SANITATION
FOR MILLIONS

Master Document

Operation and Maintenance of Water, Sanitation, and Hygiene Infrastructure in Public Institutions

This set of resources is **grounded in practical experience from the GIZ-implemented Sanitation for Millions project** regarding **sustainable operation and maintenance (O&M) of WASH infrastructure.** 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.

Through targeted capacity development measures, institutions can foster a culture of cleanliness, hygiene, and health. This implementation package **empowers institutions to tackle repair needs swiftly and implement preventive measures against infectious diseases**. Central to this approach is the development of human capacity. Through specialized trainings, caretakers are equipped with the skills and motivation to address technical challenges effectively, thus enhancing livelihoods and fostering economic growth. Impact extends beyond individual institutions.

By partnering with national training authorities, the adoption of the methods at a broader scale is facilitated, contributing to national standards and certifications. By integrating sanitation safety planning and optimizing appropriate O&M mechanisms of off-site infrastructure, environmental sustainability and public health on a larger scale is promoted.

It is important to note that this set of resources does not aim to provide universal solutions to all challenges related to operation and maintenance in the sanitation sector. 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 guidance 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 Impacts

- Applying the relevant components leads to **a long-lasting improved hygiene situation in public institutions**, as a direct result from the interplay of functioning WASH infrastructure and suitable human capacities to effectively use, operate and maintain it.
- By implementing the described elements, existing WASH facilities are **operated and maintained sustainably**, over a maximal life span. Institutions establish mechanisms to easily identify damages of WASH related infrastructure and capacities to instantly repair them.
- Constantly monitored and maintained infrastructure leads to reduced maintenance costs and saves budget of the institutions. Each institution learns how to develop and implement an operation and maintenance plan, and how to budget accordingly. This raises the attractiveness for lobbying for additional funds for WASH system at the institution.
- The institution clearly identifies mandates, roles, and responsibilities and implements WASH routine activities and thereby proves that the **WASH-system is handled with priority** and “is cared for”.
- Trainings for the private sector have a positive impact on the **job improvement potential**. The trainings create higher numbers of motivated and skilled caretakers that can address immediate technical challenges at institutions or households.
- **Sanitation Safety Planning** results in improved public health, reduces environmental pollution, enhances service delivery, builds capacity, strengthens institutions, promotes equity and social inclusion, and supports the development of policies and advocacy.
- **Advanced operation and maintenance** of specific WASH infrastructure such as greywater treatment plants or faecal sludge treatment plants leads to enhanced water quality, conservation of resources and the environment, and promotion of public health and hygiene. This includes cost-effectiveness, community resilience to water scarcity, and fostering sustainable development. Prioritizing efforts in

operation and maintenance not only optimizes the advantages of resources reuse but also plays a main role in hygiene practices, ensuring a safer and more sustainable resource supply.

- **Development of curricula and training materials** for approved assessment and training packages (ATPs) for identified skilled caretakers contributes to national streamlining and standardisation of operation and maintenance practices at the caretaker level. This fosters ample employment opportunities for semi-skilled blue-collar personnel in the sector.

Our Services

This set of resources resources supports institutions in providing functional WASH infrastructure through development, introduction and long-lasting implementation of a system that addresses following needs:

- Regular supply with consumables (for example soaps, detergents, toilet paper, cleaning equipment)
- Continual maintenance of the WASH infrastructure itself (e.g. cleaning of toilet and handwashing facilities),
- Handling of occasionally appearing small repairs (e.g. leaking valves or broken mirrors),
- Handling of bigger repairs (e.g. broken drainage pipes, and knowing where to get support)
- Improving the users' behaviours while using the facilities (operation from users' perspective).

Besides these needs (relevant for the institutions themselves), it is also crucial that the surrounding environment enables the provision of well-operated and maintained WASH infrastructure. It might be necessary to support stakeholders along the sanitation chain, for example private companies or utilities (for collection, transport, treatment, reuse and disposal of faecal sludge or wastewater) or local authorities (e.g. for creating the enabling legal framework).

To cater for these needs, the set of resources consists of various work packages, each focusing on a format that contributes to the overarching objective of enabling institutions to sustainably operate and maintain their WASH infrastructure.

