the pictures of the family member that is responsible for that activity. Here, facilitators need to clarify that an activity has to be decided as his/her work only if he/she always or usually does that activity in their family or

household. To indicate the time spent on each activity, make a mark for each hour spent next to the activity each day.

5. Facilitators need to mobilise and encourage all people to participate actively in their respective groupwork discussion.
6. Give at least 45 minutes for group-work discussion.
7. Once they have finished their charts, the two groups will come together to discuss the similarities and differences in their charts. The facilitator will use this exercise to lead a discussion around the gender division of labour in the household. If appropriate, this may include a discussion on decision-making relevant to the daily tasks, and extend to how the nature of their daily activities can impact on their leisure, getting information, participation in their community management works, etc.
8. Discussion questions (if needed):
 - a. Women's group, did the men's group accurately depict the activities that you do each day? If not, what should be different? Do you accept the time they indicated for each activity? Why?
 - b. Men's group, did the women's group accurately depict the activities that you do each day? If not, what should be different? Do you accept the time they indicated for each activity? Why?
 - c. Is there anything surprising you see in the activities that women do compared to the activities that men do?
 - d. Do you think the division of tasks is fair between all members of the household? If not, what could be changed?
 - e. Who decides which member of the household does which task? Does this decision-making make sense or could it be changed?
 - f. Are there any activities that you do that you wish others would help you with? How can you encourage this change?
 - g. By seeing the nature of your respective daily activities and counting the time taken, who has more leisure time? Who can get access to information and news on current issues? Who is able to be involved in their community management activities? Why?
 - h. What should we do? How can the activities and time be more balanced between household members, so that everyone can enjoy more leisure time?
9. Participants will then look specifically at the WASH activities in the daily tasks. The facilitator will use the flipchart of good/bad WASH behaviours to communicate the key messages around good hygiene practices associated with each WASH activity (for example, water collection, transportation, and storage, cleanliness of the house, etc.)

To close: The facilitator should collect information for the attendance sheet and take a picture of the two charts. Thank everyone for coming!

| Activity: Solar Light Installation | | | | | |
|------------------------------------|--|------|--------------|-----------------|--------------------|
| No | Item | Unit | No. of units | Unit cost (MMK) | Amount (MMK) |
| A Material | | | | | |
| 1 | Broken brick | Sud | 0.01 | 80,000 | MMK 1,091 |
| 2 | Cement | Bag | 0.87 | 8,500 | MMK 7,409 |
| 3 | Sand | Sud | 0.37 | 26,500 | MMK 9,706 |
| 4 | Gravel | Sud | 0.05 | 90,000 | MMK 4,573 |
| 5 | 5 ply plywood - 8' length x 4' width | No. | 0.50 | 15,500 | MMK 7,750 |
| 6 | Hard wood first class - 3" x 1.5" x 9' | No. | 4.00 | 6,800 | MMK 27,200 |
| 7 | 2" nail | Viss | 0.25 | 2,600 | MMK 650 |
| 8 | 12 mm dia rebar | Ft | 9.66 | 350 | MMK 3,381 |
| 9 | 8mm dia rebar (stirrup) | Ft | 22.50 | 200 | MMK 4,500 |
| 10 | Binding wire 18 G | Viss | 0.07 | 3,000 | MMK 198 |
| 11 | Red oxide paint | Gal | 0.19 | 12,000 | MMK 2,280 |
| 12 | GI solar pole, base plate and anchor bolts - 5 m high, 88.5 mm dia, 3 mm thick | No. | 1 | 123,000 | MMK 123,000 |
| 13 | Solar light and mounting bracket (CS Solar, model SH1402) | No. | 1 | 349,000 | MMK 349,000 |
| A Sub material costs | | | | | MMK 540,739 |
| B Labour charges | | | | | |
| 1 | Unskilled daily workers | DW | 4 | 4,800 | MMK 19,200 |
| 2 | Skilled daily workers | DW | 2 | 6,200 | MMK 12,400 |
| B Sub labor costs | | | | | MMK 31,600 |
| TOTAL AMOUNT | | | | | MMK 572,339 |
| UNIT COST | | | | | MMK 572,339 |

Solar Lighting Functionality Check - OXSI

| Field | Question | Answer |
|--|--|---|
| Date_of_survey <i>(required)</i> | Date of survey | |
| enumerator_name <i>(required)</i> | Enumerator Name | |
| Camp_Name <i>(required)</i> | Camp Name | tcc TCC |
| | | dpc DPC |
| | | hmz HMZ |
| | | bdc BDC |
| | | bsr BSR |
| | | mtn MTN |
| | | tkp1 TKP1 |
| | | tkp2 TKP2 |
| | | kdk KDK |
| | | otg1 OTG1 |
| | | otg3 OTG3 |
| | | otg6 OTG6 |
| | | otc OTC |
| | | stmg STMG |
| Sector_Number | Sector Number | 1 1 |
| | | 2 2 |
| | | 3 3 |
| | | 4 4 |
| | | 6 6 |
| Reference_Number <i>(required)</i> | Reference Number | |
| category <i>(required)</i> | Category | lighting Lighting |
| | | system System |
| Is_the_solar_light_functional <i>(required)</i> | Is the solar light functional? <i>Functional means shines brightly all night and the lamp doesn't have visible damages.</i> | yes Yes |
| | | no No |
| If_yes_how_long_does_it_work <i>(required)</i> | IF Yes, how long does it work? | well_working Well working (full of time- from evening to morning) |
| | | moderately_working Moderately working (from evening to half of the night) |
| | | slightly_working Slightly working (few hours work) |
| If_No_which_parts_are_not_working <i>(required)</i> | If No which parts are not working? | Cable Cable |
| | | Lamp-post Lamp-post |
| | | Lamp Lamp |
| | | system System |
| | | solar_panel Solar panel |
| connected_electricity_for_personal_use <i>(required)</i> | Has anyone in the community connected to electricity for their personal use? | yes Yes |
| | | no No |
| System | | |
| solar_structure_condition <i>(required)</i> | Condition of solar mounting structure | good Good |
| | | small_damage Small damage |
| | | broken Broken |
| solar_panel_condition <i>(required)</i> | Condition of solar panel | good Good |
| | | crack_small-damage Crack/ small damage |
| | | broken Broken |
| controller_condition <i>(required)</i> | Condition of controller | good_functioning Good and functioning |
| | | not_functioning Not functioning |
| battery_condition <i>(required)</i> | Condition of battery | good_functioning Good and functioning |
| | | not_functioning Not functioning |
| inverter_condition <i>(required)</i> | Condition of inverter | good_functioning Good and functioning |
| | | not_functioning Not functioning |

| Field | Question | Answer |
|--|---------------------------|---------------------------------------|
| breaker_condition <i>(required)</i> | Condition of breaker | good_functioning Good and functioning |
| | | not_functioning Not functioning |
| battery_rack_condition <i>(required)</i> | Condition of battery rack | good Good |
| | | small_damage small damage |
| | | broken Broken |
| DB_box_condition <i>(required)</i> | Conditioning of DB box | good Good |
| | | small_damage small damage |
| | | broken Broken |

SOLAR LIGHT SYSTEM HANDOVER CERTIFICATE - OXSI

| Camp Name | Date of Handover |
|------------------|------------------|
| | |
| # of Solar Point | |

A copy of the file is needed for:

| | | | |
|-----------------|-------------------------------------|--|-------------------------------------|
| Representative: | <input checked="" type="checkbox"/> | Solidarites International + Oxfam (OXSI) : | <input checked="" type="checkbox"/> |
|-----------------|-------------------------------------|--|-------------------------------------|

This document gives all the information regarding the donation of solar system materials after the complete installation is done by the organisation.

Camp representatives designated below agree to:

- Take responsibility for all materials included in the solar system mentioned below.
- Take responsibility to inform OXSI in case of material looting and/ or damage.
- Take responsibility for relevant action in case of solar material looting or destruction.
- Assume the ownership of the solar system materials and take responsibility to get back the materials in case of looting and inform OXSI for required technical support to return the looted materials in the original place.
- Take the responsibility to inform OXSI in any case of non-functioning of the solar lights.
- Regularly check to see if the solar lights are functioning.
- Take care of the overall security of the solar system.

Oxfam + Solidarites International (OXSI) agree to:

- Provide fully installed stand-alone integrated solar systems for latrines with functioning lights in the pre-identified area.
- Provide regular technical supervision of the solar system and technical support whenever it is needed.
- Replace damaged materials (but if the materials are stolen, they will not be replaced).

LIST OF MATERIALS GIVEN FOR SOLAR SYSTEM HANDOVER

Solar System BOQ and Specifications

- Integrated Solar Unit
- Bracket to Attach Integrated Solar Units to GI Pole
- GI Pole, 5 m high, 88.5 mm diameter, 3 mm thick
- Concrete Footing for Solar Pole

| Integrated Solar Unit Detailed Specifications | |
|---|---|
| Integrated solar unit components | LED Street Light 40W/ 12V Solar Panel 50W/ 18V Storage Battery 24Ah/ 12.8V MPPT Solar Controller Housing for Components Assorted Accessories |
| Rainy and cloudy days backup | 2 days |
| Daily lighting hours | From dusk to dawn. Brightness = 1,500 lumens for the entire night |
| Installation | Hanging on pole 5 m from soil |

SIGNATORY FOR SOLAR SYSTEM MANAGEMENT

Representative Person
(Men Group)

Representative Person
(Women Group)

| | |
|-------------|--|
| Name | |
| Shelter No. | |
| Room No. | |

| | |
|-------------|--|
| Name | |
| Shelter No. | |
| Room No. | |

| Men Group | | | Women Group | | |
|---------------------|----------------------------------|-----------------------|-------------|-----------|-----------------------|
| Name | Signature | Shelter no. /Room no. | Name | Signature | Shelter no. /Room no. |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| OXSI Representative | Name: Position: Signature: | | | | |

အိမ်တွင်းအမှိုက်ခွင့်ပစ်ခြင်း

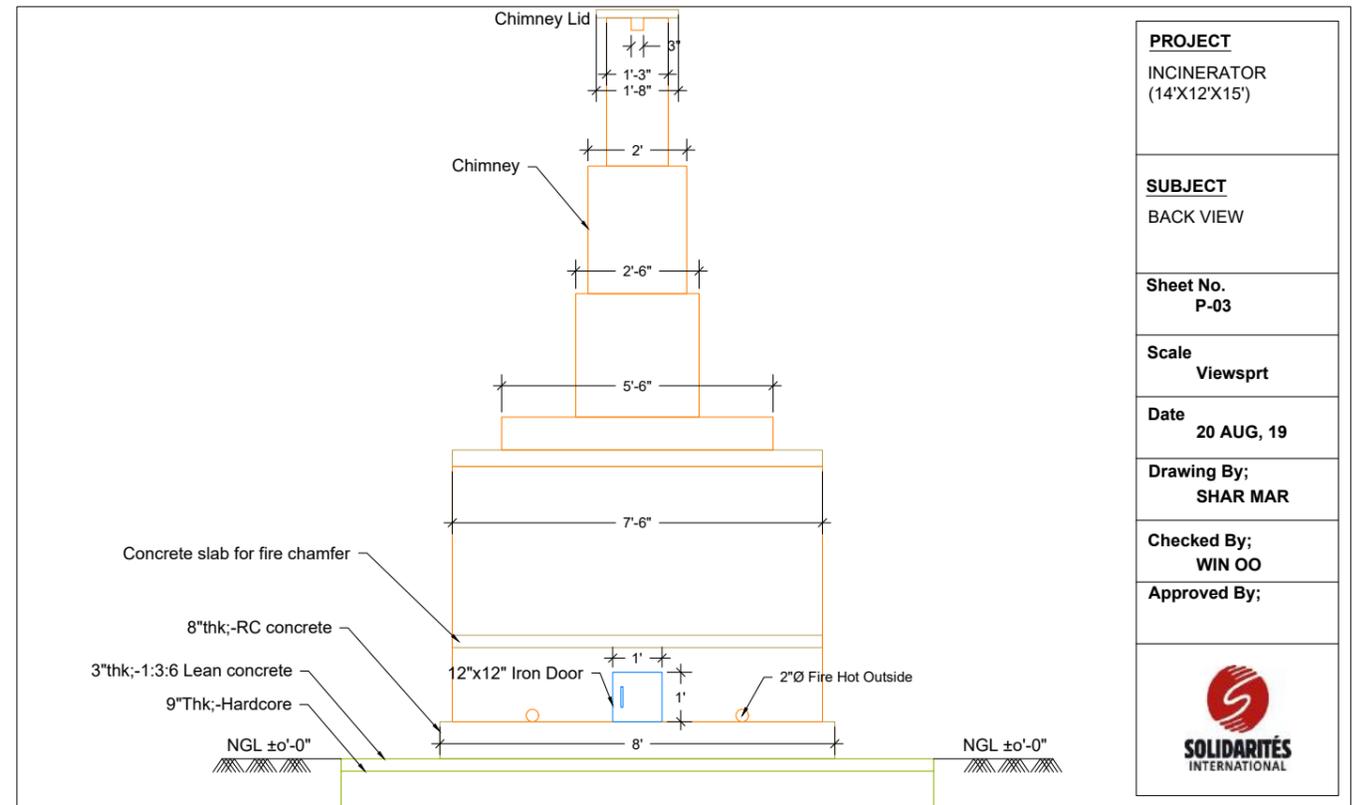
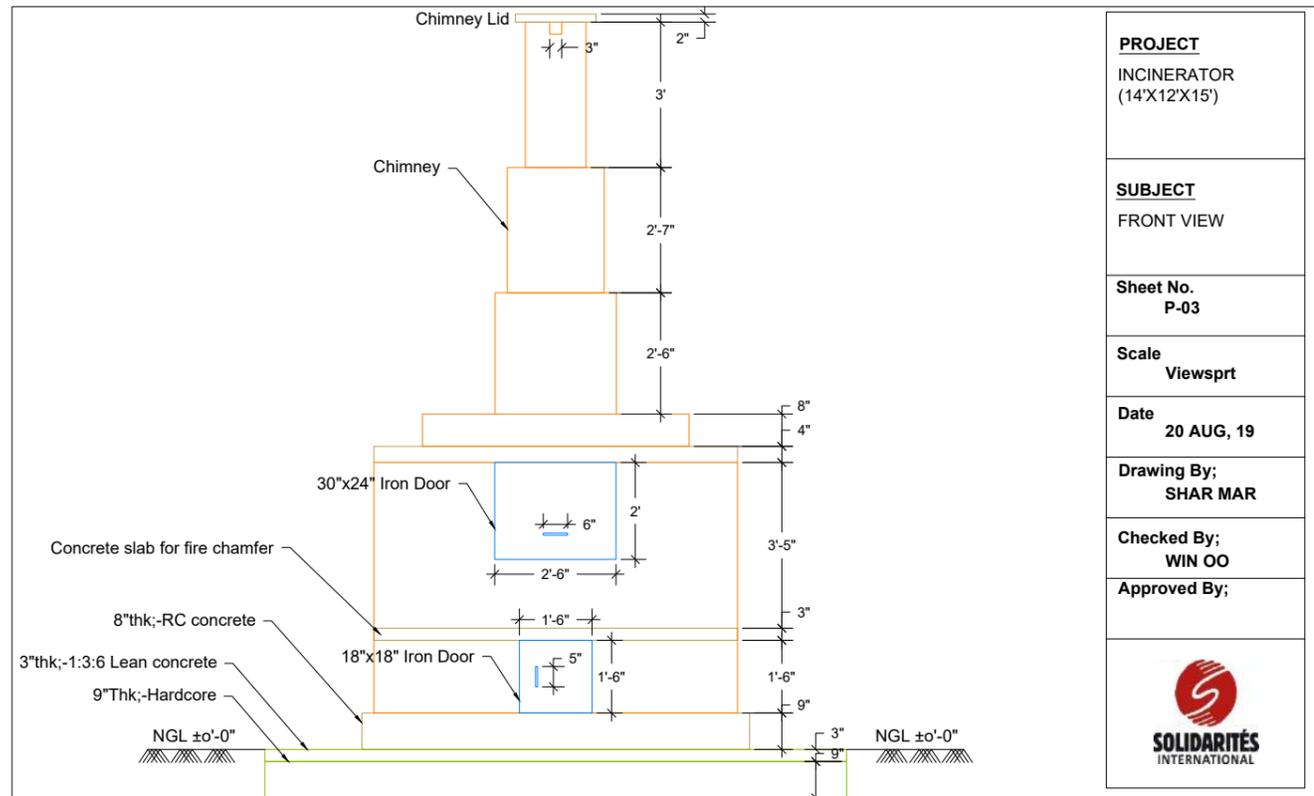
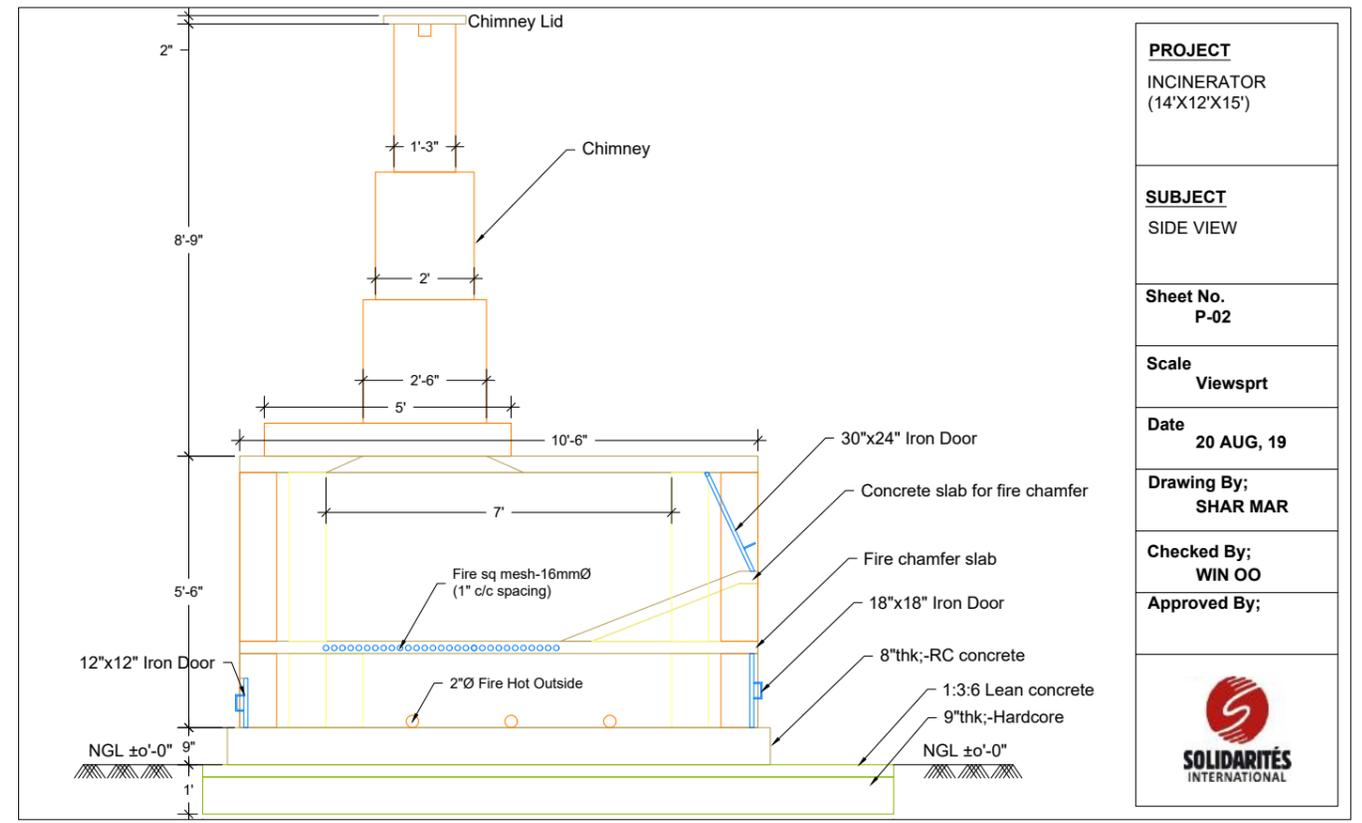
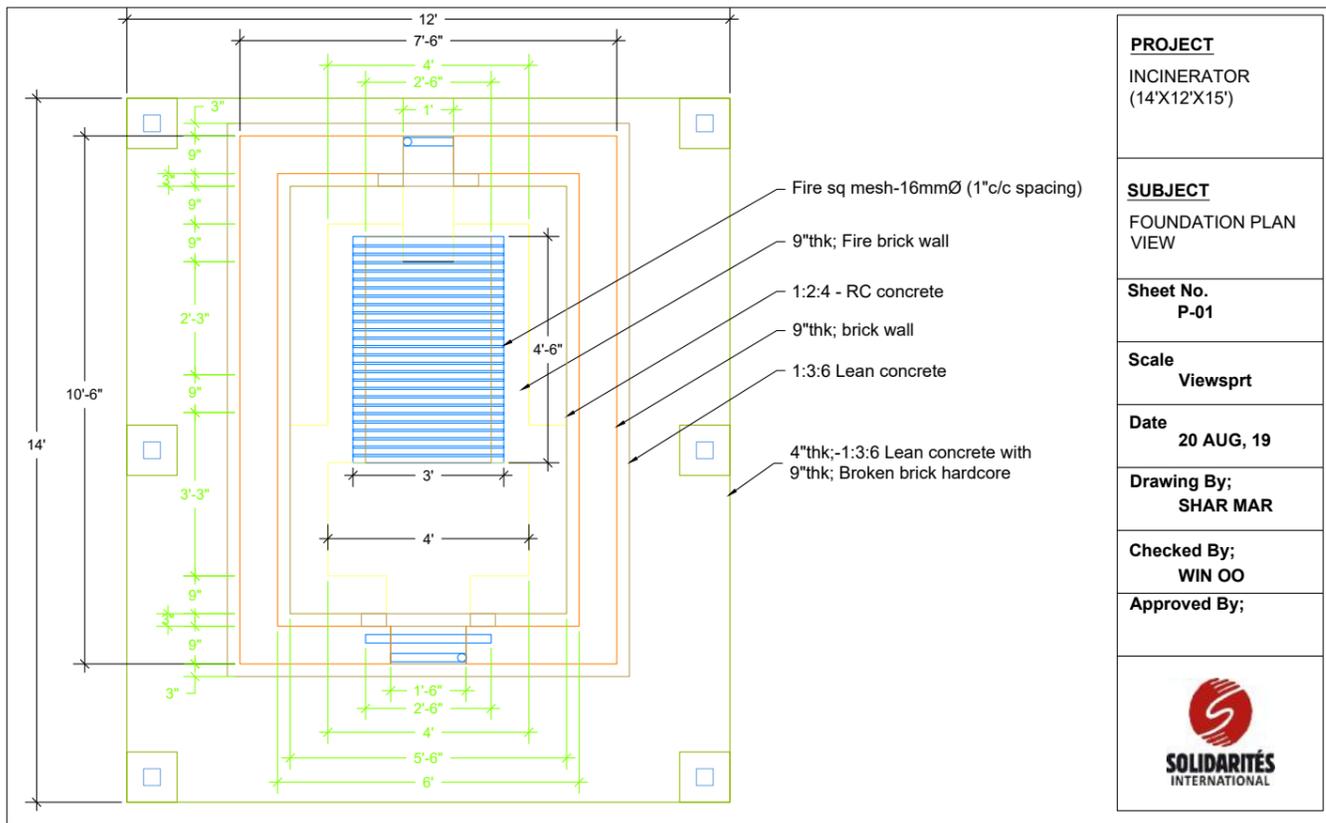
အဖိုးပါသော အမှိုက်ပုံကို အကြမ်းအကျန်များထည့်ပါ။
ကျန်စားပစ္စည်းပစ္စည်းများနှင့် အမှိုက်ခြောက်များထည့်ပါ။

