



Merlin Water, Sanitation and Hygiene Guide

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1. INTRODUCTION

This guide has been developed to serve as an appropriate working reference with minimum standards and examples for the Organization and Country Offices engaged in assisting the Ministry of Health or related Public health institutions, non-states entities, key stake holders, communities and families - in accelerating and sustaining progress towards achieving the MDG goals as well as contributing to saving lives during Emergencies. It also describes Merlin strategies, guiding principles and potential framework of WASH programming, WASH policy and packages and related global Policies and strategies, albeit - IASC global WASH cluster and WASH Emergency Policy of well-established players in the sector with emphasis on the set of minimum standards as articulated in the Sphere handbook¹ and/or best practices.

1.1 Global Strategy

The Merlin 2012-2015 global strategy promotes saving lives, disaster risk reduction and building resilience through the Response-Recovery and Resilience (3Rs) framework with clear articulation of results to be achieved using an integrated and continuum of primary health care approaches by ensuring the provision of essential services; essential commodities and promotion of essential practices (3 Es).

There is an ongoing joint exercise by the Health team and Programme colleagues to provide guidance and support to the development of country business plans; more so ensuring that they are aligned with the global results framework and harmonized with their respective country plans.

Based on 2011 review of country key WASH interventions, the content of the “How to” is based on four (4) outcome areas, namely - **hygiene promotion; sanitation; solid waste management, including medical waste and water supply**. WASH is, therefore, seen as a critical intervention component for improved health and quality of care. These are summarized into three integrated chapters of WASH in Response, early recovery and resilience programming.

1.2 Technical Justification

A balanced and integrated WASH approach is seen as essential to preventing and reducing mortality, especially among vulnerable populations, families and children in humanitarian crises. Recent empirical evidence shows that diarrhoea is one of the leading causes of death and illness for children in humanitarian crises. Every episode sets back growth and development. Almost 90 per cent of diarrhoeal cases are preventable through safe drinking water, basic sanitation and appropriate hygiene behaviour. Diarrhoeal episodes are reduced by 25 per cent by improving the water supply, 32 per cent by improving sanitation, 44 per cent by hand washing with soap, and 39 per cent by household water treatment. Water quality interventions could play a role in reducing diarrhoeal episodes by roughly half to 70 per cent or more².

1.3 Application or adaption of the guide, including subsequent revisions

Each country will adopt and adapt according to their context, local technical capacity and sustainability of the set of WASH interventions being envisaged. However, feasibility and cost effectiveness of selected measures or interventions must have opportunity to have full community participation, ownership, scalability and sustainability. The document is live and will be revised and/or updated with evidence, lessons learned evaluations and best practices from the field when or as at when necessary. The cross cutting areas are mainstreamed and the proposed actions linked to other “how to” produced.

This guide provides evidenced based suggested interventions and practices; and it should be applied within the operational context with selected best practices based on what is seen as feasible, practical and appropriate to do rather than seen as a prescriptive action.

1.4 Programme Action - Background

Reviewing global progress of individual countries, regions, and the world as a whole between the MDG baseline year of 1990 and the half-way mark of 2002, more than 2.6 billion people - over 40 per cent

¹ Sphere standards, 2011

² WHO Global Strategy for Women and Children's health - 2011

of the world's population - do not have access to basic sanitation, and more than one billion people still use unsafe sources of drinking water (World Health Organization and UNICEF³).

It makes two significant predictions on reaching the 2015 goals¹⁴, based on progress to date:

- The global sanitation target will be missed by half a billion people - most of them in rural Africa and Asia - allowing waste and disease to spread, killing millions of children and leaving millions more on the brink of survival.
- The world is on track to meet the drinking water target. The severe human and economic toll of missing the sanitation target could be prevented by closing the gap between urban and rural populations and by providing simple hygiene education, say WHO and UNICEF.

The agencies warned that a global trend towards urbanization is marginalising the rural poor and putting huge strain on basic services in cities. As a result, families living in rural villages and urban slums are being trapped in a cycle of ill-health and poverty. Families, albeit, children are always the first to suffer from the burden of disease caused by dirty water and poor hygiene; while the wider impact of unhygienic environments drags back economic progress and erodes good governance.

“Around the world millions of children are being born into a silent emergency of simple needs,” says Carol Bellamy, UNICEF’s former Executive Director. “The growing disparity between the haves and the have-nots in terms of access to basic services is killing around 4000 children every day and underlies many more of the 10 million child deaths each year. We have to act now to close this gap or the death toll will certainly rise.” To compliment her reaction, the former and late WHO Director-General Dr LEE Jong-wook said that “Water and sanitation are among the most important determinants of public health. Wherever people achieve reliable access to safe drinking-water and adequate sanitation they have won a major battle against a wide range of diseases.”

Developing regions of the world, such as sub-Saharan Africa, are most at risk. But the report also highlights some worrying trends in the industrialised regions, where coverage figures for clean water and basic sanitation facilities are estimated to have decreased by 2 per cent between 1990 and 2002. In the former Soviet Union, only 83 per cent of people had access to adequate sanitation facilities. With economic and population pressures growing, these percentages could decrease.

The consequences of inaction today are severe. Diarrhoeal disease currently takes the lives of 1.8 million people each year - most of them children under five - with millions more left permanently debilitated. Over 40 billion work hours are lost in Africa to the need to fetch drinking water (WHO and UNICEF).

1.5 The Problem

Almost 900 million people still lack access to safe drinking water and 2.6 billion people still lack access to basic sanitation. Diarrhoea related illnesses kill more children under five years old than AIDS, malaria and measles combined - they are the second leading cause of child death. So, although many children’s lives are now being protected through bednets, vaccinations and antiretroviral drugs, too many of these same children will still die from diarrhoea. Eighty-eight percent of diarrhoea worldwide is due to unsafe water, inadequate sanitation or insufficient hygiene. Four thousand people die every day from diarrhoea primarily because they don’t have toilets or clean water, and don’t wash their hands at key moments such as after going to the toilet and before preparing food.

Women and girls are disproportionately affected by the lack of ready access to water. They walk miles every day fetching and carrying water for their families, which means they miss out on opportunities to work and go to school. Girls are also less likely to attend school after they start menstruating if separate toilets are not provided.

³ WHO-UNICEF JMP report - 2012: Meeting the Millennium Development Goals (MDG) drinking water and sanitation target - A mid-term assessment of progress

⁴ WHO

1.6 The WHO-UNICEF JMP 2011 Report Summary

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, known as the JMP, reports every two years on access to drinking water and sanitation worldwide and on progress towards related targets under Millennium Development Goal 7. This 2012 report is based on data gathered from household surveys and censuses, including both recent and older data sets that have come to the attention of the JMP. The estimates presented here describe the situation as of end-2010 and supersede those of the JMP update published in March 2010.

Eight Millennium Development Goals were agreed by the Member States of the United Nations at the Millennium Summit 2000. The targets state that the proportion of people worldwide not having access to an improved water source and the proportion of people worldwide not having access to adequate sanitation facilities should be halved between the baseline year of 1990 and 2015.

