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Looking at WASH in non-household settings: WASH away from the home information guide

Liz Kendall and Marielle Snel

Supporting water sanitation and hygiene services for life

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We believe in a world where water, sanitation and hygiene services are fundamental utilities that everyone is able to take for granted. For good.

We face a complex challenge. Every year, thousands of projects within and beyond the WASH sector fail – the result of short-term targets and interventions, at the cost of long-term service solutions.

This leaves around a third of the world's poorest people without access to the most basic of human rights, and leads directly to economic, social and health problems on a global scale. IRC exists to continually challenge and shape the established practices of the WASH sector.

Through collaboration and the active application of our expertise, we work with governments, service providers and international organisations to deliver systems and services that are truly built to last.

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Acronyms

ACM	Association for Computing Machinery
ACTED	Agency for Technical Cooperation and Development
ALNAP	Active Learning Network for Accountability and Performance
ATC	Appropriate Technology Centre
BORDA	Bremen Overseas Research and Development Association
BRAC	Building Resources Across Communities
CBO	community-based organisation
CCCM	Camp Coordination and Camp Management
CDP	CDP (formerly Carbon Disclosure Project)
DEWATS	Decentralized Wastewater Treatment Solutions
ELRHA	Enhancing Learning and Research for Humanitarian Assistance
EMIS	Education Monitoring Information System
ENPHO	Environment and Public Health Organization
FPE	Free Primary Education [Grant]
FRESH	Focusing Reserves on Effective School Health
GIZ	Deutsche Gesellschaft für International Zusammenarbeit
GLAAS	UN-Water Global Analysis and Assessment of Sanitation and Drinking-water
HCF	health care facility
HIP	Hygiene Improvement Framework
HRWS	Human Rights to Water and Sanitation
IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
IDMC	Internal Displacement Monitoring Centre
IDP	internally displaced person
IEEE	Institute of Electrical and Electronics Engineers
IOM	International Organization for Migration
INGO	international non-governmental organisation
IWA	International Water Association
JHSPH	Johns Hopkins Bloomberg School of Public Health
JMP	[WHO/UNICEF] Joint Monitoring Programme
KESSP	Kenya Education Sector Support Programme
LCCA	life cycle cost approach
LDC	less developed country
LSHTM	London School of Hygiene and Tropical Medicine
M&E	monitoring and evaluation
MDG	millennium development goal
MHM	menstrual hygiene management
MNS	Mongolian Agency for Standardization and Metrology
NGO	non-government organisation
NRC	Norwegian Refugee Council
O&M	operations and maintenance

ODI	Overseas Development Initiative
OVC	orphans and vulnerable children
PAHO	PanAmerican Health Organization
PPP	public private partnerships
PTA	parent teacher association
SARA	Service Availability and Readiness Assessment
SDI	Service Delivery Indicator
SHARE	Sanitation and Hygiene Applied Research for Equity
SHIELD	Social Humanitarian Economical Intervention for Local Development
SPA	Service Delivery Assessment
SGD	sustainable development goal
SPLASH	schools promoting learning achievement through sanitation and hygiene
SuSanA	Sustainable Sanitation Alliance
TUS	temporary use setting
UHC	universal health care
UN	United Nations
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
WASH	water, sanitation and hygiene
WBCSD	World Business Council for Sustainable Development
WEDC	Water, Engineering and Development Centre
WHO	World Health Organization
WPB	World Prison Brief
WRC	Water Research Commission
WSP	Water and Sanitation Program
WSSCC	Water Supply and Sanitation Collaborative Council
WWAP	[United Nations] World Water Assessment Programme

Abstract

Clearly, access to water, sanitation and hygiene (WASH) facilities at home is simply not enough to achieve complete behavioural change and sustainable impact. The availability of WASH facilities at schools, for example, for both students and teachers, is of critical importance so that they can work and learn effectively. As important is the availability of WASH facilities at hospitals, health centres and clinics, as this is key to preventing infections and other diseases. In addition, the availability of WASH facilities ranging from workplaces to prisons is fundamental so that people are able to survive in a healthy and safe environment. This information guide is therefore meant to provide an overview of WASH in a variety of settings beyond the household. Also known as WASH away from the home, it focuses on different settings outside of the home which include schools, health care facilities, workplaces, temporary use settings (e.g. restaurants, accommodation, transportation hubs, transportation vehicles, markets, places of worship and public WASH facilities), mass gatherings and dislocated population settings (e.g. internally displaced camps, refugee camps, prisons and orphanages).

This guide draws from the knowledge that this is the first compilation overview focusing on WASH away from the home. The typology used in the guide is based on the initial research undertaken by the Water Institute at the University of North Carolina on WASH in non-household settings. The aim of this information guide is to assist anyone involved in or planning to work in WASH within institutions outside of the home. This guide provides background information and reference resources that can be applied to WASH programmes globally. There are also a number of case studies of best practices and lessons learnt.

Introduction

PURPOSE OF THIS GUIDE

In the water, sanitation and hygiene (WASH) sector's quest to ensure the availability and sustainable management of water and sanitation for all, which is Goal #6 of the sustainable development goals (SDGs),[1] it will have to look outside the household to other settings. This guide aims to facilitate the realisation of this agenda by presenting a series of information sheets overviewing the most popular non-household WASH settings.

THE OBJECTIVE OF THE INFORMATION IS TO:

- Provide material which will help professions dealing with WASH in different settings.
- Provide an "ideas" guide for professionals to think about WASH beyond the household since much work remains to be done in these settings.
- Provide a hands-on guide that covers concepts, content issues and practical resources.

HOW DID THIS GUIDE COME ABOUT?

The way the material has been classified in this guide is based on an article on WASH away from the home by Cronk, et al., 2015,[2] and discussions with him on the importance of documenting available secondary data for WASH in different settings.

A first attempt to bring WASH away from home to the attention of other WASH professionals took place at the IRC International Water and Sanitation Centre (IRC) Monitoring sustainable WASH service delivery symposium held in Addis Ababa in 2013. Since then there have been a number of events, including the hosting of a specific side event during the Sanitation and Water for All event in 2014. In 2015 the IRC organised a side event on this issue at the University of North Carolina's Water and Health Conference. Representatives of key WASH organisations[3] reflected on WASH away from the home. The session culminated in the discussion of the development of WASH indicators for these different settings.

WHAT IS DIFFERENT ABOUT THIS GUIDE?

- It contains stand-alone themes for different WASH away from the home settings.
- The resources provided can be adapted to culturally suitable and locally available materials and situations.
- The guide is dynamic as it will be published on the web with acknowledgements to those contributing to further editions. (See Annex 1: Feedback form at the back of the guide).

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[1] SDGs with 2030 targets related to WASH:
3.3 End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
3.9 Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination.
6.1 Achieve universal and equitable access to safe and affordable drinking water for all.
6.2 Achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
6.a Expand international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, and recycling and reuse technologies.
6.b Support and strengthen the participation of local communities for improving water and sanitation management. http://www.un.org/sustainabledevelopment/water-and-sanitation/.

[2] Cronk, R., Slaymaker, T. and Bartram, J., 2015. Monitoring drinking water, sanitation, and hygiene in non-household settings: Priorities for policy and practice. International journal of hygiene and environmental health, 218(8), pp. 694-703.

[3] Organisations at this session included Emory University, Simavi, Susana Alliance Forum, UNC, UNICEF and WHO.

FOR WHOM IS THIS GUIDE?

This guide is meant specifically for WASH professions who want to understand WASH settings beyond the home. However, it is also intended for those outside of the WASH sector. It provides guidelines and resources for anyone who wants to work to improve sanitation and hygiene in their communities, and who may find inspiration in the overviews and recommended resources.

USE OF THE GUIDE

The guide has been prepared with two specific uses in mind, namely:

- As a reference document for planning and/or implementing specific WASH activities outside the home setting. In this case it is advisable to see the document as a resource best read from cover to cover.
- To learn about, or find inspiration from, lessons on specific WASH away from home settings. In this case the reader is encouraged to dip into or read sections covering specific settings.

STRUCTURE OF THE GUIDE

Each section has a stand-alone theme. The theme relates to the setting of WASH away from the home. Each theme is formatted as follows:

I. Background

II. Challenges

(Within each setting are listed just some of the main impediments identified during the secondary date and literature review performed for this guide. This list is not exhaustive.)

III. Useful websites

IV. Building blocks for each WASH away from the home setting

A. Policy environment

B. Stakeholders

(This gives a general overview of some of the actors involved within each setting. Again, this list is not exhaustive.)

C. Technical choices

D. Financial options

E. Monitoring and evaluation

V. Resources

A. Sources of information

B. Toolkits and guidebooks

C. Further topics

D. Case studies

YOU CAN JOIN THIS INITIATIVE

This guide can be downloaded from the Internet. It will be a living document where information will continue to be fed into updated versions based on new and emerging experiences, information and knowledge.

Opinions and comments fed back to the IRC through the Feedback form (Annex 1 at the end of the document) will enable this document to grow and remain up-to-date.

All readers, especially those working in WASH in schools, health care facilities, workplaces, orphanages, prisons and other settings are kindly asked to join in this initiative by:

- Giving us comments, observations and constructive criticism.
- Suggesting changes in the current texts, including telling us where, why and how to make improvements to the guide.
- Sending us information (including case studies) of your WASH activities in different settings, even those currently not included in this guide.

The authors pledge that all contributions will get a response and that all contributors will be acknowledged in updated versions.

You are requested to send your responses by post or email, as indicated in Annex 1: Feedback form.

WASH in schools

I. BACKGROUND

Water, sanitation and hygiene (WASH) in schools refers to a combination of technical (hardware) and human development (software) components that are necessary to produce a healthy school environment and to develop or support appropriate health and hygiene behaviours. WASH in schools aims to make a visible impact on the health and hygiene of children through improvement in their health and hygiene practices, and those of their families and communities. It also aims to improve the curriculum and teaching methods while promoting hygiene practices and community ownership of water and sanitation facilities within schools. It is based on the belief that children are far more receptive to new ideas because they are of an age when they can be influenced to cultivate the habits of good personal hygiene. The promotion of personal hygiene and environmental sanitation within schools can help children to adopt good habits during the formative years of their childhood.

The technical components include drinking water, and handWASHing and toilet facilities in and around the school compound. The human development components are the activities that promote conditions within the school, and the practices of children and teachers that help to prevent water and sanitation related diseases and worm infestation. School sanitation and hygiene education depend on a process of capacity enhancement of teachers, education administrators, community members, village/ward water and sanitation committees, public health engineering and rural development departments, non-governmental organisations (NGOs) and community-based organisations (CBOs). It seeks to use water/sanitation/hygiene learning as a bridge linking children, their families and communities.

II. CHALLENGES

- Need to create effective learning environments as children perform better if surrounded by a clean and hygiene environment.
- Weak enrolment and retention of girls owing to lack of private sanitary facilities for girls. Parents can be discouraged from sending girls to school, and this contributes to the dropout rate of especially adolescent girls.
- Need to reduce diseases and worm infestation. Badly maintained or absent sanitation and hygiene school facilities are health hazards.
- Lack of environmental cleanliness. Proper facilities will prevent pollution of the environment and limit health hazards for the community at large.
- Weak emphasis on implementing child rights. Children have the right to be as healthy and happy as possible in their given circumstances. Good sanitation and hygiene practices lead to fewer diseases, better health and better nutrition.[4]

III. USEFUL WEBSITES

- http://www.fitforschool.international
- http://www.WASHinschools.info
- http://www.WASHinschoolsmapping.com
- http://www.unicef.org/WASH/schools/
- http://www.hip.fhi360.org/page/4086.html
- http://www.susana.org/library?search=school

[4] Refer to Mooijman, A., Snel, M., Ganguly, S., and Shordt, K., 2010. Strengthening water, sanitation and hygiene in school s- A WASH guide manual with a focus on South Asia. Delft: IRC; Snel, M., Ganguly, S., and Shordt, K., 2002. School sanitation and hygiene education - India. Delft: IRC.

IV. BUILDING BLOCKS FOR WASH IN SCHOOLS

A. Policy environment

The international policy environment is increasingly preoccupied with providing adequate levels of WASH in schools, and is directly related the SDGs, specifically those that target improving the health of vulnerable populations, achieving universal primary education, promoting gender equality and reducing child mortality. The current policy environment focuses on WASH in schools as more than construction and coverage only, but also focusing on programme impact. Impact is determined by the sustainability of the facilities, using them as intended, and developing and institutionalising appropriate health behaviour practices.

See:

Mooijman, A., Snel, M., Ganguly, S. and Shordt, K., 2010. Strengthening water, sanitation and hygiene in schools: a guidance manual with a focus on South Asia. (IRC technical paper 53) The Hague: IRC.

This manual provides information on a number of essential topics related to WASH in schools, and contains relevant activity sheets. Parts of the manual can be used for training and orienting officials and trainers from education, engineering and health departments as well as rural development officials and trainers. Within WASH in schools programmes this book can be used for planning new programmes and setting strategies; for district training and planning workshops (select the topics and exercises that are most relevant for those who attend training); for training trainers from NGOs and other institutions focusing on WASH in schools; for orientation of district and departmental officials, education officers and head teachers, public health engineering staff and contractors, leaders of other institutions such as NGOs and CBOs; for setting up monitoring activities in the district, block, cluster and community; and for training field workers to work with communities on group mobilisation, technology selection and design. The manual can also be used to prepare or adapt school teaching and learning materials. However, on its own it is not sufficient for classroom activities.

Mooijman, A., van den Berg, C., Odum Jensen, L. and Bundy, D., 2005. Toolkit on hygiene, sanitation and water in schools. WASHington DC: World Bank. http://www.wsp.org/Hygiene-Sanitation-Water-Toolkit/index.html.

This toolkit has been developed following the FRESH (Focusing Resources on Effective School Health) framework, which has been created through a partnership of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), and the World Bank.

