

ADDIS ABABA SCHOOL-BASED MENSTRUAL WASTE MANAGEMENT SYSTEMS LANDSCAPE ANALYSIS



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ADDIS ABABA SCHOOL-BASED MENSTRUAL WASTE MANAGEMENT SYSTEMS LANDSCAPE ANALYSIS



Across the city, students who use disposable menstrual products do not currently have equitable access to disposal solutions that are convenient, discreet, and hygienic, which creates a cycle of adverse effects on the functionality and sustainability of sanitation facilities at schools, in turn affecting health and hygiene for everyone at the school. The compounded effect of a lack of adequate sanitation facilities and an absence of menstrual waste disposal facilities at schools contributes to absenteeism and negatively impacts school performance, particularly for menstruating girls. This research focuses on the system of stakeholders, market constraints, and policies that contribute to these challenges. With the findings from this research, Splash has been able to refine our current approach to menstrual waste disposal in Splash schools, ensuring the sustainability of our programming and sanitation infrastructure. Additionally, the recommendations laid out in this report are intended to be leveraged by other WASH+MH implementors, school administrators, and advocacy organizations to further improve the waste management practices within Addis Ababa, Ethiopia, and beyond.

A notable finding from this research is that site-level manual incineration could alleviate many of the challenges that schools face in regard to solid waste management. Disposing of menstrual waste using manual incineration technology is safer for people in the community and reduces the amount of bulky waste generated at school, saving schools from unnecessary operation and maintenance costs that would otherwise be incurred from improper disposal of menstrual waste into school sanitation facilities. However, there are challenges related to policies, environmental considerations, design considerations, lack of awareness, technical capacity, and market availability. Most of these challenges, can be solved by implementing systems-based infrastructural and behavioral corrective measures before and during the implementation of the technology at schools.

1. Introduction

Menstrual health is one of the three core pillars of Splash's WASH in-schools model. Among the facets of menstrual health, menstrual waste management (MWM) is a crucial component that significantly impacts the usage, efficacy, and sustainability of toilet facilities in schools. Through a formative research effort led by Splash in 2019, solid waste management was highlighted by school administration, teachers, and girls themselves as a critical issue dissuading girls from staying in school during their menstruation. Often, when a girl needs to change her menstrual hygiene product, she is left with limited options for its disposal, resulting in used hygiene products clogging sanitation infrastructure, thrown on the floor in bathroom stalls, and degrading the sanitation environment. This degraded sanitation environment then discourages other students from using the facilities as intended. Another unfortunate outcome of the lack of solid waste management solutions is that menstruating students will often not change their menstrual hygiene product while at school, even when they need to. This has resulted in an increased rate of reproductive tract infections, menstrual leaks, and feelings of shame and embarrassment for girls during menstruation.¹ Splash has committed to investigating solid waste management solutions for schools to address this critical issue.

The main objective of this assessment was to investigate menstrual hygiene waste management solutions for public schools in Addis Ababa, Ethiopia. The assessment also aimed at developing a framework that lays out the existing solid waste management solutions alongside actionable and contextually bound recommendations for programs for public schools in Addis Ababa.

The assessment occurred from October 2020 to April 2021. A cross-sectional formative assessment using qualitative research methods was conducted through 12 key informant interviews (KIs) with various government stakeholders and NGOs in addition to a desk review of local, regional, and national level policies concerning solid waste management.

2. National Landscape

Since 2007 the Ethiopian government has made progress in developing policies and guidelines around solid waste management (SWM) and menstrual waste management (MWM). However, additional policies specific to menstrual waste in school settings is needed.