The report brings welcome news: The MDG drinking water target, which calls for halving the proportion of the population without sustainable access to safe drinking water between 1990 and 2015, was met in 2010, five years ahead of schedule. However, the report also shows why the job is far from finished. Many still lack safe drinking water, and the world is unlikely to meet the MDG sanitation target. Continued efforts are needed to reduce urban-rural disparities and inequities associated with poverty; to dramatically increase coverage in countries in sub-Saharan Africa and Oceania; to promote global monitoring of drinking water quality; to bring sanitation 'on track'; and to look beyond the MDG target towards universal coverage.

Still, much has been achieved. As this progress report shows, over 2 billion people gained access to improved water sources and 1.8 billion people gained access to improved sanitation facilities between 1990 and 2010. This is impressive, particularly when the gains of countries that started at a low baseline and faced high population growth are considered. Indeed, much of the progress of the last 20 years has been in the context of rapid population growth, and this is why some of the news in this report is sobering. Over 780 million people are still without access to improved sources of drinking water and 2.5 billion lack improved sanitation. If current trends continue, these numbers will remain unacceptably high in 2015: 605 million people will be without an improved drinking water source and 2.4 billion people will lack access to improved sanitation facilities. As we approach the 2015 target date for the MDGs, the safety and reliability of drinking water supplies and the sustainability of both water supply sources and sanitation facilities need to be addressed; whilst at the same time beginning the process to develop new water, sanitation and hygiene goals, targets and indicators beyond 2015, in alignment with the human right to water and sanitation.

1.7 Meeting the 2015 MDG Goal-7

And many children, particularly girls, are prevented from going to school for want of latrines; this amounts to squandering of their intellectual and economic potential.

Reversing this trend and moving towards universal coverage for water and sanitation will take more than money as evidence shows. National policies based on the principle of "some for all" rather than "all for some" have been the key to improvements in many countries. And at the local level, resources have to be retargeted to include the poorest communities, with local government and the private sector co-operating to bring affordable solutions. (MERLIN SOWC and MDG progress report - 2011).

"To meet the 2015 targets, countries need to create the political will and resources to serve a billion new urban dwellers, and reduce by almost 1 billion the number of rural dwellers without access to adequate sanitation facilities. Otherwise we risk leaving millions, if not billions, out of the development process," says Dr Lee.

The report, which is the first in a series, looks at progress in water and sanitation coverage, should be a wake-up call to all global leaders. Every country still has work to do to eliminate disparities in basic services and the data shows clearly how that can be done before the MDG deadline of 2015.

However, there are also some very encouraging signs. Great gains in water and sanitation coverage have been made against considerable odds in many countries. This progress came as a direct result of political prioritization and a drive to find locally effective solutions.

1.8 Merlin's Vision

Merlin envisions a world where families, vulnerable groups or populations and stable communities enjoy life protected from the threat of water borne and hygiene related diseases. Whilst most of its country support and response are humanitarian, early recovery programming and health system strengthening for primary care and to some extent secondary care; the guide provides the least common actions required for WASH interventions and standards adapted to local context. The experiences and human interest stories will be used to build resilience and disaster risk reduction through clear contingency, response and early recovery planning, implementation and monitoring. Through a set of low cost and high impact interventions, it looks forward to bringing hope to the hopeless; addressing the needs of the marginalized and most vulnerable families and populations in seen in fragile states.

2. CHAPTER 1: SANITATION AND HYGIENE IN DEVELOPMENT PROGRAMMING

This chapter explains how to implement the sanitation and hygiene components of the Merlin's commitment in development programming. There is practical guidance on what safe drinking water is and how to help families gain access to it in an emergency in a separate chapter. Also covered are basic purification methods and guidance on providing families with water collecting and storage containers. The key hygiene-related messages are outlined, with guidance on how to communicate these messages to affected populations.

2.1 Sanitation: An Overview

Sanitation includes excreta disposal, vector control, solid waste disposal and drainage. Infectious diseases and pathogens in excreta are a risk to others who may come in contact with waste. In addition, excreta can provide a breeding ground for vectors that can then transmit disease. During emergencies, and especially in camps for displaced persons, shelters or any type of temporary refugee location, sanitation and excreta disposal usually become a major problem. Large concentrations of people in one area, especially a confined area such as a camp, create an immediate sanitation problem that tends to aggravate exponentially if urgent measures are not taken.

The aim of a safe excreta disposal programme is to keep the environment free from contamination by human faeces. Merlin is committed to providing basic assistance in the early stages of an emergency to help people dispose of excreta safely, at both the household and community or camp levels. A minimum package of household-level sanitation assistance should always be considered for people living in temporary shelters or tents. Merlin will undertake to supply shovels for households to bury excreta, garbage and other solid waste away from homes and public places, and to provide instructions in the local language on safe disposal of excreta and human and animal corpses.

What to do

- *At the household level*
 - Estimate the number of households in need of shovels for burying excreta away from homes and public places.
 - Provide shovels either through the basic family sanitation kit, which is available through off-shore procurement, or by local procurement (when approved or waiver provided).
 - Provide instructions on safe excreta disposal.
 - Provide family sanitation supplies.

- *At the community level*
 - Pay local service companies to dispose of solid waste.
 - Provide instructions for and support construction of trench and pit latrines.
 - Provide messages on the importance of burying faeces away from homes and public areas as well as information on safe disposal of human and animal corpses.

What to remember

Safe disposal of human excreta is more important than disposal of animal waste, because human excreta transmit more diseases affecting humans. Human faeces are much more dangerous than urine, which poses little risk.

- Children’s faeces are more dangerous than adults’ due to the higher concentration of pathogens.

2.2 Family Sanitation Supplies

Basic family sanitation supplies are not stocked by Merlin but readily available from our list of Preferred Suppliers as separate items: squatting plate, folding shovel and plastic sheeting. These items must be supplemented with provision of community or camp water supplies, latrine construction, solid waste disposal and hygiene promotion.

What to remember

- These supplies are not stocked as a kit per se, but can be ordered as separate items and shipped together.
- Family sanitation supplies can be extended with baby or adult hygiene kits, which are produced to order and contain items such as soap, shampoo, toothbrushes, laundry detergent, cloth diapers, etc.

2.3 How to Dispose of Excreta

A rapid and effective response to the disposal of human waste can help prevent the spread of diseases and infections in emergency situations.

What to do

- Ensure full-time supervision of defecation areas by attendants.
- Supply receptacles for anal cleansing materials.
- Ensure that anal cleansing materials are buried or burned in a safe location to avoid creating a health hazard.
- Provide clear instructions in the local language on the use of sanitary facilities.