The Toolkit consists of the following five main sections:

1. **Why this toolkit**?: Background information on WASH for schools and its impact on the Sustainable Development Goals (SDGs).
2. **Basic principles:** The basic guidelines for WASH in schools in six key areas: policy environment, life skills-based hygiene education, technology choice, financing options, stakeholder participation, and capacity building.
3. **Sector assessment:** An overview of the major opportunities for and constraints on WASH in schools. It outlines a strategy to deal with key issues to be addressed to ensure successful implementation of school WASH interventions.
4. **Project cycle:** A step-by-step presentation of the project cycle for WASH projects in schools, emphasising interactive processes and full stakeholder involvement from promotion through evaluation.
5. **Resources:** Tools, readings, useful links and a glossary for school WASH projects.

B. Stakeholders

The following are key stakeholders that all play a part in improving WASH in schools. They are meant to give a guide of the various institutions and people involved in undertaking effective WASH in school programmes.

National and district institutions

- National health departments including district health officers
- National rural development departments
- District officials: collectors and chief executive officers
- Teachers and cluster coordinators
- Child development project officers and supervisors
- NGOs and their field workers

Community members

- Children
- Parents
- Teachers and head teachers
- Builders and masons

Community groups and institutions

- Parent teacher associations (PTAs)
- Village education committees
- School health clubs (e.g. World Vision (2014). Kachan School Health Club)
- Water and sanitation committees
- Village/local government development committees
- Women's and self-help groups
- Youth groups
- Small entrepreneurs

See:

Mooijman, A., Snel, M., Ganguly, S. and Shordt, K., 2010. Strengthening water, sanitation and hygiene in schools: a guidance manual with a focus on South Asia. (IRC technical paper 53). The Hague: IRC.

This manual provides information on a number of essential topics related to WASH in schools, and contains relevant activity sheets. Parts of the manual can be used for training and orienting officials and trainers from education, engineering and health departments as well as rural development officials and trainers. Within WASH in schools programmes this book can be used for planning new programmes and setting strategies; for district training and planning workshops (select the topics and exercises that are most relevant for those who attend training); for training trainers from NGOs and other institutions focusing on WASH in schools; for orientation of district and departmental officials, education officers and head teachers, public health engineering staff and contractors, leaders of other institutions such as NGOs and CBOs; for setting up monitoring activities in the district, block, cluster and community; and for training field workers to work with communities on group mobilisation, technology selection and design. The manual can also be used to prepare or adapt school teaching and learning materials. However, on its own it is not sufficient for classroom activities.

C. Technical choices

Hardware and software

The linkage of improved WASH in schools strongly revolves around adequate hardware and software options. In terms of hardware, there is a variety of technical choices around building schools. One of the most sought after

IRC publications is a manual on building child-friendly latrines. The following are some key documents on technical choices in construction but which also have a focus on software aspects for WASH in schools.

See:

Adams, J., Bartram, J., Chartier, Y. and Sims, J., 2009. Water, sanitation and hygiene standards for schools in low-cost settings. Geneva: WHO. http://www.who.int/water_sanitation_health/publications/wsh_standards_school/en/.

These guidelines deal specifically with WASH, and are designed to be used in schools in low-cost settings where simple and affordable measures can significantly improve hygiene and health. They offer a basis for creating the minimum conditions required for providing schooling in a healthy environment for children, teachers and other staff. The guidelines deal specifically with water supply, water quality, water quantity and access to water, hygiene promotion, sanitation (quality and access), control of vector-borne diseases, cleaning and waste disposal, and food storage and preparation.

The word "school" is used in this document to include primary and secondary schools, boarding and day schools, rural and urban schools, and public and private schools. The common feature of all schools addressed in this document is that they are constrained by a severe lack of resources for infrastructure development. The guidelines are written for use by education managers and planners, architects, urban planners, water and sanitation technicians, teaching staff, school boards, village education committees, local authorities and similar bodies.

GIZ, 2013. Hardware for group handWASHing in schools: field guide, Manila: Fit for School, GIZ. http://www.susana.org/en/resources/library/details/2074.

The report is a photo catalogue of handWASHing facilities for schools constructed in the Philippines, Indonesia, Lao PDR and Cambodia as part of the GIZ Fit for School programme. It looks at the materials used, design, durability and practicality issues encountered. There are separate sections on water sources, basins, piping and drainage. Based on problems encountered a new, simplified and optimised design of a group handWASHing facility made from simple, low-cost materials is presented. The maintenance and sustainability of handWASHing facilities is in part dependent on the community ownership of the facilities. Small measures are described that can be taken to improve community acceptance and ownership. The report concludes with a discussion on the remaining challenges related to functionality and financial constraints.

Government of Ethiopia and UNICEF Ethiopia, 2012. Design and construction manual for water supply and sanitary facilities in primary schools. Rev. ed., Addis Ababa: Ministry of Heath, Ministry of Water and Energy, Ministry of Education and UNICEF Ethiopia UNICEF. http://www.unicef.org/WASH/schools/files/WASH_in_Schools_Design_Manual.pdf.

This manual focuses on the design and construction of child-friendly school WASH facilities in Ethiopia. Following a general introduction on the importance of school WASH facilities, it provides an overview of the different water supply options available for schools in Ethiopia, together with their designs and related technical details. The next sections of the manual provide detailed designs for dry toilet facilities, urinals and handWASHing facilities, and infiltration pits and trenches for wastewater management. The final two sections cover green technologies and the management of WASH facilities. Technical design drawings and bills of quantities are included in the annexes.

Zomerplaag, J. and Mooijman, A., 2005. Child-friendly hygiene and sanitation facilities in schools: indispensible to effective hygiene education. Delft: IRC and UNICEF. http://www.ircwash.org/sites/default/files/Zomerplaag-2005-Child.pdf.

This document covers all the stages of a design project from needs assessment to operation and maintenance (O&M). It stresses the importance of active involvement of children, teachers, parents and the community during all of these stages so that they will be able to find solutions to their own problems and needs. The scope of this document is limited to the design of the 'space' containing the hygiene and sanitation facilities. Within the context of this booklet the provision of water is addressed insofar as it is required to enable hygienic behaviour.

The word 'toilet' is used for all kinds of technical sanitation solutions. Reference is made to a 'latrine' when the point addressed specifically reflects problems and solutions related to pits. The document describes in ten points those issues that are important when dealing with children, hygiene and sanitation in the school environment, and provides practical, easily accessible guidance to policy makers, programme designers and implementers at field level. The ideas are not blueprints for solutions. Rather, they are 'concepts' intended to stimulate discussions and creative thinking that will need to be tailored to a particular project context. Moreover, they can serve for both the construction of new facilities and the rehabilitation of existing ones. The booklet contains two annexes showing how to integrate the different concepts: a checklist and a 'sample set-up' for the implementation of hygiene and sanitation facilities in schools.

D. Financial options

Finance is a huge challenge for all settings WASH settings, including in schools. The ongoing costs of supporting WASH programmes in primary schools are not well understood. As a result a number of recent studies, including some supported by the IRC, have focused on the financing role of WASH in schools.

See:

Fonseca, C., 2015. The costs of water and sanitation in schools: Bangladesh. The Hague: IRC. http:/www.ircwash.org/blog/costs-water-and-sanitation-schools-bangladesh.

It costs at least US$10 per student to construct water and sanitation facilities in schools and another US$1.40 per student per year for all recurrent costs including continuous support to hygiene promotion.

Snehalatha, M., Fonseca C., Rahman, M., Uddin, R., Ahmed, M. and Shariff, A.J., 2015. School WASH programmes in Bangladesh: how much does it cost?: applying the life-cycle costs approach in selected upazilas. The Hague: IRC and BRAC. http://www.ircwash.org/sites/default/files/lcca_methodologyreport_school_WASH_clean.pdf.

This study applies a life-cycle cost approach (LCCA) to the sanitation and hygiene activities undertaken in 117 schools in six selected upazilas (sub-districts) out of the 245 upazilas in Bangladesh where the BRAC WASH in schools programme operates.

It uses a school service level framework to evaluate the WASH services provided using six criteria:

1. Access – the number of students per latrine, with separation for boys and girls.
2. Use – the safe use of latrines, water and soap available for handWASHing.
3. Reliability – clean latrines, availability of products for regular maintenance.
4. Drinking water available – availability of safe drinking water.
5. Environmental protection – faecal waste and wastewater safely disposed.
6. Menstrual hygiene management – availability of pads and napkins for emergencies and facilities for disposal.

The study analyses expenditure data for capital expenditure (hardware and software), operational expenditure, capital maintenance expenditure and direct support costs.

It concludes with a review of:

- The methodology for assessing WASH service levels.
- The life-cycle costs of WASH in schools and the relationship between investments and services provided.
- Cost benchmarks for sustainable WASH services in schools.

Recommendations are provided for the BRAC WASH programme and development partners.

Gallo, K., Mwaki, A., Caruso, B., Ochari, I.A., Freeman, M., Saboori, S., Dreibelbis, R. and Rheingans, R., 2012. An evaluation of the financial management of WASH programs in SWASH-plus primary schools. Nairobi: SWASH+ Kenya. http://www.ircwash.org/sites/default/files/Gallo-2012-Evaluation.pdf.

The ongoing costs of supporting WASH programmes in primary schools are not well understood. The Kenyan government provides primary schools with funds to support school operations of school WASH through the Free Primary Education (FPE) Grant, but does not provide dedicated funding to support school WASH. The capacity of primary school administrators with responsibility for maintaining school WASH programmes to manage financial components of these systems needs to be described. Spending and budgeting practices at the school level must be better defined in order to effectively plan for support of WASH in schools, and to advocate for appropriate funding and training support for school administrators. Head teachers hold primary responsibility for financial management and accounting of school WASH funds. The FPE Grant is used for expenditures to support WASH, but schools report inadequate funds and shortages of supplies. Budgeting and record-keeping practices at schools vary widely, and head teachers show varying levels of competency for financial management. Head teachers and other school administrators need to receive effective training in financial management, and funds should be availed for ongoing financial management education and contracting of account clerks, as needed. The FPE Grant should include a dedicated budget line for repair, maintenance, and improvement of school WASH systems. Funding amounts should be appropriated to schools based on levels of WASH capacity and needs

Gallo, K., Mwaki, A., Caruso, B., Ochari, I.A., Freeman, M., Saboori, S., Dreibelbis, R. and Rheingans, R., 2012. Understanding the recurring costs for maintaining a school WASH program: financial management of school WASH programs (summary of: An evaluation of the financial management of WASH programs in SWASH-plus primary schools). Nairobi: SWASH+ Kenya. http://www.ircwash.org/sites/default/files/Gallo-2012-Understanding.pdf.

Two-page summary based on SWASH+ project report 'An Evaluation of the Financial Management of WASH Programs in SWASH+ Primary Schools'.[5] The study covers how schools plan for WASH expenditures, characteristics of financial documents, annual WASH expenditures, funding sources and an overall need for standardised allocation for WASH funding.

Under development:
Murphy, H., (forthcoming) Costing model for WASH in schools. Pennsylvania: Temple University.

E. Monitoring and evaluation

A fundamental aspect of WASH in schools is M&E. Clearly, monitoring should be an ongoing activity in WASH in school programmes. Monitoring is far more than collecting information to "see how things are going". It is meant to improve programmes and activities over the short term. Monitoring involves checking, analysing and acting to improve a situation. The action should, of course, be taken at the lowest possible level, with cross checks to make sure that the situation has, in fact improved. One key means of undertaking this activity is through the development of national standards and student latrine/urinal ratios.[6]

Most programmes that are serious about monitoring try to develop a small set of indicators to describe the minimum necessary conditions for programme success. It is very useful for those involved in projects or those working in a particular place to develop such mutually agreed lists of basic indicators. An indicator shows a standard that you want to reach. It can be written as a sentence or a question, or in any other way, as long as people have the same understanding of its meaning.

Some popular indicators include gender specific presence of latrines, grade specific presence of latrines, presence of water facilities, functionality of water facilities, signs of WASH facilities usage, condition and maintenance of WASH facilities, and availability of easy access and well-located hygiene facilities (including handWASHing stations and soap).

[5] Gallo, K., Mwaki, A., Caruso, B., Ochari, I.A., Freeman, M., Saboori, S., Dreibelbis, R. and Rheingans, R., 2012. An evaluation of the financial management of WASH programs in SWASH-plus primary schools. Nairobi: SWASH+ Kenya.

[6] Freeman, M., Snel, M., Mohaned El-Fatih, Y., Gitahi, S., Khan, F., Wachira, S. and Krukkert, I., 2012. The usage of urinals in Kenyan schools, Waterlines, 31(3).

See:

Deroo, L., Walter, E., and Graham, J., 2015. Monitoring and evaluation of WASH in schools programs: Lessons from implementing organizations. Journal of water, sanitation and hygiene for development, 5(3), pp. 512-520. http://bit.ly/2bFBjEZ.

Increasing access to WASH in schools improves health and performance among learners. School WASH programmes are being scaled-up globally, however little is known about how they are monitored and evaluated. The authors studied 21 organisations implementing WASH in school programmes to assess M&E policies and practices.

Five barriers emerged: (1) logistical challenges; (2) limited staff capacity; (3) limited funding; (4) inadequate management systems; and (5) socio-political barriers. The findings highlight the need to better integrate M&E into government systems that will endure post-implementation. Further, there is a need to expand the data collected and improve the quality of national monitoring systems. This will likely require additional human and financial resources that will translate into better planning and budgeting with the aim of providing an hygienic environment for children to learn and grow.

Flores, Ó., Giné, R., Pérez-Foguet, A. and Jimenez, A., 2013. Post□2015 WASH targets and indicators: a review from a human rights perspective. Barcelona: University Research Institute for Sustainability Science And Technology and Universitat Politècnica de Catalunya and ONGAWA, Engineering for Human Development. http://www.ongawa.org/wp-content/uploads/2013/11/WASH-Human-Rights-post-2015.pdf.

This report analyses the WHO/UNICEF Joint Monitoring Programme (JMP) post□2015 WASH targets and indicators as developed for the SDGs, from a human rights perspective. The focus is on challenges and recommendations for local level implementation of this monitoring proposal.

This research builds on a combination of a literature review and specific local experience from four case studies, namely the district of Kibondo (Tanzania), the districts of Homa Bay and Suba (Kenya), the municipality of Manhiça (Mozambique), and the municipality of San Sebastián de Yalı (Nicaragua).