ကွန်ကရစ်အမှိုက်ပုံးထဲတွင်အမှိုက်ခွင့်ပစ်ခြင်း

ကွန်ကရစ်ခွေအမှိုက်ပုံးထဲတွင် အကြမ်းအကျန်များထည့်ပါ။
အခြားကွန်ကရစ်ခွေအမှိုက်ပုံးထဲတွင် ပလတ်စတစ်နှင့် အမှိုက်ခြောက်များထည့်ပါ။

အမှိုက်များကို ပြေဆေးတွင်းနှင့် အမှိုက်မီးရှို့စက်သို့ ပို့ဆောင်ခြင်း

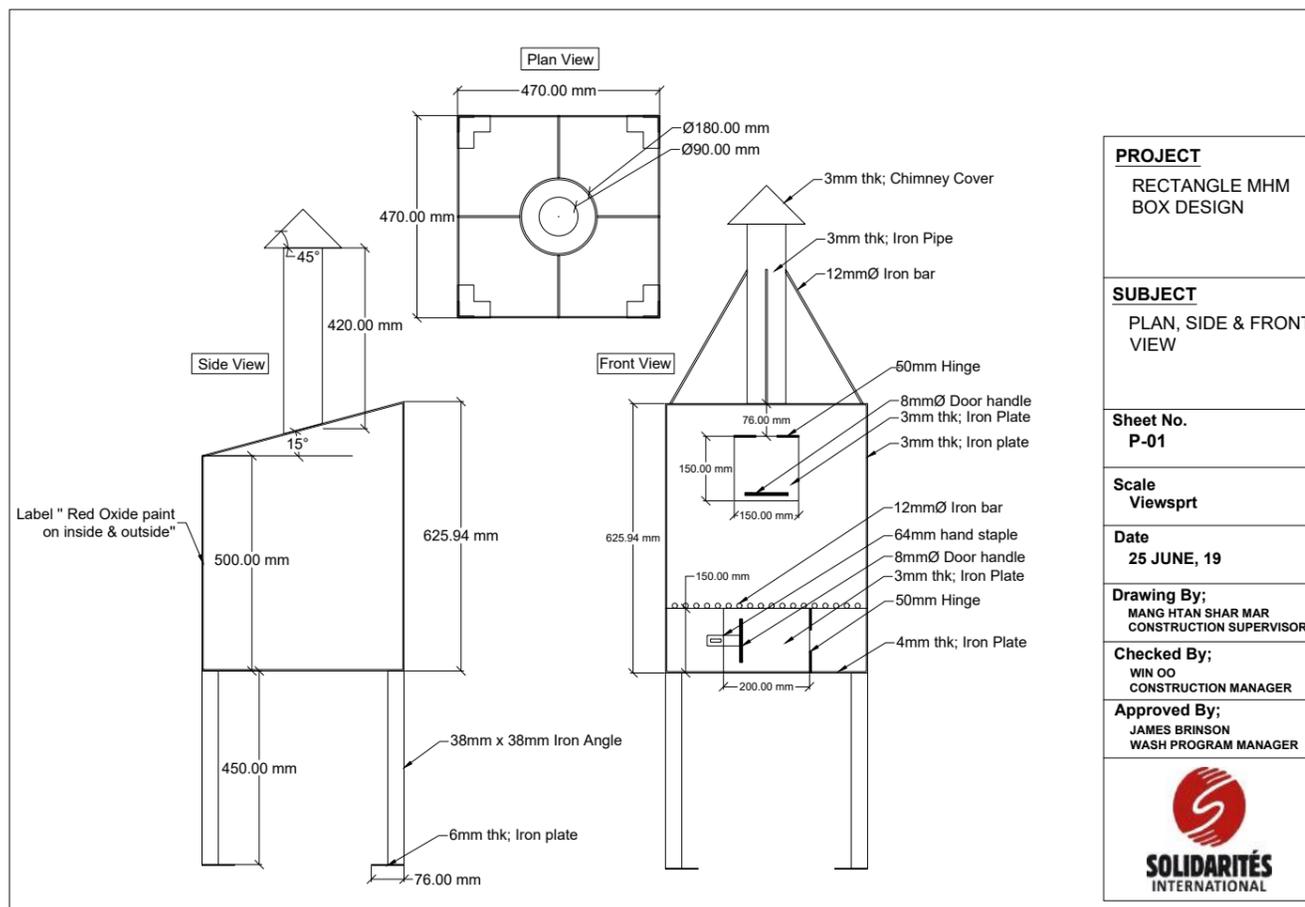
သန့်ရှင်းရေးသမားများမှ ခန့်ခွင့်အမှိုက်ပုံးများတွင် အမှိုက်များကို မွဲခြားသယ်ယူပြီး အမှိုက်ကန်မှိုက်မီးရှို့စက်သို့ ခန့်ခွင့်ပို့ပေးရန် လျှောက်ရှိပါသည်။ နေ့စဉ်အမှိုက်များကို မွဲခြားခွင့်ပစ်ရန်အစီအစဉ်ရှိပါသည်။



| BILL OF QUANTITY Incinerator | | | SITTWE/ RAKHINE STATE | | |
|---------------------------------|---|-------------|--------------------------|-----------------------|------------------------|
| Item No. | Materials | Unit | No. | Unit Price MMK | Total Price MMK |
| 1 | Fire Cement | Bag | 7 | 53,000 | 371,000 |
| 2 | Cement | Bag | 45 | 8,500 | 382,500 |
| 3 | Fire Brick | No. | 1050 | 1,800 | 1,890,000 |
| 4 | Brick | No. | 3100 | 140 | 434,000 |
| 5 | Sand | Sud | 2.5 | 26,500 | 66,250 |
| 6 | Gravel | Sud | 1.5 | 85,000 | 127,500 |
| 7 | Broken Brick | Sud | 1.5 | 75,000 | 112,500 |
| 8 | Wire Nail | Viss | 2 | 3,000 | 6,000 |
| 9 | Roofing Nails | Viss | 2 | 3,000 | 4,500 |
| 10 | Binding Wire | Viss | 2 | 3,500 | 5,250 |
| 11 | Plain Sheet (8'x3') | Sht | 2 | 7,500 | 15,000 |
| 12 | 10' x 2'-3" CGI Sheet (Green or Blue Colour) | Sht | 16 | 7,500 | 120,000 |
| 13 | 5-Plywood (8'x4') | Sht | 2 | 20,000 | 40,000 |
| 14 | 12mmØ Bolt & Nut 6" and Washer | Set | 10 | 600 | 6,000 |
| 15 | 12mmØ Bolt & Nut 5" and Washer | Set | 15 | 500 | 7,500 |
| 16 | 2" x 1'-6" MS Flat 4mm thk: (2 Hole) | Pcs | 6 | 2,000 | 12,000 |
| 17 | 16mmØ Deformed Bar x 39.5ft | No. | 20 | 10,000 | 200,000 |
| 18 | 8mmØ Plain Bar | Cwt | 1 | 60,000 | 60,000 |
| 19 | 12mmØ MS Rod x 39.5ft | No. | 2 | 10,000 | 20,000 |
| 20 | 16mmØ MS Rod x 39.5ft | No. | 1 | 12,000 | 12,000 |
| 21 | 4"x4" Timber Post 9' (Inn, Kanyin wood) | No. | 4 | 12,000 | 48,000 |
| 22 | 4"x4" Timber Post 12' (Inn, Kanyin wood) | No. | 2 | 12,000 | 24,000 |
| 23 | 4"x2" Wall Plate & Ridge 12' (Inn, Kanyin wood) | No. | 3 | 6,000 | 18,000 |
| 24 | 3"x2" Rafter 12' (Inn, Kanyin wood) | No. | 8 | 4,500 | 36,000 |
| 25 | 3"x2" Purlin 15' (Inn, Kanyin wood) | No. | 6 | 6,875 | 41,250 |
| 26 | 6"x1" Eave 12' (Inn, Kanyin wood) | No. | 6 | 5,500 | 33,000 |
| 27 | 30" x 24" MS Door, 2mm Thick, with Frame | No. | 1 | 50,000 | 50,000 |
| 28 | 18" x 18" MS Door, 2mm thick, with Frame | No. | 1 | 30,000 | 30,000 |
| 29 | 12" x 12" MS Door, 2mm thick, with Frame | No. | 1 | 15,000 | 15,000 |
| 30 | 4" Dia x 19.5' MS Pipe (Chimney Extension) | No. | 1 | 90,000 | 90,000 |
| 31 | 2" Dia x 8' long MS Pipe | ft | 1 | 18,000 | 18,000 |
| 32 | Red Oxide Paint | Gal. | 1 | 13,000 | 13,000 |
| A | SUB TOTAL MATERIAL COST | | | | 4,308,250 |
| | Labour | Unit | Quantity | Unit Price MMK | Total Price MMK |
| | Skilled Labour (Mason, Carpenter, Welder, Etc.) | M.D | 47 | 7500 | 352,500 |
| | Unskilled Labour | M.D | 41 | 5000 | 205,000 |
| B | SUB TOTAL LABOUR COST | | | | 557,500 |
| C | MATERIAL TRANSPORT | | | | 800,000 |
| GRAND TOTAL | | | | | 5,665,750 |

