SANITATION
FOR MILLIONS

Master Document

Construction or Rehabilitation of WASH Infrastructure at Schools

This set of resources is grounded in practical experience from the GIZ-implemented Sanitation for Millions project concerning construction or rehabilitation of WASH infrastructure at schools. The approaches, tools, and materials included were developed and successfully implemented on the ground across multiple partner countries. The documentation is based on feedback processes involving project partners and local staff, ensuring their effectiveness in different project contexts. It provides essential background information, critical minimum standards, and the necessary steps for implementation.

It is important to note that this set of resources does not aim to provide universal solutions to all challenges related to construction or rehabilitation of WASH infrastructure at schools. Rather, it presents a curated set of field-tested materials and insights. These are intended to inform, guide, and complement the work of projects and practitioners, supporting context-specific adaptation and further development.

The set of resources consists of this master document that provides an overview and guides the user with key information, and annexes which contain practical materials derived from project implementation, such as terms of reference, questionnaires, manuals, and guidance documents.

Key features

- **Sanitary Infrastructure:** Provides facilities including hand-washing stations, barrier-free and female-friendly toilets, aligned with international and local standards.
- **Long-Term Functionality:** Emphasizes capacity development for sustainable operation and maintenance.
- **Health and Education Impact:** Enhances school environments, promotes hygiene, reduces water-borne diseases, and lowers treatment costs.
- **Gender Equality:** Supports SDG 5 by improving facilities that encourage school attendance and retention, especially for girls.
- **Cost-Effective and Environmentally Friendly Designs:** Designs are appropriate for the context and the selected technology system considers the entire sanitation chain. Innovations like WASHaLOT and MoCHs promote hygiene practices and are attractive for both public and private sectors.
- **Community Influence:** Students act as hygiene multipliers, extending improved practices to their homes, contributing to public health and environmental protection.

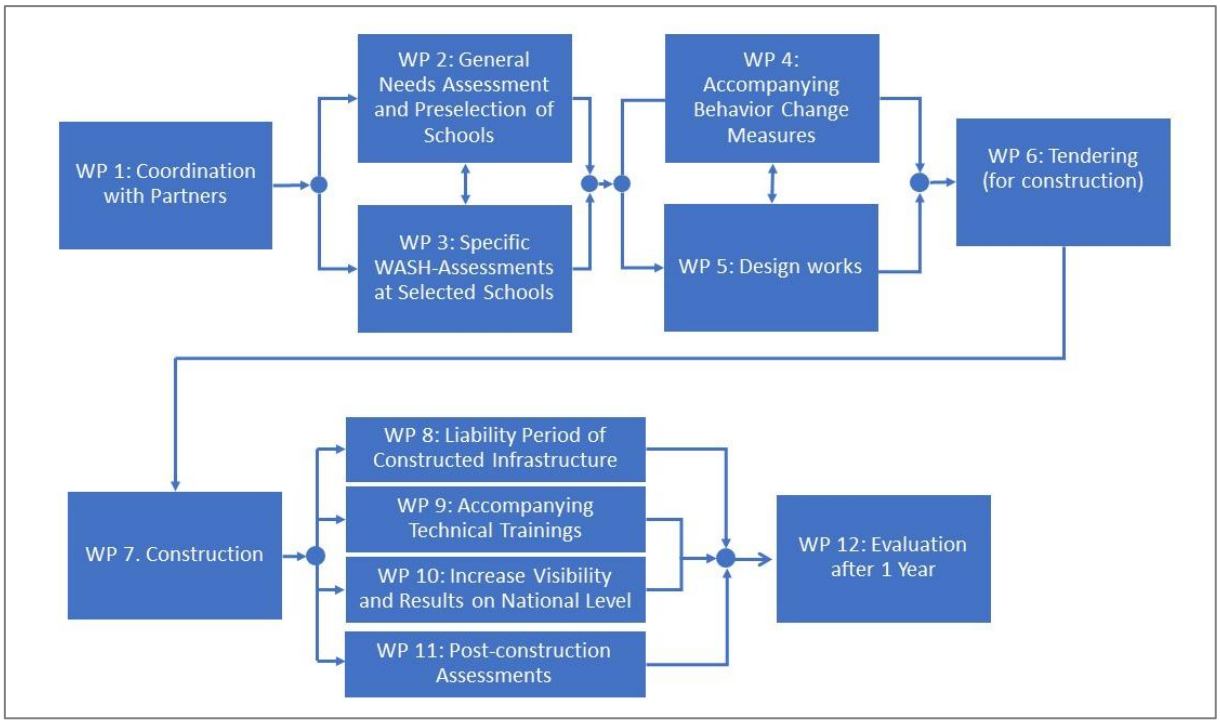
This comprehensive approach not only meets immediate health needs but also fosters long-term sustainability and educational improvements.