The report concludes that the JMP post□2015 proposal shows how human development and human rights' approaches can benefit each other mutually to improve international and local monitoring systems.

Shordt, K. and Snel, M., 2006. Indicators for WASH in schools. Delft: IRC. http://www.ircwash.org/sites/default/files/Shordt-2006-Indicators.pdf.

The basic components of WASH in school programmes centre around water, sanitation, hygiene practices, hygiene education and reaching out into the home and community. Of course, WASH programmes differ in different settings. However, every programme should have a minimum set of indicators that are well known and agreed to by different stakeholder groups. These indicators can serve as concrete objectives for planning and monitoring. Examples of key indicators for WASH in schools are shown in tables; and three lists provided may be useful to develop site-specific indicators for WASH in schools.

Schwemlein, S., Cronk, R. and Bartram, J., 2016. Indicators for monitoring water, sanitation, and hygiene: a systematic review of indicator selection methods, International journal of environmental research and public health, 13(3), pp.333-358.

Monitoring WASH is important to track progress, improve accountability, and demonstrate impacts of efforts to improve conditions and services, especially in low- and middle-income countries. Indicator selection methods enable robust monitoring of WASH projects and conditions. However, selection methods are not always used, and there are no commonly-used methods for selecting WASH indicators. To address this gap, the authors conducted a systematic review of indicator selection methods used in WASH-related fields. They present a summary of indicator selection methods for environment, international development, and water. They identified six methodological stages for selecting indicators for WASH: define the purpose and scope; select a conceptual framework; search for candidate indicators; determine selection criteria; score indicators against criteria; and

select a final suite of indicators. This summary of indicator selection methods provides a foundation for the critical assessment of existing methods. It can be used to inform future efforts to construct indicator sets in WASH and related fields.

Keast, G., Sahin, M., Dooley, T., Henderson, M., Meyers, C., Luyendijk, R. and Unalan, T., 2011. WASH in schools monitoring package. New York: UNICEF. http://uni.cf/2bXh8nX.

This package is designed as a resource for WASH and education professionals and practitioners to strengthen national monitoring systems and to improve the quality of monitoring at the project level.

The package consists of three modules:

- The EMIS module: a set of basic monitoring questions on WASH in schools to be incorporated into national Education Monitoring Information Systems (EMISs), usually administered annually.
- The survey module: a more comprehensive set of questions, observations and focus group discussion guidelines for use in national WASH in schools surveys, as well as for sub-national, project level or thematic surveys.
- The children's monitoring module: a teacher's guide and tool set for the monitoring of WASH in schools by students, including observation checklists, survey questions and special monitoring exercises.

UNICEF, 2015. Advancing WASH in schools monitoring. (Working paper). New York: UNICEF. http://uni.cf/1Rg9d1L.

This working paper presents the best data available for the coverage of WASH services in primary schools gathered from 149 countries for the period 2008-2013. It also compares current national WASH in schools monitoring indicators against global guidelines.

By providing this information the publication responds to the 2012 Call to Action, Raising Even More Clean Hands. It also aims to promote and support improved monitoring of WASH in schools so that coverage indicators can be included in the SDGs.

The key messages of the paper are:

- More countries are reporting school water and sanitation coverage data each year.
- Globally, school water and sanitation coverage both increased by 6% between 2008 and 2013.
- HandWASHing facility coverage is rarely reported.
- The quality of WASH in schools coverage data is questionable, including poorly defined and inconsistent indicators.
- Many countries solicit WASH in schools information through their EMIS questionnaires.
- Sanitation is the most comprehensively monitored WASH in schools component; hygiene is the least.
- WASH in schools data captured in EMIS questionnaires is often underutilised.

The paper concludes with recommendations for action for both the national and international levels.

V. RESOURCES

A. Sources of information

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WASH in health care facilities

I. BACKGROUND

In 2015 WHO and UNICEF conducted the first worldwide survey of WASH in health care facilities (HCFs). Data was collected on WASH conditions in 66,101 HCFs across 54 low- and middle-income countries. The report found that 38% of HCFs do not have improved water sources, 19% do not have improved sanitation, and 35% do not have water and soap for handWASHing.[7]

Access to WASH HCFs decreases the risk of visit-related or preventable infections for patients, health care staff and the larger community alike. HCFs with WASH programming are characterised by higher quality of treatment and care, efficiency, increased uptake of health services by the community, improvements in health care staff morale and the dissemination of WASH knowledge to the surrounding population. The impact of WASH services in HCFs is so great that it is a requisite of numerous other public health development goals, including universal health coverage (UHC) and the global reduction in maternal and neonatal deaths.

In the global context, awareness about this largely overlooked WASH setting has increased over the past decade, culminating in WHO and UNICEF presenting a global action plan in March 2016.[8] Together, the WASH sector has set a target for attaining universal basic coverage of WASH in HCFs by the year 2030.

II. CHALLENGES

- Any significant change in this sector will require the collaboration of public health leaders, WASH professionals, and government officials. "Improving services will require a number of elements starting with leadership from the health sector, strong technical inputs from the WASH sector and political commitment from governments dedicated to better health for all".[9]
- There is discord in WASH among HCF practitioners concerning regional disparity within countries. Major actors will need to come to a decision on whether WASH standards should be the same for a rural clinic and an urban hospital. Should rural HCFs just be held to lower WASH standards than urban ones? This also raises the issue of appropriate levels for WASH services for each type of HCF (primary, secondary, and tertiary).[10]
- When it comes down to it, after advocacy, the real work will be getting all HCFs to provide the same level of WASH service. To achieve this each country needs to do a baseline assessment of public and private HCFs.
- Investment in improved infrastructure will be required. There are many inexpensive low technology solutions that may help to reduce infection rates, but planning for both the immediate future and the long term will be vital to achieve significant national improvements.

III. USEFUL WEBSITES

- http://www.WASHinhcf.org/home/
- http://www.who.int/water_sanitation_health/healthcare_waste/en/
- http://www.wateraid.org/policy-practice-and-advocacy/healthy-start/

[7] WHO and UNICEF, 2015. Water, sanitation and hygiene in health care facilities - Status in low-and middle income countries and way forward. Geneva: WHO and UNICEF.

[8] See: http://www.WASHinhcf.org/action-plan/ and WHO and UNICEF, 2015. Water, sanitation and hygiene in health care facilities – urgent needs and actions. (Meeting Report). Geneva: WHO and UNICEF.

[9] WHO and UNICEF, 2015. Water, sanitation and hygiene in health care facilities - Status in low-and middle income countries and way forward. Geneva: WHO and UNICEF, p. v.

[10] For argument, see: Cronk, R., Slaymaker, T. and Bartram, J., 2015. Monitoring drinking water, sanitation, and hygiene in non-household settings: Priorities for policy and practice. International journal of hygiene and environmental health, 218(8), pp. 694-703.

IV. BUILDING BLOCKS FOR WASH IN HCFS

A. Policy environment

The 2014 UN-Water Global Analysis and Assessment of Sanitation and Drinking-water (GLAAS) report looked at national policy on WASH in HCFs in 86 countries. As cited in the WHO report over half (52%) of the 94 countries responding to this question in GLAAS do not have targets for hygiene in facilities and over a third of countries do not have targets for sanitation (35%) or water (44%). These figures indicate that policy development and planning is inadequate for WASH in HCFs.[12] Only a quarter of respondents reported having a fully implemented plan or policy for drinking-water and sanitation in HCFs. "In countries for which data on provision of water and national plans were available, countries with national plans had a greater proportion of facilities with water services, suggesting national policies are an important element of improving services".[13]

At the country level, establishing a national plan with clearly stated targets is the best way to improve WASH in HCFs.[14] This will require the coordination between multiple government ministries. Stakeholders outside of the government are essential for advocacy at every level of participation.

See:

Johnston, R., 2015. WASH in health care facilities - Standard module for outpatient areas in all health care facilities. Geneva: WHO.

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B. Stakeholders

- National government
  - Establish national plan and targets
  - Secure funding
- Local government
  - Secure funding and addition human resources
- Doctors, nurses, and health care facility staff
  - There should be regularly trained individuals for ensuring that water and sanitation facilities are properly operated and maintained and that essential services such as safe disposal of health care waste are available
  - Commitment to ongoing training

[11] WHO and UNICEF, 2015. Water, sanitation and hygiene in health care facilities - Status in low-and middle income countries and way forward. Geneva: WHO and UNICEF.

[12] WHO and UNICEF, 2015. WHO/UNICEF Report: Water, Sanitation and Hygiene in Health Care Facilities: status in low-and middle-income countries and way forward: Question and Answer. Geneva: WHO and UNICEF.

[13] WHO and UNICEF, 2015. Water, sanitation and hygiene in health care facilities - Status in low-and middle income countries and way forward. Geneva: WHO and UNICEF. p. iv.

[14] "The existence and enforcement of national targets and national plans on WASH in health care facilities is one method to achieve a higher proportion of facilities with adequate WASH services. In analysing water targets, policies and coverage in a sub-set of 18 Sub Saharan countries in those countries where there is a water target and a national plan costed and regularly reviewed (Burkina Faso, Senegal and Zimbabwe) water coverage in health facilities is high (87% or greater). This is far above the African average of 58%. This suggests that the existence of national targets and national plans on WASH in health care facilities may be associated with a higher proportion of facilities served with water. Conversely, countries with no national plan have the lowest rates of facilities with water access". Page 3 from: WHO and UNICEF, 2015. WHO/UNICEF Report: Water, Sanitation and Hygiene in Health Care Facilities: status in low-and middle-income countries and way forward: Question and Answer. Geneva: WHO and UNICEF.

- Civil society and WASH practitioners
  - Training on WASH should be closely developed and delivered in tandem with training on infection prevention and control
  - Public health and WASH working together
- Community health committee representatives
  - Not much in literature, but would be a good additional set of actors to work as intermediaries between health care providers/staff and communities, spreading benefits and knowledge of WASH in HCFs services to the larger population
- International non-governmental organisations (INGOs)
  - WHO and UNICEF's global initiative
  - Advocacy, especially for acceptance of global monitoring indicators and targets for WASH in HCFs
  - Further funding streams

See:

Bartram, J., Cronk, R., Montgomery, M., Gordon, B., Neira, M., Kelley, E. and Velleman, Y., 2015. Lack of toilets and safe water in health-care facilities. Bulletin of the World Health Organization, 93(4), pp. 210-210.

Waterkeyn, J. and Cairncross, S., 2005. Creating demand for sanitation and hygiene through Community Health Clubs: A cost-effective intervention in two districts in Zimbabwe. Social science and medicine, 61(9), pp. 1958-1970.

WHO and UNICEF, 2015. Water, sanitation and hygiene in health care facilities - Status in low-and middle income countries and way forward. Geneva: WHO and UNICEF.

C. Technical choices

There are various technical choices to be considered given the enormous institutional and financial challenges to improve HCF. Ideally, the technical choices should begin with a Facilities Risk Assessment. From there, the project design becomes a series of hardware and software choices.

Hardware

The WASH in HCFs standards cover any combination of water quality, water quantity, water facilities, access to water, excreta disposal, wastewater treatment and disposal, health care waste disposal and other environmental issues.[15] An initial assessment of the HCF infrastructure will help with prioritising improvements. When prioritising, HCFs should develop and reach essential safety standards as a primary goal. This may mean that construction will happen in phases. If this is the case, it is important to factor in lengthy installation times when choosing appropriate WASH technologies.

See:

Bennett, S.D., Otieno, R., Ayers, T.L., Odhiambo, A., Faith, S.H. and Quick, R., 2015. Acceptability and Use of Portable Drinking Water and Hand WASHing Stations in Health Care Facilities and Their Impact on Patient Hygiene Practices, Western Kenya. PLoS One, 10(5).

Government of Ethiopia and UNICEF, 2013. Design and Construction Manual for Water Supply and Sanitary Facilities in Health Institutions. Addis Ababa: Ministry of Health, Ministry of Water and Energy, and UNICEF.

Software

Software must accompany hardware. In this setting, software consist of training, skills development, behaviour change programming, and interventions such as training WASH infrastructure operators, educating staff and patients on the need for and benefits of proper use of WASH services, and sensitising health care providers to

[15] Most existing policy does not include health care waste as a standard for WASH in HCFs because of insufficient data. Hopefully this important aspect of WASH in HCFs will be introduced once the more immediate standards, like access to continuous water supply and closely located sanitation facilities, are met. To learn more about health care waste see http://www.healthcare-waste.org/.

motivate patients and their relatives to continue the practice of handWASHing even after discharge from hospitals. In order to reap the benefits of hardware improvements, long-term management and planning is very important.

See:

Peal, A., Evans, B. and van der Voorden, C., 2010. Hygiene and sanitation software. Geneva: WSSCC.

USAID, 2009. Technical Guide to Set up WASH-Friendly Community Health Centers. WASHington DC: USAID

WHO and Government of Liberia, 2013. Report on training of trainers on WASH in health care facilities: WASH package and WASHFIT (Final Report).Monrovia: WHO and Ministry of Health of Liberia.

D. Financial options

Funding for WASH programming in HCFs is usually financed by the national government as part of the national health care plan; however, with the growing advocacy around improving WASH services in this setting, more international donors with public health missions are awarding grants for this type of programming. Few resources at the moment are available concerning the financing of WASH programming in HCFs. More research needs to be done to identify funding sources and financing mechanisms. This work will be especially useful for national policy makers.

See:

UN-Water GLAAS, 2014. Investing in water and sanitation: increasing access, reducing inequalities. UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water, GLAAS 2014 Report.Geneva: WHO.

UNICEF, WHO and WaterAid,2015. Water, sanitation and hygiene in health care facilities in Asia and the Pacific: A necessary step to achieving universal health coverage and improving health outcomes.New York: UNICEF, WHO and WaterAid.