What to remember

- Establish defecation areas and sanitation systems as quickly as possible.
- Consult the affected community when citing sanitation facilities and involve them in each step.
- Support the government in the coordination of the agencies responsible for camp layout to ensure proper citing of water and sanitation facilities.
- The establishment of defecation areas should consider:
 - Cultural, age, gender and special physical needs.
 - Privacy and safety, especially for girls and women.
 - Ease of use and maintenance.
 - Soil and flooding conditions.
 - Location (distance from users, food storage and preparation areas, settlements and water sources).
 - Odour and insects.
 - Length of use.
 - Cost-effectiveness.
- Supply anal cleansing materials that the local population is accustomed to using.
- Children’s faeces are more dangerous than adult faeces.
- All sanitation programmes must provide hand-washing facilities as close as possible to latrines and should involve hygiene and environmental sanitation education.
- Support should be provided to the training of community- and camp-based organizations in participatory hygiene methods.
- Sanitation efforts will suffer if no local authority and/or community organization is made responsible for the provision and continuance of facilities.

WATER, SANITATION AND HYGIENE - Item

Supply	Catalogue number
Plastic sheeting (4 x 5 m sheets)	#####
Polyethylene rolls (4 x 50 m)	#####
Round point shovel, folding	#####
Baby hygiene kit	#####
Adult hygiene kit	#####
Tarpaulin, reinforced, polyethylene roll, 4 x 50m (plastic sheeting) for latrine superstructure	#####
Squatting plate, plastic, 60 x 80 cm	#####
Mould, plastic, for concrete latrine slab fabrication	#####

2.4 Community-Level Sanitation Assistance

In the first 6-8 weeks of an emergency, Merlin is committed to helping affected communities meet the basic sanitation need to safely dispose of excreta. This is done at both the household and community level, which includes camps for displaced persons or shelters and any type of temporary

refugee location. In the early days of an emergency, community-level actions involve finding or building suitable latrines.

What to do

- Ask about local and customary practices.
- Involve community members, especially women, in planning for emergency latrines.
- Estimate how many latrines will be necessary to meet minimum standards.
- Use disaggregated population data to plan the ratio of women's cubicles to men's (approximately 3:1). Where possible, urinals should be provided for men.
- Consult with community members and sanitation experts to decide which types of latrines are suitable in the immediate period
- Procure basic supplies to help communities build latrines. (Refer Merlin Supply Catalogue.)
- Provide easy access to latrines for people living with HIV/AIDS because they frequently suffer from chronic diarrhoea and reduced mobility.
- Design facilities and solutions with children in mind, because children's faeces are generally more dangerous than adults'

What to remember

Common standards for emergency latrines are as follows:

- There should be one latrine for every 20 people, arranged by household. For a displaced population where there are no existing toilets, it is not always possible to provide this immediately. In such cases, a figure of 50 people per latrine can be used, decreasing to 20 people per latrine as soon as possible. Latrines should:
- Be at least 30 m from any groundwater source.
- Be no more than 50 m or a one-minute walk from shelter and sited to minimize threats to users, especially women and girls, day and night.
- Be 1.5 m above the water table.
- Be designed in such a way that they can be used by all people, including children, older people, pregnant women and people with disabilities.
- Allow for disposal of women's sanitary protection, or provide the necessary privacy for women to wash and dry sanitary protection cloths.
- Be easy to keep clean and minimize fly and mosquito breeding.
- Have adequate drainage.
- Latrines must have an adequate and regular supply of water, if they use water for flushing, and/or a hygienic seal.
- There should be separate facilities for men and women available in camps or for displaced populations.

3. CHAPTER 2: WASH IN EMERGENCIES AND EARLY RECOVERY

This chapter of the how to guide is on how to implement the water, sanitation and hygiene components of the Merlin's commitment in Emergencies. There is practical guidance on what safe drinking water is and how to help families gain access to it in an emergency. Also covered are basic purification methods and guidance on providing families with water collecting and storage containers. The key hygiene-related messages are outlined, with guidance on how to communicate these messages to affected populations.

The chapter also covers how to address basic sanitation in the early days of an emergency, including such topics as provision of basic family and community sanitation supplies and general guidance on the types of latrines that may be needed.

To ensure the provision of safe water and proper sanitation for families and communities, Merlin, in collaboration with partners, will:

First six to eight weeks

1. Ensure the availability of a minimum safe drinking water supply, taking into account the privacy, dignity and security of women and girls.

2. Provide bleach, chlorine or water purification tablets, including detailed user and safety instructions in the local language.
3. Provide jerry cans, or an appropriate alternative, including user instructions and messages in the local language on handling of water and disposal of excreta and solid waste.
4. Provide soap and disseminate key hygiene messages on the dangers of cholera and other water- and excreta-related diseases.
5. Facilitate safe disposal of excreta and solid waste by providing shovels or cash for contracting local service companies spreading messages on the importance of keeping excreta (including infant faeces) buried and away from habitations and public areas; disseminating messages on disposal of human and animal corpses; and giving instructions on and support for construction of trench and pit latrines.

Beyond initial response

6. Make approaches and technologies used consistent with national standards, thus reinforcing long-term sustainability.
7. Define Merlin's continuing involvement beyond the initial response by:
 - Establishing, improving and expanding safe water systems for source development, distribution, purification, storage and drainage, taking into account evolving needs, changing health risks and greater demand.
 - Providing a safe water supply and sanitation and hand-washing facilities at schools and health posts.
 - Supplying and upgrading sanitation facilities to include semi-permanent structures and household solutions, and providing basic family sanitation kits.
 - Establishing regular hygiene promotion activities.
 - Planning for long-term solid waste disposal

How to communicate key hygiene-related messages

As part of the Response in Emergencies, Merlin is committed to making sure the following basic messages (or appropriate adapted local variations) are conveyed to the affected population. Messages on the importance of hygiene will have no effect if they do not reach or are not accepted by the affected community. It is extremely important that messages be discussed with vulnerable groups, especially women and children.

What to do:

- Establish and train a team that is familiar with local practices and social structures.
- Use the local language or pictograms if possible
- Keep messages clear and simple. Work through existing social structures
- Consider existing culture, practices and gender roles.
- Reach people during times of emergency at clinics, feeding centres, distribution centres, water collection points, etc.
- Use various ways of reaching people that can include megaphones, radio broadcasts, announcements, meetings, posters, home visits, large and small group discussions, local newspapers and community newsletters, as well as street theatre, slides, films, video presentations, games, drama, songs, role-play and simulation, if possible and appropriate.

What to remember:

- It is important not to blame the community for previous poor hygiene practices.

Potential Actions:

3.1 Priority Action Checklist

- Conduct a rapid assessment after
- Contacting government and partners to assess water and environmental sanitation needs
- Provide technical support to government and partners in citing new camps for the displaced and in the layout of water and sanitation facilities.
- Assess staffing requirements and recruit accordingly.
- Arrange for adequate funding, following Merlin guidelines.
- Ensure safe drinking water. Organize local action if needed, such as trucking in water.

- Provide adequate family water kits, water purification supplies and other supplies for household-level sanitation.
- Based on demographic data, calculate water collection and storage needs and provide adequate jerry cans or appropriate alternatives.
- Promote hygiene by providing soap and issuing messages on preventing and treating diarrhoea, cholera and shigella.
- Identify and provide suitable latrine facilities and
- Facilitate safe excreta and solid waste disposal.