Our Services

This set of resources consists of twelve work packages:

- **Work Package 1** describes important aspects for successful coordination between the implementing project and relevant partners.
- **Work Package 2** specifies details for general needs assessments of the WASH in school sector and the process of pre-selecting schools in the intervention area.
- **Work Package 3** entails elements for performing school-specific assessments in each of the pre-selected schools to inform on specific needs.
- **Work Package 4** covers all relevant dimensions of accompanying behaviour change measures that should be implemented to complement the construction measures at the schools.
- **Work Package 5** outlines the attributes that must be considered during design works for the construction measures. Here, the minimum standards developed by the programme play a pivotal role.

- **Work Package 6** includes attributes that are crucial for the process of tendering for planned construction works.
- **Work Package 7** specifies relevant characteristics of the actual construction phase to ensure that expectations regarding quality and timeframes are met.
- **Work Package 8** covers details that are important for the liability period of the constructed infrastructure in case defects appear after finalization of the construction works.
- **Work Package 9** outlines technical trainings that must be implemented simultaneously to guarantee the sustainable operation and maintenance of the new infrastructure.
- **Work Package 10** refers to factors for increased visibility of the measure and achieved results on local, regional, and national level.
- **Work Package 11** describes specific post-construction WASH assessments that document and illustrate changes in comparison to the assessments under work package 3.
- **Work Package 12** outlines the assessments that are undertaken after one year, especially for purposes of long-term monitoring and evaluation.



Target Groups

Direct beneficiaries
These are the users of the sanitary and hygiene facilities of the selected schools, in particular pupils, teachers, other staff, and visitors. Special focus of the infrastructure measures is on female beneficiaries and vulnerable population groups (persons with disabilities, persons in flight context, poor and other disadvantaged minorities). During the design of sanitation and hygiene facilities, specific requirements of these population groups are considered.

Indirect beneficiaries
Especially the families of enrolled students benefit indirectly from the interventions and the improved hygiene behaviours of the young family members. The students act as multipliers in their homes and transfer their behaviour to the other family members. Furthermore, many students are motivated to discuss WASH topics in

the family, and to address existing needs at home, resulting in improved hygiene behaviours and less disease burden of the respective families. This indirectly rebounds to the public health of respective communities and relieves pressure on their health services, since the need for treatment of waterborne and hygiene related diseases is reduced.

Prerequisites for Implementation

To provide the service successfully, the internal and external conditions listed below are met.

- **Consent and ownership of the concerned authorities**: Political support is provided by the concerned authorities and there are no objections of any political, societal, or religious agency. School management supports long-term behavioural change and facility maintenance measures.
- **Technical expertise**: Cooperative co-working with the partners and their capacities are crucial for a successful implementation of the planned activities.
- **Strategy**: A successful implementation strategy includes ideas and remarks of the target group, both human and financial resources, and a suitable methodology.
- **Constant involvement of counterparts**: The counterparts are involved in the elaboration of an implementation framework and the clarification of roles and responsibilities on different levels of engagement.
- **Financial resources**: Financial resources from both the project and the counterparts are imperative to implement construction measures and accompanying activities.
- **Internal knowledge management**: Regular experience exchanges are conducted to learn from each other and to transfer best practices among regions and countries.
- **Property**: The ownership is legally clarified.
- **Material**: Required construction materials are locally available.

During implementation, these requirements are fulfilled to provide the service successfully:

- **Logical Framework:** Construction measures and goals are defined with the implementing team and local counterparts.
- **Sustainability and Community Needs:** Construction procedures are sustainable and match the local community's needs (budget, timeline, resources, and deliverables).
- **Construction Management Plans:** Clear plans organizing all construction activities and soft measures are established**.**
- **Partner Communication:** All partners are informed about efforts and desired outcomes.
- **Safety Precautions:** Safety precautions and rules are adhered to at all construction sites.
- **Temporary Facilities:** Alternative toilet options for users during the construction period are provided.