- **Work Package 1: Hausmeister Trainings**
  Hausmeister trainings equip people with the necessary skills to ensure effective functioning and maintenance of WASH facilities at institutions or public places.
- **Work Package 2: Trainings for Planning and Budgeting of O&M**
  During these management-oriented trainings, drafts of O&M plans and budgets are developed, and WASH routine activities, roles and responsibilities are specified for each institution.
- **Work Package 3: Trainings on Sanitation Safety Planning (SSP)**
  Local environmental hazards and health risks along the sanitation chain are identified for various exposure groups and different actors agree on control measures and monitoring mechanisms.
- **Work Package 4: Development of context-specific training materials**
  This includes the development of the *Skilled Sanitation Caretaker Training Curriculum* and the *Trainers guide for ToTs for WASH in schools* in Uganda, and the development of the *Curriculum on DEWATS for BUITEMS University* in Pakistan.
- **Work Package 5: O&M trainings related to specific facilities**
  This includes specific details on additional O&M trainings that might be necessary depending on context and scope.

Target Groups

- **Staff within the institutions or public places**, that can be caretakers, managing and dedicated staff, or organisations of stakeholders (e.g. health unit management committees (HUMCs), market

management committees (MMCs), mosque care committees (MCCs), parent teacher associations (PTAs) and school management committees (SMCs)
- **Service providers of the private sector**, for example technical experts for operation and maintenance of specific infrastructure, e.g. FSTPs, DEWATS, greywater treatment plants, or service providers for collection and transportation of feacal sludge)
- **Government agencies** overseeing compliance with O&M safety, environmental, and quality standards to offer training programs to stakeholders on regulatory requirements, inspection protocols, and reporting obligations
- **Staff of local authorities**, e.g. managing and technical staff of relevant ministry departments, municipal staff school inspectors, Health Inspectors
- **Users/visitors** of the respective institutions
- **Communities** with limited access to clean water and sanitation in the institutions' surroundings

Prerequisites for Implementation

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

Related to the interaction with the political partners:

- **Open channels for communication with the relevant counterpart** (responsible for O&M activities) must be established. Regular meetings to discuss progress, challenges, and upcoming plans must be scheduled and conducted. In these meetings, relevant information, data, and updates must be shared to ensure transparency and alignment of efforts.
- **Strategies and action plans to address O&M needs** must be elaborated collaboratively by the partners. O&M strategies and interventions must be aligned with the political agenda and policies of the government, and integration of O&M priorities into national or regional development plans and budgets should be advocated for. Also, endorsement and support from political leaders for O&M initiatives should be sought.
- **Assigned dedicated focal points from project and government sides** to facilitate ongoing coordination and communication has proven effective. In case the interventions are realized through implementing partners, it must be ensured that they are fully onboarded and ideally part of these interactions.
- **Human capacity building measures for the counterparts and partners** should be carried out, for them to better understand existing WASH challenges and increase their ownership of respective interventions.

Related to the interaction with the receiving institution:

- **Detailed plans and guidelines for O&M procedures and protocols** tailored to the specific needs and context of the institution should be elaborated.
- **Technical assistance and capacity-building support** to strengthen the institutional capacity for O&M planning, implementation, and monitoring should be provided.
- **O&M activities must be fully integrated into the overall programming** and operational framework of the receiving partner institution.
- **Mechanisms for regular communication, joint problem-solving, and shared decision-making processes** between the project and the receiving partner institution must be established at start of the intervention.

Related to the implementation of trainings:

- **Comprehensive and up-to-date training materials** must be accessible to all stakeholders involved in O&M activities. Once the materials are available, mechanisms for the distribution and dissemination, such as online platforms, workshops, or training sessions must be established.
- **Roles and responsibilities for implementing O&M measures** must be clearly defined, whether it involves internal project staff, personnel from implementing partners, or external consultants. A collaborative environment where all stakeholders understand their roles and work together towards common objectives must be fostered, and necessary support must be provided.

Related to the alignment of the measures:

- **Expenses must be included in the project's budgeting** from the beginning.
- **Interventions must be aligned to the operational planning** of the implementing project. It must be ensured that all construction/rehabilitation measures go hand in hand with accompanying behavioral change and respective capacity development measures related to O&M.
- **Monitoring, reviewing and revising** the actual status of implementation regularly is crucial.

Monitoring

For each conducted training these steps should be followed to generate comparable and proper data:

1. **Creation of a data set** using a predefined criteria containing number of participants (disaggregated by gender and private sector affiliation), trained topics and further training details (e.g. place, date, trainings-ID, etc).
2. **Reporting of these datasets** according to internal reporting schedules and incorporation into the monitoring system.
3. After an initially agreed time span (e.g., half year after the training) the training's **participants should be contacted and evaluated** in terms of how the training contents are used in the implementation of their professional service provision. The evaluation of a certain training's participants again builds a separate data set for the monitoring system, which should directly be connected to the initial trainings.
4. According to internal reporting mechanisms the data sets might have to be submitted for an assigned officer for **plausibility and quality checks**.