3.2 Rapid Assessment

- A rapid assessment should be developed and implemented as soon as possible in an emergency.
- A rapid assessment matrix is available for reference on the Emergency Field CD-ROM. For a list of questions to ask during the initial rapid assessment to be conducted in the first 48-72 hours, see field CD.

3.3 Water, Sanitation and Hygiene in Emergencies:

- Water and sanitation are critical for survival in the initial stages of an emergency. People in emergency situations are generally much more susceptible to illness and death from disease, often caused by a lack of sanitation, inadequate water supplies and poor hygiene. Diarrhoea and infectious diseases transmitted from faeces to mouth are the most significant diseases resulting from poor water and sanitation.
- The main objective of water supply and sanitation programmes in emergencies is to reduce the transmission of diseases from faeces to mouth through the promotion of good hygiene practices, the provision of safe drinking water and the reduction of health risks related to poor sanitation.
- This chapter provides an overview of the key early action that needs to be taken to help Merlin meet its water- and sanitation-related commitments in Emergencies. It provides non-specialist staff with the information they need to consult more effectively by telephone with technical experts. Although Merlin may not be directly involved in some of the activities described in the chapter (but instead supports them in working with local and international implementing partners), its guidance, coordination and technical oversight are essential in order to ensure standards and policy guidelines, and the quality of water, environment and sanitation interventions

3.4 Merlin's Role and Partners

- During emergencies, Merlin is committed to meeting families' rights to water and sanitation, whether directly or through implementing partners. Merlin does not have the capacity to take the lead on behalf of the INGOs and local non-governmental organizations (NGOs) in water, sanitation and hygiene programmes in emergency situations but will ensure that essential needs are met and for supporting related government institutions to coordinate the emergency response.
- Although Merlin's water and sanitation role in emergencies varies from country to country, its direct contribution is typically to:
 - Restore water sources and
 - Truck water in if necessary
 - Provide technical expertise to ensure rapid response standards and policy guidelines are followed.
 - Provide water containers and water purification mechanisms.
 - Make latrines and sanitation services available
 - Make sure that hygiene and sanitation supplies are available.
 - Prepare and disseminate information on safe water, sanitation and hygiene.
 - Order additional supplies and equipment and oversee their distribution and use
 - Monitor and follow through with implementing partners.

On emergency water, sanitation and hygiene projects, Merlin typically works with the following partners, among others: local government, local NGOs, Action Contre la Faim, International Committee of the Red Cross, International Federation of Red Cross and Red Crescent Societies, International Rescue Committee, Médecins Sans Frontières, Oxfam Public Health Engineering Team, RedR International, UN High Commissioner for Refugees, World Health Organization, and Water, Engineering and Development Centre, UNICEF and WHO.

Although some basic emergency response actions can be taken by non-specialists, every effort should be made to find and recruit experienced water and sanitation professionals as early as possible.

What to do:

- Involve Merlin's water, environment and sanitation programme or health officer in the country immediately; this person should take the lead in implementing at once the steps required to support the emergency response.

If no officer is available:

- If there is no Water and Environmental Sanitation focal person in the country office, the CD and the CHD should contact the Desk to identify suitable candidates from a neighbouring country, the region, or elsewhere; and/or part of a surge capacity response
- Look for experienced staff to take on key responsibilities in medium- and large-scale emergencies.
- Look for experienced partners or outsource to appropriate institutions to take on key responsibilities in medium- and large-scale emergencies.

3.5 Ensuring Women's and Girls' Safety, Dignity and Privacy

In most emergencies the responsibility for collecting water falls to women and children. Women and adolescent girls can be vulnerable to sexual violence or exploitation when using communal water and sanitation facilities. Several steps can be taken to reduce this risk.

What to do:

- Encourage women's participation in water supply and sanitation programmes wherever possible. The equitable participation of women and men in planning, decision-making and local management will help ensure that the entire group has safe and easy access to water supply and sanitation services, and that services are equitable and appropriate.
- Put latrines in places that reduce the vulnerability of women and girls to attack, especially at night. Where possible, communal latrines should be provided with lighting or families provided with torches.
- Seek the input of the community to enhance the safety of users.
- Find ways to ensure that women feel, and are, safe using the toilets provided.
- Allow for sufficient bathing cubicles when communal bathing facilities are necessary, with separate cubicles for males and females.

3.6 Safe Drinking Water

In emergencies, clean, safe water for drinking, cooking and for personal hygiene is critical to ensuring health and well-being, especially of children and women. The following steps give a general picture of what needs to be done.

What to do...

in all cases:

- Provide sufficient supplies of safe water for feeding centres, communal kitchens, health clinics, etc., and train staff to prevent contamination.
- Facilitate the provision of minimum quantities of safe water for drinking, cooking and personal hygiene to those affected, displaced or not, as long as supply mechanisms are disrupted.
- Provide suitable containers for collecting and storing water.
- Immediately facilitate bacteriological water testing wherever contamination is suspected or diarrhoea is present
- Promote conservation of available supplies and recycling.
- Promote community monitoring of the condition and use of water and sanitation facilities.
- Keep all pumps and delivery systems working

if wells are reduced or insufficient:

- Promote expert surveys.
- Collect rainwater where possible - this is the first option if it rains.
- Deepen existing wells and sink new wells where appropriate (after conducting an EIA).

If surface water is reduced or dried up:

- Protect and conserve available surface water by controlling access and constructing small dams, retention pits, etc.

If wells are blocked, damaged or contaminated:

- Clean or re-sink when possible, then pump out and disinfect
- Build replacements if needed.

If piped distribution systems have been damaged

- Set up standpipes and/or distribution tanks as immediate, temporary measures.
- Repair and disinfect system based on expert surveys.

If available water is unsafe:

- Collect rainwater where possible. -
- Search for alternative sources (especially groundwater).
- Treat unsafe water until better-quality water is available.

As a last resort:

- Deliver supplies by truck to ensure survival until other sources can be found, water piped or the population moved
- Set up storage tanks at distribution centres.

What to remember:

- The minimum water requirement for drinking, cooking and personal hygiene in any household is 15 litres per person per day.
- Springs may be considered as an alternative supply. In most cases only disinfection is required.
- It is the presence of faecal coliforms (bacteria that reside in the colon) in a water supply that shows it has been contaminated by human or animal faeces.

3.7 Family water kit

The rapid distribution of family water kits can help families have water that is safe for drinking, cooking and personal hygiene in the first days and weeks after an emergency hits.

The family water kit is good for 10 families for one month. It is one of the key emergency supplies.