Monitoring

An existing monitoring plan with standardized processes is in place. The main indicator for construction and rehabilitation measures is creating "access to safe sanitation and hygiene". In the context of Sanitation for Millions, the indicator is defined by the number of institutions and the gender-differentiated number of benefiting people. Depending on the project's goals, the monitoring framework needs to be adapted. Key characteristics of the monitoring system include:

- Collection of pre-/post-intervention and evaluation data using the EnDev Surveys Platform.
- Data collection occurs at three stages: before intervention, at the end of construction, and about one year after handover. These assessments track needs and changes related to the toilet facilities in schools and evaluate the functionality of sanitation systems one year post-handover.

- Data is collected by project staff or implementation partners, reviewed locally, and transmitted quarterly to the M&E team.
- The Sanitation for Millions M&E team verifies and integrates data into the global M&E system.
- Monthly exchanges between project staff with and global M&E team take place to address and solve challenges proactively.

Risks

Despite thorough preparation, risks cannot be entirely excluded. During planning, potential risks are identified, assessed, and documented. Mitigation strategies are developed. Key risks and mitigation strategies include:

- **Stakeholder Support:** The involvement of ministries and partner institutions is essential. Risks from limited financial and human resources are mitigated through initial meetings, resource assessments, identifying focal persons, and defining roles and responsibilities.
- **Sustainable Impact:** Ensuring continuous application of minimum standards in construction and behaviour change activities is crucial. Construction activities need operation and maintenance which are integrated into national/local planning and budget plans to ensure sustainability.
- **Social and Political Acceptance:** A lack of social and political acceptance can undermine the success of construction measures. Acceptance is gained through culturally appropriate designs and capacity building activities in schools.
- **External Shocks:** To address the risk of external shocks like inflation and material shortages, emergency plans are developed in cooperation with the counterparts.
- **Corruption:** To eliminate the risk of corruption in construction projects, transparent procurement processes and clear role separation are ensured. Documenting specifications clearly and recruit qualified experts for supervision is indispensable.

Work Packages in Detail

Work Package 1: Coordination with Partners

Aligning with local partners is essential for long-term success in target areas. Engaging partners and communities fosters good relationships, sets strategic priorities, and ensures sustainable facilities. Programme objectives and activities are discussed with partners, who must nominate a member or form a steering committee for support and oversight. This committee aligns the work plan among all parties. Regular meetings track progress, address developments, and ensure timely completion by identifying and mitigating delays.

Attachments:
→ *WP_01s_Important Aspects for Coordination with Partners*

Work Package 2: General Needs Assessment and Pre-selection of Schools

This work package starts with a needs assessment for WASH in schools in a specific area, identifying sector challenges. Pre-selecting public schools using specific criteria saves resources. Schools are assessed for ownership, location, beneficiaries, and management. Partners are informed in advance and asked to nominate representatives for joint assessments, ensuring that the Do-No-Harm principle is followed.

Attachments:
→ *WP_02s_Criteria for Pre-Selection of School*

Work Package 3: School Specific Assessments

Before designing WASH infrastructure, specific needs assessments are conducted to understand each school's current sanitation and hygiene coverage, including existing infrastructure and needs. These assessments help stakeholders build a common understanding and shared vision of WASH priorities, forming the foundation for planning and strategic responses. The assessments, done by assigned staff using standardized survey tools, include:

1. The **WASH assessment for programme monitoring** uses EnDev-Surveys to save and analyze data, integrating findings into the programme's monitoring and evaluation system.
2. The **technical needs assessment to inform on detailed specific needs** combines interviews and focus groups to identify detailed needs, demographic trends, and sustainability options, informing the design process.
3. The **feasibility analysis** evaluates design options using sustainability criteria and recommends the best option for implementation.

Attachments:
→ *WP_03s_Specific WASH-Assessments at Selected Schools*
→ *WP_03s_11_12-2023-Guidance on EnDev-Surveys in context of S4M*

Work Package 4: Accompanying Behaviour Change Measures

Accompanying construction activities with soft measures that target knowledge, attitudes, and practices ensures ownership and maintenance of WASH infrastructure. The behaviour change measures, planned from the start, aim to promote sustainable use and operation of the facilities. Measures can include behaviour change campaigns or trainings for teachers, school staff, pupils, or parent-teacher organizations, and may be generic or specific, like the Toilets Making the Grade (TMG) competitions. These measures are planned during the design phase and carried out alongside construction. Clear timelines, milestones, and a progress monitoring mechanism are essential for these measures.