Incinerator Functionality Check - OXSI

| Field | Question | Answer |
|--|--|--|
| date_of_survey <i>(required)</i> | Date of Survey | |
| enumerator_name <i>(required)</i> | Enumerator Name | |
| camp_name <i>(required)</i> | Camp Name | tcc TCC |
| | | dpc DPC |
| | | hmz HMZ |
| | | bdc BDC |
| | | bsr BSR |
| | | mtn MTN |
| | | tkp1 TKP1 |
| | | tkp2 TKP2 |
| | | kdk KDK |
| | | otg1 OTG1 |
| | | otg3 OTG3 |
| | | otg6 OTG6 |
| | | otc OTC |
| | | stmg STMG |
| sector_number | Sector Number | 1 1 |
| | | 2 2 |
| | | 3 3 |
| | | 4 4 |
| | | 6 6 |
| | | reference_number <i>(required)</i> |
| Status_of_the_incinerator_fencing <i>(required)</i> | Status of the incinerator fencing | good Good (fully closed: doors, posts in correct state, fencing well attached to posts, no hole in the fences) |
| | | to_be_maintain To be maintained (fencing partly damaged or no fencing) |
| Is_there_a_the_collection_pointdrying_space_inside_fencing <i>(required)</i> | Is there a the collection point/ drying space inside fencing? | yes Yes |
| | | no No |
| If_yes_is_there_a_concrete_slab <i>(required)</i> | And If yes : is there a concrete slab for the collection point/ drying space? | yes Yes |
| | | no No |
| If_yes_Status_of_the_collection_point <i>(required)</i> | And If yes : Status of the collection point/ drying space | good Good |
| | | to_be_maintain To be maintained (cracked/ plastering damaged) |
| Is_the_incinerator_able_to_run_to_date <i>(required)</i> | Status of the Incinerator: Is the incinerator able to run to date? | yes Yes |
| | | no No |
| If_No_write_down_the_problems <i>(required)</i> | If No, write down the problems | |
| Is_there_any_crack_out_side_or_on_the_incinerator <i>(required)</i> | Status of the Incinerator: Is there any crack, out side or on the incinerator? | yes Yes |
| | | no No |
| Are_the_doors_of_the_oven_and_the_ash_room_in_place <i>(required)</i> | Status of the Incinerator: Are the doors of the oven and the ash room in place ? | yes Yes |
| | | no No |
| Is_there_a_roof_on_the_incinerator <i>(required)</i> | Status of the Incinerator: Is there a roof on the incinerator ? | yes Yes |
| | | no No |
| Status_of_the_incinerator_roofing <i>(required)</i> | And If yes : Status of the incinerator roofing | good Good (wooden carpentry and roofing in good state) |
| | | To_be_maintain To be maintained (timber missing / roofing sheet missing) |



PROJECT
RECTANGLE MHM
BOX DESIGN

SUBJECT
PLAN, SIDE & FRONT
VIEW

Sheet No.
P-01

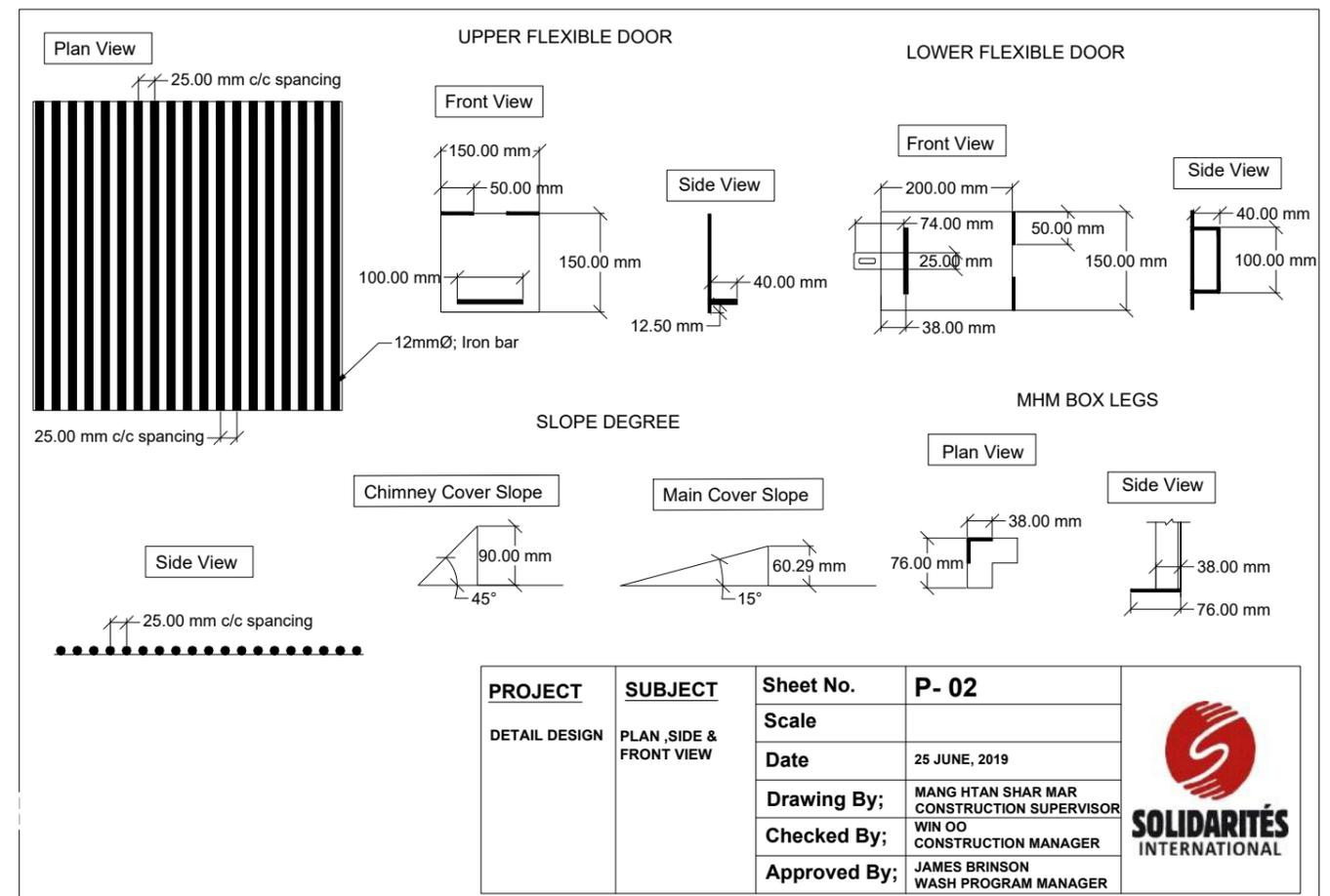
Scale
Viewsprt

Date
25 JUNE, 19

Drawing By;
MANG HTAN SHAR MAR
CONSTRUCTION SUPERVISOR

Checked By;
WIN OO
CONSTRUCTION MANAGER

Approved By;
JAMES BRINSON
WASH PROGRAM MANAGER



| | | | | |
|----------------------|------------------------------------|---------------------|---|--|
| PROJECT | SUBJECT | Sheet No. | P- 02 | |
| DETAIL DESIGN | PLAN ,SIDE & FRONT VIEW | Scale | | |
| | | Date | 25 JUNE, 2019 | |
| | | Drawing By; | MANG HTAN SHAR MAR CONSTRUCTION SUPERVISOR | |
| | | Checked By; | WIN OO CONSTRUCTION MANAGER | |
| | | Approved By; | JAMES BRINSON WASH PROGRAM MANAGER | |

Camp Cleaning Campaigns

Introduction

Although OXSI employs environmental cleaners to collect solid waste around the camps, the programme is also working to improve ownership and accountability of the community by organising regular camp cleaning campaigns to engage people in the cleaning process. These are weekly or bi-weekly events (depending on location and season), sometimes in collaboration with other organisations such as the Camp Management Agencies (CMAs).

The Community Mobilisation team sometimes also organizes “spontaneous” cleaning campaigns in response to a complaint, Transect Walk or Group Discussion, if there is waste around a borehole that fails a microbiological test, or after a storm to clean up debris.

Special effort is made to organise drainage cleaning campaigns in the month or two before the rainy season begins, to ensure that rainwater clears more quickly and does not cause flooding or stagnant water.

All of the cleaning campaigns aim to bring people together and inspire them to clean up and take care of their environment. This document is a guideline for both regular cleaning campaigns and drainage cleaning campaigns.

Objectives

- To clean the camp effectively and reduce the accumulation of garbage around the camp and in drainage channels.
- To reduce public health risks linked to improper disposal of solid waste and flooding.
- To ensure environmental sustainability.
- To promote environmental awareness.
- To increase community’s sense of ownership of the public spaces around their shelters.

Equipment

- Pushcarts
- Shovels, rakes, hoes, brooms, plastic bags
- Dust masks and gloves
- Attendance sheet

Standard Operating Procedure

- Decide on the location where a cleaning campaign is needed, based on requests from Community Facilitators (CFs), feedback from Transect Walks or Group Discussions, complaints, etc.
- If coordinating with another agency, come to an agreement on the date, time, and location of the cleaning campaign.

- Inform the community about the upcoming camp cleaning campaign (date, time, assigned area). For a routine weekly cleaning campaign, CFs should inform communities; for a joint cleaning campaign, CMA is also responsible for informing and inviting Camp Management Committees (CMCs).
- If planning a drainage cleaning campaign, agree with camp leaders on a dumping site for the wet waste, since it cannot be incinerated.
- CFs should recruit community members to participate in the camp cleaning campaign by informing shelter leaders about the event.
- Routine environmental cleaners should join the campaign with their pushcarts, instead of working in their assigned areas.
- For main drainage cleaning campaigns: if drainage channels are heavily blocked with sand, mud, and waste, it might be necessary to hire extra labour for the campaign. (This is handled by the SI team.)
- Distribute tools such as brooms, shovels, and rakes to the volunteers. Also distribute plastic bags or bins, dust masks, and gloves for each participant.
- For a routine solid waste cleaning campaign: environmental cleaners are responsible for taking the pushcarts full of waste to the incinerators while volunteers collect waste.
- For drainage cleaning campaigns: because waste from drainage channels is too wet to burn, environmental cleaners must take pushcarts with waste to the designated dumping place. The wet waste is buried until it dries and can be sent to the incinerator.
- At the end of the campaign, if appropriate, WASH staff can conduct an awareness session to make the link between proper waste disposal and disease reduction.
- At the end of the campaign (about 2 hours), thank participants for joining and ensure that everyone has signed the attendance sheet.
- In a joint cleaning campaign, CMAs may distribute refreshments, such as juice and cake.

SOP for OD Cleaning Campaign

Introduction:

Open defecation (OD) is commonly practiced in the IDP camps despite intensive hygiene promotion activities and construction of sanitation facilities in these camps. To involve the community in solving this issue while eliminating the public health threat of OD, the OXSI WASH team proposed to conduct an Open Defecation cleaning campaign monthly in all the targeted camps. This SOP is simple guidance on how to conduct the OD campaign in the camp.

Steps

Step 1: Organize community meeting

- Organize a community meeting to discuss the OD Cleaning Campaign. The community members can include, but are not limited to, religious leaders, shelter leaders, women's groups, and youth groups.
- In the community meeting, present the information from the most recent OD monitoring done by the MEAL team, and develop an action plan together with the community to target the areas that most need an OD cleaning campaign. The action plan can include the target areas, date and time for the campaign, needed tools from OXSI, and how participants can contribute to the campaign. (The OD campaign should be conducted in the first or second week of each month, after the monthly functionality check, so that it does not skew the functionality check OD data.)

Step 2: Prepare for the OD campaign

- Mobilize cleaning tools for the OD campaign. These could be borrowed from the existing camp cleaners or from different camps based on the availability of tools. (Cleaning materials from OXSI must be returned to OXSI after OD campaign in order to use next time.)
- Before the day of the OD campaign, confirm the date and time of the campaign with the community (as decided in the community meeting) and inform the CMA and CMC about the plan.

Step 3: During the OD campaign

- On the day of the cleaning campaign, arrange with the construction team to open the manhole covers of several pits near the OD cleaning campaign to discard OD collected into the pits.
- Right before the campaign begins, make a 0.2% chlorine solution to disinfect tools:
 - If using chlorine powder: put 4 spoonful of calcium hypochlorite (HTH) powder in 20 litres of water, stir for about 30 seconds, and then let the solution sit for 30 minutes before use.
 - If using Aquatabs: put about 5.5 spoonfuls of Aquatab powder in 20 litres of water, stir for 30 seconds, then let the solution sit for 30 minutes before use.
- Take the bucket with the chlorine solution near the latrine pits where OD will be disposed. Don't let children play in the area during the campaign.
- Provide tools, gloves and masks for participants.

- Conduct awareness-raising activities during the OD cleaning about the negative effects that OD can have on the environment and health.

Step 4: After the OD campaign

- After the campaign is over, make sure participants have signed the attendance sheet.
- Thank participants for coming and remind them to wash their hands when they get home.
- Clean the tools used in the bucket with the chlorine solution. Immerse the tools in the bucket for at least 10 minutes.
- Empty the bucket of chlorine solution on the pit covers or on the ground near the pits. Throw away gloves and masks used by participants in a proper waste bin.

Reporting, Monitoring and Evaluation:

- **Report:** the progress of the activities will be reported monthly. The reporting is compiled by the WASH officer in charge and submitted to the WASH field coordinator. The report should also include pictorial presentation as a verification of the activities.
- **Monitoring and evaluation:** Regular monitoring of the activities will be carried out by WASH coordinator, Commob PM, Commob AM and WASH field coordinator. The MEAL team will conduct the evaluation of this specific activity by conducting a mini-survey and gathering health data focusing on the incidence of diarrheal disease.

Resources required

- Cleaning tools: shovels, hoes, hard brooms
- Bucket with chlorine solution (for disinfecting tools)
- Gloves and masks for participants to wear during the campaign
- Refreshment during community meeting

Estimated Timeline

- Community meeting: **one day**
- Community mobilization: **one day**
- Preparation of tools (mobilizing cleaning tools) and IEC materials: **two days**
- Carry out OD campaign: **one day**

Remarks: Suggestions for the locations for OD campaigns will come from MEAL team data.

| Result | Indicators | Method of Data Collection | Disaggregation | Frequency (Collect) | Frequency (Report) | Responsibility | |
|--|---|-------------------------------|---|---------------------|--------------------|---|---|
| | | | | | | Collect | Report |
| Impact | # of Pharmacies reporting significant amount of medicines sold for diarrheal diseases | Survey | By community; type of pharmaceutical distribution center; types of medicine sold | Bi-annually | Bi-annually | OXSI MEAL | OXSI Programme managers |
| | # of policy and procedural changes in collaboration platforms that incorporate OXSI best practices and community feedback | Advocacy Review | Per platform (Working Group, Cluster); per level (local, national); per type of change; per best practice | Bi-annually | Bi-annually | OXSI Advocacy and Programme Coordinator | OXSI Advocacy and Programme Coordinator |
| | Community Engagement - Community defined indicator | TBD | TBD | Bi-annually | Bi-annually | OXSI WASH Coordinator | OXSI Programme managers |
| Outcome I Conflict-affected populations have access to and ownership and management over the provision of safe water in their communities | Degree of participation of conflict-affected community in ensuring access to water services ¹ | Participation Diagnosis Tool | Rating of participation per category of participation | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % of households in conflict-affected communities who report access to safe and sufficient water to meet basic needs | Satisfaction Survey | By type of household (women-headed household vs non); by community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % of conflict-affected community satisfied with the water infrastructure handovers | Post-Handover Survey | By gender; by age; by community | Per handover | Bi-annually | OXSI MEAL | OXSI MEAL |
| Output I.1 Water lifecycle infrastructure is | # of functional boreholes monitored by OXSI | Borehole Functionality Survey | Per community | Monthly | Monthly | OXSI MEAL | OXSI MEAL |

¹ Degree of participation defined by scale of participation in community engagement. Framework delivered by Lucy Knight, Oxfam PHP Advisor

| | | | | | | | |
|---|--|-------------------------------|--|-------------------|-------------|---|-------------------------|
| functional and handed over to communities | # of boreholes handed over to community | Post Distribution Monitoring | Per community | Per handover | Bi-annually | OXSI MEAL | OXSI MEAL |
| | # of boreholes maintained/repared by OXSI | Borehole Functionality Survey | Per community | Monthly | Monthly | SI Construction | OXSI MEAL |
| | % of water points are clean and free of standing water | Borehole Functionality Survey | Per community | Monthly | Monthly | OXSI MEAL | OXSI MEAL |
| Output I.2 Communities able to implement minor repairs and able to request major repairs from service providers | # of conflict-affected community members are trained in operation and maintenance of handpumps | Participation List | By gender; age; community | Per event | Monthly | SI Construction | OXSI MEAL |
| | # of community member-initiated repair requests on handpumps | Feedback mechanism | By community; major; minor | Per request | Monthly | OXSI MEAL | OXSI MEAL |
| | % of conflict-affected community satisfied with repairs to water infrastructure | Satisfaction Survey | By gender; by age; per community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| Output I.3 OXSI implements water quality testing processes and remedial responses to ensure safe water | # of handpumps that receive timely and effective remedial actions | Water quality report | Per handpump; per community; type of remedial action; timeliness of action | For failed test | Weekly | Oxfam Water Quality Team | Oxfam programme manager |
| | % of boreholes with <10 CFU/100ml | Water quality report | Per handpump; per community | Per test | Weekly | Oxfam Water Quality Team | Oxfam programme manager |
| | # of remedial actions carried out | Water quality report | Per handpump; per community | Per negative test | Weekly | SI Construction; OXSI CommMob teams; Water Quality Team | Oxfam programme manager |
| Output I.4 Development and piloting of water enterprises within the conflict-affected communities | # of water enterprise models designed | Document Review | Type of water enterprise model | TBD | TBD | TBD | TBD |
| | # of water enterprises piloted | Document Review | Type of water enterprise model piloted | TBD | TBD | TBD | TBD |
| | # of water enterprises functional | Document Review | Type of water enterprise model piloted | TBD | TBD | TBD | TBD |

| Outcome 2 Conflict-affected populations have access to and O&M over the provision of safe sanitation in their communities | Degree of participation of conflict-affected community in ensuring access of provision of sanitation services ² | Participation Diagnosis Tool | Rating of participation per category of participation | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
|--|--|------------------------------|---|--------------|-------------|-----------------|-----------|
| | % of conflict-affected population satisfied with the process of consultation for the repairs and upgrades of latrines | Satisfaction Survey | Per community; | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % of households in conflict-affected communities who report access to safe and sufficient latrines at all times | Latrine Functionality Survey | Per community; | Monthly | Bi-annually | OXSI MEAL | OXSI MEAL |
| | | | | | | | |
| Output 2.1 Latrines are functional and have been handed over to communities | # of latrines that OXSI monitors that are functional | Latrine Functionality Survey | Per community; | Monthly | Monthly | OXSI MEAL | OXSI MEAL |
| | # of latrines handed over to the community | Post-handover survey | Per community; per | Per handover | Monthly | OXSI MEAL | OXSI MEAL |
| | % of community-affected population satisfied with handovers | Post-handover survey | Per community; by gender; by age | Per handover | Monthly | OXSI MEAL | OXSI MEAL |
| | # of latrines maintained and/or repaired by OXSI | Latrine Functionality Survey | Per community; per infrastructure | Monthly | Monthly | SI Construction | OXSI MEAL |
| | % of latrines that are free of faeces in the surrounding area | Latrine Functionality Survey | Per community | Monthly | Monthly | OXSI MEAL | OXSI MEAL |
| Output 2.2 Communities are able to implement minor repairs and/or able to | # of community member-initiated repair requests on latrines | Feedback mechanism | By gender; by age; per community; per | Per request | Monthly | OXSI MEAL | OXSI MEAL |
| | % of conflict-affected community members satisfied with repairs to latrines | Satisfaction Survey | By gender; by age; per community; per | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |

² Degree of participation defined by scale of participation in community engagement. Framework delivered by Lucy Knight, Oxfam PHP Advisor

| | | | | | | | |
|--|---|-------------------------------|--|------------------|-------------|-------------------|-------------------------|
| request major repairs from service providers | | | | | | | |
| Output 2.3 Latrines in conflict-affected communities are regularly desludged | Volume of sludge removed and taken to Sludge Treatment Site | STS Reports | By ; by community; frequency of collection | Per desludging | Monthly | SI Sanitation | SI programme manager |
| | # of community-initiated requests for desludging | Feedback mechanism | By gender; by age; per community; per | Per request | Monthly | OXSI MEAL | SI programme manager |
| | # of overflowing latrines | Latrine Functionality Survey | By latrine; by community | Monthly | Monthly | OXSI MEAL | SI programme manager |
| Output 2.4 Solid waste management | # of functional Incinerators | Solid Waste Management Survey | By type of incinerator; MHM or non-MHM; by community | Monthly | Monthly | OXSI MEAL | OXSI MEAL |
| | # and frequency of community-led cleaning campaigns | WASH Field Report | Per community; community-led vs not; timing of campaigns | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |
| | % of households reporting active use of solid waste management kits | Solid Waste Management Survey | Per community | Per distribution | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % of community members reporting that they are satisfied with solid waste management kits and cleanliness of their area | Satisfaction Survey | Per community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | # of solid waste management kits distributed | Distribution list | Per community | Per distribution | Bi-annually | WASH CommMob Team | OXSI programme managers |
| | | | | | | | |
| Output 2.5 Drainage | Linear length of repairs or construction of drainage channels | Construction Report | Type of repair; type of construction; per community | Monthly | Monthly | SI Construction | SI programme manager |
| | # of community-initiated drainage cleaning campaigns | WASH Field Report | Per community; per | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |
| Output 2.6 Sanitation | # of sanitation enterprise models designed | Document Review | Type of sanitation enterprise model | TBD | TBD | TBD | TBD |

| | | | | | | | |
|--|--|---|---|-------------|-------------|-------------------------------|-------------------------|
| enterprise developed | # of sanitation enterprises piloted | Document Review | Type of sanitation enterprise model piloted | TBD | TBD | TBD | TBD |
| | # of sanitation enterprises functional | Document Review | Type of sanitation enterprise model piloted | TBD | TBD | TBD | TBD |
| Outcome 3 Conflict-affected community are aware of and promoting positive hygiene practices | % of conflict-affected community members actively involved through campaigns | Participation on Lists; Population projection | By gender; by age; per community | Weekly | Bi-annually | WASH Field Team; CommMob Team | OXSI programme managers |
| | % of conflict-affected community who report that campaigns are effective at promoting positive WASH practices in their communities | Satisfaction Survey | By gender; by age; per community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % conflict-affected community members who can describe three measures they are taking to prevent WASH-related diseases | Satisfaction Survey | By gender; by age; per community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | | | | | | | |
| Output 3.1 Implementation of targeted campaigns on issues related to public health in conflict-affected communities | # of community members participating in educational outreach sessions | WASH Field Report | By type of outreach activity ³ ; per community | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |
| | # of community members who participate in WASH events and celebrations | WASH Field Reports | By event; by gender | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |
| | # of topics covered and addressed in educational sessions | WASH Field Reports | Type of topic covered; By type of resolution; location of distribution; per community | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |

³ Outreach sessions are:

1. WASH in Schools 2. WASH for Women 3. Menstrual Hygiene Management Sessions 4. Transect Walks 5. Targeted Home Visits 6. Meetings

| | | | | | | | |
|---|--|--|---|------------|-------------|---|---|
| Output 3.2 Community-led campaigns are initiated, developed and implemented by conflict-affected communities | # of community members participating in designing community campaigns | Participation Lists; Community Engagement Report | By age; by gender; per community; per stakeholder group | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| | % of communities that have at least one campaign | Community Engagement Report | By type of campaign; per community type | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| | # of campaigns that have community-developed indicators | Community Engagement Report | By type of campaign; per community type | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| | # of community-led campaigns that have achieved the result anticipated by the community | Community Engagement Report | By type of campaign; per community type | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| Output 3.3 Community has access to basic hygiene items | # hygiene kits distributed | Distribution lists | By gender; by age; per community | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |
| | % of community satisfied with access and type of hygiene kits distributed | Hygiene kit Post Distribution Monitoring | Per community; by gender; by age | Bi-monthly | Bi-monthly | OXSI MEAL | OXSI MEAL |
| Outcome 4 Increased and strengthened influencing across various platforms at the local and national levels to amplify key concerns from conflict-affected communities | # of engagement mechanisms developed by conflict affected people to ensure equitable and sustainable access to WASH services | Community Engagement Report; Document Review | Per mechanism; per locality | Monthly | Bi-annually | WASH CommMob Team | OXSI WASH Coordinator |
| | # of collaboration or coordination platforms actively led by OXSI | Self-assessment | Per type of platform | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |
| Output 4.1 Collaboration with stakeholders at | # of best practices (learnings) presented to local, regional, and national forums | Advocacy Strategy Report | Per platform; per level | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |

| | | | | | | | |
|--|--|---|---|--------------------|--------------------|---|---|
| local, national, and international levels | # of learning products developed in platforms led by OXSI | Advocacy Strategy Report | Per platform; per level | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |
| | # of collaboration events led by OXSI | Advocacy Strategy Report | Per platform; per level | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |
| Output 4.2 Coordination with local, regional, national and international actors to raise and amplify the voices of displaced people through platforms they do not have access to | # of notes, policies and guidelines developed by formal coordination platforms that incorporate OXSI messages on issues facing conflict-affected communities | Advocacy Strategy Report | Per platform; per level | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |
| | # of policy and research documents developed by OXSI incorporating views and feedback from conflict-affected populations | Advocacy Strategy Report | Per platform; per level | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |
| | # of coordination mechanisms attended by OXSI | Advocacy Strategy Report | Per platform; per level | Monthly | Bi-annually | Advocacy and Programme Coordinator OXSI | Advocacy and Programme Coordinator OXSI |
| Outcome 5 A strengthened culture of accountability and transparency exists in the delivery of WASH services to affected populations | % of conflict-affected community members reporting that WASH services are delivered in a participatory manner | Satisfaction Survey | By gender; by age; per community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % of complaints that are investigated, resolved and results fed back to the complainant within the stated timeframe | Feedback mechanism ; Document Review | By complaint type; by community | Weekly | Quarterly | OXSI MEAL | OXSI MEAL |
| | # of adaptations and improvements to project done by staff in response to feedback raised by communities | Learning Review | | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | | | | | | | |

| | | | | | | | |
|--|--|--|---|---------------------|-------------|-------------------|-----------------------|
| Output 5.1 Short-term and systemic barriers, especially those affecting vulnerable and marginalized groups, are understood by the project | # and type of groups who participate in design, implementation, and oversight of the Community Engagement Strategy | Participation Lists; Community Engagement Report | Type of groups; by gender; by age; by community | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| | # and types of needs identified by community | Community Engagement Report | Type of groups; by thematic grouping | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| | # of community folders updated regularly with changes in maps, stakeholders, power dynamics | Community Engagement Report | Types of updates; types of documents; per community | Weekly | Monthly | WASH CommMob Team | OXSI WASH Coordinator |
| | Information Ecosystem Assessment analysis completed | Information Ecosystem Assessment | Per community | One time assessment | | Internews | Internews |
| Output 5.2 An effective accountability mechanism is established receiving quality feedback from conflict-affected communities and a timely, effective response from OXSI | # of feedback received | Feedback Mechanism | By type of feedback; by community; by gender; by age | Monthly | Quarterly | OXSI MEAL | OXSI MEAL |
| | % of complaints that are investigated and where appropriate follow up action taken | Feedback mechanism | By type of complaint; by community; by gender; by age | Weekly | Quarterly | OXSI MEAL | OXSI MEAL |
| | % of conflict-affected community members, including vulnerable and marginalized groups, who are aware of complaints mechanisms established for their use | Satisfaction Survey | By age; by gender; by community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | % of conflict-affected community satisfied with response received from feedback | Satisfaction Survey | By age; by gender; by community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| Output 5.3 Clear, transparent and | % of the affected population that consider the complaints mechanisms accessible and safe | Satisfaction Survey | By age; by gender; by community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | # of information products delivered to community members | Internews Report | By community | Monthly | Quarterly | Internews | Internews |

| | | | | | | | |
|---|--|---------------------------------------|--|--------------------|--------------------|--|--|
| consistent communication with communities ensures transparency and accountability between project and conflict-affected communities | % of conflict-affected community who consider that they have timely access to relevant and clear information | Internews Report; Satisfaction Survey | By age; by gender; by community | Bi-annually | Bi-annually | Internews | Internews |
| | # and type of coordination mechanism in place to ensure clear, effective referral process for feedback among other agencies | Internews Report | Type of coordination mechanism; type of referral mechanism | Monthly | Quarterly | Internews | Internews |
| | # and type of trainings to outreach teams to provide targeted, verified and localized information and to receive community feedback. | Internews Report | Type of training; location of training; types of trainees | Monthly | Quarterly | Internews | Internews |
| Outcome 6 Clear and comprehensive Gender and Protection mainstreaming throughout the project implementation | # of gender needs identified and integrated into access to WASH services | Gender Review | By type of need; by type of project modification | Monthly | Quarterly | Gender and Protection Coordinator | Gender and Protection Coordinator |
| | % of conflict-affected community considers WASH services to be accessible, safe, and useable by men, women, and children according to their needs | Satisfaction Survey | By gender; by age; by community | Bi-annually | Bi-annually | Gender and Protection Coordinator | Gender and Protection Coordinator |
| | % of conflict-affected community believe their protection issues in accessing WASH services are dealt with effectively | Satisfaction Survey | By gender; by age; by community | Bi-annually | Bi-annually | Gender and Protection Coordinator | Gender and Protection Coordinator |
| Output 6.1 Development and implementation of Gender and Protection strategies | # of gender and protection strategies developed | Gender and Protection Strategy | | Monthly | Quarterly | Gender and Protection Coordinator | Gender and Protection Coordinator |

| | | | | | | | |
|---|--|-------------------------------------|----------------------------------|-------------|-------------|-----------------------------------|-----------------------------------|
| Output 6.2 Design and implementation of Gender and Protection assessments and analyses | # of gender assessments conducted | Gender and Protection Strategy | Per community | Monthly | Quarterly | Gender and Protection Coordinator | Gender and Protection Coordinator |
| | # of gender and protection analyses completed | Gender and Protection Strategy | Per community | Monthly | Quarterly | Gender and Protection Coordinator | Gender and Protection Coordinator |
| Output 6.3 All levels of staff have knowledge and awareness of gender and protection strategy and mainstreaming | # of staff trainings conducted on gender and protection | Participation lists | per community; per staff level | Monthly | Quarterly | Gender and Protection Coordinator | Gender and Protection Coordinator |
| | % of staff reporting higher knowledge and awareness of gender and protection | Pre and post-assessments | per community; per staff level | Monthly | Quarterly | Gender and Protection Coordinator | Gender and Protection Coordinator |
| Output 6.4 Latrines have functional solar lighting for safe access for men, women, and children at all times | # of solar lights installed or repaired | Construction Report | Per community | Weekly | Monthly | SI Construction | OXSI MEAL |
| | % of conflict-affected community reporting solar lights are an effective method for improving safe access to latrines at night | Satisfaction Survey | By age; by gender; per community | Bi-annually | Bi-annually | OXSI MEAL | OXSI MEAL |
| | # of solar lights functional around OXSI latrines | Latrine Functionality Survey | Per community | Monthly | Monthly | OXSI MEAL | OXSI MEAL |
| Output 6.5 Women and girls have improved oversight and consultation on WASH services in conflict-affected communities | # of learning reviews developed with insights from women, girls, boys, and men and their access to WASH services | Gender Learning Review | Per community | Monthly | Bi-annually | Gender and Protection Coordinator | Gender and Protection Coordinator |
| | # of trainings held with community members on women's leadership | Participation Lists | By age; by gender; per community | Weekly | Monthly | Gender and Protection Coordinator | Gender and Protection Coordinator |
| | Type and content of WASH for Women (W4W) sessions held | Participation lists; Monthly report | By age; by gender; per community | Weekly | Monthly | WASH CommMob Team | OXSI programme managers |

| Outcome 7 Emergency Planning implemented and Emergency Response ready to adapt and launch | Emergency Planning sessions held | Situation Report | Per level (Sittwe; coordination bodies; camp-based) | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
|--|---|---------------------------|--|-------------|-------------|-------------------------|-------------------------------------|
| | # of WASH infrastructure altered due to emergency planning considerations | Situation Report | By type of infrastructure; by community | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
| Output 7.1 Needs-based preparedness outreach and awareness for conflict-affected communities | # and type of preparedness outreach sessions with conflict-affected community members | Participation lists | By age; by gender; per community | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
| | # of campaigns conducted on preparedness | Document Review | By type of campaign; per community | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
| | # and type of materials stockpiled | Stocklist Database | By type of material; by location; by purpose | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
| Output 7.2 Emergency Response activated based on type of response | # of assessment and response teams deployed within 48 hours of emergency | Situation Report | By type of assessment; by type of response team (Surge Response Team; Emergency Response Team) | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
| | % of Sittwe joint contingency plan implemented within 7 days of emergency | Contingency Plan for OXSI | By camp | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |
| | # and types of materials distributed | Inventory and Stock Lists | By camp; by household | As required | As required | OXSI programme managers | As per Emergency Response Mechanism |

Satisfaction Survey - HARP - 2

| Field | Question | Answer |
|------------------------------------|--------------------------|--|
| General Information | | |
| Enumerator_Name <i>(required)</i> | Enumerator Name | |
| Date <i>(required)</i> | Date of Survey | |
| Agency_name <i>(required)</i> | Agency Name | Oxfam Oxfam SI SI |
| Oxfam_Camp <i>(required)</i> | Oxfam Camp Name | STMG Say Tha Mar Gyi Camp OTG_1 Ohn Taw Gyi (1) Camp OTG_3 Ohn Taw Gyi (3) Camp OTG_6 Ohn Taw Gyi (6) Camp MTN Maw Thin Nyar Camp TKP Thet Kay Pyin Camp OTC Ohn Taw Cha Camp KDK Kaung Doke Kar Camp |
| SI_Camp <i>(required)</i> | SI Camp Name | TCC Thae Chaung Camp DPC Dar Paing Camp HMZ Hmanzi Camp BDP Baw Du Pha Camp BSR Bar Ser Rar Camp |
| Respondeent_Name <i>(required)</i> | Respondent Name | |
| R_Gender <i>(required)</i> | Respondent Gender | M Male F Female |
| Respondent_Age <i>(required)</i> | Age of Respondent | 16_40 16 - 40 Year 40_60 40 - 60 Year Over_60 Over 60 Year |
| HH_Head_Gender <i>(required)</i> | Gender of Household Head | M Male F Female |