The Ethiopian Solid Waste Management Proclamation No. 513/2007 defines and categorizes solid waste (SW) into six categories: glass containers and tin cans, plastic bags, used tires, food-related solid waste, household solid waste, and construction debris and demolition waste. In addition, it describes the systems for how these six types of solid waste are collected, transported, and disposed of with the intention of reducing adverse impacts on the community and environment while creating economically and socially beneficial assets out of solid waste.²

The Menstrual Hygiene Management Policy and Implementation Guideline of Ethiopia, developed by the Federal Ministry of Health (FMoH) in 2016, states that access to safe, convenient, and adequate disposal facilities for used menstrual materials is one of the components considered essential to MHM. Adequate disposal, per this guideline, means including facilities and disposal systems within the toilet stall or block itself (such as a dustbin) and maintaining a system for safe, culturally and environmentally appropriate disposal of the waste via an incinerator or burying.³

The National School WASH Implementation Policy Guideline of Ethiopia, developed by the Federal Ministry of Education (FMoE) in 2017, classifies MHW as one of the major types of SW generated in schools. Menstrual hygiene waste falls under the “garbage” category and is considered hazardous. The guidelines advise that it be disposed of via incineration technology but lacks guidance on the practicalities of installing and maintaining incinerators on school grounds. The guidelines include two manually operated incinerator options (metal barrel and concrete ring resting on masonry wall with slab) for school menstrual waste disposal solutions.⁴

These guidelines also contain a structured system for the collection, transportation, disposal, and recycling of solid waste generated from households and institutions. However, there is no separate system that specifically addresses menstrual waste management — menstrual waste is to be managed in the same fashion as other solid waste. As per the current system, any type of solid waste should be collected and stored by households or institutions in designated receptacles. Waste is then collected and transported by microenterprise waste collection service providers to temporary solid waste collection sites. Next, government-owned or private waste collection companies transport the collected waste to a landfill site. Finally, the waste is incinerated to produce electric power.

3. Municipal Landscape

The findings from this qualitative assessment indicate that there are no available policies or legal frameworks at the municipal level in Addis Ababa that adequately describe the best practices for the safe disposal and treatment of menstrual waste collected in schools. Although there are not any clear written regulations or guidelines, MHW is categorized as hazardous waste based on its biological nature.

Regarding the system, the Addis Ababa SWM Agency is mandated and responsible for regulating, administering, and managing municipal solid waste generated both from households and institutions, including schools. However, the agency indicated that it has not developed any mandate regarding the

management of MHW specifically. There is no clear regulation or practical arrangement that specifically addresses MHW separately from other SW generated by schools.

Nevertheless, the informants from the government sectors indicated that MHW generated either from the community or schools should be handled and disposed of in a safe and hygienic way, though there is no clear guidance around what “safe” or “hygienic” looks like in practice. As per the key informant opinion, incineration is the most feasible option to manage MHW collected from schools to reduce the negative health impact of improper menstrual waste disposal for students, school cleaners, and waste collection service providers. However, they recommend conducting independent feasibility studies before the endorsement of this option. The sub-city level SWM office is currently promoting segregation of menstrual waste from other solid waste generated in the schools at the source level. However, most schools did not comply with the advice, and SWM offices did not pressure schools to implement solutions.

4. Gap Analysis

4.1. POLICY GAPS

Menstrual hygiene waste is not well-defined and addressed in the Ethiopian Solid Waste Management (SWM) Proclamation No. 513/2007. In this proclamation, six types of solid wastes are defined, and their proper collection, transportation and ideal disposal method are declared. However, the proclamation does not categorize MHW under the SW types listed. The Menstrual Hygiene Management Policy and Implementation Guideline of Ethiopia, developed by the FMoH in 2016, directs that sanitary materials in schools be collected and disposed of using the waste management collection and disposal systems available locally or disposed of in pit latrines. The policy guideline has overlooked the disadvantages of disposing of MHW into the regular SW disposal systems and in school pit latrines. The National School WASH Implementation Policy Guideline of Ethiopia, developed by FMoE in 2017, classifies MHW as one of the major types of SW generated in schools, characterized under the category of “garbage” and considered as hazardous, thus advising disposal via incineration. However, the guideline did not reflect clear policy direction on incineration type, performance criteria, quality standards, and emission control levels.