Risks

Despite thorough preparation, risks cannot be entirely excluded. Key risks and mitigation strategies include:

- **Stakeholder support:** For sustainable and long-lasting success, the support of relevant stakeholders is crucial. Especially the political partner ministries and partner institutions play a key role in the successful implementation of measures. Both limited financial and human resources present risks. To solve or avoid such risks, initial alignment, the identification of focal persons and the definition of roles and responsibilities are suggested.
- **Continuity:** To generate sustainable and long-lasting impacts, it is important to ensure a continuous implementation of similar trainings for the sector in the future. These trainings require minimum quality standards should be integrated in the annual national planning and the respective budget plans of the political partner.
- **Capacity Drain:** The trainings improve human capacities of WASH service providers and firms to constantly offer services for sustainable O&M at the partnering institutions (e.g. schools, HCFs, FBIs,

etc). Through developing their professional capacities, the service providers might migrate to other (financially more attractive) job-possibilities more easily, instead of being available for the initial partner institutions. This risk can be mitigated by establishing contractual obligations between the service provider and the benefitting partner institution.

- **Social and Political norms:** A lack of social and political acceptance puts the sustainability of above-described training activities at risk. Therefore, it is crucial to strengthen capacities in more "complex" institutions to create WASH committees with multidisciplinary teams and enforce the development of socially and culturally sound training materials on "WASH-awareness". This process should be initiated complementary to the implementation of trainings for WASH service providers.
- **External Risks:** The COVID-19 pandemic has shown that external shocks can come unexpected and hit even strong systems and business lines. To deal with external shocks such as pandemics or natural disasters, it is important to develop "emergency plans" as well as to provide additional resources in case of an emergency.

Work Packages in Detail

Work Package 1: Hausmeister Trainings

The idea of the Hausmeister concept is to establish sustainable maintenance practices at the partner institutions on local level and create the enabling environment on regional and national level. The Hausmeister concept was initially implemented in mosques in Jordan, where Sanitation for Millions tailored its capacity-building efforts and practical support to accommodate the diverse roles and responsibilities across all three levels. While at local level mosque muezzins required specialized training and basic tools for minor repairs, technical guidance and supervision was provided for the regional directorates and on national level for the central Ministry of Awqaf and Islamic Affairs.

For the Hausmeister trainings, a manual for plumbing works in mosques was collaboratively developed with the Ministry of Awqaf's Construction and Maintenance department. This manual serves as a practical guide for muezzins undergoing this training. The trainings are offered in a comprehensive five-day practical course, for basic and advanced plumbing skills training sessions held in the various Awqaf directorates across the Jordanian governorates.

Parallelly to the trainings, the program capacitated and introduced the so-called mobile maintenance units (MMUs). Each is staffed with two technicians and a driver to tackle medium-sized maintenance and repair tasks in mosque sanitation facilities, in case the new Hausmeister-muezzins encounter challenges beyond their capabilities. In such cases they can seek assistance from the regional Awqaf directorates, which deploy these MMUs. A MMU typically can cater for up to four mosques per day.

Also in Uganda one of the identified gaps related to WASH facilities is the lack of easily accessible technicians' services for basic and advanced routine repairs for the WASH infrastructure. The main reasons are limited skills of stakeholders/personnel at the institutional level. Most of the public institutions rely on outsourcing external private service providers/technicians in competition with big establishments like hotels and other private businesses that are willing to pay highly for the much-sought repair service. This leaves public institutions in limbo as they can't manage to compete for technicians. Smaller problems might not to be solved directly and develop into significantly more difficult challenges. As an example, a simple pipe burst might result in a lack of functionality and unfunctional infrastructure for a long time.

The Uganda-specific aim of the Hausmeister concept is to introduce and establish a sustainable facility maintenance approach at operational level in schools, HCFs and FBIs. Therefore, Sanitation for Millions contextualised the concept through a criteria-driven identification of caretakers from partnering institutions.

Through context-tailored trainings, the programme capacitates handymen, security guards, facility plumbers, cleaners or any other staff categories. After the trainings, the programme further supports through handholding and follow-up.