% of Conflict-affected population satisfied with the process of consultation for the repairs and upgrades of latrines

| | | |
|--|--|---|
| Consultation <i>(required)</i> | 1(a) - Have you ever been consulted about repairs or upgrades of latrine in your area? | Yes Yes No No |
| Frequency_Consultation <i>(required)</i> | 1(b) - How often are you consulted on repairing and upgrading of latrine? | Occasionally Occasionally Often Often Always Always |
| Rating_Satisfaction <i>(required)</i> | 1(c) - Overall, Are you satisfied with the consultation you've received on repairs/upgrades of latrines? | Dissatisfied Dissatisfied Neutral Neutral Satisfied Satisfied |

% of conflict-affected community who report that campaigns are effective at promoting positive WASH practices in their communities

| | | |
|--|---|---|
| Experience_HP <i>(required)</i> | 2(a) - Have you joined a campaign or HP session during this project? | Yes Yes No No |
| Useful_HP_Act <i>(required)</i> | 2(b) - What was the most useful campaign or HP session you took part in? | ECC Environmental Cleaning Campaign DCC Drainage Cleaning Campaign MHM MHM Session WASH_S WASH in School WASH_W WASH for Women Events Events HK Hygiene kit Distribution TW Transect Walk Other Other |
| Helped_Good_Practise <i>(required)</i> | 2(c) - Do you think campaign or HP session helped people to adopt good practises? | Yes Yes No No |

% conflict-affected community members who can describe three measures they are taking to prevent WASH-related diseases

| | | |
|---|--|---|
| Prevention_Water_Related_Diseases <i>(required)</i> | 3(a) - What is the most important practise you perform regularly and encourage your family perform to prevent diarrhoea? | HW Hand Washing with Soap Use_CW Use Clean Water Safe_Food Safe Food Using_Clean_Latrine Using Clean Latrine Using_Bin Using bin for waste Other Other |
|---|--|---|

| Field | Question | Answer |
|----------------------------------|--|---|
| Make_Sure_SW <i>(required)</i> | 3(b) - What do you do to make sure water to be safe and clean? | Clean_WC Clean Water Container WC_Lid Water Container with Lid Use_CC Use Clean Cup CWF Using CWF Sedi Sedimentation Boiling Boiling Use_WF Using Water Filter Use_CH Use clean handpump Using_Aqu Using Aquatab Other Other |
| Manage_Garbage <i>(required)</i> | 3(c) - How do you manage garbage at home? | Give_Cleaner Collect at home and give to cleaner Dispose_PWB Dispose in a public waste bin Dispose_Open Dispose in the open Other Other |

% of affected people who report hand washing with soap and water at key times during the reporting period

| | | |
|---|--|--|
| use_to_wash_hands <i>(required)</i> | 3 (d) - What do you use to wash your hands? | soap_water Soap and water water_only Water only other Other |
| critical_time_to_wash_hands <i>(required)</i> | 3 (e) - Could you mention the critical time to wash hands with soap? | before_eating (a)-Before eating after_using_latrine (b)-After using the latrine before_preparing_food (c)-Before preparing food after_cleaning_babies_bottom (d)-After cleaning baby's bottom before_feeding_child (e)-Before feeding a child other (f)-Other |
| soap_present_at_house <i>(required)</i> | 3 (f) - Do you have soap at your house and can you please show me? | yes Yes no No |

% of conflict-affected community members reporting that WASH services are delivered in a participatory manner

| | | |
|--|--|---|
| Involved_Handover_LT <i>(required)</i> | 4(a) - Were you or a member of your family involved in the latrines handover process? | Yes Yes No No |
| Involved_LT_MR <i>(required)</i> | 4(b) - Were you or a member of your family involved in minor repairing of latrine? | Yes Yes No No |
| Satisfied_LT_MR <i>(required)</i> | 4(c) - Are you satisfied with minor repair of handed over latrine by community? | Satisfied Satisfied Neutral Neutral, Don't know Dissatisfied Dissatisfied |
| Involved_HO_HP <i>(required)</i> | 4(d) - Were you or a member of your family involved in the handpump handover process? | Yes Yes No No |
| Involved_HP_MR <i>(required)</i> | 4(e) - Were you or a member of your family involved in minor repairing of handpump? | Yes Yes No No |
| Satisfied_HP_MR <i>(required)</i> | 4(f) - Are you satisfied with minor repair of handed over handpump by community? | Satisfied Satisfied Neutral Neutral, Don't know Dissatisfied Dissatisfied |
| Consulted_HP <i>(required)</i> | 4(g) - Were you or a member of your family consulted on topics discussed during hygiene promotion session? | Yes Yes No No |

% of conflict-affected community considers WASH services to be accessible, safe and useable by men, women, and children according to their needs

| | | |
|--|--|--|
| Enough_Latrine <i>(required)</i> | 5(a) - Do you believe there are enough latrine for everyone in your community? | Yes Yes No No |
| Why_Not_Enough_Latrine <i>(required)</i> | 5(b) - If no, Why not enough latrine? | Away_HH Too far away from household latrine_NF Latrine is not functioning Stolen Latrine was stolen Large_FZ Large family size Other Other |

% of conflict-affected community considers WASH services to be accessible, safe and useable by men, women, and children according to their needs > 5(c) - Do you believe that you and your family can easily access latrine?

| | | |
|----------|--------------|------------------|
| Women | For Women | Yes Yes No No |
| Men | For Men | Yes Yes No No |
| Children | For children | Yes Yes No No |

| Field | Question | Answer |
|--|---|--|
| Older | For Older | Yes Yes No No |
| Disable | For Disable | Yes Yes No No |
| Why_Not_Accessible_Latrine <i>(required)</i> | 5(d) - If no, why not accessible to latrine? | Larine_Far Latrines are to far away Latrine_Locked Latrines are locked Latrine_Unsafe Latrines are not safe Latrine_Dirty Latrines are too dirty No_Path No path to latrine Not_Functioning Latrines are not functioning Overflow Latrines are overflowing Stolen Latrines were stolen High Latrine is high Large_FS Large Family Size Other Other |
| Enough_Desludging <i>(required)</i> | 5(e) - Do you believe there is enough desludging happening in your community? | Yes Yes No No |
| Safety_Issue <i>(required)</i> | 5(f) - What is your safety issue to use latrine? | No_Light No light at night No_Path No path to latrine Non_Fun_Lat Non functioning Latrine High Latrine is high D_Latrine Double Latrine no_safety_issue No safety issue Other Other |
| Accessible_Quality_Water <i>(required)</i> | 5(g) - Do you believe you and your family can easily access quality water from handpumps? | Yes Yes No No |
| Why_Not_Accessible_handpump <i>(required)</i> | 5(h) - If no, why not accessible to handpumps? | No_Good_Water No good quality water Far_HH Too far from HH No_Functioning HPs are not functioning Unsafe Unsafe to get water from HP Other Other |
| % of conflict-affected community members, including vulnerable and marginalized groups, are aware of complaints mechanisms established for their use | | |
| Aware_Feedback_Mechanism <i>(required)</i> | 6(a) - Do you know how to provide feedback or a complaint about WASH services to OXSI staff? | Yes Yes No No |
| Provided_Feedback <i>(required)</i> | 6(b) - Have you ever provided feedback to OXSI? | Yes Yes No No |
| Providing_Feedback <i>(required)</i> | 6(c) - If yes, how did you provide feedback? | Feedback_Tablet Feedback on Tablet Oxfam/SI_Office Oxfam/SI Office Person_Staff In Person (Staff) T_CMC Through CMC T_CMA Through CMA T_BL Through Barrack Leader T_RL Through Religious Leader Hot_line Phone, Hot Line Other Other |
| % of conflict-affected community satisfied with response received from feedback | | |
| Receiving_Response <i>(required)</i> | 7(a) - Do you regularly receive a response to the feedback you provide? | Yes Yes No No |
| % of the affected population that consider the complaints mechanisms accessible and safe | | |
| Satisfactions <i>(required)</i> | 8(a) - Overall, how satisfied are you with the responses you have received from the feedback? | Satisfied Satisfied Neutral Neutral, Don't know Dissatisfied Dissatisfied |
| Accessible_Complaint <i>(required)</i> | 8(b) - Do you consider the OXSI complaint mechanism accessible for you to report your feedback to OXSI? | Yes Yes No No |
| Safe_Complaint <i>(required)</i> | 8(c) - Do you feel safe to raise your feedback to OXSI? | Yes Yes No No |
| % of conflict-affected community who consider that they have timely access to relevant and clear information | | |
| Unsafe_Specify <i>(required)</i> | 9(a) - If you feel unsafe, why, please specify? | Fear_Attacked Fear to be attacked No_Trust No Trust to staffs Afraid_CMC Afraid of CMC Away_Office Far away from Office No_Action No action on response Shame Shame Other Other |

| Field | Question | Answer |
|---|---|---|
| Information <i>(required)</i> | 9(b) - How often do you receive relevant and clear information about OXSI WASH? | Never Never Sometimes Sometimes Often Often Always Always |
| 9c. Do you know if the following groups receive relevant and clear information about OXSI WASH? | | |
| children <i>(required)</i> | Children | never Never Sometimes Sometimes Often Often Always Always |
| women <i>(required)</i> | Women | never Never Sometimes Sometimes Often Often Always Always |
| people_with_limited_mobility <i>(required)</i> | People with limited mobility | never Never Sometimes Sometimes Often Often Always Always |
| People_with_hearing_impairments <i>(required)</i> | People with hearing impairments | never Never Sometimes Sometimes Often Often Always Always |
| People_with_visual_impairments <i>(required)</i> | People with visual impairments | never Never Sometimes Sometimes Often Often Always Always |
| % of conflict-affected community reporting solar lights are an effective method for improving safe access to latrines at night | | |
| Solar_Present <i>(required)</i> | 10(a) - Is there solar lighting near latrine which you use? | Yes Yes No No |
| Effective-Method <i>(required)</i> | 10(b) - Do you think solar lighting is effective method for improving safe access to latrine at night? | Yes Yes No No |
| Suggestion | 10(c) - Do you have any suggestion to access to latrine at night better than solar lighting? | |
| % of women and girls who report that they have an adequate system for disposing of used sanitary pads? | | |
| dispose_used_sanitary_pads <i>(required)</i> | 11 (a) - Where do you dispose the used sanitary pads? | MHM_incinerator_bin At MHM incinerator bin into_the_latrine Into the latrine waste_collection_point At waste collection point into_the_drainage Into the drainage other Other |
| when_disposed_the_used_pads <i>(required)</i> | 11 (b) - When do you dispose the used pads normally? | during_the_day During the day at_night At night whenever_available Whenever available |
| encountered_problems_while_disposing <i>(required)</i> | 11 (c) - Have you ever encountered any problems/challenges while disposing the used sanitary pads? | yes Yes no No |
| specificaiton_of_problems <i>(required)</i> | 11 (d) - If yes, can you please tell what problems you are facing? | |
| satisfied_with_existing_disposal_system <i>(required)</i> | 11 (e) - Overall, how are you satisfied with the existing disposal system for used sanitary pads? | satisfied Satisfied dissatisfied Dissatisfied neutral Neutral |
| % of women and girls who report that they have an adequate system for disposing of used sanitary pads | | |
| attended_MHM_session <i>(required)</i> | 12 (a) - Have you ever attended a MHM session for men? | yes Yes no No |
| conducted_organization <i>(required)</i> | 12 (b) - Which organization conducted it? | |
| shared_with_family_members <i>(required)</i> | 12 (c) - If yes, have you ever shared the information received during the session with your family especially women and girls? | yes Yes no No |
| interesting_topics <i>(required)</i> | 12 (d) - Which topics did you find interesting? | |
| satisfied_with_information <i>(required)</i> | 12 (e) - How are you satisfied with the information? | satisfied Satisfied dissatisfied Dissatisfied neutral Neutral |
| improving_MHM-session <i>(required)</i> | 12 (f) - Do you think there is anything that can be improved in the MHM session? | yes Yes no No |
| suggestions <i>(required)</i> | 12 (g) - If yes, please specify details | |
| % of affected people surveyed who report feeling satisfied with the latrine design and sanitation services->% of affected people surveyed who report feeling satisfied with the water point design and water services | | |
| satisfaction_of_latrine-design_sanitation_servies <i>(required)</i> | 13 (a) - Overall, how are you satisfied with the latrine design and sanitation services? <i>Noe for enumerator: Please make sure the respondent understands the question. The question is mainly to assess the overall satisfaction on the OXSI latrine design and other sanitation services such as waste management system, drainage system as well as latrine desludging.</i> | satisfied Satisfied dissatisfied Dissatisfied neutral Neutral |

| Field | Question | Answer | | | | | | | | | | |
|---|--|--|------------------------|---|-------------------------------|---------------------------------------|-----------------------------|---|-------|-------|--------|--------|
| satisfaction_of_water_point-design_water_services <i>(required)</i> | 13 (b) - Overall, how are you satisfied with the water point design and water services? <i>Noe for enumerator: Please make sure the respondent understands the question. The question is mainly to assess the overall satisfaction on the OXSI water point design and other water services such as water quality test and shock chlorination.</i> | <table border="1"> <tr><td>satisfied</td><td>Satisfied</td></tr> <tr><td>dissatisfied</td><td>Dissatisfied</td></tr> <tr><td>neutral</td><td>Neutral</td></tr> </table> | satisfied | Satisfied | dissatisfied | Dissatisfied | neutral | Neutral | | | | |
| satisfied | Satisfied | | | | | | | | | | | |
| dissatisfied | Dissatisfied | | | | | | | | | | | |
| neutral | Neutral | | | | | | | | | | | |
| MHM Incinerator Bin PDM | | | | | | | | | | | | |
| MHM_incinerator_bins <i>(required)</i> | 1a. Is there anything you don't like about the MHM incinerator bins? | <table border="1"> <tr><td>too_far_from_household</td><td>It's too far from household</td></tr> <tr><td>MHM_incinerator_bins_are_full</td><td>The MHM incinerator bins are full</td></tr> <tr><td>Other</td><td>Other</td></tr> </table> | too_far_from_household | It's too far from household | MHM_incinerator_bins_are_full | The MHM incinerator bins are full | Other | Other | | | | |
| too_far_from_household | It's too far from household | | | | | | | | | | | |
| MHM_incinerator_bins_are_full | The MHM incinerator bins are full | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | |
| If_Other <i>(required)</i> | 1b.If Other, please mention details | | | | | | | | | | | |
| access_MHMincinerator_daytime <i>(required)</i> | 2a.Can you easily access the MHM incinerator bins at day time? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| access_MHMincinerator_nighttime <i>(required)</i> | 2b.Can you easily access the MHM incinerator bins at night time? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| feelsafe_disposing_used_sanitary_pad <i>(required)</i> | 3a.Do you feel safe disposing used sanitary pad in the MHM incinerator bins? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| If_No_why <i>(required)</i> | 3b.If No, why? | | | | | | | | | | | |
| prefer_male_female_workers_burning_used_sanitary_pads <i>(required)</i> | 4a.Do you prefer male or female workers burning the used sanitary pads inside the MHM incinerator bins? | <table border="1"> <tr><td>M</td><td>Male</td></tr> <tr><td>F</td><td>Female</td></tr> </table> | M | Male | F | Female | | | | | | |
| M | Male | | | | | | | | | | | |
| F | Female | | | | | | | | | | | |
| if_no_why <i>(required)</i> | 4b.If Female, why | | | | | | | | | | | |
| believe_enough_MHMincinerator_bins <i>(required)</i> | 5a.Do you believe there are enough MHM incinerator bins in your community? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| Extra Soaps PDM | | | | | | | | | | | | |
| Did_you_receive_extra_soap <i>(required)</i> | 1a.Beside the soaps included in HK distributed by OXSI, Did you receive extra soap? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| Extra Soaps PDM > Group14 | | | | | | | | | | | | |
| how_many_months_recieve_extra_soap <i>(required)</i> | 1b.How many months did you receive Extra Soaps? | <table border="1"> <tr><td>1month</td><td>1 month</td></tr> <tr><td>2months</td><td>2 months</td></tr> <tr><td>3months</td><td>3 months</td></tr> </table> | 1month | 1 month | 2months | 2 months | 3months | 3 months | | | | |
| 1month | 1 month | | | | | | | | | | | |
| 2months | 2 months | | | | | | | | | | | |
| 3months | 3 months | | | | | | | | | | | |
| Can_you_specify_whichmonthdid_youreceiveExtraSoaps <i>(required)</i> | 1c.Can you specify in which month did you receive Extra Soaps? | <table border="1"> <tr><td>April</td><td>April</td></tr> <tr><td>may</td><td>May</td></tr> <tr><td>jun</td><td>Jun</td></tr> <tr><td>july</td><td>July</td></tr> <tr><td>august</td><td>August</td></tr> </table> | April | April | may | May | jun | Jun | july | July | august | August |
| April | April | | | | | | | | | | | |
| may | May | | | | | | | | | | | |
| jun | Jun | | | | | | | | | | | |
| july | July | | | | | | | | | | | |
| august | August | | | | | | | | | | | |
| Did_yourememberwho_distributed <i>(required)</i> | 2a.Did you remember who distributed the extra soap that you received? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| Isit_useful_receive_extra_soap <i>(required)</i> | 2b.Is it useful to receive extra soap? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| if_yes_why <i>(required)</i> | 2c.If Yes, why | <table border="1"> <tr><td>Hygiene_use</td><td>Hygiene use</td></tr> <tr><td>To_sell_them_and_gain_money</td><td>To sell them and gain money</td></tr> <tr><td>give_who_my_family_neighbor</td><td>To give to who in my family/ neighbor are in need</td></tr> <tr><td>other</td><td>Other</td></tr> </table> | Hygiene_use | Hygiene use | To_sell_them_and_gain_money | To sell them and gain money | give_who_my_family_neighbor | To give to who in my family/ neighbor are in need | other | Other | | |
| Hygiene_use | Hygiene use | | | | | | | | | | | |
| To_sell_them_and_gain_money | To sell them and gain money | | | | | | | | | | | |
| give_who_my_family_neighbor | To give to who in my family/ neighbor are in need | | | | | | | | | | | |
| other | Other | | | | | | | | | | | |
| if_no_why1 <i>(required)</i> | 2d.If NO, Why? | | | | | | | | | | | |
| Can_give_us_your_opinions_upon <i>(required)</i> | 3a.Can you give us your opinions upon Extra Soap distribution? | <table border="1"> <tr><td>Just_an_overlap_aid</td><td>Just an overlap aid as other organizations also distributed</td></tr> <tr><td>In_excess_of_soaps</td><td>In excess of soaps, I don't need them</td></tr> <tr><td>Sold_some_soaps</td><td>Sold some soaps</td></tr> <tr><td>Other</td><td>Other</td></tr> </table> | Just_an_overlap_aid | Just an overlap aid as other organizations also distributed | In_excess_of_soaps | In excess of soaps, I don't need them | Sold_some_soaps | Sold some soaps | Other | Other | | |
| Just_an_overlap_aid | Just an overlap aid as other organizations also distributed | | | | | | | | | | | |
| In_excess_of_soaps | In excess of soaps, I don't need them | | | | | | | | | | | |
| Sold_some_soaps | Sold some soaps | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | |
| DoyouthinkOXSI_should_continue_distribute <i>(required)</i> | 3b.Do you think OXSI should continue to distribute Extra Soaps? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| If_yes_why <i>(required)</i> | 3c.If yes, why? | | | | | | | | | | | |
| If_no_why <i>(required)</i> | 3d.If no, why? | | | | | | | | | | | |
| Dignity Kit PDM | | | | | | | | | | | | |
| Did_you_receive_dignity_kit <i>(required)</i> | 1-(a) Did you receive dignity kit provided by OXSI? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| Dignity Kit PDM > Group15 | | | | | | | | | | | | |