Work Package 5: Design Works According to Minimum Standards

Context-specific designs for WASH facilities in schools are developed according to minimum standards to ensure feasibility and compliance with local regulations. Based on initial needs assessments, experts or firms create inclusive designs, bills of quantities, and drawings for construction or rehabilitation. These documents are used for tendering and are prepared by registered external consultants or engineers. The design process includes technical assessments, reviews of existing reports, and surveys to inform substructure designs. Proposed designs are reviewed and approved by local authorities and relevant stakeholders. Detailed designs ensure that the facilities are accessible, high-quality, equipped with adequate O&M systems, and regularly inspected. Toilets are barrier-free, female-friendly, and faecal matter is managed safely. Handwashing facilities

are functional, accessible, and supported by hygiene education and menstrual hygiene management (MHM) initiatives.

Attachments:
→ *WP_05s_Minimum Standards for Advanced Services in Schools*

Work Package 6: Tendering (for Construction)

The tendering process adheres strictly to standardized procedures, ensuring transparency, fair competition, and cost-effectiveness. The method of tendering is determined by the size and complexity of the project. This process includes construction contracts and the procurement of materials and equipment. It begins with the preparation of tender documents followed by the request for proposal documentation and an invitation to tender. Various service providers, contractors, and suppliers submit their tenders or proposals, which are then evaluated based on predetermined criteria. The chosen provider receives an award letter, and a contract is drafted and signed. Throughout the process, adherence to internal and external regulations ensures fairness and sustainability, allowing for verification of market prices. Ultimately, the most economically advantageous bid is selected transparently, based on defined criteria.

Work Package 7: Construction

The construction process begins with a kickoff meeting to familiarize the contractor with standards and procedures. Construction documents are provided before handing over the site to the contractor. Material samples undergo testing and approval, followed by site establishment activities such as setting out structures and stockpiling materials. Regular site inspections and construction progress meetings ensure regular monitoring. The supervisor maintains a contract management file with schedules, meeting minutes, site instructions, test results, and progress reports. Upon completion, a steering committee inspects the work, and the completed project is handed over to the contractor with a standard certificate.

Work Package 8: Liability Period of Constructed Infrastructure

During the defects liability period (DLP), which begins upon issuance of the taking over certificate, identified defects or outstanding works are communicated to the contractor. Not all defects are immediately detectable, and additional issues may arise during facility utilization. Typically lasting 6-12 months for WASH infrastructure, the DLP allows for adequate identification and rectification of defects. At the DLP's conclusion, a final inspection involving the technical team, users, stakeholders, and the contractor ensures all issues are addressed before issuing a handover certificate. This signifies readiness for contract closure and release of the final retained funds to the contractor.

Work Package 9: Accompanying Technical Trainings

Technical trainings play a vital role in ensuring the sustainability of international development cooperation measures, particularly in the context of water, sanitation, and hygiene (WASH) infrastructure. Sanitation for

Millions offers a flexible range of technical trainings tailored to local needs, covering areas such as operations and maintenance (O&M) and vocational skills development. These trainings address day-to-day O&M challenges and aim not only to impart knowledge but also to transfer practical skills to end beneficiaries. Participants benefit from learning in a supportive environment, engaging with experienced professionals.

Attachments:
→ *WP_09s_ Aspects related to Accompanying Technical Trainings*

Work Package 10: Increase Visibility and Results on National Level

In addition to construction activities, efforts are focused on promoting the visibility and impact of the project, adhering to GIZ and BMZ regulations. Sanitation for Millions has a specific corporate design style guideline to ensure alignment with these regulations. Visibility methods include print media, the project website, social media releases, and construction signboards. It's crucial that all levels recognize and adopt these measures appropriately. Visibility products typically include project name, funders, and implementors, along with their respective logos. Documentation of construction progress also comply with privacy rights regulations for any photographed individual.

Work Package 11: Specific Post-construction WASH-Assessments

Following the completion of WASH infrastructure construction, post-construction assessments are conducted in all institutions. Typically, these post-construction assessments are performed by the same assigned individual using a consistent format. These assessments occur around the time of construction site handover. They provide insights into hardware-related changes compared to the pre-assessment. The assessments are documented on the EnDev-Surveys platform, accessible to the project team for analysis, verification, and integration into the programme's global monitoring and evaluation system.