Quantity	Description	Supply Catalogue Number
20	10 liter collapsible container, PW/PE	5007310
10	14 liter with lid, HDPE	5007315
50	Wrapped 110g bar of soap	0552000
10	33mg water purification tablets, pack of 50	1588355

*the Supply Catalogue number for the entire kit of 9901100
 Note: flocculation and disinfectant powder for treating turbid water can be ordered separately from the catalogue [item number 5007321]

Concentrations are usually expressed per 100 ml of water. As a rough guide:
 0-10 faecal coliforms/100 ml = reasonable quality
 10-100 faecal coliforms/100 ml = polluted
 100-1,000 faecal coliforms/100 ml = dangerous
 1,000 faecal coliforms/100 ml = very dangerous

What to do:

- Calculate the number of family water kits needed based on an estimate of the number of affected families.
- Find out how many family water kits have been stocked by the office or are otherwise available in the country, the Merlin Preferred Suppliers group
- Procure elements of the kit locally or the kit in its entirety from offshore using PSA, or elsewhere.
- If they are not yet available in the local language, have instructions for using the kit translated into the local language and printed at low cost.

What to remember:

- The development of locally appropriate family water kits is a critical step in preparedness. Instructions for using the kit, in the local language or using pictographs can be developed and printed ahead of time, along with key hygiene messages.
- Provide bleach, chlorine or water purification tablets,

With gross dimensions of 80cm x 40cm x 50cm, the family water kit is very bulky; shipment by sea freight is recommended when possible. Cost: approximately US\$92.00, volume: 0.160 m3, weight: 27 kg.

including detailed user and safety instructions in the local language.

3.8 Trucking water

Trucking water (also called water tankering) to meet a community's water needs during an emergency should be considered a short-term solution, to be used only as long as it takes to pipe water in, develop other sources or move the population. However, it is sometimes the only way to ensure that people have safe drinking water, and is often unavoidable in the early stages of an emergency or when a population is mobile. Water tankers may be available from the military, fire services, dairies or bottled drink factories, including breweries; petrol and oil tankers are difficult to clean adequately before using.

Quantity	Description	Supply Catalogue number
20	10 litre collapsible container,	#####
10	14 litre bucket with lid, HDPE	#####
50	Wrapped 110 g bar of soap	#####
10	33 mg water purification tablets, pack of 50	#####

What to do:

- Calculate the amount of water the target population needs. Given normal minimum requirements of 15 litres per person per day, for example, a population of 1,000 would need 15,000 litres per day.
- Identify available water, milk or other tankers, or flatbed trucks that can be made into tankers by fitting them with bladder or rigid tanks
- Choose the most reliable tankers and drivers available
- Ensure that enough drivers are available to cover absence for sickness and breaks. Avoid overworking drivers.
- Keep a logbook for each tanker
- Provide a tank at the destination so that tankers can discharge rapidly.
- Provide hard and well-drained surfaces at tanker filling and discharge points, as well as enough space for tankers to wait in line and turn around.
- Provide pumps for filling and emptying tankers rapidly.
- Chlorinate water in tankers during filling and monitor free chlorine residual during discharge.

What to remember:

- Trucking water can be expensive and impractical and should be avoided if there is another option. A single load of a water tanker with a capacity of 8,000 litres can meet the normal minimum requirements (15 litres) of 530 people for a single day.
 - Water trucking is an option only if there are good or serviceable roads.
 - Water trucking can be easily disrupted by insecurity, strikes and bad road conditions.
- Priority in trucking water should be delivery to community services (hospitals, health posts and schools), after which water should be delivered to public distribution points.

3.9 Treating water: Household level

The purpose of purifying water is twofold: to remove, as much as possible, contaminating solids (by the process of precipitation, coagulation and filtration), and to remove or destroy (through disinfecting) disease-causing organisms in the water. Merlin is committed to providing bleach, chlorine and water purification tablets as well as instructions for their use at the onset of an emergency to help families quickly obtain water that is safe for drinking, cooking and hygiene.

In the early days of an emergency, tablets or powders can be used for treatment at the household level while longer-term solutions are being put in place. Surface water is particularly dirty and almost always needs to be treated. If the water source is clean (clear, not dirty), only disinfection is necessary.

What to do:

- Estimate the number of families who may need household purification supplies
- Order and distribute family water kit (or its locally designed equivalent) if it can be made available quickly. The family water kit contains the necessary water purification supplies, including containers and tablets. One family water kit is good for 10 families for one month.
- If family water kits are not available, estimate the number of water purification tablets or Chlor-Floc sachets that are needed.

- Confirm specific quantities of water that can be purified per dose based on instructions for the actual product used.
- Procure the products locally or through our preferred suppliers group.

What to remember:

- Surface water is particularly unsafe and must be purified.
- Even where a protected water source is in use, it is always best to disinfect the water and store it in the household.
- If people are not accustomed to using water disinfection products, it is very important to provide written or pictogram instructions along with oral instructions and information.
- Bleaching powder and chlorine tablets will only disinfect the water; they will not remove solids.
- Chlor-Floc sachets purify water, disinfecting and removing solids
- All chemicals and solutions should be stored in tightly closed containers made of dark glass, ceramic or plastic (not metal) and kept in a cool, dark place.
- Other household treatment options include boiling water, ceramic filters and solar disinfection.

3.10 Collecting and storing water at the household level

In emergencies, Merlin is committed to providing jerry cans (or suitable alternatives such as plastic buckets or barrels) to affected families who need a way to collect and store water for washing, cooking and bathing. Each household should have at least two clean water collection containers of 10-20 litres, plus enough clean water storage containers to ensure there is always water in the household. The amount of storage capacity required depends on the size of the household and the consistency of water availability. For example, a storage capacity of approximately four litres per person would be appropriate for situations where there is a constant daily supply. Collapsible containers and buckets are included in the family water kit and can be provided in this way.

What to do:

- Based on demographic data or rough population estimates, calculate the number of families who are in need of water collection and storage containers. In a camp setting, whichever agency is in charge of setting up or running the camp should have a working estimate of the number of families and total population of the camp. If people are still living at home, the local authorities should know how many families are being targeted.
- Ensure that each family has at least two water collection containers of 10-20 litres.

What to remember:

- Rigid high-density polyethylene tanks (capacity of 500-2,000 litres) are useful for water storage at community, school and health posts.
- Water containers should be covered.
- Cups or other utensils should not be dipped into disinfected water.

3.11 Soap, bathing and laundry

Provision of soap is extremely important in emergencies because effective hand-washing using soap (or an alternative) is a key way to prevent waterborne diseases and infections. Each person needs 250 g of soap per month for personal hygiene.

What to do:

- Provide the family water kit, which contains 50 bars of soap for 10 families, or five bars of soap per family
- If provision of the family water kit is not feasible, provide soap separately, preferably through local procurement.
- Where communal bathing facilities are necessary, make sure there are sufficient bathing cubicles available, with separate cubicles for males and females.
- Where communal laundry facilities are necessary, make sure there is at least one washing basin per 100 people & private laundering areas available for women to wash and dry underpants/sanitary cloths.

3.12 Hygiene

Types of emergency latrines

In the earliest days of an emergency, it is important to isolate excreta. This can be done in different ways, initially through a defecation trench (as an emergency stopgap solution until other latrines are constructed), then with trench and pit latrines.