| Field | Question | Answer | | | | | | | | | | | | | | |
|---|---|--|--------------------------|--|------------------------------|---|-------------------------------|-------------------------------|---------------------------|---------------------------|----------------|----------------|----------------------------------|---|-------|-------|
| Did_you_have_to_pay_for_dignity_kit <i>(required)</i> | 2-(a) Did you have to pay for dignity kit? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | | | | | |
| yes | Yes | | | | | | | | | | | | | | | |
| no | No | | | | | | | | | | | | | | | |
| Whom_did_you_pay_for_the_kit <i>(required)</i> | 2-(b) Whom did you pay for the kit? | | | | | | | | | | | | | | | |
| How_much_did_you_have_to_pay <i>(required)</i> | 2-(c) How much did you have to pay? | | | | | | | | | | | | | | | |
| give_any_of_items_the_dignity_kit_as_pay <i>(required)</i> | 2-(d) Did you have to give any of the items in the dignity kit as pay? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | | | | | |
| yes | Yes | | | | | | | | | | | | | | | |
| no | No | | | | | | | | | | | | | | | |
| satisfied_with_the_new_dignity_kit_household_distribution <i>(required)</i> | 3-(a) How are you satisfied with the new dignity kit household distribution? | <table border="1"> <tr><td>satisfied</td><td>Satisfied</td></tr> <tr><td>dissatisfied</td><td>Dissatisfied</td></tr> <tr><td>neutral</td><td>Neutral</td></tr> </table> | satisfied | Satisfied | dissatisfied | Dissatisfied | neutral | Neutral | | | | | | | | |
| satisfied | Satisfied | | | | | | | | | | | | | | | |
| dissatisfied | Dissatisfied | | | | | | | | | | | | | | | |
| neutral | Neutral | | | | | | | | | | | | | | | |
| if_dissatisfied_why <i>(required)</i> | 3-(b) If dissatisfied, why? | <table border="1"> <tr><td>Poor_behavior_of_staff</td><td>Poor behavior of staff</td></tr> <tr><td>Need_to_wait_for_a_long_time</td><td>Need to wait for a long time</td></tr> <tr><td>Distribution_site_too_crowded</td><td>Distribution site too crowded</td></tr> <tr><td>Distribution_site_too_far</td><td>Distribution site too far</td></tr> <tr><td>Poor_informing</td><td>Poor informing</td></tr> <tr><td>not_like_standing_MandF_together</td><td>Do not like standing men and women together</td></tr> <tr><td>Other</td><td>Other</td></tr> </table> | Poor_behavior_of_staff | Poor behavior of staff | Need_to_wait_for_a_long_time | Need to wait for a long time | Distribution_site_too_crowded | Distribution site too crowded | Distribution_site_too_far | Distribution site too far | Poor_informing | Poor informing | not_like_standing_MandF_together | Do not like standing men and women together | Other | Other |
| Poor_behavior_of_staff | Poor behavior of staff | | | | | | | | | | | | | | | |
| Need_to_wait_for_a_long_time | Need to wait for a long time | | | | | | | | | | | | | | | |
| Distribution_site_too_crowded | Distribution site too crowded | | | | | | | | | | | | | | | |
| Distribution_site_too_far | Distribution site too far | | | | | | | | | | | | | | | |
| Poor_informing | Poor informing | | | | | | | | | | | | | | | |
| not_like_standing_MandF_together | Do not like standing men and women together | | | | | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | | | | | |
| If_other_please_mention_details <i>(required)</i> | 3- (c) If other, please mention details | | | | | | | | | | | | | | | |
| distribution_than_office_distribution <i>(required)</i> | 3- (d) Are you more satisfied with household level distribution than office distribution? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | | | | | |
| yes | Yes | | | | | | | | | | | | | | | |
| no | No | | | | | | | | | | | | | | | |
| safe_receiving_dignitykit_household <i>(required)</i> | 3- (e) Did you feel safe receiving dignity kit with the household level distribution | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | | | | | |
| yes | Yes | | | | | | | | | | | | | | | |
| no | No | | | | | | | | | | | | | | | |
| If_No_why1 <i>(required)</i> | 3- (f) If No, why? | | | | | | | | | | | | | | | |
| satisfied_with_quantity_of_underwear <i>(required)</i> | 4-(a) How are you satisfied with the quantity of underwear? | <table border="1"> <tr><td>satisfied</td><td>Satisfied</td></tr> <tr><td>dissatisfied</td><td>Dissatisfied</td></tr> <tr><td>neutral</td><td>Neutral</td></tr> </table> | satisfied | Satisfied | dissatisfied | Dissatisfied | neutral | Neutral | | | | | | | | |
| satisfied | Satisfied | | | | | | | | | | | | | | | |
| dissatisfied | Dissatisfied | | | | | | | | | | | | | | | |
| neutral | Neutral | | | | | | | | | | | | | | | |
| satisfied_with_size_underwear <i>(required)</i> | 4-(b) How are you satisfied with the size of underwear? | <table border="1"> <tr><td>satisfied</td><td>Satisfied</td></tr> <tr><td>dissatisfied</td><td>Dissatisfied</td></tr> <tr><td>neutral</td><td>Neutral</td></tr> </table> | satisfied | Satisfied | dissatisfied | Dissatisfied | neutral | Neutral | | | | | | | | |
| satisfied | Satisfied | | | | | | | | | | | | | | | |
| dissatisfied | Dissatisfied | | | | | | | | | | | | | | | |
| neutral | Neutral | | | | | | | | | | | | | | | |
| satisfied_with_quality_underwear <i>(required)</i> | 5-(a) How are you satisfied with the quality of underwear? | <table border="1"> <tr><td>satisfied</td><td>Satisfied</td></tr> <tr><td>dissatisfied</td><td>Dissatisfied</td></tr> <tr><td>neutral</td><td>Neutral</td></tr> </table> | satisfied | Satisfied | dissatisfied | Dissatisfied | neutral | Neutral | | | | | | | | |
| satisfied | Satisfied | | | | | | | | | | | | | | | |
| dissatisfied | Dissatisfied | | | | | | | | | | | | | | | |
| neutral | Neutral | | | | | | | | | | | | | | | |
| kits_being_used <i>(required)</i> | 6-(a) Are the dignity kits being used? | <table border="1"> <tr><td>Yes-using_all</td><td>Yes-using all</td></tr> <tr><td>Yes-using_some</td><td>Yes-using some</td></tr> <tr><td>No</td><td>No</td></tr> </table> | Yes-using_all | Yes-using all | Yes-using_some | Yes-using some | No | No | | | | | | | | |
| Yes-using_all | Yes-using all | | | | | | | | | | | | | | | |
| Yes-using_some | Yes-using some | | | | | | | | | | | | | | | |
| No | No | | | | | | | | | | | | | | | |
| Why_Not_Using_DK <i>(required)</i> | 6-(b) Why are you not using dignity kit? | <table border="1"> <tr><td>Sold</td><td>Sold</td></tr> <tr><td>Give_to_other</td><td>Give to other</td></tr> <tr><td>No_Need</td><td>No Need</td></tr> <tr><td>Not_useful</td><td>Not useful</td></tr> <tr><td>Other</td><td>Other</td></tr> </table> | Sold | Sold | Give_to_other | Give to other | No_Need | No Need | Not_useful | Not useful | Other | Other | | | | |
| Sold | Sold | | | | | | | | | | | | | | | |
| Give_to_other | Give to other | | | | | | | | | | | | | | | |
| No_Need | No Need | | | | | | | | | | | | | | | |
| Not_useful | Not useful | | | | | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | | | | | |
| meet_family_need <i>(required)</i> | 7-(a) Is the dignity kit useful for your family ? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | | | | | |
| yes | Yes | | | | | | | | | | | | | | | |
| no | No | | | | | | | | | | | | | | | |
| benefits_DK_family <i>(required)</i> | 7-(b) If Yes, what are the benefits your family derive from using the dignity kit? | <table border="1"> <tr><td>improve_personal_hygiene</td><td>It improves menstrual and personal hygiene</td></tr> <tr><td>reduce_financial_budget</td><td>It reduces the financial burden on the family to seek those items</td></tr> <tr><td>Not_sure</td><td>Not sure</td></tr> <tr><td>Other</td><td>Other</td></tr> </table> | improve_personal_hygiene | It improves menstrual and personal hygiene | reduce_financial_budget | It reduces the financial burden on the family to seek those items | Not_sure | Not sure | Other | Other | | | | | | |
| improve_personal_hygiene | It improves menstrual and personal hygiene | | | | | | | | | | | | | | | |
| reduce_financial_budget | It reduces the financial burden on the family to seek those items | | | | | | | | | | | | | | | |
| Not_sure | Not sure | | | | | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | | | | | |
| informed_about_distribution <i>(required)</i> | 8-(a) Were you informed about the dignity kit distribution date and time? | <table border="1"> <tr><td>yes</td><td>Yes</td></tr> <tr><td>no</td><td>No</td></tr> </table> | yes | Yes | no | No | | | | | | | | | | |
| yes | Yes | | | | | | | | | | | | | | | |
| no | No | | | | | | | | | | | | | | | |

| Field | Question | Answer | | | | | | | | | | |
|---|---|---|-------------|--|--------------------|-----------------------------|----------|-----------------------|--------|--------|-------|-------|
| informed_about_distribution_items <i>(required)</i> | 8-(b) Were you informed about the sizes and number of items to be distributed? | <table border="1"> <tr> <td>yes</td> <td>Yes</td> </tr> <tr> <td>no</td> <td>No</td> </tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| quantity_female_underwear <i>(required)</i> | 8- (c) How many pieces of female underwear did you receive? | | | | | | | | | | | |
| challenges_receiving_kits <i>(required)</i> | 8- (d) Were there any challenges you faced while receiving the kit? | <table border="1"> <tr> <td>no_one_home</td> <td>No one was in the house when kits were distributed</td> </tr> <tr> <td>received_neighbour</td> <td>Neighbour received the kits</td> </tr> <tr> <td>loss_kit</td> <td>Loss of the kit items</td> </tr> <tr> <td>No</td> <td>No</td> </tr> <tr> <td>Other</td> <td>Other</td> </tr> </table> | no_one_home | No one was in the house when kits were distributed | received_neighbour | Neighbour received the kits | loss_kit | Loss of the kit items | No | No | Other | Other |
| no_one_home | No one was in the house when kits were distributed | | | | | | | | | | | |
| received_neighbour | Neighbour received the kits | | | | | | | | | | | |
| loss_kit | Loss of the kit items | | | | | | | | | | | |
| No | No | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | |
| If-other_details <i>(required)</i> | 8- (e) If other, please mention details | | | | | | | | | | | |
| explain_DK <i>(required)</i> | 9 - Did OXSI staff explain to you how to use the items in the dignity kit? | <table border="1"> <tr> <td>yes</td> <td>Yes</td> </tr> <tr> <td>no</td> <td>No</td> </tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| preferred_colour <i>(required)</i> | 10 - (a) What are the Underwear colours that your family prefers (choose 3) | <table border="1"> <tr> <td>white</td> <td>white</td> </tr> <tr> <td>black</td> <td>black</td> </tr> <tr> <td>blue</td> <td>blue</td> </tr> <tr> <td>yellow</td> <td>yellow</td> </tr> <tr> <td>red</td> <td>red</td> </tr> </table> | white | white | black | black | blue | blue | yellow | yellow | red | red |
| white | white | | | | | | | | | | | |
| black | black | | | | | | | | | | | |
| blue | blue | | | | | | | | | | | |
| yellow | yellow | | | | | | | | | | | |
| red | red | | | | | | | | | | | |
| satisfied_consultation <i>(required)</i> | 10- (b) Are you satisfied with the ways of consulting with the community by OXSI staff in Dignity Kit distribution? | <table border="1"> <tr> <td>yes</td> <td>Yes</td> </tr> <tr> <td>no</td> <td>No</td> </tr> </table> | yes | Yes | no | No | | | | | | |
| yes | Yes | | | | | | | | | | | |
| no | No | | | | | | | | | | | |
| suggestion_dk_process | 10-(c) Do you have any suggestion on Dignity Kit? | | | | | | | | | | | |
| suggestion_distribution_process | 10-(d) If you wish you can give us suggestions to make the distribution process better in the future | | | | | | | | | | | |

Rating Scale for Community Engagement - Participation

| Consulted: Communities are consulted and informed during all phases, including the assessment phase (less participative) | | | | Consensus score and justification |
|--|---|---|---|--|
| 1: Community is not sufficiently consulted | 2: Community is occasionally consulted | 3: Community is often consulted | 4: Community is almost always consulted | |
| Informed: Community is informed of project objectives, expectations, and/or necessary project information (less participative) | | | | |
| 1: Community is rarely informed, with misleading or incomplete information | 2: Community is occasionally informed with some complete information | 3: Community is often informed, with clear information | 4: Community is almost always informed, and updated, on all relevant details/objectives of project information | |
| Demonstrates acceptance: Community demonstrates acceptance of implementing organization(s) and project (less participative) | | | | |
| 1: Community members rarely show buy-in, commitment or consistency in project activities | 2: Community members occasionally show buy-in, commitment or consistency in project activities | 3: Community members often show buy-in, commitment or consistency in project activities | 4: Community members almost always show buy-in, commitment or consistency in project activities | |
| Plans and acts together: Community plans and acts together with implementing partners (more participative) | | | | |
| 1: Community members rarely or never plans community-related activities in the project | 2: Community members occasionally plans and acts together with OXSI in the project | 3: Community members often plan project activities, and implements them alongside OXSI | 4: Community members almost always plan project activities, and implements them alongside OXSI | |
| Negotiates: Community negotiates their views and are used to update programming; community plans and acts together with OXSI (more participative) | | | | |
| 1: Community members rarely make their views on project activities known, and if they do OXSI rarely incorporates their views into project activities | 2: Community members occasionally make their views on project activities known, and if they do OXSI occasionally incorporates their views into project activities | 3: Community members often make their views on project activities known, and if they do OXSI often incorporates their views into project activities | 4: Community members almost always make their views on project activities known, and if they do OXSI almost always incorporates their views into project activities | |
| Takes decisions: Community takes decisions supported by implementing partners (more participative) | | | | |
| 1: Community members rarely make project decisions supported by OXSI | 2: Community members occasionally make project decisions supported by OXSI | 3: Community members often make project decisions supported by OXSI | 4: Community members almost always make project decisions supported by OXSI | |