In Pakistan unskilled and unemployed male youths of the targeted communities have been trained on operation and maintenance. The selection of the youths is done by a set of clearly defined criteria and the trainings are provided by the certified technical centre. Objective is to engage them to provide voluntary services free of cost to the selected institutions through a memorandum of understanding.

Furthermore, the trained youths are capacitated to provide O&M services in the catchment area to generate additional income for themselves. The trainings focus mainly on plumbing skills and enable the youths to provide simple repair and maintenance services for toilets, drinking water and handwashing facilities. These trainings usually consist of a 3 hours per week vocational training in theoretical and practical topics for 6 months, complimented by a 2 months on-the-job training.

Work Package 2: Trainings for Planning and Budgeting of Operation and Maintenance

Operation and Maintenance (O&M) planning and budgeting follows several key objectives:

- WASH infrastructure facilities are properly maintained to preserve their functionality, longevity, and value over time. This includes preventive maintenance to address potential issues before they become critical problems.
- Efficiency and effectiveness of operations are optimized because of minimized downtime. Running costs are reduced, and if applicable, productivity is maximized. This might involve streamlining of processes, adopting new technologies, or improving workforce training.
- Risks are identified and mitigated to prevent accidents, breakdowns, or other disruptions. This can include implementing safety protocols, conducting regular inspections, and addressing compliance requirements.
- Identifying and securing diverse funding sources, including government allocation, user fee, donor contributions Development of realistic budgets that accurately reflect the operation costs, inclusive of forecasting expenses, and setting up for unforeseen costs and urgent repairs to guarantee swift response to important difficulties, spendings on monitoring, and adjusting within budgetary constraints.
- Establishment of key performance indicators (KPIs) to track the effectiveness of O&M activities and ensure that they align with operational goals. Regular monitoring and reporting helps to identify areas for improvement and demonstrate the value of investments in maintenance.
- Promotion of environmentally sustainable practices in O&M, such as reducing energy consumption, minimizing waste, and using eco-friendly materials. This contributes to long-term environmental stewardship and may also result in cost savings.
- Vital stakeholder's sensitization and connection to the individuals with the necessary skilled and trained persons for operation and maintenance.

The training targets teachers, health unit management committes, parent-teacher associations, students, school club members and is implemented either by a consultant or directly by a technical officer of the programme. The training consists of brainstorming and group work to generate ideas and structure them together respectively. It focuses on enlightening the participants on the need for O&M planning and budgeting for WASH, taking the participants through the planning process of identifying WASH activities under each of the components above, the frequency of the activities, identifying the items required to facilitate the WASH activities and later costing each item to form a budget. Roles and responsibilities of different stakeholders are discussed, including developing a monitoring tool to facilitate inspection and monitoring of WASH facilities. At

the end of the training ideally, all participating institutions have a draft O&M Plan and Budget, their future WASH routine activities are specified, and roles and responsibilities of different institutional stakeholders are outlined. To anchor these results, commitment letters should be signed by the managing staff.

Work Package 3: Trainings on Sanitation Safety Planning (SSP)

The main objective of Sanitation Safety Planning is the mitigation of local environmental hazards and health risks for various exposure groups through implementation of innovative solutions for adequate sanitary and wastewater management. SSP systematically identifies and manages health risk along the sanitation chain. SSP guides investments based on actual risks, promotes health benefits and minimizes adverse health impacts. Furthermore, SSP provides assurance to authorities and the public on the safety of sanitation related products and services. The implementation of SSP results in various positive impacts: it improves public health, reduces environmental pollution, enhances service delivery, builds capacity, strengthens institutions, promotes equity and social inclusion, and supports policy development and advocacy. Integrating SSP into sanitation programming and decision-making processes helps relevant stakeholders to achieve sustainable improvements in sanitation outcomes and contributes to realizing the Sustainable Development Goals related to water, sanitation, and hygiene (SDG 6).

SSP is a multiple-barrier approach combining treatment and non-treatment barriers related to faecal matter. It is a risk-based management tool for sanitation systems and systematically identifies and prioritizes health risks along the sanitation chain (toilet interface, containment, storage, conveyance , transport, treatment, and end use or disposal). Through its application, SSP guides management and investments in sanitation systems according to the identified and prioritized risks. It supports authorities and the public to improve the safety of sanitation related products and services.

Depending on country and context, SSP trainings vary slightly in format, but usually cover following topics:

- Theoretical knowledge transfer of key concepts of SSP.
- How to conduct a risk assessment
- How to design sanitation safety plans.
- How to apply key concepts of SSP in the professional daily routines, for example during inspections.