4.2. SCHOOL-LEVEL GAPS

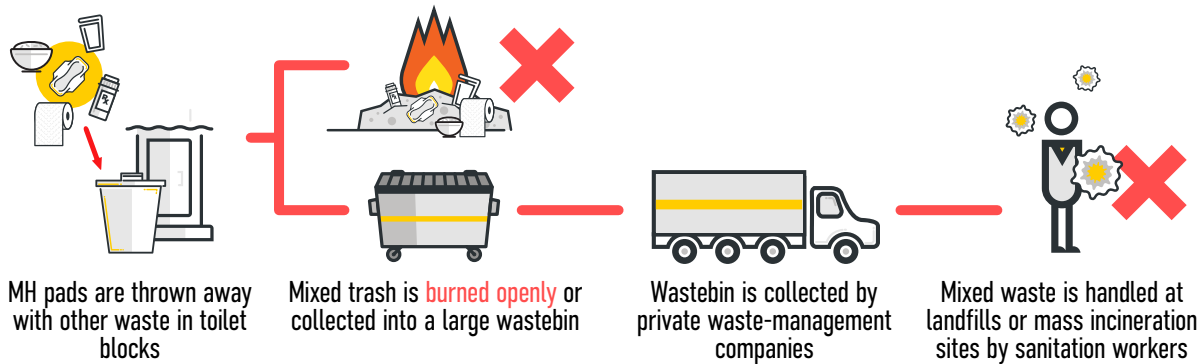
The assessment shows that school districts and local government bodies, such as SWM offices at the sub-city level, do not create or provide policies or guidance on how schools should properly collect and dispose of used sanitary pads. Schools across Addis Ababa do not have a consistent plan for proper menstrual waste disposal. Menstrual waste is recognized and treated by most school administrations as any other type of solid waste, despite its status as a biohazard. Interviews with school administrators indicated that girls generally dispose of used menstrual products into waste bins located inside the latrine blocks or in other menstrual health resting spaces such as counseling rooms, changing rooms, or school showers.

Direct observation showed that sanitary pads are disposed of in the same bin as other solid waste like toilet paper. In the absence of waste bins, girls also disposed of used menstrual products on the latrine floors, tucked in ceiling rafters, or thrown down toilet drains. This malpractice has created problems with the maintenance and functionality of the sanitation facilities, resulting in defunct or derelict facilities and costly repairs paid for by schools. Lack of awareness about appropriate disposal and its consequences is one of the major factors driving the inappropriate disposal practices among girls in school. This research also found that many girls carry their used sanitary pads home for disposal, demonstrating the multiple barriers to proper menstrual hygiene management at school.