Pharmacy Assessment

| Field | Question | Answer | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|-----------|---|----------------|---------------------------------------|---------|----------------------|-----------------|----------------------|-------|--------------------------------------|------|-------------------------|--------------|-----------------|----------|------------------|---------|-------------|-----------|------------------|-----------|----------------|--------|-------------------------|------|-------------------|
| Enumerator <i>(required)</i> | Enumerator | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date <i>(required)</i> | Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Camp_Name <i>(required)</i> | Camp Name | <table border="1"> <tr><td>STMG</td><td>Say Tha Mar Gyi Camp</td></tr> <tr><td>OTG-1</td><td>Ohn Taw Gyi - 1 Camp</td></tr> <tr><td>OTG-3</td><td>Ohn Taw Gyi - 3 Camp</td></tr> <tr><td>OTG-6</td><td>Ohn Taw Gyi - 6 Camp</td></tr> <tr><td>MTNC</td><td>Maw Tin Nyar Camp</td></tr> <tr><td>TKPC</td><td>Thet Kay Pyin Camp</td></tr> <tr><td>BDPC</td><td>Baw Du Pha Camp</td></tr> <tr><td>BSRC</td><td>Bar Sar Rar Camp</td></tr> <tr><td>HMZC</td><td>Hmanzi Camp</td></tr> <tr><td>TCC</td><td>Thae Chaung Camp</td></tr> <tr><td>DPC</td><td>Dar Paing Camp</td></tr> <tr><td>KDKC_1</td><td>Khaung Doke Khar-1 Camp</td></tr> <tr><td>OTCC</td><td>Ohn Taw Chay Camp</td></tr> </table> | STMG | Say Tha Mar Gyi Camp | OTG-1 | Ohn Taw Gyi - 1 Camp | OTG-3 | Ohn Taw Gyi - 3 Camp | OTG-6 | Ohn Taw Gyi - 6 Camp | MTNC | Maw Tin Nyar Camp | TKPC | Thet Kay Pyin Camp | BDPC | Baw Du Pha Camp | BSRC | Bar Sar Rar Camp | HMZC | Hmanzi Camp | TCC | Thae Chaung Camp | DPC | Dar Paing Camp | KDKC_1 | Khaung Doke Khar-1 Camp | OTCC | Ohn Taw Chay Camp |
| STMG | Say Tha Mar Gyi Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTG-1 | Ohn Taw Gyi - 1 Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTG-3 | Ohn Taw Gyi - 3 Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTG-6 | Ohn Taw Gyi - 6 Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MTNC | Maw Tin Nyar Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TKPC | Thet Kay Pyin Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BDPC | Baw Du Pha Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BSRC | Bar Sar Rar Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HMZC | Hmanzi Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TCC | Thae Chaung Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DPC | Dar Paing Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KDKC_1 | Khaung Doke Khar-1 Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTCC | Ohn Taw Chay Camp | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelter | Shelter Number | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Room | Room Number | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Owner_Name <i>(required)</i> | Shop Owner Name | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Categories <i>(required)</i> | For what type of medical issue do you sell the most medications? Please name 3 types response categories; | <table border="1"> <tr><td>Diarrhoea</td><td>Diarrhoea (Oral Dehydration Pack, Diarrhoea Medication)</td></tr> <tr><td>Cold_Flu_Fever</td><td>Cold, Flu, Fever (Cough, Sore throat)</td></tr> <tr><td>Stomach</td><td>Nausea, Stomach ache</td></tr> <tr><td>Intestinal_worm</td><td>Intestinal worm</td></tr> <tr><td>Heart</td><td>Heart Medication (Blood thinner etc)</td></tr> <tr><td>Pain</td><td>General Pain Medication</td></tr> <tr><td>Hypertension</td><td>Hypertension</td></tr> <tr><td>Diabetes</td><td>Diabetes</td></tr> <tr><td>Malaria</td><td>Malaria</td></tr> <tr><td>Hepatitis</td><td>Hepatitis</td></tr> <tr><td>Head_Ache</td><td>Head Ache</td></tr> <tr><td>Other</td><td>Other</td></tr> </table> | Diarrhoea | Diarrhoea (Oral Dehydration Pack, Diarrhoea Medication) | Cold_Flu_Fever | Cold, Flu, Fever (Cough, Sore throat) | Stomach | Nausea, Stomach ache | Intestinal_worm | Intestinal worm | Heart | Heart Medication (Blood thinner etc) | Pain | General Pain Medication | Hypertension | Hypertension | Diabetes | Diabetes | Malaria | Malaria | Hepatitis | Hepatitis | Head_Ache | Head Ache | Other | Other | | |
| Diarrhoea | Diarrhoea (Oral Dehydration Pack, Diarrhoea Medication) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cold_Flu_Fever | Cold, Flu, Fever (Cough, Sore throat) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach | Nausea, Stomach ache | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestinal_worm | Intestinal worm | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | Heart Medication (Blood thinner etc) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pain | General Pain Medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertension | Hypertension | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diabetes | Diabetes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malaria | Malaria | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatitis | Hepatitis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Head_Ache | Head Ache | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | Other | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ranking | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_diarrhea <i>(required)</i> | Ranking for diarrhea medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_cold-flu-fever <i>(required)</i> | Ranking for cold_flu fever medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_stomach-ache <i>(required)</i> | Ranking for stomach ache medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_intestinal-worm <i>(required)</i> | Ranking for intestinal worm medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_heart-medication <i>(required)</i> | Ranking for heart medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_general-pain <i>(required)</i> | Ranking for general pain medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_hypertension <i>(required)</i> | Ranking for hypertension medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_diabetes <i>(required)</i> | Ranking for diabetes medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_malaria <i>(required)</i> | Ranking for malaria medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_hepatitis <i>(required)</i> | Ranking for hepatitis medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_head-ache <i>(required)</i> | Ranking for head ache medication | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ranking_other <i>(required)</i> | Ranking for other | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Guidelines for Implementation of Activities in Camps and Settlements during COVID-19 Response

Introduction

COVID-19 is spreading throughout the world through human-to-human transmission. The most effective preventative measures against COVID-19 have been identified as:

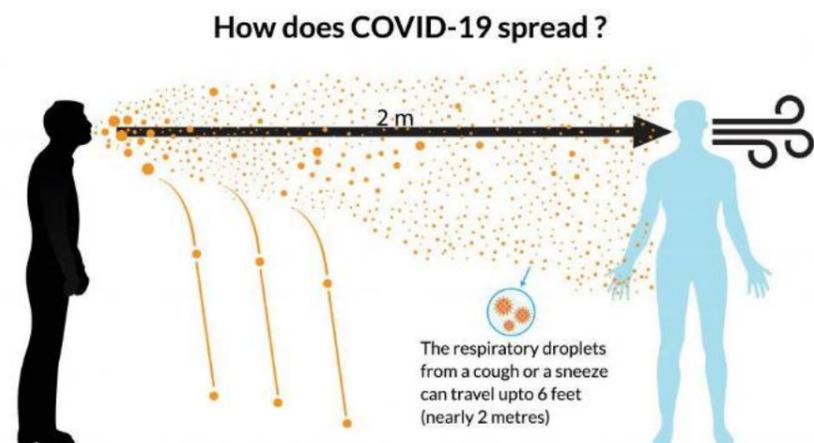
- Wash your hands frequently
- Cover your mouth and nose when coughing or sneezing
- Maintain physical distance (3-6 feet) from others
- Avoid touching your face

To avoid transmission of the virus, Oxfam and SI have drastically cut down activities that involve gathering in groups in all programmes (WASH, Food Security and Livelihoods, advocacy, and community listening). The Ministry of Health and Sports also issued a notice that gatherings of more than 5 people should not be held except as required for some specific and necessary activities.

However, much of our community engagement work involves sharing essential information and educating communities about life-saving hygiene practices. This short document gives some guidance for staff who are continuing activities in camps or other settlements to stay safe, especially by using physical distancing, during activities that require frequent communication with others.

Why is physical distancing important?

COVID-19 is transmitted person-to-person through small droplets from the nose or mouth of infected persons. A healthy person can get sick if they breathe in these droplets, or if the droplets land on a surface and other people touch the surface and then touch their eyes, mouth, or nose. When a person coughs, sneezes, or exhales these infectious droplets, they will move forward and down, eventually evaporating or falling to the ground. Some droplets, especially from a sneeze or cough (if not covered properly with an elbow or tissue), can travel about 6 feet.



If you stay 6ft away from others, you will be less at risk of inhaling infectious droplets. Even if your neighbour or family members get sick, it is not guaranteed that you will also get sick if you a) keep your distance, b) wear a mask when tending to a sick family member, c) wash your hands with soap and water, and d) disinfect surfaces.

Guideline for Activity Implementation

Although Oxfam and SI have reduced or paused many activities, some need to continue to ensure that communities are receiving accurate information about COVID-19 and how to stay healthy, as well as to keep WASH infrastructure functioning and communities clean, as well as to make sure that community voices keep on being heard and to minimize the risk of future food insecurity. Below are guidelines for how to continue each activity safely.

The guidelines for activities change based on the current status of the pandemic in Myanmar. To define the status, Oxfam uses 1-4 Levels, while SI uses A-C Situations. In developing the guidelines for how to continue activities during COVID-19 in Myanmar, it became clear that the actions to take during Level 3 and Level 4 as defined by Oxfam were almost exactly the same, so they were combined to match the 3 levels that SI uses, as shown below.

| Oxfam | SI |
|---|--|
| Level 1: No cases in Myanmar | Situation A: Minimal measures on any base , all areas are concerned. THREAT IS still LIMITED at the moment <i>No or few COVID-19 cases (confirmed or suspected) and outside of areas of operations for the concerned base.</i> |
| Level 2: One or more cases in Myanmar, without cases in OXSI's area of work* | Situation B: THREAT IS still MODERATE at the moment <i>Significant number of COVID-19 cases (confirmed or suspected) but outside of areas of operation for the concerned base.</i> |
| Level 3: Significant number of cases in Myanmar, with cases in OXSI's area of work* | Situation C: THREAT IS SIGNIFICANT <i>Significant number of COVID-19 cases (confirmed or suspected) and within areas of operation for the concerned base.</i> |

* In this case, for the Oxfam-SI WASH Programme, the area of work is defined as Sittwe Township. It is unlikely that there will be extensive testing offered in the Sittwe camps, and with regular movements between camps and Sittwe town, any cases in Sittwe will trigger a move to Level 3/Situation C.

For the WASH project that Oxfam and SI are implementing in Sittwe township, a contingency plan (separate document) shows an overview of tasks and activities that will be continued, stopped, or altered at each Level. There are also general guidelines for managers, particularly addressing preparations for each Level. However, these are subject to change. For guidance on how often certain activities should be done and which activities have been suspended, speak with your line manager.

Government rules and regulations issued as part of measures to reduce the spread of COVID-19 in Myanmar shall be duly followed by Oxfam and SI staff. In any case and scenario, the stricter rule will prevail.

Note: A separate SOP has been developed for distributions, but distributions are included at the bottom row in case of a change in Level.

| Activity | Protection and Risk Management Strategies | | |
|--|---|--|--|
| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
| FGDs/Small group meetings | <ul style="list-style-type: none"> - A maximum of 10-12 people per group. - Hold in a space that allows for physical distancing of 6ft (2m) between participants and has good ventilation, preferably outside. - Where weather does not permit being outside or opening windows, ensure the space is large enough for physical distancing. - Ensure handwashing facilities are available and ask each participant to wash hands on entering and exiting the group. - Advise participants who feel sick to remain at home and not attend the session. - Ensure that all sessions contain time for awareness raising and discussion of concerns. Share hotline numbers with participants to raise awareness about the accountability mechanism. - At the end of the session, clean surfaces with disinfectant. - Reduce the number of FGDs being held to a minimum. | <ul style="list-style-type: none"> - Follow the guidance for level 1 but reduce numbers to only essential FGDs/meetings (e.g. consultation on life-saving outbreak activities, perception of the disease, health seeking behaviour, etc.). - A maximum of 5 people can gather, keeping a distance of 6ft apart. - Regularly review government guidelines, balancing advice against what is happening in localised context. - Wear a mask (medical or cloth) if available. | <ul style="list-style-type: none"> - Suspend FGDs/meetings; consider other mechanisms for gathering feedback and community input, including by telephone or text message, taking into consideration access issues for different groups. |
| Door to Door/ Household Visits (including water sample collection at household level) | <ul style="list-style-type: none"> - Do not enter the household, conduct discussions from the doorway where possible. - Practice physical distancing, maintaining 6ft (2m) distance between participants. - Hold discussions with 1 or only a few members of the household. - Avoid body contact, such as shaking hands. - Wash hands frequently, either with hand sanitiser or water and soap. - Avoid touching your face. - Cover your nose and mouth with a tissue or your bent elbow when coughing or sneezing. | <ul style="list-style-type: none"> - Follow the guidance for Level 1, plus: - If someone in the HH is sick, stop the visit, share referral pathway, and refer to medical facilities. - Only conduct essential HH visits that are required to support the Covid-19 response. - Share hotline numbers with participants to raise awareness about the accountability mechanism. - Wear a mask (medical or cloth) if available. | <ul style="list-style-type: none"> - House-to-house visits should be done for lifesaving actions only. However, if proper PPE is not available, suspend household visits. - Follow the advice for Levels 1 and 2, plus: - Avoid contact – leave any items at the door of the household for them to collect, rather than handing over. - Sanitise hands in between each HH visit. - If discussion is needed, maintain 6ft |

| Activity | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
|-----------------------------------|---|--|--|
| | Key Informant Interviews (KIIs) | <ul style="list-style-type: none"> - Hold in a space that allows for physical distancing of 6ft (2m) between participants and has good ventilation, preferably outside. - Ensure handwashing facilities are available and ask each participant to wash hands before entering and exiting the interview. - Advise participants who feel sick to remain at home and not attend the session. - Ensure that all sessions contain time for awareness raising and discussion of concerns. Share hotline numbers with participants to raise awareness about the accountability mechanism. - At the end of the session, clean surfaces with disinfectant. - Reduce the number of KIIs being held to a minimum. | <ul style="list-style-type: none"> - Follow the guidance for level 1 but reduce numbers to only essential KIIs and consider holding these by phone where appropriate. - A maximum of 5 people can gather, keeping a distance of 6ft apart. - Regularly review government guidelines, balancing advice against what is happening in localised context (e.g. masks may be required). - Wear a mask (medical or cloth) if available. |
| Large group meetings (20+) | <ul style="list-style-type: none"> - Reduce the number of these events being held to a minimum. - Hold in a space that allows for physical distancing of 6ft (2m) between participants and has good ventilation, preferably outside. - Ensure handwashing facilities are available and ask each participant to wash hands before entering and exiting the space. - Advise participants who feel sick to remain at | <ul style="list-style-type: none"> - Suspend group meetings; consider other mechanisms for gathering feedback and community input, including by telephone or text message, taking into consideration access issues for different groups. | <ul style="list-style-type: none"> - Same as Level 2. |

| | | | |
|---|--|--|---|
| | <p>home and not attend the session.</p> <ul style="list-style-type: none"> -Ensure that all sessions contain time for awareness raising and discussion of concerns. Share hotline numbers with participants to raise awareness about the accountability mechanism. -At the end of the session, clean surfaces with disinfectant. | | |
| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
| Mass events (100+) | As a preventative measure, suspend mass events; consider other mechanisms for gathering feedback and community input, including by telephone, radio, or text message or by installing informational banners and posters. | | |
| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
| Workshops/ Trainings | <ul style="list-style-type: none"> -Reduce the number of these events being held to a minimum. -Hold in a space that allows for physical distancing of 2m between participants, and has good ventilation, preferably outside. -Ensure handwashing facilities are available and ask each participant to wash hands before entering and exiting the space. -Advise participants who feel sick to remain at home and not attend the session. -Ensure that all sessions contain time for awareness raising and discussion of concerns. -At the end of the session, clean surfaces with disinfectant. | <ul style="list-style-type: none"> - Follow the guidance for level 1 but reduce numbers to only essential workshops and trainings. -Consider webinars, remote conferences, or online training for staff and volunteers where connection allows. -Regularly review government guidelines, balancing advice against what is happening in localised context (e.g. masks may be required). -If you must meet in person, keep the number to a maximum of 5 people, spaced 6ft apart. | <ul style="list-style-type: none"> -Suspend any workshops or training not relating to the provision of lifesaving aid. -For staff undertaking lifesaving activities, conduct training/briefing daily whilst donning PPE, and debrief whilst doffing. -For essential workshops and training, consider webinars, remote conferences, or online training for staff and volunteers where connection allows. -If proper PPE is not available, suspend any in-community briefings or trainings. |
| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
| Meetings with partners/ other NGOs | <ul style="list-style-type: none"> - Hold in a space that allows for physical distancing of 6ft (2m) between participants and has good ventilation, preferably outside. -Ensure handwashing facilities are available and ask each participant to wash hands before entering and exiting the space. -Advise staff and partners who feel sick to remain | <ul style="list-style-type: none"> - Follow the guidance for level 1 but reduce visits to essential activities, and consider holding these by phone, webinars, or remote conferences where connection allows. -Regularly review government guidelines, balancing advice against what is happening | <ul style="list-style-type: none"> -Suspend non-lifesaving related visits, and communicate over the phone, video conference, or other remote communication. - Where visits involve lifesaving tasks and will take place in communities, a mask (medical or cloth) should be worn |