Attachments:
→ *WP_03s_11_12-2023-Guidance on EnDev-Surveys in context of S4M*

Work Package 12: Evaluation after one year

One year after the handover of newly constructed or rehabilitated WASH infrastructure, a comprehensive evaluation is conducted to assess sustained functionality. This evaluation, carried out by designated programme staff, utilizes standardized EnDev-Surveys questionnaires tailored to schools. Unlike pre- and post-construction assessments, this evaluation focuses on the overall functionality of the entire WASH system. It identifies challenges and areas for improvement to optimize system performance. Evaluation findings are saved and analyzed on the EnDev-Surveys platform, then seamlessly integrated into the programme's monitoring and evaluation system. This approach ensures ongoing effective monitoring and responsiveness to evolving needs, promoting continuous improvement within the Sanitation for Millions project.

Attachments:
→ *WP_03s_11_12-2023-Guidance on EnDev-Surveys in context of S4M*

Material for Implementation Provided by Sanitation for Millions (Annexes)

Attachments related to Working Packages

→ WP_01s Important Aspects for Coordination with Partners.pdf
→ WP_02s_Criteria for Pre-Selection of Schools.pdf
→ WP_03s_Specific WASH-Assessments at Selected Schools.pdf
→ WP_03s_11_12-2023-Guidance on EnDev-Surveys in context of S4M.pdf
→ WP_05s_Minimum Standards for Advanced Services in Schools.pdf
→ WP_08s_Steps Related to DLP for Constructed Infrastructure.pdf
→ WP_09s_ Aspects related to Accompanying Technical Trainings.pdf
→ WP_10_S4M_Styleguide 2023.pdf

Attachments on impact and experiences
→ ATT01s_WASH_in_Schools_Impact-Capture_UG.pdf
→ ATT02s_Factsheet_Championing Sustainable WASH in Schools_UG.pdf
→ ATT03s_Factsheet_Sanitation Contributing to Improving Grades_UG.pdf
→ ATT04s_WASHaLOT3.0.pdf
→ ATT05s_WASHaLOT and MOCHs.pdf

Other references
→ CBM (2008): Promoting Access to the Built Environment - Guidelines
→ FIT FOR SCHOOL (undated) // CONCEPT - MENSTRUAL HYGIENE MANAGEMENT
→ HUMANTEKTUR (2023): Handbook (Minimum) Standards for Construction Projects in the Global South
→ ISO (2011): ISO/FDIS 21542 Building Construction – Accessibility and usability of the built environment
→ Uganda (2019): STATUTORY INSTRUMENTS 2019 No. 52; THE BUILDING CONTROL (ACCESSIBILITY STANDARDS FOR PERSONS WITH DISABILITIES) CODE, 2019
→ Unilever and London School of Hygiene and Tropical Medicine (LSHTM) (2013): Critical Success Criteria for Evaluating Sanitation Models.
→ USAID (2014): Learning Environment: Improved Infrastructure Program, Design Guidelines & Concept Report.
→ S4M (2020), Curtain call for Caretakers – The Hausmeister Concept
→ S4M (2020), Inclusive WASH Activities
→ S4M (2020), WASHaLOT 3.0 – An Innovative Handwashing Technology in Uganda
→ S4M (2021), Menstrual Health and Menstrual Hygiene Management – A contribution of S4M to improved gender equality and safer hygiene
→ S4M (2021), Safe Hand Hygiene at Sanitation for Millions – Proper handwashing saves lives
→ SDC and UNICEF (2017): WASH in Schools Guidelines for Lebanon – Setting Standards, Ensuring Children's Health.
→ WHO and UNICEF (2016): Core questions and indicators for monitoring WASH in Schools in the Sustainable Development Goals
→ WHO (2009): Water, Sanitation and Hygiene Standards for Schools in Low-Cost Settings

Published by
Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH

Registered offices Bonn and Eschborn, Germany

Sanitation for Millions (S4M)
Dr. Bärbel Schwaiger
S4M@giz.de
www.sanitationformillions.org

On behalf of
German Federal Ministry for
Economic Cooperation and Development (BMZ)

Division 121 –
Water, Circular Economy

Postal address of BMZ offices
BMZ Bonn
Dahlmannstraße 4
53113 Bonn, Germany
T +49 228 995 35-0
F +49 228 995 35-3500

BMZ Berlin
Stresemannstraße 94
10963 Berlin, Germany
T +49 30 18535-0
F +49 30 18535-2501

poststelle@bmz.bund.de
www.bmz.de

Authors
Sanitation for Millions

Design
by creativ republic / Germany

Illustrations
by GIZ

Photos
© GIZ/Vanessa Mugide

As at
October 2024

GIZ is responsible for the content of this publication.

SANITATION
FOR MILLIONS