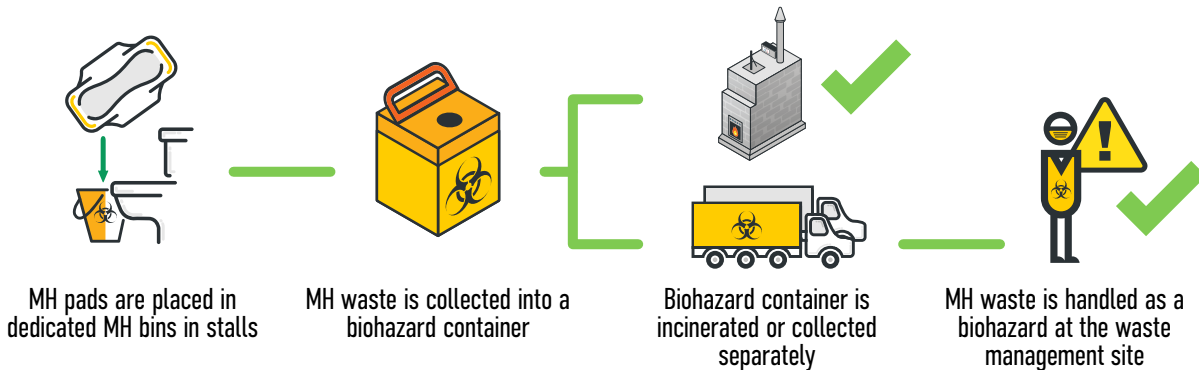
4.3. WASTE MANAGEMENT SYSTEM GAPS

Menstrual waste is usually disposed of mixed with other solid waste generated at schools. There is currently no proper system for menstrual waste handling practices at schools. The menstrual waste disposed of by students is collected by cleaners and janitors and temporarily stored in large containers alongside multiple other types of solid waste. These bins are collected by organized (microenterprise) waste collection service providers, who then dispose of it into large wastebins mixed with other solid waste collected from the community. This implies that segregation of menstrual waste from other solid waste generated at schools is done neither at the source nor at the temporary collection site. Disposing of used menstrual products, which are considered biohazardous material, into the regular solid waste management system can have a negative impact on the health of waste handlers and others who may have contact with it.

Current Waste Management Stream for Menstrual Hygiene (MH) Waste



Ideal Waste Management Stream for Menstrual Hygiene (MH) Waste



The findings indicate that collaboration and partnership around a MHW disposal solution across sectors and among implementing partners is weak. Although the three partners assessed in this study — UNICEF, WaterAid, and World Vision — have a common interest regarding MHW and the development of school-level programmatic interventions, they did not complement each other on resource mobilization or chosen intervention strategy. Nevertheless, each of these NGOs has a strong partnership with local government health and education sectors and are closely working in harmony with these sectors at all levels.

4.4. WASTE DISPOSAL TECHNOLOGY

There are currently no new MHW disposal technologies put in place other than those indicated in the Ministry of Education and Health design and construction manuals. The three NGOs (UNICEF, WaterAid, and World Vision) adopted the Ministry of Education and Health design and construction manuals to construct MHW

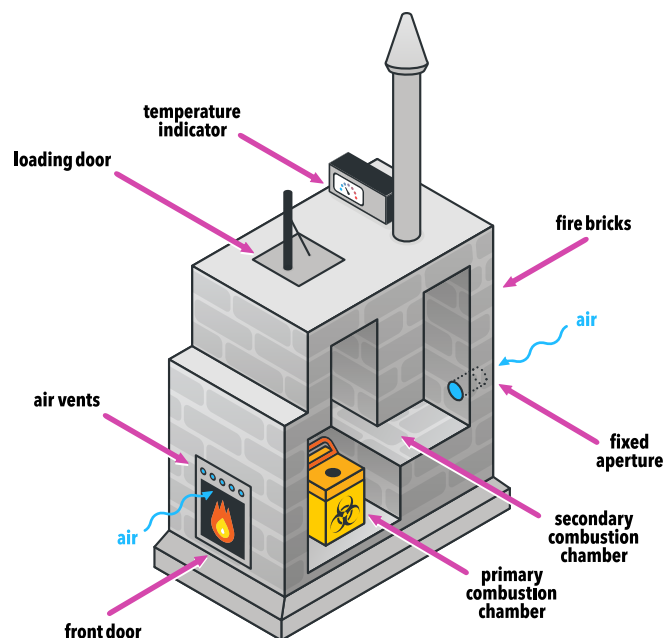
disposal solutions for schools, installing barrel and brick incinerators to safely dispose of sanitary pads. Nevertheless, the three NGOs indicated that menstrual waste is biological waste and thus should be disposed of like the health waste produced at health facilities using methods such as autoclaving or high heat electrical incineration. There are currently no electrical incinerators available in the Ethiopian market.