E. Monitoring and evaluation

In overseeing the progress of the national plan, monitoring data must be collected at the global, national and facility levels. This data can be analysed so as to evaluate the success and identify the challenges of following the established national plan. Public health and WASH professionals are currently working together to develop, test and revise core and expanded indicators to track WASH in HCFs. The benefit of working within the health care system is that there are already well-established mechanisms to collect facility related data. "The three most common health care facility surveys are the Service Availability and Readiness Assessment (SARA), the Service Delivery Indicator survey (SDI) and the Service Provision Assessment (SPA). These surveys have closely aligned methods and collect nationally representative data for a given country. They are designed to be conducted periodically and sample from a master list of all public and private health care facilities".[16] Simple adjustments to these existing national surveys would give us standardised data on WASH in HCFs.

Table 5
Indicators for WaSH in non-household settings recommended by the WHO/UNICEF Joint Monitoring Programme (from WHO/UNICEF, 2014).

Indicators	Schools	Health care facilities (HCF)
Water	• Percentage of primary and secondary schools with an improved source on or near premises and water points accessible to all users during school hours	• Percentage of health facilities with an improved source on premises and water points accessible to all users at all times
Sanitation	• Percentage of primary and secondary schools with basic separated sanitation facilities for males and females on or near premises (at least one toilet for every 25 girls, at least one toilet for female school staff, a minimum of one toilet and one urinal for every 50 boys and at least one toilet for male school staff) • Percentage of primary and secondary schools with basic separated sanitation facilities for females that provide privacy: soap, water and space for washing hands, private parts and clothes; and places for changing and disposing of materials used for managing menstruation	• Percentage of health facilities with basic separated sanitation facilities for males and females on or near premises (at least one toilet for every 20 users at inpatient centers, at least four toilets – one each for staff, female, male and child patients – at outpatient centers) • Percentage of health facilities with basic separated sanitation facilities for females that provide privacy: soap, water and space for washing hands, private parts and clothes; and places for changing and disposing of materials used for managing menstruation
Hygiene	• Percentage of primary and secondary schools with a handwashing facility with soap and water in or near sanitation facilities	• Percentage of health facilities with a handwashing facility with soap and water in or near sanitation facilities, food preparation areas and patient care areas

Source: Cronk, et al., 2015.

[16] WHO and UNICEF 2015, Water, sanitation and hygiene in health care facilities - Status in low-and middle income countries and way forward. Geneva: WHO and UNICEF, p. 4.

See:

http://www.WASHinhcf.org/monitoring/activities/.

MNS, 2016. Environmental hygienic requirements for health facilities.Mongolia: MNS.

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Challenge, F.G.P.S., 2009. WHO Guidelines on Hand Hygiene in Health Care. Geneva: WHO.

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Environment and Public Health Organization, 2015. Enhancing Health Sector Crisis Preparedness in The Event of High Intensity Earthquake in the Kathmandu Valley Prepared by Environment and Public Health Organization Emergency WASH Preparedness Training Module for Health Facilities. Geneva: WHO.

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Uganda

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Vietnam

BORDA, 2011. Decentralized Wastewater Treatment Systems for a Prison and 2 Hospitals: Three BORDA-Vietnam DEWATS Projects in Vietnam.Produced for UNEP.

Zanzibar, Tanzania

Faulkner, S., Chitty, A., Ali, Said M., Ali, Siti M., Ali A.O., Ame, S.M., Cavill, S., Dahoma, M., Gon, G., Haji, H.S., Kabole, I., Kahabuka, C., Mkasha, M.H. Morrison, E., Nassor, Z.M. Omari, N., Rashid, S.H., Said, R.M., Mamboya, S., Tato, A., Towriss, C., Velleman, Y., Woodd, S., Graham, W., 2015. Briefing Paper: Improving Maternal Health in Zanzibar through Improved WASH.London: SHARE and LSHTM.

WASH in the workplace

I. BACKGROUND

Besides being a basic human right, access to WASH services in the workplace makes for healthier employees and customers. Improvements to access to WASH are good for businesses, their long-term livelihoods and the overall economy. There is a compelling and clear economic case for businesses to demonstrate leadership by addressing this situation. For every US$1 invested in water and sanitation, US$4.30 is generated in economic returns through increased productivity.[17] Tangible benefits for corporations looking to invest in WASH solutions include access to new marketplaces, mitigation of risk, increased brand recognition, and improved employee morale. Ensuring safe WASH in the workplace also contributes to the achievement of international recognised objectives such as the universal realisation of the Human Rights to Water and Sanitation (HRWS).[18]

II. CHALLENGES

- The policy currently does not exist, so any action toward improving WASH in the workplace is voluntary.
- The workplace is a very diverse setting, so creating WASH standards or guidelines is a complex task.

III. USEFUL WEBSITES

- http://ceowatermandate.org
- http://wbcsdpublications.org/project/water/
- https://wateractionhub.org/WASH4work/
- http://pacinst.org/issues/corporate-water-stewardship/corporate-water-disclosure/

IV. BUILDING BLOCKS FOR WASH IN THE WORKPLACE

A. Policy environment

There has been a lot of work done in the WASH sector to facilitate public private partnerships (PPPs) in over the last decade. A key aspect of the policy environment regarding WASH in the workplace is creating an environment that nurtures WASH PPPs. The World Business Council for Sustainable Development (WBCSD),[19] is one of the key organisations that has focused on the workplace in various contexts including WASH. It has bypassed this problematic area by creating the non-binding pledge, which, so far, has raised its profile among some international and regional corporations. Nevertheless, more work is required.

There is still no compilation of national policies on WASH in the workplace. This will be an important piece in the campaign for WASH in the workplace policy because policymakers will be able to use it when defining stakeholder responsibilities. As it stands now the roles of government, business, and employee in WASH in the workplace are unclear.

See:

CEO Mandate, 2009. From Footprint to Public Policy – The business future for addressing water issues. (Discussion Paper). Oakland: Pacific Institute.

Ha, M-L., Morrison, J., Davis, R., Holzman, B. and Lipsett, L., 2015. Guidance for companies on respecting the human rights to water and sanitation: bringing a human rights lens to corporate water stewardship. Oakland: Pacific Institute CEO Water Mandate Secretariat.

[17] The WBCSD pledge for access to safe water, sanitation and hygiene at the workplace, WBCSD 2016.
[18] The WBCSD pledge for access to safe water, sanitation and hygiene at the workplace, WBCSD, 2016
[19] http://www.wbcsd.org/WASHatworkplace.aspx.

B. Stakeholders

- INGOs – bringing together the public and private sectors to address the WASH challenge
  - WBCSD
  - CEO Water Mandate (part of UN Global Compact)
  - International Labor Organization (ILO)
    - ILO, 2009. Work Improvement in Small Enterprises (WISE). Action Manual. Geneva: ILO.
  - WASHfunders.org
  - WASH Grantmakers Network
  - Global Water Challenge
  - Water-related trade associations
- Academic/research institutions
  - Pacific Institute
- Local government
- National government
- Civil society
  - Especially business, human rights, economic development, and water related groupings
- WASH professionals
- Businesses and corporations
  - Strategic philanthropy, corporate social responsibility, cause-related marketing, and employee motivation campaigns are among the variety of channels available to corporations for supporting WASH[20]
- Business boards
- Employee representative committees

See:

CEO Water Mandate, 2015. Business contribution to the implementation of the Sustainable Development Goals related to water. In: 2015 UN-Water Annual International Zaragoza Conference. Water and Sustainable Development: From Vision to Action. Zaragoza, Spain,15-17 January 2015.Geneva, UN Water.

Dietvorst, C., 2015. A clean place to go at work. Delft: IRC.

Ha, M.L., 2015. The business case for improving access to water, sanitation and hygiene. Oakland: Pacific Institute.

C. Technical choices

Hardware and software

There is no material on hardware for WASH in the workplace. In terms of software choices, the only key document is the guiding principles of the WBCSD that aims to support companies in the implementation of the Pledge and provides the following:

- A process for companies to follow to provide access to safe WASH for employees (aiming to be integrated in existing water stewardship, health and safety, and/or other internal processes).
- Agreed points of reference on what represents leading practice in providing access to safe WASH in different workplaces.

[20] Mann, B., 2014. Navigating the Water, Sanitation and Hygiene Sector: A Guide for Corporate Grantmakers. WASH Advocates

- Suggestions for educational and behavioural change activities necessary to ensure the sustainability of an adequate WASH provision model.
- A tool to facilitate self-assessment by businesses against the points of reference.
- Examples of the potential economic benefits of improving access to safe WASH for employees".[21]

By signing the WBCSD WASH Pledge, companies commit to providing access to safe water, sanitation and hygiene at an appropriate level to all employees in all company locations. While the inclusion of software, mainly related to employee engagement, is strongly encouraged in this setting, there are no guides or tools outlining possible software technical choices for WASH in the workplace.

See:

2030 Water Resources Group, 2015. Water scarcity solutions: A catalogue of best practice solutions to addressing the growing water scarcity challenge.WASHington: World Bank.

WBCSD, 2013. Water, sanitation and hygiene implementation at the workplace - Pledge and guiding principles. Geneva: WBCSD.

D. Financial options

Many businesses have operations, employees, contractors and customers in countries lacking access to safe WASH. Their economic, social and environmental impacts can cause illnesses or fatalities, impair productivity, and restrict markets for some products and services. There is a compelling and clear economic case for businesses to demonstrate leadership by addressing this issue as noted by WBCSD.

See:

Mann, B., 2014. Navigating the Water, Sanitation, and Hygiene (WASH) Sector: A Guide for Corporate Grantmakers, WASH Advocates.

Mason, N., Matoso, M. and Smith, W., 2015. Private Sector and water supply, sanitation and hygiene (Report). London: ODI.

E. Monitoring and evaluation

As cited by Cronk, one of the leading experts in WASH away from the home, "Opportunities are available to include WASH indicators within existing non-household monitoring initiatives would reduce the need for additional data collection instruments, monitoring costs, and human resources. For example, World Bank Enterprise surveys could assess the status of WASH conditions in workplaces".[22] [23] As with all surveys, there are limitations to using the Enterprise Survey as a means of monitoring WASH in the workplace, but it is the best current option available in terms of access and cost.

See:

CDP, 2015. Water responder pack. London: CDP.

WBCSD, 2014. WASH in the Workplace Self-Assessment Tool. Geneva: WBCSD.

[21] WBCSD, 2013, Pledge and Guiding Principles: Water, Sanitation and Hygiene Implementation at the Workplace.

[22] Cronk, R., Slaymaker, T. and Bartram, J., 2015. Monitoring drinking water, sanitation, and hygiene in non-household settings: Priorities for policy and practice. International journal of hygiene and environmental health, 218(8), p. 701.

[23] For context, the World Bank describes an Enterprise Survey as: "a firm-level survey of a representative sample of an economy's private sector". Data is available for 130,000 companies in 135 countries on business environment issues like access to finance, corruption, infrastructure, crime, competition, and performance measures. More information is available at http://www.enterprisesurveys.org/.

V. RESOURCES

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Mukantwali, C., 2014. Compliance of small and medium scale pineapple processing enterprises with national and international standards in Rwanda.Kigali: Rwanda Agriculture Board.

Rajaraman, D., Travasso, S.M. and Heymann, S.J., 2013. A qualitative study of access to sanitation amongst low-income working women in Bangalore, India. Journal of Water Sanitation and Hygiene for Development, 3(3), pp. 432-440.

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WWAP, 2016. The United Nations World Water Development Report 2016: Water and Jobs. Paris: UNESCO.

Zungu, L.I., 2012. Occupational health and safety challenges reported by women in selected South African gold and platinum mines.Durban:Occupational Health Southern Africa.

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Ha, M-L., Morrison, J., Davis, R., Holzman, B. and Lipsett, L., 2015. Guidance for companies on respecting the human rights to water and sanitation: bringing a human rights lens to corporate water stewardship. Oakland: Pacific Institute CEO Water Mandate Secretariat.

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WBCSD, 2002. Water for the Poor. Geneva: WBCSD.

WBCSD, 2011. Global Water Tool. Geneva: WBCSD.

WBCSD, 2013. Water, sanitation and hygiene implementation at the workplace - Pledge and guiding principles. Geneva: WBCSD.

WBCSD, 2014. WASH in the Workplace Self-Assessment Tool. Geneva, WBCSD.

C. Further topics

Women and MHM

Amiya, R., Gupta, S., Habib, N. and Whitesides, E., 2010. WASH and Women: A situation analysis of living and working conditions in the Tea Gardens of Dibrugarh District, Assam.India: UNICEF.

D. Case studies

Ahmed, S., 2012. Where no one has worked before: Innovations behind WaterAid's WASH work in Bangladesh tea garden communities. Bangladesh: WaterAid.

Attabra-Yartey, B., 2012. Assessing the impact of occupational health and safety needs on the lives of construction workers: A case study at Abasa General Enterprise Limited-Kumasi (Doctoral dissertation). Kumasi:Kwame Nkrumah University of Science and Technology.

CEO Water Mandate, 2015. Pathways to Achieving Sustainable Development Goals Related to Water and Sanitation: An Experience from India (2015). CEO Water Mandate and Unilever.

Labhasetwar, P., 2015. Wastewater Treatment and Reuse at the Ordnance Factory Ambajhari, Nagpur, Maharashtra, India (NaWaTech) - Case study of sustainable sanitation projects.Eschborn: SuSanA.

Lamb, C., 2015. Case study: CDP corporate stewardship. From: 2015 UN-Water Annual International Zaragoza Conference. Water and Sustainable Development: From Vision to Action. Zaragoza, Spain 15-17 January 2015. Geneva: UN Water.

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WASH in orphanages

I. BACKGROUND

Today there are more children than ever before becoming orphans due to increased world conflicts and on-going epidemics such as HIV/AIDS especially in less developed countries (LDCs). As a result more children are living in overcrowded institutions with failing infrastructure. Orphans and vulnerable children (OVCs) are a social group that is currently not represented in the WASH sector.

Many OVCs end up in orphanages. Regardless of whether these are state or private institutions, they should provide children with the WASH facilities and services as part of HRWS under the United Nations (UN) declaration.

II. CHALLENGES

- WASH facilities and services are minimal or non-existent in terms of being child friendly and including behaviour education in orphanages.
- There is disagreement among WASH professionals working with OVCs whether or not orphanages should be distinguished from school settings as the hardware and software approaches are similar for both.