For deep dives into the topic of SSP it is referred to the respective attachments

Work Package 4: Development of context-specific training materials

- **Development of Skilled Sanitation Caretaker Training Curriculum in Uganda:** The joint assessment of the Faecal Sludge management (FSM) O&M situation in the small towns with the MWE UWSD showed that there's need of a practical approach that provides for a training framework for all the categories of caretakers along the FSM chain to guarantee a comprehensive sectoral approach. It is up on this background that Sanitation for Millions Uganda programme sought services of a suitably qualified expert/consultant that will develop a Skilled Sanitation Caretaker training curriculum for the occupational categories across the entire sanitation chain to enable adoption and institutionalization at a national level. The curriculum will be designed to produce competent skilful caretakers equipped with the appropriate knowledge and skills aligned to the focus area within the FSM chain. including containment, emptying, transportation, treatment, disposal/reuse. The curriculum will contribute to national streamlining and standardisation of operation and maintenance practices at the caretaker level. It will also contribute to providing ample employment opportunities for semi-skilled blue-collar personnel in the sector to positively impact the maintenance culture.

- **Trainers guide for ToTs for WASH in schools in Uganda:** Sanitation for Millions aims at reaching sustainably established good sanitation and hygiene conditions. But the sanitation status in schools assessed at the initiation of the project in the Anaka cluster showed that a lot needs to be done including software interventions to foster appropriate use of WASH facilities, and adequate maintenance through development of hygiene routines with a special consideration to Menstrual Hygiene Management (MHM) and school sanitation and hygiene competition (Toilets Making the Grade - TMG). This approach has helped to foster sustainability and creating impact through capacity development, that is, Trainings of Trainers (TOTs) which is a key tool. It is upon this background that Sanitation for Millions engaged the already trained TOTs by Sanitation for Millions partners during the implementation phase. The main objective of this ToTs engagement is to orient and engage the school level stakeholders, with the intention of triggering action for improved O&M for WASH facilities, hygiene behaviours and practices, development of routines with clear roles and responsibilities by the different stakeholders and resource allocation. The TOTs usually conducted at least one training in 2 weeks, making it two trainings in a month per trainer. This facilitation is normally output based; facilitated for lunch, transport, and stationery on confirmation of the trainings through the training reports, pictures, participants' registration form among others monthly.

- **Curriculum development on DEWATS for BUITEMS University in Pakistan:** Sanitation for Millions has over the years promoted the utilization of decentralised waste-water treatment systems (DEWATS) at various levels. In addition to the construction of a pilot DEWATS plant at the BUITEMS University in Balochistan, which is the largest and oldest university in Balochistan, and construction at various other sites in the country, a curriculum for a university course on DEWATS has been developed . Objective was to complement DEWATS infrastructure measures by providing support to sustainable O&M mechanisms on tertiary education level. The curriculum development was executed as part of a contract with Bremen Overseas Research and Development Association (BORDA), a German based company that is among others, specialized in decentralised water and wastewater treatment system. The Departments of Civil Engineering, Chemical Engineering, and Environmental Sciences at BUITEMS University officially adapted the curriculum and incorporated DEWATS into the teaching contents. In several courses the future engineers are taught on DEWATS treatment plant layouts, components, working mechanisms, design aspects and O&M related contents.

Work Package 5: O&M trainings related to specific facilities

- **O&M Trainings for greywater treatment plants in Jordan:**
  O&M and hygiene trainings for greywater treatment plants done by Sanitation for Millions are significant components to ensure their effectiveness and sustainability. These trainings focus on personnel responsible for the operation, maintenance and management of these treatment plants. The O&M training covers various aspects, including:
    - Detailed instruction on the day-to-day operation of the greywater treatment plant, including starting up, shutting down, and monitoring processes
    - Routine maintenance tasks such as equipment inspection, cleaning, and troubleshooting common issues to ensure optimal performance and longevity of the plant
    - Safety procedures and protocols to prevent accidents and ensure the well-being of personnel working with the equipment
    - Monitoring water quality parameters and implementing necessary adjustments to maintain compliance with health and environmental standards
    - Preparation for handling emergencies such as equipment malfunctions, leaks, or power outages to minimize downtime and mitigate potential risks.