5. Recommendations

Based on the assessment findings, the following recommendations have been developed to improve menstrual waste disposal and management at schools in Addis Ababa. These recommendations are intended for government stakeholders who approve infrastructure standards for schools within the Addis Ababa municipality, local implementers and international non-governmental organizations who are seeking a solution for solid waste management within schools or other similar institutions that they sponsor or support, and school administrators as they develop annual budgets and plan for the maintenance of the sanitation facilities within their schools. The recommendations fall into two categories: infrastructure and social systems change.

5.1. INFRASTRUCTURE

There are many different designs for a small-scale incinerator — manually operated fire-based incinerators are recommended for piloting (estimated cost: \$250-\$1000 USD).⁵ Recommendations for piloting: construction and longitudinal assessment of feasibility and acceptability at a limited number of schools through various operation, maintenance, and frequency of use indicators or cross collaborating with other organizations to evaluate existing incinerators at sites similar but not limited to schools to learn more about the challenges associated with implementing incinerators at scale.



Manually operated fire-based incinerator ⁶

5.2. SOCIAL SYSTEMS CHANGE

The following phase-based recommendations are provided below to establish the recommended incinerator options as means for MHW disposal for public schools in Addis Ababa:

Phase one

- Organize a meeting with key government sector offices like the FMoH, FMoE, Addis Ababa Health Bureau of Education, and Addis Ababa Solid Waste Management Agency and representatives from sub-city SWM managers and private solid waste collection companies. Create awareness of the challenges of MHW management in schools, establish a foundation of common understanding of the social and environmental impacts of MHW, and identify feasible options for proper management of MHW in schools.
- Establish a coalition partnership among implementing partners within the WASH, education, and menstrual health sectors to develop a cross-sector solution.
- Advocate among school administrators to build their understanding of the importance of a comprehensive solution for MHW in schools.
- Develop appropriate guidelines and provide adequate training to cleaning staff, school administration, and all relevant stakeholders around the proper use of incinerators to ensure consistent use and quick resolutions to operation and maintenance challenges.

Phase two

- Educate and train students and teachers about menstrual hygiene management and the importance of proper MHW disposal.
- Train incinerator champions within each school (perhaps janitors) about proper usage and handling of MHW, incinerator function, ash disposal, and operation and maintenance of incinerators.

Phase three

- Pilot recommended incinerator options within schools and conduct feasibility assessments.
- Scale the preferred incinerator technology across schools in Addis Ababa.
- Introduce regular monitoring to ensure quality and adherence to standards of use of incinerators at schools.
- Advocate among government stakeholders to encourage a position on the issue of MHW management and develop a plan for procurement of materials/machines and budgetary allocations for MHW solutions based on the findings from the operational study.
- Advocate for the government to develop and institute performance standards, regulations, and enforcement mechanisms for MHW disposal at schools.

Phase four

- Conduct a study to estimate the MHW generation rate for schools in Addis Ababa to inform improved solutions for MHW management in schools.
- Promote the use of reusable sanitary pads at schools to help reduce the impact of MHW on disposal systems.

5.3. OPPORTUNITIES FOR WASH-IN-SCHOOLS PROGRAMMING

- Incorporate MHW disposal as a topic in school management committee workshops, focal teacher trainings, janitor trainings, and club member trainings.
- Provide schools with MH waste disposal bins and support schools in segregating menstrual waste at the source.

6. Conclusion

There is currently a lack of clear guidance at the national, regional, and municipal levels on the proper management of menstrual solid waste on school campuses. There are solutions available that will require the mobilization of funds as well as coordination across multiple types of stakeholders. Cross-sectoral collaboration among policymakers, school administrators, and the private sector waste management companies will enable the implementation of a safer waste management system. Sorting of menstrual waste from general solid waste at the school level and construction of school-level incinerators will both ensure the safety of sanitation workers and ease the maintenance of school sanitation facilities. With the proper maintenance of sanitation facilities — enabled by a streamlined solid waste management system — restrooms will remain functional, clean, and safe for use of menstruating students.

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