III. USEFUL WEBSITES

- https://thewaterproject.org/
- http://www.proving.it/ and www.splash.org

IV. BUILDING BLOCKS FOR WASH IN ORPHANAGES

A. Policy environment

The lack of information on this subject clearly hints at how actors still need to take fundamental steps towards improving international and national policy environment on WASH in orphanages. More information on this topic and dedicated actors willing to champion this WASH setting is critical. It is surprising that there is not more information available on WASH policy considering how orphanages are popular with international organisations. NGO websites working in this setting often feature blogs or articles about their specific WASH projects, but they consist of photos of children and amusing anecdotes rather than structured case studies including hard data and lessons learned.

Similar to the global policy environment, there is extremely little information about how governments manage orphanages, let alone WASH infrastructure and services in orphanages at the national level. Since children are involved, UNICEF or the UN are best-placed actors for global leadership/coordination. Of the many countries with clear policy concerning orphanages and the rights of orphans, only Colombia had established standard daily water allotments for orphans and included these institutions in the country's WASH goals.[24]

See:

Government of Kenya, 2006. National Policy on Orphans and Vulnerable Children. Nairobi: Office of the Vice-President and Ministry of Home Affairs.

Sabates-Wheeler, R. and Pelham, L., 2006. Social Protection: How Important are the National Plans of Action for Orphans and Vulnerable Children? Brighton: Institute of Development Studies and UNICEF.

[24] Ministerio de Vivienda, Ciudad y Territorio Viceministerio de Agua y Saneamiento Básico, 2014. Reglamento Técnico del Sector de Agua Potable y Saneamiento Básico [recurso electrónico]: TÍTULO B. Sistemas de acueducto. (2 ed.) / Viceministerio de Agua y Saneamiento Básico, ed, 2010. Universidad de los Andes. Departamento de Ingeniería Civil y Ambiental. Centro de Investigaciones en Acueductos y Alcantarillados, CIACUA. Bogotá: Ministerio de Vivienda, Ciudad y Territorio.

B. Stakeholders

- National government
- Local government
- Orphanage management and staff
- Orphans
- Civil society
- International civil society
- Religious organisations

See:

Goodwin, R., 2010. Good Practices in Water, Sanitation and Human Rights Stakeholders' responses to the questionnaire October 2010. Geneva: OHCHR.

Nalivata, P. and Matiya, G., 2008. Reaching out to the excluded: Exclusion study on water, sanitation and hygiene delivery in Malawi.London: WaterAid.

C. Technical choices

Hardware

International organisations such as Rotary often sponsor technical projects like digging boreholes or installing water treatment systems. Typically, orphanages are not given the choice of what they will receive, so most hardware technical choices are not necessarily adapted to the orphanage's unique circumstances.

See:

BORDA, 2012. Decentralized Wastewater Treatment Systems for the Sovann Komar Orphanage: A BORDA-Cambodia DEWATS Project in Cambodia.Produced for UNEP.

Pinto, S., Wong, Y., Fennesy, K., Tang, Y. and Compare, M., 2016. Design and Commissioning of a Community Scale Solar Powered Membrane-Based Water Purification System in Haiti. Journal of Humanitarian Engineering, 4(1), pp. 18-25.

Software

It is interesting to note that there is no software intended for use in orphanages. Instead, orphans are often grouped with WASH in schools programming. While WASH professionals hardly want to single out the orphan population, their unique circumstances and institutional setting certainly merit some individual attention. There are many child-focused WASH software tools that could be modified to focus on the WASH needs of orphans and their orphanage settings.

See:

Adenya, E. A., and Shaw, R., 2009. Integrated water and sanitation life skills approaches: the Zambian case study. In: 34th WEDC International Conference, Water, sanitation and hygiene: sustainable development and multisectoral approaches. Addis Ababa, Ethiopia 18-22 May 2009 pp. 18-22. Loughborough: WEDC.

D. Financial options

Overcrowding, failing infrastructure and insufficient funding are endemic characteristics to orphanages worldwide. Global private civil society organisations like the Rotary Club and religious groups have a track record of funding WASH projects in orphanages in less developed countries (LDCs). Otherwise, the responsibility for providing improvements to WASH facilities and services is the responsibility of the owner of the orphanage.[25] A growing area of research among smaller-scaled WASH interventions in this setting shows financially sustainable options. For example, WASH technologies, like low-cost composting toilets and water kiosks, are becoming popular and successful in this setting.

See:

Wong, Y., Pinto, S., Tang, Y. and Compere, M., 2014. Community development through a sustainable micro-business selling clean water pp. 133-139. In: Global Humanitarian Technology Conference. San Jose, USA, 10-12 October, 2014. New York: IEEE.

E. Monitoring and evaluation

There has been no international accordance on specific standards for WASH in orphanages; however, most organisations working in this field use UN human rights figures or refugee standards to evaluate projects. Similarly, there has not been an agreement among WASH practitioners on the most effective indicators. They tend to use monitoring indicators used in WASH in schools.

Unlike WASH in schools and HCFs, the collection of data for WASH in orphanages cannot be easily integrated into existing national surveys or monitoring systems. There is no easy evaluation platform already in use to which these WASH in orphanages indicators can be added. This is complicated by the fact that orphanages can be owned by the state, non-profit organisations, religious or other institutions. Work needs to be done by stakeholders to establish official WASH in orphanages indicators and methods for collecting this critical data.

See:

Muruka, C. and Muruka, A., 2007. Guidelines for Environmental Health Management in Children's Homes in Sub-Sahara Africa. International Journal of Environmental Research and Public Health, 4(4), pp. 319–331.

V. RESOURCES

A. Sources of Information

Duedu, K.O., Peprah, E., Anim-Baidoo, I. and Ayeh-Kumi, P.F., 2015. Prevalence of intestinal parasites and association with malnutrition at a Ghanaian orphanage. Human Parasitic Diseases, 7, p. 5.

Goodman, M., Elliott, A., Gitari, S., Keiser, P.H. and Raimer-Goodman, L.A., 2016. Improved water and household water purification practices among orphans and vulnerable children in a multi-sectoral empowerment program in Eastern province, Kenya. Journal of Water and Health. 14(4), pp.

Huq, A.O., Chowdhury, T., Roy, P., Haque, K.F. and Hossain, M.B., 2013. Health Care Facilities and Nutritional Status of Orphans Residing in Selected Orphanage in Capital City of Bangladesh. Int J Curr Microbiol Appl Sci, 2(10), pp. 118-25.

Peshel, P.A., 2012. Community and health assessment: Water utilization and hygiene practices - A study of the Rhema Grace Orphanage and Ombe village, Cameroon (Master's Dissertation). Ann Arbor: ProQuest Dissertations Publishing.

Video: http://hassanfoundationusa.org/project/orphans-water-dr-khan-appna/.

[25] Historically, orphanages are run by the state, religious groupings or charities.

B. Toolkits and guidebooks

Greenblott, K. and Nordin, K., 2012. Permaculture Design for Orphans and Vulnerable Children Programming: Low-Cost, Sustainable Solutions for Food and Nutrition Insecure Communities. Arlington: USAID (AIDS Support and Technical Assistance Resources, AIDSTAR-One, Task Order 1).

C. Further topics

HIV

Annan, K., 2010. How to integrate water, sanitation and hygiene into HIV programmes. Geneva: WHO.

MHM

El-Mowafy, R.I., Moussa, M.M. and El-Ezaby, H.H., 2014. Effect of health education program on knowledge and practices about menstrual hygiene among adolescent girls at orphanage home. IOSR J Nurs Health Sci, 3, (6), pp. 48-55.

E. Case studies

BORDA (2012). Decentralized Wastewater Treatment Systems for the Sovann Komar Orphanage: A BORDA-Cambodia DEWATS Project in Cambodia.Produced for UNEP.

Ingle, R., 2008. New toilets for orphanage: A feasibility study of sanitation technologies for an orphanage in rural Orissa, India. Stuttgart: University of Stuttgart.

Pinto, S. Wong, Y., Fennesy, K., Tang, Y. and Compere, M., 2016. Design and Commissioning of a Community Scale Solar Powered Membrane-Based Water Purification System in Haiti. Journal of Humanitarian Engineering, 4(1), p. 18-25.

WaterAid, 2008. Beyond Construction Use By All: A collection of case studies from sanitation and hygiene promotion practitioners in South Asia, pp. 260. Delft: IRC and WaterAid.

WASH in prisons

I. BACKGROUND

Prisons all over the world experience overcrowding and failing infrastructure as governments often try to cut costs by squeezing more people into established facilities. Prison populations are growing, and infrastructure and services are not expanding at the same rates. Already minimal water, sanitation and hygiene conditions in prison quickly deteriorate, along with the health of the detainees.

As cited by the International Committee of the Red Cross (ICRC) which has one of the most comprehensive overviews on WASH in prisons,[26] "This [inadequacy of WASH services and facilities in prisons] may be the result of any number of factors, including inadequate planning and design; inadequate or poorly maintained infrastructure; large numbers of detainees and increases in the number of detainees; the high cost of delivering a sufficient supply, particularly during the dry season in hot climates; interference with the water supply; lack of a maintenance budget; and/or payment of fees to local authorities".[27]

Clearly access to water and sanitation is a basic human right. No one, no matter their current conditions or prior actions, should be forced to live in conditions where these services are not available. Under no circumstances can limiting access to water and sanitation be used as punishment.[28]

II. CHALLENGES

- Different prison settings that comprise of two distinct zones: institutional (prisoners, visitors and staff on duty) and residential areas for prison officers and their families. Each zone has different WASH standards to meet.[29]
- Lack of correct hygiene behaviour practices requiring sustainable behaviour change.
- Safe disposal and treatment of human waste given the confined environment.

III. USEFUL WEBSITES

- https://www.icrc.org/en/what-we-do/visiting-detainees
- http://www.prisonstudies.org/
- http://www.africanprisons.org/

IV. BUILDING BLOCKS FOR WASH IN PRISONS

A. Policy environment

While guidebooks on WASH-related prison construction and management are readily available for practitioners, details of their lessons have not been compiled and analysed. This WASH setting lacks a summary document of past and current programmes. Despite the existence of numerous individual case studies, there is a lack of a fully comprehensive global evaluation of WASH in prisons, with corresponding national policies. There are currently, for example, only a few documents from national governments summarising the state of WASH in their nation's prisons and setting out clear goals to improve the situation.[30]

[26] Nembrini, P., 2013. Water, Sanitation, Hygiene, and Habitat in Prisons. Geneva: ICRC.
[27] Nembrini, P., 2013. Water, Sanitation, Hygiene, and Habitat in Prisons. Geneva: ICRC.
[28] de Albuquerque, C, 2014. Realizing the human rights to water and sanitation: a handbook. 7. Lisbon: UN.
[29] Ndemere, B., 2015. Water, sanitation and hygiene are crucial in prison settings. The Hague: IRC.
[30] For an example, see: Ministerio de Vivienda, Ciudad y Territorio Viceministerio de Agua y Saneamiento Básico, 2014. Reglamento Técnico del Sector de Agua Potable y Saneamiento Básico [recurso electrónico]: TÍTULO B. Sistemas de acueducto. (2 ed.) / Viceministerio de Agua y Saneamiento Básico, ed, 2010. Universidad de los Andes. Departamento de Ingeniería Civil y Ambiental. Centro de Investigaciones en Acueductos y Alcantarillados, CIACUA. Bogotá: Ministerio de Vivienda, Ciudad y Territorio.

There is a lot of material published on improving overall prison policy published by World Prison Brief (WPB).[31] The ICRC has done a considerable amount of work linking WASH in prisons to basic human rights issues like HRWS, health, and UN standards for imprisonment. It seems that the issue is not so much about changing the policy environment as it is about advocating for incarcerated individuals.

There are many ways that WASH targets can be worked into national policy and WASH plans. They can be addressed directly in the national WASH plan of action or by the government division in charge of prison management. One of the best ways to inform policy regarding WASH in prisons would be to perform a global survey. This endeavour may be difficult considering that this setting has less established lines of communication and recognised partnerships. The ICRC would be the best leader organisation, but will need further political and financial support from key international organisations.

See:

Amnesty International, 2012. Chad: 'We are all dying here': human rights violations in prison. London: Amnesty International LTD.

Government of Ethiopia, 2006. National Hygiene and "On-Site" Sanitation Protocol: To enable universal coverage of community-led improved hygiene and improved 'on-site' sanitation in Ethiopia. Addis Ababa: Ministry of Health.

Møller, L., Gatherer, A., Jürgens, R., Stöver, H. and Nikogosian, H., 2007. Health in prisons: a WHO guide to the essentials in prison health. Copenhagen: WHO Regional Office Europe.

B. Stakeholders

- National government
  - Ministry in charge of prison management
  - Ministry of health
- Local government
- Prison management
- Civil society
  - WASH/health related INGOs
    - ICRC (Leader)
    - Agency for Technical Cooperation and Development (ACTED)
    - World Vision
    - WaterAid
    - Pan American Health Organization (PAHO)
    - UNICEF
- Prison/human rights specialty
  - Amnesty International
  - WPB
  - African Prisons Project[32]
- Prisoners/inmates
- Prison staff and families
- Prisoner WASH committees

[31] See: http://www.prisonstudies.org/.
[32] See: http://www.africanprisons.org/.

See:

Amnesty International, 2012. Prisoners are bottom of the pile: The human rights of inmates in Ghana. London: Amnesty International Ltd.

de Albuquerque, C, 2014. Realizing the human rights to water and sanitation: a handbook. 7. Lisbon: UN.

ICRC, 2013. ICRC Annual Report 2013: Haiti. Geneva: ICRC.

C. Technical choices

Hardware

For the most part, major hardware choices will require engineers to retroactively expand existing water and sanitation networks within the confines of the established prison complex. As cited in the ICRC manual, "other factors must be considered when determining the appropriateness of specifications. These factors include the period during which the equipment or facility is accessible to a given number of detainees, the climate and the adequacy of ventilation".[33] When planning the construction of future prisons, engineers would be wise to design easily expandable WASH facilities or plan for multiple phases of construction to accommodate the increase in forecasted inmates.