Before toilets can be constructed, it may be necessary to mark off an area for the creation of shallow trench latrines. This is an emergency measure that is appropriate for only a couple of days. It is inexpensive and easy to dig in most locations using hand tools such as picks and shovels.

Deep trench latrines last longer than shallow trenches and can also be dug by hand. However, digging takes more time unless mechanical excavators can be used. Each trench can last for several weeks. The deep trench latrine might be an appropriate solution for temporary or emergency health centres, crowded centres for displaced persons or refugees or where there is not enough space for sufficient pit latrines, such as a school yard.

What to remember:

An emergency sanitation strategy can include construction of two or three types of latrines at the same time. For example, while a defecation field might be used and maintained in the first days, community pit latrines may also be under construction while community members collect information on appropriate family latrines.

3.13 Hygiene promotion

What to remember:

- All faeces should be disposed of safely. Using a toilet or latrine is the best way.
- All family members, including children, need to wash their hands thoroughly with soap and water, or ash and water, after contact with faeces, before touching food and before feeding children.
- Washing the face with soap or water every day helps to prevent eye infections. In some parts of the world, eye infections can lead to trachoma, which can cause blindness.
- Only water that is from a safe source or is purified should be used. Water containers need to be kept covered to keep the water clean.
- Raw or leftover food can be dangerous. Raw food should be washed or cooked. Cooked food should be eaten without delay or thoroughly reheated.
- Food, utensils and food preparation surfaces should be kept clean. Food should be stored in covered containers
- Safe disposal of household refuse helps prevent illness.

3.14 Pit latrines

The most common excreta disposal system around the world is the family pit latrine. It is also the number one solution in emergencies. The pit latrine consists of a squatting plate (or seal) above a hole in the ground with a superstructure for privacy. Individual families can dig the pit and build the superstructure. These latrines are usually well maintained if used by only one family. Pit latrines can also be used in clusters as communal facilities.

What to do:

- Find an appropriate area
- Provide families or groups with instructions for digging pit latrines.
- Identify a team to assist in digging the trenches if a mechanical excavator will not be used
- Procure necessary tools, such as shovels, boards, rope (to mark off trenches), some type of material to create urinals, and some kind of sheltering material (plastic sheeting or other) to create private places for women and girls.
- Use a water-seal latrine where culturally appropriate.

What to remember:

- Pit latrines are about 1 m across and 2 m deep.
- The rim of the pit should be raised about 15 cm and cut-off ditches dug to divert any rainwater surface run-off.

- The sides of the pit should be reinforced, perhaps to a depth of 1 m below ground level to prevent collapse.
- When a pit is three-quarters full, it should be filled with soil and the superstructure and squatting plate moved to a new pit.

3.15 Diarrhoea prevention and treatment

What to remember:

To prevent diarrhoea

- All faeces should be disposed of in a latrine or toilet.
- Good hygiene practices protect against diarrhoea. Hands should be thoroughly washed with soap and water, or ash and water, after contact with faeces and before touching food or feeding children.

To treat diarrhoea

- Diarrhoea kills children by draining liquid from the body, thus dehydrating the child. As soon as diarrhoea starts, it is essential that the child be given extra fluids along with regular foods and fluids.
- A child’s life is in danger if there are several watery stools within an hour or if there is blood in the faeces. Immediate help from a trained health worker is needed
- Breastfeeding can reduce the severity and frequency of diarrhoea.
- A child with diarrhoea needs to continue eating regularly. While recovering from diarrhoea, a child needs at least an extra meal a day for three weeks.
- If the child is dehydrated with severe or persistent diarrhoea, only oral rehydration solution or medicines recommended by a trained health worker should be used. Other diarrhoea medicines are generally ineffective and could be harmful to the child.

3.16 Cholera and shigella prevention

There are two types of acute diarrhoea emergencies: cholera (acute watery diarrhoea) and shigella dysentery (acute bloody diarrhoea). Both are transmitted by contaminated water, unsafe food, dirty hands and vomit or stools of sick people. Other causes of diarrhoea may produce severe illness for the patient but will not produce outbreaks that threaten the community.

<i>Cholera/ Shigella</i>	
Symptoms - Acute watery diarrhoea	Acute bloody diarrhoea
Stool - >3 stools per day, watery, like rice water	>3 stools per day with watery, like blood or pus
Fever - No/ Yes	
Abdominal cramps - Yes /No	
Vomiting - Yes/ a lot/ No	
Rectal pain - No/ Yes	

What to remember:

How the general population can avoid cholera and shigella

- Wash hands with soap before and after using toilets, before preparing food and before eating
- Boil or disinfect water with chlorine solution.
- Eat only freshly cooked food
- Do not defecate near water sources.
- Use latrines and keep them clean How health workers, community members, parents and caregivers can detect cholera and shigella

Table 23 - Symptoms of Cholera and Shigella

	Cholera	Shigella
Symptoms	Acute watery diarrhoea	Acute bloody diarrhoea
Stool	>3 stools per day, watery, like rice water	>3 stools per day with blood or pus
Fever	No	Yes
Abdominal Cramps	Yes	Yes
Vomiting	Yes, a lot	No
Rectal Pain	No	Yes

For health workers, if cholera or shigella is suspected

- Take stool samples and send them for immediate analysis
- Do not wait for laboratory results to start treatment and to protect the community. Not all the cases need to be confirmed by a laboratory

- Cholera outbreaks require immediate attention according to standard protocols.

3.17 Solid and medical wastes

Accumulations of garbage create conditions for the spread of rodent- and insect-borne diseases. Arrangements for storage and regular collection and disposal must be made, with instructions translated into the local language.

What to do:

Storage and collection

- For the initial clean-up, mobilize labour and arrange transport to move the waste to selected disposal sites.
- Place metal or plastic containers (e.g., 200-litre oil drums cut in half) in appropriate locations, providing lids if possible and punching drainage holes in the bottom.
- In market areas and large institutions, construct large rectangular bins with sloping floors to allow the garbage to be shovelled out.
- Spray disposal sites with insecticide daily
- Arrange for the regular - perhaps daily - collection of garbage from all containers.

Large-scale disposal

Wherever possible, garbage should be buried at designated locations or burned, preferably using incinerators.

Small-scale disposal

- Small-scale disposal, such as in rural areas, can utilize hand-dug pits or trenches.
- Trenches should typically be 1.5 m wide and 2 m deep.
- Refuse should be covered with earth at the end of each day to discourage rodents and insects.

Incineration

- Where there is no alternative to dumping garbage in open areas:
- Fence off an area.
- Crush tins to prohibit their use by mosquitoes for breeding.
- Burn the waste as quickly as possible.
- Cover the burned refuse with earth.

What to remember:

Storage and collection

- Dogs spread garbage, while free-range goats, pigs and chickens help control it.
- Keep containers covered if possible.
- Give special attention to garbage collection from hospitals, feeding centres and other community service sites.