  In combination with these O&M trainings it is recommended to also implement hygiene trainings for plant operators and the surrounding communities on safe practices to prevent contamination and health risks associated with greywater treatment. Training aspects are:

- Guidance on personal protective equipment (PPE) usage, handwashing, and other hygiene practices to minimize the risk of exposure to pathogens.
- Education on preventing cross-contamination between treated and untreated water sources to maintain water quality standards.
- Outreach programs aimed at raising awareness among local communities about the importance of proper hygiene practices and the role of greywater treatment in safeguarding public health.
- Training in disposal of solid waste and wastewater residues generated during the treatment process to prevent environmental pollution and health hazards.

By providing comprehensive O&M and hygiene training, the targeted stakeholders can ensure the efficient operation, maintenance, and hygiene standards of greywater treatment plants in targeted areas, contributing to water conservation, environmental protection, and public health improvement efforts.

- **O&M Trainings of FSTP operators in Uganda:**
  The process of Faecal Sludge Management consists of several steps including the generation and storage of faecal sludge, collection, and transportation to the treatment site, treatment of the sludge and re-use or disposal of the byproducts from the treatment process. Along this chain, health and occupational risks are high. These include direct contact of workers with faecal sludge and spillage of faecal sludge at different stages in the whole process which pollutes the environment. These risks are worsened by the poor state of toilets; lack of proper and adequate physical access for cesspool/pit-emptying due to poor planning; and lack of proper personal protective wear for adequate protection of the workers. To address these gaps, Sanitation for Millions Uganda together the Ministry of Water and Environment designed and approved standards for the siting and minimum requirements of toilets and containment facilities within the Kampala City and Urban centres in northern Uganda.

- **O&M trainings of DEWATS operators in Pakistan**
  Decentralized wastewater treatment systems (DEWATS) require O&M trainings to work effectively and sustainably. Operators, technicians, and the key responsible persons should participate in these training programs / to effectively operate and maintain these systems. Find attached a thorough manual for creating and delivering O&M trainings for DEWATS with these principal aims:
  - Understanding DEWATS system: It is important for participants to fully comprehend the various DEWATS components and how they work.
  - Skills for Routine Maintenance: To avoid system failures, trainings include the abilities required to carry out routine maintenance chores.
  - Troubleshooting and Repairs: Attendees acquire the skills necessary to recognize and resolve typical issues that might occur in DEWATS.
  - Safety and Compliance: The trainings cover safety procedures as well as adherence to regional environmental and health laws.
  - Community Involvement: Participants are skilled to encourage community participation in O&M operations for enhanced sustainability and ownership.

- **Additional trainings of dedicated staff**
  Besides the above, selected dedicated staff, for example staff of the partners, supervisors and staff at the institutions, is trained according to identified needs. Training topics can vary immensely but should paint a comprehensive picture of the relevant minimum standard operating procedures (SOPs). The trainings can relate to collection and transportation of faecal sludge, Personal Protection Equipment (PPE), health related behaviors and routines, the use of appropriate equipment and tools, regular spot checks, appropriate signage, use of operating manuals, etc.

Materials

- **Training Manuals and Guidelines for Implementation**
  - OM-01_Hausmeister Training Manual_UGA
  - OM-02_Hausmeister Training Manual in Mosques_JOR
  - OM-03_Sanitation Safety Planning_UGA
  - OM-04_Sanitation Safety Planning_JOR
  - OM-05_Trainers' guide for TOT for WinS_UGA
  - OM-06_Occupational Health and Safety Guidelines FSTP_UGA
  - OM-07_GWTS – O&M Training Manual_JOR
  - OM-08_GWTS – Evaluation Questionnaire_JOR
  - OM-09_DEWATS Operation and Maintenance Manual_PAK
  - OM-10_DEWATS O&M Training Contents_PAK
  - OM-10a_DEWATS Curriculum_PAK
  - OM-11_Exemplary Concept for OM-Training_UGA
  - OM-12_Plumbing Course_PAK
  - OM-13_Skilled Sanitation Caretaker Training Curriculum_UGA (under development)

- **Further Informational Material**
  - OM-31_The Hausmeister Concept_JOR_GLO
  - OM-32_Factsheet_The Hausmeister-Approach in UGA
  - OM-33_Facility Maintenance Concept for Public Institutions_UGA
  - OM-34_Models-That-Work: To Reach the National Standards for WinS_UGA

- **Minimum Standards for Construction of Institutional WASH Infrastructure**
  - OM-51_Minimum Standards for Advanced Services in Schools_GLO
  - OM-52_Minimum Standards for Advanced Services in HCFs_GLO
  - OM-53_Minimum Standards for Advanced Services in FBIs_GLO

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