The following is an overview from ICRC on meeting WASH in prison specifications taken from Nembrini on hardware issues[34]

WATER

Infrastructure:

- Number of taps: 1–2 taps per 100 detainees and conveniently located. (This is covered in detail in the ICRC Handbook).[35]
- Minimum rate of flow: 3–5 litres per minute.

Supply (minimum amounts of water):

- 10–15 litres per day (to cover all needs).
- 3–5 litres per person per day for survival (hot or cold environment).
- 1 litre per person per day for handWASHing after using toilets.

Water storage:

- Total minimum storage capacity: consumption for one day, including kitchen and dispensary. (Where water is distributed from the mains supply on alternate days in different neighbourhoods, the number of days between distributions must be taken into account.)
- Storage capacity for the night: 2 litres per person available in each cell, room and dormitory. Buckets, jerry cans and plastic bottles provide suitable storage.

[33] Nembrini, P., 2012. Water, sanitation, hygiene and habitat in prisons: supplementary guidance. p. 45. Geneva: ICRC.

[34] Nembrini, P., 2013. Water, Sanitation, Hygiene, and Habitat in Prisons. Geneva: ICRC.

[35] As cited in the handbook, "Where there are few water points and/ or staff supervision is weak, there is increased opportunity for detainees to control access and charge for the use of and access to water. Conversely, multiple water points can improve detainee access but diminish its value as a resource and lead to waste and even damage from leakage" (Nembrini, 2013).

WATER SUPPLY Recommendations for minimum amounts of water and minimum services relating to water	
Minimum amounts of water	
Minimum amount for survival (hot or cold environment)	3–5 litres/person/day
Minimum amount to cover all needs	10–15 litres/person/day
Infirmary/dispensary • outpatients • inpatients • cholera treatment centre	 5 litres/person/day 40–60 litres/person/day 60 litres/person/day
Amount needed to wash hands after using toilets	1 litre/person/day
Water storage	
Minimum storage capacity If water is distributed from the mains supply on alternate days in different neighbourhoods, the number of days between distributions must be taken into account.	1 day's consumption
Storage capacity for kitchen	1 day's consumption
Storage capacity for dispensary	1 day's consumption
Storage capacity for the night inside cells or dormitories	2 litres/person or 1 10/20-litre jerry can (bucket) per cell or dormitory
Number of taps	1–2 taps per 100 detainees
Minimum rate of flow	10 litres/minute
Showers	1 per 50 persons 1 shower/week (minimum)
Taps in latrines	1 for each toilet block

Source: Nembrini, 2013.

SANITATION

Wastewater treatment and safe disposal is important because a majority of the diseases observed in the inmate population are transmitted by the faecal-oral route.

Toilets:

- 1:25 people. A minimum of one toilet should be provided for each accommodation area that houses up to 25 detainees. Where single cells are provided, each cell should contain a toilet. In multiple occupancy cells or dormitories, some cultures will be accustomed to having a much higher number of toilet and shower fixtures.

Showers:

- 1:50 people – 3 showers per week (minimum and according to local climatic conditions).

Taps in latrines:

- 1 for each toilet block for handWASHing.

EXCRETA AND REFUSE DISPOSAL	
Water in short supply	**Sufficient water supply**
• Dry pit latrines outside the cells and dormitories	• Flush latrines with water seals inside cells and dormitories
• Light structure	• Permanent structure
• There must be enough space to dig new pits when the old ones are full; access to soil buckets with lids needed in cells	• Evacuation of excreta to septic tank, then to soak pit or drainage trench; alternatively, connection to urban main sewer or to a lagooning system; direct infiltration a possibility
• 1 water tap and a bucket for washing hands	• 1 water tap and a bucket for flushing the pan and washing hands
• Daily cleaning	• Daily cleaning
• Disinfection once a week; **twice a day in the event of an epidemic**	• Disinfection once a week; **twice a day in the event of an epidemic**
Coverage rate	
• Number of latrines per person	WHO recommendations: **1:25** Acceptable: **1:50**
• Refuse	• 1 half-drum per 50 detainees

Source: Nembrini, 2013.

Strongly visible in a number of case studies is the focus on the "closed sanitation loop" in prison, meaning the excreta and urine is recycled/reused. ICRC has been leading a campaign in prisons across Nepal, Rwanda and the Philippines, for example, to replace failing septic tanks and other sanitation systems with bio digester systems. This solution addresses insufficient sanitation and power in prisons by turning human waste into biogas.[36]

See:

Nembrini, P., 2012. Water, sanitation, hygiene and habitat in prisons: supplementary guidance. Geneva: ICRC.

Nembrini, P., 2013. Water, Sanitation, Hygiene, and Habitat in Prisons. Geneva: ICRC.

Software

In terms of software there has yet to be any universal WASH in prison behavioural change or educational material created. Given the general institutional setting of prisons, it would be possible to adapt material designed for WASH in schools or HCFs for local conditions in specific prisons. Any software used in this setting would have to concentrate on sanitation promotion and hygiene education due to the overcrowding. One of the areas that needs the most attention is system maintenance and management – from both a hardware and software perspective – as this would improve the performance and extend the lifespan of prison water and sanitation systems.

See:

Collett, J. and Gibbs, S., 2016. Designing for Behaviour Change Desk review. Monrovia: World Vision.

[36] See: (1) BORDA, 2015. PriSan: Sanitation for Prisons: A promising concept for prisons to lower infection rates and environmental pollution through advanced sanitation. Bremen: DEWATS; (2) BORDA Vietnam, 2012. Decentralized Wastewater Treatment Systems for a Prison and 2 Hospitals Three BORDA-Vietnam DEWATS Projects in Vietnam.Produced for UNEP. Bremen: BORDA Vietnam; (3) Lohri, C., Vögeli, Y., Oppliger, A., Mardini, R., Giusti, A. and Zurbrügg, C., 2010. Evaluation of biogas sanitation systems in Nepalese prisons. Water Practice and Technology, 5(4); and (4) Gauthier, M., Oppliger, A., Lohri, C. and Zurbrugg, C., 2011. Ensuring Appropriateness of Biogas Sanitation Systems for Prisons-Analysis from Rwanda, Nepal and the Philippines. Geneva: ICRC.

D. Financial options

Traditionally, prisons fall under the fiscal responsibility of the state. However, in the hierarchy of the state administration's budget, management of prisons generally falls at the bottom of government priorities, especially in LDCs. Given this global phenomenon, governments need to find other programme funding opportunities. Many governments have found external funding through project grants and partnerships with INGOs like World Vision and ICRC. When this is not an option, selecting revenue-raising WASH technologies appropriate for high density and volume human settlements could recover some of the costs incurred from facility improvements.

See:

Ndemere, B., 2015. Water, sanitation and hygiene are crucial in prison settings. The Hague: IRC.

UN-HABITAT, 2014. Vice-president Musyoka inaugurates UN-HABITAT water project in Kisii prison. UN-HABITAT Website.

World Vision Zimbabwe, 2010. WASH in 5 Prisons Bulawayo, Beitbridge and Gwanda. (Project Report). Harare: World Vision Zimbabwe.

E. Monitoring and evaluation

A majority of countries does not conduct in-depth national surveys on the condition of prison infrastructure and services. Available statistics are limited to annual number of inmates, length of pre-trial detention, and convictions.[37] However, most countries have government websites about their prison system.[38] Some post-annual national reports reflect minor details about improved or newly constructed WASH infrastructure. Unfortunately, the state and use of the WASH facilities is not found in subsequent national reports and, therefore, this is not consistently monitored until conditions become major health hazards, often resulting in catastrophic epidemics such as cholera.[39]

There has been no fundamental discussion of what specific WASH indicators should be used for M&E in the prison setting. There are some spare examples such as in Zimbabwe, where the Sphere Project standards have been used at select prisons as advocacy tools for WASH facilities and services improvements.[40]

See:

ICRC, 2015. Health care in detentions: A practical guide. Geneva: ICRC.

Nembrini, P., 2012. Water, sanitation, hygiene and habitat in prisons: supplementary guidance. Geneva: ICRC.

[37] Refer to WPB's national prison briefs, like this one for Zimbabwe http://www.prisonstudies.org/country/zimbabwe or this one for Uganda http://www.prisonstudies.org/country/uganda.

[38] See examples: http://www.zambiaprison.gov.zm/ or http://www.prisons.go.ug/.

[39] The most recently cholera outbreaks in prisons have taken place in Ethiopia, Uganda, Zimbabwe, Haiti, and Burkina Faso. These and other countries have been dealing with these crises as they arise through the support of organizations like World Vision and Care.

[40] Sphere and Trócaire, 2013. A review of rollout in Zimbabwe. The Sphere Project website.

V. RESOURCES

A. Sources of Information

Alo, M.N., Ugah, U.I., Saidu, A.Y. and Mohammed A.H., 2015. Microbial Status of Prison Inmates in Abakaliki Prison, Ebonyi State Southeastern Nigeria. Global Journal of Medicine Researches and Studies, 2(1), pp. 7-11.

Angal, L., Mahmud, R., Samin, S., Yap, N.J., Ngui, R., Amir, A., Ithoi, I., Kamarulzaman, A. and Lim, Y.A. ,2015. Determining intestinal parasitic infections (IPIs) in inmates from Kajang Prison, Selangor, Malaysia for improved prison management. BMC infectious diseases, 15(1), p.1.

Bejarano-Roncancio, J.J., Celedón-Dangond, C.A. and Socha-Gracia, L. ,2015. Alimentación penitenciaria: entre higiene y derechos. Rev. Fac. Med., 63(3), pp. 527-35.

Gauthier, M., Oppliger, A., Lohri, C. and Zurbrugg, C., 2011. Ensuring Appropriateness of Biogas Sanitation Systems for Prisons-Analysis from Rwanda, Nepal and the Philippines. Geneva: ICRC.

Government of the USA, 2012. Report on International Prison Conditions. WASHington: Bureau of Democracy, Human Rights and Labor, United States Department of State.

Ishaleku, D. and Mamman, A.S., 2014. Co-infection of malaria and helminthes infection among prison inmates. Res Rev J Microbiol Virol, 2(1), pp. 1-5.

Madara, D.S., Namango, S.S., Makokha, A.B. and Ataro, E., 2014. Acceptance, Operational Challenges and Conceptual Optimization of Biodigester System in Embu Prison. Journal of Energy Technologies and Policy, 4(12).

Mamo, H., 2014. Intestinal parasitic infections among prison inmates and tobacco farm workers in Shewa Robit, north-central Ethiopia. PloS one, 9(6), e99559.

Ndayisaba, C. and Ngirabakunzi, B.R., 2013. Preliminary Calculation of a Natural System Based Treatment Plant for Grey Water from Butare Central Prison, Rwanda. Journal of Environmental Science and Engineering. A, 2(5A), p. 277.

Nyaura, J.E. and Ngugi, M.N., 2014. A Critical Overview of the Kenyan Prisons System: Understanding the Challenges of Correctional Practice. International Journal of Innovation and Scientific Research, 12(1), pp. 6-12.

Topp, S.M., Moonga, C.N., Luo, N., Kaingu, M., Chileshe, C., Magwende, G., Heymann, S.J. and Henostroza, G., 2016. Exploring the drivers of health and healthcare access in Zambian prisons: a health systems approach. Health Policy and Planning.

Ugah, U.I., Alo, M.N., Saidu, A.Y. and Alhassan, H.M., 2015. Microbial Status of Prison Inmates in Abakaliki Prison, Ebonyi State Southeastern Nigeria. Global Journal of Medicine Researches and Studies, 2(1), pp. 7-11.

B. Toolkits and guidebooks

BORDA, 2015. PriSan: Sanitation for Prisons: A promising concept for prisons to lower infection rates and environmental pollution through advanced sanitation. Bremen: DEWATS.

Galea, G., Enggist, S., Udesen, C. and Møller, L., 2014. Prisons and Health. Copenhagen: WHO.

Møller, L., Gatherer, A., Jürgens, R., Stöver, H. and Nikogosian, H., 2007. Health in prisons: a WHO guide to the essentials in prison health. Copenhagen: WHO Regional Office Europe.

Nembrini, P., 2012. Water, sanitation, hygiene and habitat in prisons: supplementary guidance. Geneva: ICRC.

Nembrini, P., 2013. Water, Sanitation, Hygiene, and Habitat in Prisons. Geneva: ICRC.

UNOPS, 2016. Technical guidance for prison planning: Technical and operational considerations based on the Nelson Mandela Rules. Copenhagen: UN.

C. Further topics

Women and MHM

House, S., 2013. Situation Analysis of the Water, Sanitation and Hygiene (WASH) Sector in Relation to the Fulfilment of the Rights of Children and Women in Afghanistan, 2013. Kabul: UNICEF.

House, S., Mahon, T. and Cavill, S., 2012. "Menstrual hygiene matters: A resource for improving menstrual hygiene around the world: Module seven." Vancouver: WaterAid.

Shrestha, S., Kuikel, S. and Bhandari, S., 2014. Menstrual Hygiene among Prison Women in Kathmandu. International Journal of Health Sciences and Research, 4(10), pp. 177-184.

WSSCC and UN Women, 2015. Menstrual hygiene management: behavior and practices in the Kedougou Region, Senegal. Geneva: WSSCC and UN Women.

D. Case studies

Somalia

UNPOS, UNICEF and UNODC, 2012. Assessment of the Prison System in Mogadishu/South Central Somalia. Nairobi: UNPOS, UNICEF and UNODC.

Lebanon

SHEILD, 2015. WASH in Detention Centers and Prisons in South Lebanon. Tyre City: SHEILD.

Burkina Faso

Fall, A. and Coulibaly, C., 2011. Urban urine diversion dehydration toilets and reuse Ouagadougou, Burkina Faso (Draft). Eschborn: SuSanA.

Uganda

Bamutaze, A.B.N., 2012. The State of Sanitation and Hygiene in Prisons in Uganda: A Case Study of Kauga Prison, Mukono District. Kampala: ATC.

Bamutaze, A.B.N., 2014. Can ecological sanitation work for public institutions? A success story of the urine diversion dry toilet at Kauga prison, Mukono district. Kampala: ATC.