Large-scale disposal

- Disposal sites should be well away from any dwellings, and preferably fenced off, at least 1 km downwind of major habitations and not close to water sources.
- Dumping should be conducted under supervision, in trenches made in flat areas or other suitable land.
- After being compacted, waste should be covered with at least 50 cm of soil.
- Where space and bulldozers are available, sanitary landfill disposal may be possible

Small-scale disposal

When trenches are full to within 40 cm of ground level, fill them with compacted earth and mark the site.

Medical waste

Medical waste, needles and scalpels should be treated separately, for example, using injection safety boxes, incinerated as quickly as possible and then buried.

3.18 Disposal of Dead Bodies

Both human and animal - left undisposed of or in water pose health hazards mandating immediate action.

What to remember:

- Cremation and burial are hygienic ways of disposing of human and animal corpses.

3.19 Water, Sanitation and Hygiene Supply list (adapted from UNICEF Supply catalogue⁵)

Commonly Ordered Items from Supply Division, Copenhagen

Items	Procurement Source	Specifications	Supply Catalogue Number
Water storage supplies	Copenhagen	Water tank, collapsible, 1.5m ² bladder	0005832
		Water tank, collapsible, 5000 l (5m ²) with distribution kit	5675000
		Water tank, collapsible, 10000 l (10m ²)	0005834
Water trucking supplies	Copenhagen	Water tank, modular rigid, PVC/PE set of 10 x 1m ² (1000 l) each (pump separate, see below)	0005847
Water distribution supplies	Copenhagen	Hose, lay-flat, 50m long, 50mm diameter	0008028
		Hose, lay-flat, 25m long, 75mm diameter	0008029
		Water distribution kit, 6 taps	0005831
Water filtration supplies	Copenhagen	Water purification unit, skid, 5m ² (5000 l/hr @ 20m, TMH)	0005846
		Water purification unit, skid, 15m ² (15000 l/hr @ 30m, TMH)	0005856
	Local, regional, Copenhagen	Filter, drinking, candle, 10-80 l/day, stainless steel	5619902
		Spare set of 4 candles	5619903
Water purification supplies	Local, regional, Copenhagen	Aluminium sulfate in granules 17-18%	0000571
		Calcium hypochlorite (stable bleaching powder) 65-70%	0000570
	Copenhagen	Colorimeter, digital, pocket, 0-2mg/l chlorine (chlorination testing kit)	0000538
		If required, order separately: DPD1 for free chlorine DPD4 for total chlorine	0000550 0000552
Water pumping supplies	Copenhagen	Pump centrifugal, diesel, 5 m ² /hr @ 20 m TMH	0009100
		Pump centrifugal, diesel, 10 m ² /hr @ 20 m TMH	0009101
		Pump, dewatering, submersible, electrical	0009090
		Generator set, diesel, mobile, 8 kVA*	1800342
Water testing supplies	Copenhagen	Electrical distribution box, portable, with assorted cables	5035010
		Water quality test kit, OXFAM DELAGUA, portable	0005829
	Regional, Copenhagen	Bacteriological H ₂ S field testing kit	0000568
Well construction supplies	Local, Regional, Copenhagen	Dewatering pump, 11-21 m ² /hr @ 50m TMH with delivery hoses and fittings	0005815
	Copenhagen	Drilling set, soil, manual, ergonomic	0005430

*Hazardous material. Transport certificate required

4. CHAPTER 3: PLANNING FOR LONG-TERM SUSTAINABILITY

The primary goal of emergency response is to meet immediate and unforeseen needs but more importantly to build the capacity of families, institutions and authorities to better cope and respond to crisis when they occur. However, emergency programmes do sometimes have a demonstration effect by providing examples of new and low-cost approaches to governments and partners. What is necessary and critical, is institutionalizing the planning and capacity building process on the Response contingency planning component and a jointly developed early recovery and resilience response plan from the outset of the crisis rather than later.

⁵ Accessed online Supply Division Catalogue - 12 May, 2012. For the complete list of water and sanitation items, this is available (www.supply.unicef.dk/Catalogue/).

What to do:

- Ensure that all Merlin-supported emergency interventions conform to national standards where possible and appropriate (e.g., minimum coverage standards, technology standards, contracting norms).
- Encourage other support agencies to work with governments and through sectoral coordination mechanisms and to respect national standards
- Use new partnerships and coordination mechanisms established for emergency response to improve sector coordination over the long term.

What to remember:

- For technologies to be appropriate, they should generally evolve out of the local context and build on local innovations.
- Long-term intervention design should adopt a participative approach involving all affected groups in the decision-making process as part of disaster risk reduction
- Forming water and sanitation committees representative of the group being served, with half of them women, to manage communal facilities such as water points, public toilets and washing areas will ensure representation and promote sustainability (part of PHC managerial processes).

4.1 Defining Merlin's continuing involvement

Beyond the initial emergency response, Merlin's continued work to improve water and sanitation for emergency-affected populations will probably involve longer-term solutions and programme planning; this work will certainly need special expertise and resources - which is beyond the scope of the organizational mandate and as suggested in the Emergency field CD, which is designed to help non-specialists get early response off to a rapid start. In the EPR commitments in Emergencies, Merlin has undertaken to improve water and sanitation after the initial emergency period by taking the actions below. References to related material in the Emergency CD and/or appropriate Field Handbooks as indicated where appropriate and also at the end of the guide. Appropriate examples, standards for water, sanitation and hygiene packages will be provided based on country feedback on this guide.

What to do:

- Establish, improve and expand safe water systems for source development, distribution, purification, storage and drainage.
- Provide a safe water supply, sanitation and hand-washing facilities at schools and health centres.
- Supply and upgrade sanitation facilities to include semi-permanent structures
- Supply and upgrade household sanitation solutions; provide family sanitation supplies
- Establish regular hygiene promotion activities.
- Plan for long-term solid waste disposal

5. CHAPTER 4: WASH IN SCHOOLS/HOSPITALS

This chapter addresses how to implement the water, sanitation and hygiene components of the Merlin's commitment in Hospitals and Schools. There is practical guidance on what safe drinking water is and how to help pupils; teachers and clients gain access to these services during an emergency and normal or regular programming. Merlin country response, in this case, is optional and depends on assessed needs, improving quality of care and life saving impact. Also covered are basic purification methods and guidance on providing health facilities and educational institutions with water collecting and storage containers. The key hygiene-related messages as already outlined with guidance on how to communicate these messages to affected populations.

School children and sick people, just like their crisis affected families, have rights to basic facilities such as school toilets, safe drinking water, clean surroundings and basic information on hygiene. If these conditions are created, children learn better and can bring concepts and practices on sanitation and hygiene back to their families. Care seeking behaviour also will improve, especially for institutional health care and delivery.

Schools and hospitals can play important roles in bringing about behavioural changes and promoting better health. Improved hygiene practices are essential if transmission routes of water- and sanitation-related diseases are to be cut. Diseases such as diarrhoea, parasitic worm infections, skin

and eye diseases, need to be tackled by making improvements to water and sanitation facilities. These improvements in facilities must go hand in hand with hygiene behaviour change and practice, if the transmission of disease is to be prevented.