| | | | |
|---|--|---|---|
| | <p>at home and not attend the session.</p> <ul style="list-style-type: none"> -Ensure that all sessions contain time for awareness raising and discussion of concerns. -At the end of the session, clean surfaces with disinfectant. -Reduce the number of meetings to a minimum. | <p>in localised context.</p> <ul style="list-style-type: none"> -A maximum of 5 people can gather, keeping a distance of 6ft apart. -Wear a mask (medical or cloth) if available. | <p>if available.</p> <ul style="list-style-type: none"> - Staff conducting such visits should have access to hand sanitiser or handwashing spaces to use regularly. |
| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
| Monitoring and Evaluation / Data Collection /feedback collection in the framework of the accountability system | <ul style="list-style-type: none"> -Do not enter the household/building and conduct discussions from the doorway where possible. -Practice physical distancing, maintaining 6ft (2m) distance between participants where possible. -Hold discussions with 1 or only a few members of the household. -Avoid body contact, such as shaking hands. -Wash hands frequently, either with hand sanitisers or water and soap. -Avoid touching your face. -Cover your nose and mouth with a tissue or your bent elbow when coughing or sneezing. -Utilise mobile data collection methods where possible and have one note taker only touching the device. Each device should be wiped with a disinfectant wipe at the end of each day. | <ul style="list-style-type: none"> - Follow the guidance for level 1. -If someone in the household or shop is sick, stop the visit and refer to medical facilities. -Only conduct essential monitoring/data collection visits. -Ensure that the accountability hotline is in place. -Wear a mask (medical or cloth) if available. | <ul style="list-style-type: none"> -Undertake monitoring or data collection for lifesaving actions only. - Follow the advice for Levels 1 and 2, plus: -Avoid contact – utilise mobile data collection methods where possible and have one note taker only touching the device. Each device should be wiped with a disinfectant wipe at the end of each day. -If discussion is needed, maintain 6ft (2m) distance; if this is not possible, discuss through the door. -Explore possibilities for collecting data remotely such as through SMS systems or phone calls. - Wear a mask (medical or cloth). - Staff should have access to hand sanitiser or handwashing spaces to use regularly. -If proper PPE is not available, suspend face to face data collection and use remote collection methods only. |

| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
|---|---|--|---|
| Operation and Maintenance of WASH Infrastructure | <ul style="list-style-type: none"> - Ensure physical distance of 6ft (2m) from others during work; where necessary, provide workers with signs or barrier tape that allow them to work while maintaining this distance. - Ensure that the usually required PPE is in good stock and that those who require to wear it are trained on how to use it and strictly abiding by its use. - Provide spaces for workers to wash their hands on a regular basis, including at the beginning and end of each shift. For mobile teams, provide hand sanitiser. - Provide areas where workers can safely dispose of used PPE. - Facilities should be cleaned regularly with disinfectant. - Scale up maintenance teams where possible to complete as many outstanding tasks in case of movement restrictions. - Ensure those facilities that pose the highest public health risk (latrines and sanitation facilities) are serviced as a priority. | <ul style="list-style-type: none"> - Follow the guidance for Level 1 and introduce a risk prioritisation mechanism to ensure facilities that pose the greatest public health risk are serviced quickly. - Weekly disinfection of WASH facilities (latrines, handpumps, MHM bin handles). - Wear a mask (medical or cloth) if available. | <ul style="list-style-type: none"> - Follow the guidance for level 1 and 2, plus: - If possible, daily disinfection of WASH facilities. - <i>The following PPE should be worn for ANY worker during operation and maintenance work at this stage of the outbreak:</i> - Gloves - Medical or cloth mask - Goggles - Gumboots - Staff undertaking operational and maintenance work should have access to hand sanitiser or handwashing spaces to use regularly, and spaces to safely don and doff PPE. |
| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
| Environmental Sanitation | <ul style="list-style-type: none"> - Avoid working in crowded and/or narrow areas. - Practice physical distancing, maintaining 6ft (2m) distance between others. - Wash hands frequently, either with hand sanitiser or water and soap. - Avoid touching your face. - Cover your nose and mouth with a tissue or your bent elbow when coughing or sneezing. - Ensure those facilities that pose the highest public health risk (latrines and sanitation facilities) are serviced as a priority. | <ul style="list-style-type: none"> - Follow the guidance for Level 1, plus: - If possible, cut working days/hours. | <ul style="list-style-type: none"> - Follow the guidelines for Levels 1 and 2, plus: - <i>The following PPE should be worn: gloves and medical or cloth mask.</i> - Staff should have access to hand sanitiser or handwashing spaces to use regularly. - Provide areas where workers can safely dispose of used PPE. |

| | Level 1/Situation A | Level 2/Situation B | Level 3/Situation C |
|----------------------|---|---|--|
| Distributions | <ul style="list-style-type: none"> - Arrange distributions for small numbers at a time, beginning with those most vulnerable. - Undertake distributions in open spaces, with plenty of room for people to wait in shaded areas. - Encourage people to space out in queues, using markers on the ground to indicate where possible. - Pre-package kits or items so that recipients can collect these without contact with distributors. - Have handwashing facilities available and ensure each person attending the distribution washes their hands upon entering and exiting. - Advise recipients who feel sick to remain at home; organise alternative deliveries for these households. - Ensure that all distributions have awareness materials displayed and staff available for people to ask questions and discuss concerns. Share hotline numbers to raise awareness about the accountability mechanism. - At the end of the distribution, clean surfaces with disinfectant. - Reduce the number of distributions to a minimum. | <ul style="list-style-type: none"> - Follow the guidance for Level 1 but reduce distributions to essential items. - Merge monthly distributions if possible (eg. 2 hygiene kits in one distribution). - Undertake house to house distributions for vulnerable groups, such as the elderly and those with underlying health problems. - Regularly review government guidelines, balancing advice against what is happening in localised context. - Wear a mask (medical or cloth) if available. | <ul style="list-style-type: none"> - Follow the advice for Levels 1 and 2, plus: - Suspend large scale distributions. - Undertake distributions house to house only. - Avoid contact – leave any items at the door of the household for them to collect, rather than handing over. - Ensure hands are sanitised between handling each kit. - If discussion is needed, maintain 6ft (2m) distance; if this is not possible, discuss through the door. - <i>The following PPE should be worn: plastic apron or overalls and medical or cloth mask.</i> - Staff should have access to hand sanitiser or handwashing spaces to use regularly. |

Basic Gender Checklist

This checklist is intended for all HARP/OXSI staff and managers as they implement and revise programme strategies and activities, and as they develop new and additional work, in response to the COVID-19 pandemic which is affecting Rakhine, alongside the rest of Myanmar, the region and most of the world since February 2020.

The checklist reflects the evidence that COVID-19 has gendered impacts. More specifically, it has disproportionate consequences on women's and girls' health and well-being, on their exposure to the infection, increase in their care responsibility, and to the risk of domestic and other forms of Gender-Based Violence (GBV).

| No. | Gender Responsive Activities | Meet | Don't Meet | Progress | Remarks |
|-----|---|------|------------|----------|---------|
| 1. | Make COVID-19 specific assessments, surveys, SOPs, and IECs with a gender and protection lens, and carry out specific gender analyses and reviews of the impact of COVID-19 as necessary. | | | | |
| 2. | Consider the results of these gender reviews/analysis into the program activities to make all accessible and to prevent protection issues. | | | | |
| 3. | Give the space for women's participation and leadership in our consultation sessions and meetings for any COVID-19 response activities. | | | | |
| 4. | Promote the leadership of existing women leaders and women groups and women's organizations, and coordinate with them in our COVID-19 response activities. | | | | |
| 5. | Encourage women and girls to take community technician roles related with the minor repairs of WASH facilities. | | | | |
| 6. | Make sanitation facilities—including latrines, washing stands, and MHM boxes—accessible to all including the vulnerable people. | | | | |
| 7. | Carry out safe distribution and ensure access to dignity kits with extra soap, underwear and hygiene materials for personal hygiene and dignity of women and girls. | | | | |
| 8. | Ensure both women and men participate in the identification of safe and accessible distribution sites. | | | | |
| 9. | Give awareness about gender and protection consequences of COVID-19 to all beneficiaries and perform activities to promote gender equality in the response to this crisis. | | | | |
| 10. | Regularly consult with men, religious leaders and CMC members to change their attitudes and behaviors towards women and girls and involve women in the COVID-19 response activities. | | | | |
| 11. | Ensure women, girls and people with disabilities can access our CRM and Safeguarding systems. | | | | |

| | | | | | |
|-----|---|--|--|--|--|
| 12. | Ensure all OXSI staff, especially accountability staff, are familiar with our CRM process, safeguarding system and updated GBV case management flow information. | | | | |
| 13. | Ensure all IEC materials and information related with COVID-19 are accessible to all beneficiaries. | | | | |
| 14. | Make sure the community speakers are both women and men. | | | | |
| 15. | Hold consultations with women, men, the elderly and people with disabilities about different gender needs in the quarantine facilities, to meet their different needs and prevent GBV issues. | | | | |

OXSI Hygiene Kit Distribution Standard Operating Procedures for door-to-door distribution – September 2020

As COVID-19 continues to spread in an unpredictable manner, it presents a growing risk to OXSI personnel and beneficiaries, particularly during Hygiene Kit (HK) distributions.

This document aims to guide the revision of HK distribution Standard Operating Procedures (SOPs), which were revised in March 2020, to take **further** precautions in the COVID-19 context in OXSI's WASH programme, to minimize the risk of exposure of staff and beneficiaries. Adjustments to existing HK distribution SOPs should be in alignment with country-specific guidance shared by the relevant health authorities and partners (e.g. Ministry of Health, WHO), where available.

The following recommendations will go into effect immediately as preventative measures, even when no cases of COVID-19 have been confirmed in camps.

SPECIFIC INSTRUCTIONS FOR STAFF AT THE OFFICES

- **Inform staff about the new HK distribution protocol**
 - Inform staff about this protocol and ensure that everyone is aware of his/her responsibility for the distributions.
- **Ensure all staff who are conducting door-to-door visits have the proper PPE:** goggles (reusable, wash each day), N90 masks (disposable, new one each day) if available (cloth masks are acceptable as well), and gloves (disposable, two pairs per day, before and after lunch).
 - Ensure all staff know how to put on, take off, and use the PPE:
 - Wash your hands with soap and water before putting on PPE.
 - Mask: hold the mask by the loops, determine which side is up (stiff bendable edge goes on top), then place a loop around each ear. Pinch the stiff edge to the shape of your nose and pull the bottom of the mask over your mouth and chin. While wearing the mask and when removing it, avoid touching the front of the mask because it is contaminated. To remove the mask, gently lift by the ear loops.
 - Gloves: check the gloves to make sure there are no rips, then put on one glove at a time. While wearing the gloves, avoid touching your face, since the gloves are contaminated. To remove the gloves, pinch the glove at your wrist and pull down over your hand so the glove goes inside-out and you do not touch the outside of the glove.
 - After removing PPE, wash your hands with soap and water.
 - Ensure all staff know how and where to dispose of PPE at the end of the distribution.
 - Prepare a location at the entrance of each office to dispose of PPE (eg. rice bag labeled "used PPE" that can be taken to the incinerator when full). Place the PPE disposal bag/bin next to the handwashing station, so that all staff coming back after distribution are reminded to dispose of their PPE in the bag/bin and wash their hands immediately.
 - Goggles: wash goggles with soap and water at the end of each day and allow to air dry OR wipe down with 0.2% chlorine solution and a tissue (see Annex I for instructions to make chlorine solution).
- **Ensure that the hand washing station is present in each office** and consistently has enough water and soap – if not, inform your manager immediately.

STEPS FOR DOOR-TO-DOOR HYGIENE KIT DISTRIBUTION

- **Plan door to door distributions**
 - Plan for two staff to work as a team for each pushcart filled with hygiene kits. One staff should take care of the pushcart and hygiene kits, while the other staff should ensure that people stay organized, pick up one hygiene kit at a time, and sign the distribution list.
 - Depending on the size of the camp, plan the number of staff and pushcarts needed, and how many days it will take to finish the distribution.
 - Print hygiene kit distribution lists for each group of two and assign areas of the camp to make sure there is no overlapping.
- **Inform households about the day and approximate time of delivery**
 - Use a megaphone to inform households in advance the date and approximate time of the HK delivery.
 - The distribution of vouchers is not necessary.
- **Prepare hygiene kits in pushcarts**
 - Place 30- 40 hygiene kits in each pushcart, enough to distribute to about 4 longhouses with each trip.
- **Start distributions**
 - Bring the pushcart of hygiene kits to the planned longhouse.
 - Call out **one** person from **one** household at a time to come out to receive the hygiene kit. Ask them to wear a mask if they have one.
 - Ask each person to take one hygiene kit from the pushcart; do not hand the hygiene kit to them directly.
 - Place the distribution list and ink pad on the pushcart and step away 2m while each person marks their household on the distribution list.
 - Maintain a distance of at least 2m from everyone, including your distribution partner, while distributing hygiene kits.
 - Avoid touching your face, especially your eyes, mouth, and nose, after touching the ink pad and the distribution list.
 - If someone is not home at the time of the distribution, come back to the household later in the day or the next day.
 - When the pushcart is empty, return to the office to get more hygiene kits.
- **Reminders**
 - If you remove your PPE to eat or drink, wash your hands with soap and water before eating and again before putting the PPE back on. You can use one mask per day but use new gloves after lunch.
 - Continue to follow good hygiene practices: wash hands with soap and water, cough/sneeze into elbow or a tissue, leave space between yourself and others when possible.



Important Note: All OXSI staff are responsible for complying with all aspects of the SOPs identified the country level. If any individual (OXSI staff) demonstrates symptoms of COVID-19, they should avoid contact with others and not be present at the distribution sites.

Annex 1: Instructions for making disinfectant solution (0.2% bleach solution) from liquid bleach

Disinfectant solution (0.2% chlorine solution) can be made from a variety of chlorine bases available in the market. All washing and disinfecting solutions must be prepared at the OXSI offices prior to dispatching to the distribution point and marked clearly.

Use for: Floors, surfaces, materials, aprons, boots, dishes (after cleaning)

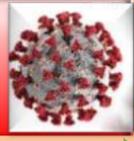
| If you have... | Add... | To... | Then... | Remarks |
|--|--------------------------------|-----------------|---|---|
| Sodium dichloroisocyanurate (NaDCC) granules, 55% active chlorine | 4 level 20 ml measuring spoons | 20 litres water | Mix for 10 seconds and wait 30 minutes before use | 72 grams in 20 litres 430 grams in 120 litres |
| Sodium dichloroisocyanurate (NaDCC) tablet, 1 g of active chlorine/tablet | 40 tablets | 20 litres water | Mix for 10 seconds and wait 30 minutes before use | 2 tablets per litre |
| Calcium hypochlorite (HTH®) granules, 65-70% active chlorine | 4 level 20 ml measuring spoons | 20 litres water | Mix for 10 seconds and wait 30 minutes before use | 60 grams in 20 litres 360 g in 120 litres of water |

Notes: Do not prepare too much solution at a time (to avoid wasting unused solution). Make new solution each day.



Cautionary Note: Concentrated chlorine and bleach are highly toxic substances that can cause irritation and inflammation to eyes, throat and nose. When mixing and using 0.2% disinfecting solution, appropriate PPE (including mask, goggles and gloves) must be worn.

PROTECT YOURSELF AND OTHER FROM COVID19



ALWAYS WASH YOUR HANDS WITH SOAP AND WATER

GREET SAFELY WITHOUT TOUCHING

COVER YOUR MOUTH AND NOSE WITH FLEXED ELBOW OR TISSUE WHEN COUGHING AND SNEEZING

AVOID TOUCHING YOUR MOUTH, NOSE AND EYES

PRACTICE SOCIAL DISTANCE



WASH Handbook for Protracted Emergencies:

The OXSI Experience in Myanmar

When the WASH project launched in 2017 as part of the Rohingya crisis response in Sittwe, there was limited guidance available on approaches and techniques to deliver WASH services in a protracted emergency, particularly in the context of a human rights crisis. The Oxfam–SI partnership (referred to as “OXSI”) piloted and tested strategies to adapt the delivery of WASH services to the specific protracted Rohingya crisis in Myanmar, while focusing on increasing engagement and ownership of the community.

Many of the approaches described in the ‘WASH handbook for protracted emergencies’ are adaptable and relevant to a protracted emergency linked to a human rights crisis. This handbook aims to help cover a gap of knowledge and also to stimulate further discussion on WASH approaches in these unique contexts.

All approaches are clearly explained and accompanied by visuals and SOPs for easy replicability and adaptation