Kvarnström, E., Sawyer, R., Bulnes, M. and Garduño, F., 2013. Sanitation and Reuse Experiences world-wide on reuse of different sanitation flowstreams.

Vietnam

BORDA, 2011. Decentralized Wastewater Treatment Systems for a Prison and 2 Hospitals: Three BORDA-Vietnam DEWATS Projects in Vietnam. Produced for UNEP.

Philippines

ICRC, 2011. Biogas for the Cagayan de Oro City Jail: An ICRC-Funded Environmental and Livelihood Project in the Philippines.Geneva: ICRC.

Nepal

Lohri, C., Vögeli, Y., Oppliger, A., Mardini, R., Giusti, A. and Zurbrügg, C., 2010. Evaluation of biogas sanitation systems in Nepalese prisons. In: IWA-DEWATS Conference. Surabaya, Indonesia, 23-25 March 2010. Eschborn: SuSaNa.

Zimbabwe

ICRC, 2015. Zimbabwe: Improving access to water at Chikurubi Prison Complex. Geneva: ICRC.

WASH in refugee camps

I. BACKGROUND

Displaced populations are growing internationally. Refugees and camps for internally displaced persons (IDPs) are emergency situations where large groups of exhausted people, likely with very few personal items, are relocated to a previously uninhabited area.

Specifically residents of refugee and IDP camps find themselves fleeing from negative circumstances in their homelands only to encounter sometimes equally difficult situations in the camps.

Densely populated stretches of land are developed quickly to provide immediate infrastructure for services to ensure the health and safety of residents. Even in these challenging settings, refugees and IDPs have human rights to drinking water and sanitation. The fact is that these camps house large populations living together in close temporary quarters for an indeterminate period of time make them susceptible to the rapid spread of pathogens and other environmental health-related crises.

II. CHALLENGES

- WASH programming in refugee and IDP camps often does not have adequate hardware and software to ensure the wellbeing of camp occupants and prevent potentially devastating epidemics.
- Immediate action is needed as WASH-related infrastructure often fails to work or does not exist. As cited by Mercy Corps, "Settings with ongoing social unrest due to war or civil disorder are typically characterised by a breakdown of basic services, including water and sanitation. This is always the case during the first stages of a refugee or IDP scenario, and addressed as part of the immediate package of services that NGOs implement. However, WASH programmes in refugee or IDP camps are often insufficient to meet the minimum standards".[41]
- WASH contexts and conditions vary between and, in some cases, within refugee camps.

III. USEFUL WEBSITES

- http://WASH.unhcr.org/
- www.cmtoolkit.org
- www.wedc.ac.uk

IV. BUILDING BLOCKS FOR WASH IN REFUGEE CAMPS

A. Policy environment

There is a well-established global policy environment for WASH in refugee and IDP camps. Specifically, UN member countries also have strong policies concerning refugee and IDP camps and human rights. While the need for WASH programming in this setting has been well-publicised in many global campaigns, advocacy has and continues to be carried out at every level of stakeholder involvement.

The current international policy environment for WASH programming in this setting makes it possible for numerous powerful international and national actors to act together quickly to provide basic services to refugees and IDPs. "The most severe internally displaced persons (IDPs) emergencies will usually trigger an international response. The Camp Management Agency as well as the WASH services providers and other operational entities including national authorities, will align WASH-related response activities in strategic partnership with United Nations Children's Fund (UNICEF) as the Global WASH Cluster under the Inter-Agency Standing Committee (IASC) cluster approach. Refugee emergencies are coordinated through the UN Refugee

[41] Mercy Corps, 2008. Water, sanitation and hygiene guidelines. http://www.mercycorps.org/sites/default/files/WASH%20Guidelines.pdf.

Agency (UNHCR)".[42] Just as stakeholders have their defined roles in emergency situations, policy clearly states the acceptable conditions that emergency aid must provide. Since its publication in 2011, the authoritative document on guidelines for all aspects of refugee and IDP camps, including WASH facilities and services, is the Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response.[43]

See:

NRC/IDMC, 2015. Camp Management Toolkit 2015. Geneva: NRC/IDMC CCCM Cluster.

Sphere, 2011. Minimum standards in Water Supply, Sanitation and Hygiene Promotion, pp. 80-130. Geneva: Sphere.

B. Stakeholders

- Global governance actors (i.e. UNHCR)
- National government
- Local government
  - Represents interests of nearby/neighbouring residents[44]
- Camp managers and staff
- Camp council
  - Voices of the refugees
- Civil society
- Private sector
- International aid groups
  - Oxfam, CARE, World Vision and Plan, among others
- WASH professionals
- Emergency professionals
- Medical professionals

See:

ALNAP, 2003. Participation by Crisis-Affected Populations in Humanitarian Action: Practitioner's Handbook. London: ALNAP.

German Toilet Association and WASH Network, 2015. Building and operating sanitary facilities in refugee accommodation in Germany. Eschborn: SuSanA.

[42] NRC/IDMC, 2015. Camp Management Toolkit 2015. Geneva: NRC/IDMC CCCM Cluster.

[43] Established in 1997, The Sphere Project is a collaboration of a wide range of humanitarian response practitioners working together to improve the quality of humanitarian assistance and make humanitarian actors accountable to their constituents, donors and affected populations. See http://www.sphereproject.org/.

[44] "Emergencies also have an impact on resident or host populations as well as the refugee and displaced people. It is important that the needs of the host population be understood. The local economy can suffer because of the added demand upon it from refugees, displaced people and the host population alike. There might also not be equal access to basic services and survival needs such as food, water and health care. As emergencies progress, camps and settlements for the displaced stabilise, but the needs of the host population can be as great as and perhaps even greater than the needs of the displaced population. Therefore, it is important that response efforts include the disaster-affected host community" (JHSPH, 2011. From: Water, sanitation and hygiene in emergencies).

C. Technical choices

Hardware

The goal is to provide infrastructure and essential services to refugee groups of different sizes, varying from hundreds to thousands of individuals. This technical choice is further complicated because camps are usually established in uninhabited locations. Additionally, population is in constant flux, so the technical designs must account for rises and drops in numbers of users.

See:

House, S. and Reed, B., 2004. Emergency water sources: Guidelines for selection and treatment. Loughborough: WEDC.

Patel, D., 2011. Excreta disposal in emergencies: The use of bag systems in challenging urban contexts. Waterlines, 30,1.

UNHCR, 2016. UNHCR WASH Technical designs for refugee settings. Geneva: UNHCR.

Software

This might include sensitising refugees to new water treatment or sanitation practices, or running a community campaign to promote handWASHing. The key element is including the people and their indigenous WASH practices into the training or education in the camp. Materials for this have a strong focus on improving hygiene.

See:

Boudreau, L., Khaitu, A.K. and MacDonald, L.A., 2016. Training During Emergency Response to Build Resiliency in Water, Sanitation, and Hygiene. World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering, 10(5), pp. 1429-1433.

NRC/IDMC, 2015. Camp Management Toolkit 2015. Geneva: NRC/IDMC CCCM Cluster.

D. Financial options

Interestingly, the current financial focus in this setting has been on calculating the real cost of providing specific WASH service levels rather than on finding more funds. Financial accountability, like impact evaluations, has become increasingly important to donors. Cronin et al, 2008 [45] explains that "Financial resources are always a major constraint especially in protracted refugee camps and in 'forgotten' crises. However, even in situations where adequate financial resources were available, such as the Indian Ocean tsunami of December 2004, there were reports of poor water and sanitation provision to displaced populations by less experienced actors who failed to adhere to accepted guidelines in project planning and implementation (Telford et al., 2006)."

See:

Luff, R., 2013. Subsidies for WASH in development, mitigation, relief, and recovery: a critical but neglected aspect of practice. Waterlines, 32(4), pp. 286-294.

Pezon, C., 2014. Costing water services in a refugee context: methodological report (Progress Report). The Hague: IRC and UNHCR.

Pezon, C., Bostoen, K., Carrasco, M. and Jacimovic, R., 2015. Costing water services in refugee camps: Camp Bambasi, Ethiopia, and Camp Kounoungou, Chad. The Hague: IRC and UNHCR.

Schweitzer, R., 2015. Analyzing the cost of water provision in UNHCR refugee camps (Presentation). Delft: IRC.

[45] Cronin, A.A., Shrestha, D., Cornier, N., Abdalla, F., Ezard, N. and Aramburu, C., 2008. A review of water and sanitation provision in refugee camps in association with selected health and nutrition indicators–the need for integrated service provision. Journal of water and health, 6(1), pp. 1-13.

E. Monitoring and evaluation

Under The Sphere Project's guidance, international stakeholders have established a set of minimum WASH standards for refugee and IDP camps. Key indicators include "all groups within the population have safe and equitable access to WASH resources and facilities, use the facilities provided and take action to reduce public health risk; all WASH staff communicate clearly and respectfully with those affected and share project information openly with them, including knowing how to answer questions from community members about the project; there is a system in place for the management and maintenance of facilities as appropriate, and different groups contribute equitably; and all users are satisfied that the design and implementation of the WASH programme have led to increased security and restoration of dignity." [46]

Sphere standards and WASH indicators must be respected in order to ensure displaced persons' rights to live in safety and dignity.[47] They also help to measure the impact and effectiveness of humanitarian interventions. At the onset of WASH response operations, the setting of indicators to achieve standards must be addressed. Coordination and agreement on indicators is typically carried out at the national level by the WASH and the Camp Coordination and Camp Management (CCCM) clusters, and in consultation with relevant authorities, the displaced population and WASH service providers.[48]

Example proxy indicators for monitoring the effectiveness of WASH Hygiene Promotion and water and sanitation interventions in emergencies

Hygiene behaviour	Indicators
Water supply	• amount of water used per person per day • adequate water handling practices to minimise contamination
Safe excreta disposal	• children's and babies' faeces are disposed of safely • toilets are used by the majority of people
Hygiene practices	• soap or ash for handwashing is available in all households • handwashing facilities are available and in use
Women's privacy and dignity around menstrual hygiene	• appropriate sanitary materials and underwear for all women and girls are available
Community participation and representation	• shared toilets are maintained and monitored by community management committees* (*depending on the context) • all portions of the community, including vulnerable groups, are consulted and represented at all levels of the project • implementation of project by public health volunteers, of whom 50% are women.

The following are suggestions of ways to monitor some of the essential indicators:

Indicator	Means of monitoring
Water supply	Water testing at source Inspection of water containers at water points Household visits to look at water storage containers
Safe excreta disposal	Exploratory walks to look for signs of open defecation
Hygiene practices	Quantity of soap distributed each month Inspection of handwashing at communal latrines Observation of handwashing by children
Menstrual hygiene	Availability and quantity distributed
Community participation	Latrine inspection by community and hygiene promoters

Adapted from:
* International Rescue Committee (2005). *Environmental Health Field Guide*
* Walden, V., Nixon Achieng, O., Shirlaw, L., Malile, M. (2007). *Minimum standards for public health promotion monitoring during the first three months of a rapid-onset emergency. A guide for field staff.*

[46] See The Sphere Project website: http://www.sphereproject.org/.
[47] Sphere, 2015. See their standards page: http://www.sphereproject.org/standards-partners/
[48] NRC/IDMC, 2015. Camp Management Toolkit 2015. Geneva: NRC/IDMC CCCM Cluster.

See:

NRC/IDMC, 2015. Camp Management Toolkit 2015. Geneva: NRC/IDMC CCCM Cluster.

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Multi-country

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Shapkota, P. and Lee, S.H., 2006. Water Supply and Sanitation: A Case Study of Timai Bhutanese Refugee. Thammasat Int. J. Sc. Tech, 100(4).

South Sudan

Phillips, R.M., Vujcic, J., Boscoe, A., Handzel, T., Aninyasi, M., Cookson, S.T., Blanton, C., Blum, L.S. and Ram, P.K., 2015. “Soap is not enough: handWASHing practices and knowledge in refugee camps, Maban County, South Sudan”, Conflict and health, 9,p. 39.

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WASH at mass gatherings

I. BACKGROUND

Mass gatherings are characterised by the influx of up to millions of people into an area for a short period of time. As a result, the resources of this area become stressed, and existing infrastructure is insufficient to safely accommodate the massive numbers of visitors. In most cases, temporary facilities are installed to make basic services available to visitors.

The overcrowding, difficult management, and temporary circumstances of mass gatherings make them breeding grounds for public health threats. Visitors are especially susceptible to waterborne diseases, so access to safe WASH services is important in preventing potential outbreaks.

This setting, however, gives organisers the unique opportunity to educate visitors on the importance of WASH services, and allow them to experience programming through the use of appropriate technologies and interactive training in WASH safe practices. Mass gatherings can be extremely useful platforms to sensitise millions of people to relevant WASH issues and introduce WASH programming. They can take the new knowledge back home and share it with friends and family.

II. CHALLENGES

- Avoiding the spread of communicable diseases.
- Making WASH a priority during the planning and organisation of the event.
- Technologies must cater to users/visitors. For example, in addition to making toilets available to pilgrims, organisers designate certain locations for open defecation in Kumbh Mela (for visitors accustomed only to this means of defecating) with porters regularly cleaning the area and properly disposing of excreta).
- Protecting nearby permanent residents and ensuring the protection of the site for future use.

III. USEFUL WEBSITES

Not available. Please see Resources (below) for more information.

IV. BUILDING BLOCKS FOR WASH AT MASS GATHERINGS

A. Policy environment

The policy environment depends on the nature of the mass gathering and varies from country to country. Nevertheless, there does not seem to be any confusion about responsibility in these settings. For the Kumbh Mela,[49] the district where it takes place (alternating between four locations every 12 years), is responsible for WASH for pilgrims. Civil society organisations also contribute to the organisation. For the Hajj,[50] an annual pilgrimage to Mecca, Saudi Arabia, there is an organising committee dedicated to the planning and provision of WASH facilities for pilgrims. In these cases WASH-related policy is well established and a priority of event leaders.

In reality it is hard to enforce and evaluate the greater policy environment for this particular WASH setting because of the diverse natures of mass gatherings. The examples given are two of the largest mass gatherings in the world and they are both related to religious celebrations. They are also the subject of the most research and academic publications. So, conclusions about the policy environment for WASH programming at mass gatherings based solely on these two examples would misrepresent aspects of this setting.