Rapid action is required—far too many schools have poor hygiene conditions or do not have water, sanitation and handwashing facilities at all. While worldwide statistics are still scattered, recent studies show that in many countries more than half the primary schools do not have safe drinking water on the school premises or any type of toilet or urinal. Schools often suffer from:

- Non-existent or broken, dirty and unsafe water supply, sanitation and handwashing facilities.
- Toilets or latrines that are not adapted to the needs of children, in particular, girls.
- Children with poor hygiene habits and practices.
- Non-existent, irrelevant or passive health and hygiene education for children.
- Unhealthy and dirty classrooms and school compounds.

The provision of water and sanitation services together with sustainable operation and maintenance, meaningful hygiene education, and consistent use of facilities by all children and teachers is essential.

5.1 Putting girls first - as a response priority

Household chores, such as fetching water from long distances, keep many girls out of school. Providing water closer to homes increases girls' free time and boosts their school attendance. Most other household chores—including cleaning latrines and disposing of garbage—also fall to women and girls. When family members become sick (often due to hygiene-related diseases), girls are more likely to be kept home to care for them (Burgers 2000). All children need a sanitary and hygienic learning environment, but the lack of sanitation and hygiene facilities in schools has a stronger negative impact on girls than on boys. Girls need safe, clean, separate and private sanitation facilities in their schools. A study undertaken by the Government of Bangladesh and UNICEF (DPHEDPE-UNICEF 1994) revealed an 11% increase in girls' enrolment mainly due to the provision of sanitary latrines. Project evaluations and research has found a 15% increase in school attendance in Bangladesh, when water was available within a fifteen-minute walk compared to one of an hour or more. Similarly, a study in Tanzania showed a 12% increase in school attendance when water was available within 15 minutes instead of being more than an hour away (Redhouse 2004)

s/n	Countries	Key WASH interventions	Capacity to support WASH in Emergencies	Capacity to support WASH in Communities	Capacity to support WASH in Schools	Capacity to support WASH in HF	Coverage and target population	Comments
1	CAR	Hygiene promotion; Public sanitation; Solid waste management	N	Hygiene education	N	Assessment and solid waste management	Refugee populations	Interested in Policy and strategy formulation; Capacity building. Need TA
2	Kenya	Hygiene promotion; Public sanitation; Solid waste management	Y	Hygiene and sanitation	N	Water, Hygiene and sanitation plus solid waste management	HF catchment population	Capacity building at country level. Need TA
3	Myanmar	Hygiene promotion; Public sanitation	Y	Water, Hygiene and Sanitation	WASH clubs	N	Vulnerable populations	PHAST/CLTS/VIP latrines. Policy, plans and guidelines; Capacity building at country. Need TA
4	South Sudan	Hygiene promotion; Public sanitation; Solid waste management	Y	Hygiene	N	Water, Hygiene and sanitation plus solid waste management	HF catchment population	Interested in Policy and strategy formulation; Capacity building and info sharing. Need TA
5	Philippines	Hygiene promotion; Public sanitation; Solid waste management	N	Water, Sanitation and Hygiene	N	Hygiene and sold waste management	HF catchment population and vulnerable populations	Interested in Capacity building and info sharing. Need TA
6	Nepal	Hygiene promotion; Public sanitation	N	Water, sanitation and hygiene	School Clubs	N	Vulnerable populations	Interested in Policy and DRR strategy formulation; Capacity building and info sharing. Partnership
7	North Sudan	Hygiene promotion; Public sanitation; Solid waste management; Vector control	N	N	N	N	IDP and host community	Interested in Policy and strategy formulation; Capacity building and info sharing. Need TA
8	DRC	Hygiene promotion; Public sanitation; Solid waste management; Vector control	Y	Water, hygiene and sold waste management	N	Hygiene, sanitation and sold waste management	IDPS and host communities	Interested in Policy and strategy formulation; Capacity building and info sharing. Need TA
9	Zimbabwe	Hygiene promotion; Water supply	Y	Water and hygiene	N	Water, sanitation, hygiene and solid waste management	HF catchment population	Interested in Policy and strategy formulation; Capacity building and info sharing. Need TA

10	Liberia	Hygiene promotion; Public sanitation; Solid waste management; Vector control	N	Water, Sanitation and hygiene	N	Water and hygiene	HF catchment population	Interested in Policy and strategy formulation; Capacity building and info sharing. Need TA
11	Pakistan	Hygiene promotion; Public sanitation; Solid waste management; Vector control	Y	Hygiene	N	Water, sanitation and hygiene	HF catchment population	Interested in Policy and strategy formulation; Capacity building and info sharing. Need TA
12	Haiti	Needs high						
13	Yemen	Needs high						
14	Philippines	Low						
15	Somalia	Needs high						
16	Ethiopia	Needs High						
	Conclusion	4 areas of interest with 3 areas of emphasis - <u>hygiene, sanitation and solid waste disposal</u>	54.5% with an EPR component	91% with community component	Only 18% with school component	73% with Hospital component	3 main groups of recipients - IDPs/ refugees; HF catchment area; and Host communities	Policy and DRR Plans; Capacity building and info sharing of guides; TAs (<u>Software support but hardware in hospitals mainly</u>)

6. Chapter 5: Merlin Programming Commitments and Benchmarks

<p>Commitment 1 Effective partnership is established for WASH cluster/inter-agency coordination, with links to other cluster/ sector coordination mechanisms on critical inter-sectoral issues.</p>	<p>Benchmark 1 Coordination mechanism provides guidance to all partners on common approaches and standards; ensures that all critical WASH gaps and vulnerabilities are identified; and provides information on who is doing what, where, when and how, to ensure that all gaps are addressed without duplication.</p>
<p>Commitment 2 Affected or at risk families access sufficient water of appropriate quality and quantity for drinking, cooking and maintaining personal hygiene.</p>	<p>Benchmark 2 Children and women have access to at least 7.5-15 litres each of clean water per day.</p>
<p>Commitment 3 Affected families access toilets and washing facilities that are culturally appropriate, secure, sanitary, user-friendly and gender-appropriate.</p>	<p>Benchmark 3 A maximum ratio of 20 people per hygienic toilet or latrine squat hole; users should have a means to wash their hands after defecation with soap or an alternative (such as ash).</p>
<p>Commitment 4 Families receive critical WASH-related information to prevent child illness, especially diarrhoea.</p>	<p>Benchmark 4 Hygiene education and information pertaining to safe and hygienic child-care and feeding practices are provided to 70% of women and child caregivers.</p>
<p>Commitment 5 Children access safe water, sanitation and hygiene facilities in their learning environment and in child-friendly spaces.</p>	<p>Benchmark 5 In learning facilities and child-friendly spaces, 1-2 litres of drinking water per child per day (depending on climate and individual physiology); 50 children per hygienic toilet or latrine squat hole at school; users have a means to wash their hands after defecation with soap or an alternative; appropriate hygiene education and information are provided to children, guardians and teachers.</p>

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Cross-Cutting and Other Emerging Issues

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