[49] The Kumbh Mela is the largest religious mass gathering in the world. As stated on the official event website, "Kumbh Mela is celebrated four times every 12 years, the site of the observance rotating between four pilgrimage places on four sacred rivers: at Haridwar on the Ganges river, at Ujjain on the Shipra, at Nasik on the Godavari, and at Allahabad on the confluence of the Ganges, Yamuna and the mythical river Sarasvati". Hindu pilgrims bathe themselves in the designated river, cleansing themselves of sin. The date of the event is determined by the zodiac calendar. For more information on this mass gathering see http://kumbh-mela.euttaranchal.com/.

[50] The Hajj is an annual pilgrimage for Muslims to Mecca, Saudi Arabia. The date of the event is 8-12 of Dhu al-Hijjah, the last month of the Islamic calendar (which is based on the lunar calendar). For more information on this mass gathering see the official website: http://haj.gov.sa/english/Pages/default.aspx.

See:

Gautret P, et al., 2015. Diarrhea at the Hajj and Umrah. Travel Medicine and Infectious Disease, 30(2), pp. 1-8.

Vortmann, M., Balsari, S., Holman, S.R. and Greenough. P.G., 2015. Water, Sanitation, and Hygiene at the World's Largest Mass Gathering. Current infectious disease reports, 17(2), pp. 1-7.

B. Stakeholders

- National government
- Local government
- Mass gathering event organisers, managers and staff
- Visitors/pilgrims
- Civil society
- Private sector
- International aid groups
- WASH professionals
- Public health/mass gathering health professionals

See:

Holman, S.R. and Shayegan, L., 2014. Toilets and Sanitation at the Kumbh Mela. Boston: Harvard University.

da Cunha, D.T., de Oliveira, A.B.A., de Freitas Saccol, A.L., Tondo, E.C., Silva, E.A., Ginani, V.C., Montesano, F.T., de Castro, A.K.F. and Stedefeldt, E, 2014. Food safety of food services within the destinations of the 2014 FIFA World Cup in Brazil: Development and reliability assessment of the official evaluation instrument. Food Research International, 57, pp.95-103.

C. Technical choices

Hardware and software

The temporary nature of mass gatherings and massive number of users complicate technical choices. Hardware is relatively easy to transport, construct and dismantle.

The circumstances of this setting share many similarities with an emergency, so reflecting on technical choice resources for WASH in refugee camps is useful. Anecdotal evidence, mostly in the form of case studies, suggests software focuses on education, communication and behavioural change.

See:

Holman, S.R. and Shayegan, L., 2014. Toilets and Sanitation at the Kumbh Mela. Boston: Harvard University.

Vortmann, M., Balsari, S., Holman, S.R. and Greenough. P.G., 2015. Water, Sanitation, and Hygiene at the World's Largest Mass Gathering. Current infectious disease reports, 17(2), pp. 1-7.

D. Financial options

Financing WASH programming and infrastructure appears to be the burden of the area or entity hosting the mass gathering. There is no mention of budgets or funding in any available literature. In recent years NGOs have played an increasing role in organising and managing public health-related services in these settings. However, there is no information on how they use their own funds for WASH in these settings.

See:

Memish, Z.A., Stephens, G.M., Steffen, R. and Ahmed, Q.A., 2012. Emergence of medicine for mass gatherings: lessons from the Hajj. The Lancet infectious diseases, 12(1), pp. 56-65.

Youbi, M., Dghoughi, N., Akrim, M., Essolbi, A., Barkia, A., Azami, A.I., Fleischauer, A.T., Schneider, D. and Maaroufi, A., 2013. Preparedness and health risks associated with Moulay Abdellah Amghar moussem, Morocco, 2009–2010. East Mediterranean Health Journal, 19(S2), pp. S19-23.

E. Monitoring and evaluation

M&E in this setting remains very basic; professionals working in this area are still focusing on with the best way to gain insights into WASH in this setting and to overcome the challenges of the number of people involved. The most popular methods being used so far are qualitative, namely visual, observations made by researchers and interviews with visitors. A recent publication by Bisht and Singh focusing on the Kumbh Mela in 2013 [51] reflected on strategically measures around quantitative WASH indicators, like testing surface water for total faecal coliform count. Another study of the same mass gathering event[52] included standard WASH indicators like microbiological water quality testing of potable water supply and latrines to occupants count.

See:

Baranwal, A., Anand, A., Singh, R., Deka, M., Paul, A., Borgohain, S., and Roy, N. (2015). Managing the Earth's Biggest Mass Gathering Event and WASH Conditions: Maha Kumbh Mela (India). PLoS currents, 7.

Bisht, A. and Singh, S., 2015. Environmental Management in Mass Gatherings: A Case Study of Maha Kumbh Mela 2013 at Prayag, India. International Journal for Innovative Research in Science and Technology, 1(7), pp. 107-115.

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David, S. and Roy, N., 2016. Public health perspectives from the biggest human mass gathering on earth: Kumbh Mela, India. International Journal of Infectious Diseases. 47, pp.42-45

Gautret, P. and Steffen, R., 2016. Communicable diseases as health risks at mass gatherings other than Hajj: what is the evidence? International Journal of Infectious Diseases. 46, pp.46-52

Sun, X., Keim, M., He, Y., Mahany, M. and Yuan, Z.A., 2013. Reducing the risk of public health emergencies for the world's largest mass gathering: 2010 World Exposition, Shanghai China. Disaster Health, 1(1), pp. 21-29.

B. Toolkits and guidebooks

Not available.

C. Further topics

Not available.

D. Case studies

Bisht, A. and Singh, S., 2015. Environmental Management in Mass Gatherings: A Case Study of Maha Kumbh Mela 2013 at Prayag, India. International Journal for Innovative Research in Science and Technology, 1(7), pp. 107-115.

Holman, S.R. and Shayegan, L., 2014. Toilets and Sanitation at the Kumbh Mela. Boston: Harvard University.

Panda, S.N., Pradhan, K.K. and Mishra, S.R., 2015. Environmental Perspective and Its Implications To Policy Makers: A Case Study of World Famous Dhanuyatra an Open Air Roving Drama. International Journal of Innovative Research in Science, Engineering and Technology 4(2), pp. 165-171.

[51] Bisht, A. and Singh, S., 2015. Environmental Management in Mass Gatherings: A Case Study of Maha Kumbh Mela 2013 at Prayag, India. International Journal for Innovative Research in Science and Technology, 1(7), pp. 107-115.

[52] Vortmann, M., Balsari, S., Holman, S.R. and Greenough. P.G., 2015. Water, Sanitation, and Hygiene at the World's Largest Mass Gathering. Current infectious disease reports, 17(2), pp. 1-7

WASH in temporary use settings

I. BACKGROUND

WASH programming is important in temporary use settings (TUS) like restaurants, accommodation, markets, transportation hubs and public toilets because it sets the standard for what individuals should have at the household level. Additionally, it is a good way to influence positive WASH behaviour outside of the household which people can take back to their homes and share with their communities. WASH services and facilities in TUS are also important for maintaining good public health.

II. CHALLENGES

- This setting is enormous because it includes all locations where people spend several hours outside the home. Therefore, any WASH in TUS materials will need to be specific and highly specialised.
- TUS standards may vary from culture to culture and from setting to setting. Similarly, influential actors will also change.
- TUS must provide at least the basic level of human rights for WASH services; but there is no policy to enforce this.

Given the complicated nature of this setting, it makes it difficult to identify a potential leaders and lines of accountability.

III. USEFUL WEBSITES

Not available. For more information please see Resources (below).

IV. BUILDING BLOCKS FOR WASH IN TUS

A. Policy environment

There is a huge lack of advocacy for this type of setting, and much work is required to make significant progress. There is no clear international leader promoting this aspect of WASH or initiating any dialogue.

TUS is a mixed bag of institutions and locations, so policy and government actors vary greatly. For the most part, the Ministry of Health is the leading national authority in this setting.

See:

Government of Nepal, 2010. Sanitation and Hygiene Master Plan. Kathmandu: Steering Committee for National Sanitation Action.

Government of Rwanda, 2010. National Policy and Strategy for Water Supply and Sanitation Services.Kigali: Ministry of Infrastructure.

B. Stakeholders

- Local government
- National government
- Civil society
- WASH professionals
- Private sector
- INGOs
- Site specific stakeholders
  - Religious actors
  - Business owners

See:

Kabir, B., Ubaid, S.F., Ahmed, M., Islam, M., Rahman, M. and Mia, H.A., 2010. The role of imams and different institution in hygiene promotion of BRAC WASH programme. South Asia Sanitation and Hygiene practitioners' workshop. Dhaka, Bangladesh 31 January – 2 Februay 2012. The Hague: IRC.

Peprah, D., Baker, K.K., Moe, C., Robb, K., Wellington, N., Yakubu, H. and Null, C., 2015. Public toilets and their customers in low-income Accra, Ghana. Environment and Urbanization. 27 (2), pp.1-16

van Hoek, E. and Yardley, S., 2009. Keeping communities clean: The church's response to improving hygiene and sanitation. Teddington: Tearfund.

C. Technical choices

Hardware and software

The goal is like any other setting, namely, selecting a combination of WASH technologies most suitable for the location and users. In TUS the common characteristic for all locations is that the WASH infrastructure will be a shared among multiple users and, in some cases, will be open to the public.

WASH software should target community participation and stakeholder communication and participation. In 2011 USAID developed a Hygiene Improvement Framework-based (HIP) approach for WASH projects in TUS in Madagascar. Using the three components of HIP (hardware, software, and enabling environment), a "WASH-friendly" approach was developed that uniquely merged behaviour and hardware.[53]

See:

Njeru, J.N., 2014. Rethinking public toilet technologies in Nairobi: the case of Iko toilet facilities. Journal of Water Sanitation and Hygiene for Development, 4(2), pp. 324-328.

Robens Institute, 1996. Sanitation in public places. (Fact sheets on environmental sanitation, 3.14). Geneva: World Health Organization.

Uddin, S.M.N., Walters, V., Gaillard, J.C., Hridi, S.M. and McSherry, A., 2015. Water, sanitation and hygiene for homeless people. Journal of Water and Health. 14(1), pp. 47-514.

D. Financial options

Previous projects within this setting have been funded by religious foundations, academic institutions, private businesses and public budgets. One of the key arguments in favour of increasing WASH programming in this setting is that it pays for itself. Similar to the WASH in the workplace financial options, one has to spend money to make money. Improvements in public sanitation have been shown to increase tourism which, in turn, has resulted in additional income, in places like Madagascar and Indonesia.

See:

USAID Madagascar, 2008. Success Story: Improved Hygiene Leads to More Tourism. Antananarivo: USAID Madagascar.

World Bank, 2011. Economic Assessment of Sanitation Interventions in Indonesia A six-country study conducted in Cambodia, China, Indonesia, Lao PDR, the Philippines and Vietnam under the Economics of Sanitation Initiative (ESI). Jakarta: World Bank.

[53] "The WASH-friendly model in Madagascar evolved over time beyond schools and health centers to include markets, churches, transportation hubs or taxi stations, highway rest stops, and tourism attractions. Each entity received HIP training to create its own WASH Committee. Like the schools model, these institutions were required to have minimum acceptable WASH facilities and services, such as improved latrines segregated by gender, places to WASH hands with soap at critical times, correctly stored and treated drinking water for clients or pupils, and instruction/demonstrations for clients and students to practice improved hygiene. Ultimately, HIP promoted the WASH-friendly commune (medium-sized administrative unit) local institutions and facilities agree to meet minimum hygiene standards." (USAID, 2011. At-scale hygiene and sanitation in Ethiopia and Madagascar: Experiences and lessons learned. WASHington DC: USAID Hygiene Improvement Project.)

E. Monitoring and evaluation

Similar to other settings, national policies are starting to use UNHCR standards to track WASH in TUS, but, for the most case, there is no existing M&E structure to build on. Without something like a nationwide survey of restaurants or transportation hubs it will be impossible for the WASH sector to collect data on conditions in TUS. Additionally, the diversity of these locations makes it impossible to simply add on WASH related questions or measurements to an existing survey or M&E tool.

See:

USAID, 2011. At-scale hygiene and sanitation in Ethiopia and Madagascar: Experiences and lessons learned. WASHington DC: USAID Hygiene Improvement Project.

V. RESOURCES

A. Sources of information

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C. Further topics

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Summary

Although there have been constructive developments in WASH away from the home settings, as highlighted in the SDGs (which include schools and HCFs) there is a need to go way further. The WASH sector has, to date, focused on household programming and research. Much work is still to be done in understanding and learning lessons from non-household WASH settings before WASH professionals can truly speak about universal WASH coverage.

Inevitably, there will need to be more political support, stakeholder participation, project funding and institutional support from both the national and international community. This guide provides the WASH sector with a critical first step toward advocacy, sharing of knowledge, and consensus building.

The key will be that this information continues to be documented so it can be spread and used within a range of WASH settings. Through this initiative it is hopes that more international and national WASH partners will look beyond the home and further strengthen the pledge to support WASH services in all WASH settings.

The reader is strongly encouraged to be part of this information and knowledge exchange and sharing. Please refer to the next page – Annex 1: Feedback form.

Annex 1: Feedback form for the Information Guide on WASH away from home

1. What have you found useful in the guide?

_____

_____

2. What suggestions would you like to share?

_____

_____

3. How might you use this guide in the future?

_____

_____

4. How would you like to contribute to the initiative mentioned in the introduction section?

_____

_____

Your particulars

Last name: _____

First name: _____

Date: _____

Male/female: _____

Organisation: _____

Postal address: _____

E-mail address: _____

Please send your feedback sheet or any other comments you may have to the attention of:
Cor Dietvorst, IRC, communications@ircwash.org

Visiting address
Bezuidenhoutseweg 2
2594 AV The Hague
The Netherlands

Postal address
P.O. Box 82327
2508 EH The Hague
The Netherlands

T +31 70 3044000
info@ircwash.org
www.ircwash.org