

UNHCR WASH MANUAL

Practical Guidance for Refugee Settings

PART 1: UNHCR WASH PROGRAMME GUIDANCE



© United Nations High Commissioner for Refugees, Geneva

First Edition January 2017

Any part of this publication, may be copied, reproduced or adapted to meet local needs, without permission from the author/s or publisher, provided the parts reproduced are distributed free, or at cost and not for commercial ends, and the source is fully acknowledged as given below.

Please send copies of any materials that have been used to the UNHCR at the address given below.

UNHCR WASH Manual: Practical Guidance for Refugee Settings
United Nations High Commissioner for Refugees
Case Postale 2500. CH-1211 Genève 2 Dépôt Suisse.

This document is an output from a consultative process with WASH actors active in refugee settings. All reasonable precautions have been taken by the UNHCR to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the UNHCR be liable for damages arising from its use.

Designed and produced by the UNHCR.

UNHCR WASH MANUAL

Practical Guidance for Refugee Settings

PART 1: UNHCR WASH PROGRAMME GUIDANCE

Acknowledgements

This document has been principally written by Ben Harvey, with extensive inputs from Murray Burt, Marian Schilperood, Claudia Perlongo, Francesca Coloni, Dominique Porteaud, Abdou Savadogo, Sarah House, and John Cody. UNHCR would like to formally acknowledge the large number of experts and practitioners who contributed to the development and review of this document.

These individuals include:

- ☐ Abdou-Salam Savadogo, Senior Regional WASH Officer, UNHCR Dakar
- ☐ Abraham Varampath, Senior WASH Advisor, Save the Children UK
- ☐ Allen Gidraf Kahindo Maina, Public Health Officer, UNHCR Geneva
- ☐ Andy Bastable, Head of Water and Sanitation, OXFAM GB, Oxford, UK
- ☐ Ben Harvey, WASH Consultant, UNHCR Geneva
- ☐ Caetano Dorea, Dept. of Civil and Water Engineering, Université Laval
- ☐ Claudia Perlongo, WASH Officer, UNHCR Geneva
- ☐ David Githiri Njoroge, WASH Officer, UNHCR Ethiopia
- ☐ Dominique Porteaud, Global WASH Cluster Coordinator, UNICEF Geneva
- ☐ Elizabeth Lamond, Senior WASH Advisor, IRC New York
- ☐ Ellen Milnes, Senior Lecturer in Hydrogeology, Université de Neuchâtel
- ☐ Francesca Coloni, Senior Regional WASH Officer, UNHCR Tunis
- ☐ John Adams, Independent WASH Consultant, UK
- ☐ John Cody, WASH Consultant, UNHCR Geneva
- ☐ Jola Miziniak, Public Health Advisor, OXFAM GB, Oxford, UK
- ☐ Krischan Makowka, Technical Advisor UWASNET, Uganda
- ☐ Marian Schilperood, Chief Public Health Section, UNHCR Geneva
- ☐ Marion O'Reilly, Head of Public Health Promotion, OXFAM GB, Oxford, UK
- ☐ Murray Burt, Senior WASH Officer, UNHCR Geneva
- ☐ Nicholas Brooks, Senior Emergency WASH Advisor, CARE International
- ☐ Nicole Hahn, WASH Cluster Coordinator, UNICEF Philippines
- ☐ Richard Bauer, Senior WASH Advisor, Norwegian Refugee Council, Oslo
- ☐ Roberto Saltori, WASH Focal Point, UNICEF Jordan
- ☐ Samuel Gonzaga, Senior WASH Officer, UNHCR Lebanon
- ☐ Sarah House, Independent WASH Consultant, UK
- ☐ Tom Handzel, Epidemiologist, CDC Atlanta
- ☐ Tessa Gough, WASH Emergency Response Program Manager, CARE
- ☐ William Carter, Water and Sanitation Officer, IFRC Geneva
- ☐ U Aye Muang, Public Health Officer, UNHCR Ethiopia
- ☐ Yegerem Tsige, WASH Officer, UNHCR Ethiopia

Acronyms and Abbreviations

AAP	Accountability to Affected Populations
AGDM	Age, Gender and Diversity Mainstreaming
AWD	Acute Watery Diarrhea
BCC	Behaviour Change Communication
CAT	Comprehensive Assessment Tool
CATS	Community Approaches to Total Sanitation
CBI	Cash Based Intervention
CBO	Community Based Organisation
CCCM	Camp Coordination and Camp Management
CFU	Colony Forming Units
CHW	Community Health Worker
CLTS	Community Led Total Sanitation
CSP	Community Support Projects
DPD	Diethyl-P-Phenylene-Diamine
FGD	Focus Group Discussion
FRC	Free Residual Chlorine
GAD	Gender, Age, Diversity
GI	Galvanized Iron (Pipe)
GBV	Gender Based Violence
GIS	Geographical Information System
GPS	Global Positioning System
HDPE	High Density Poly Ethylene (Pipe)
H&S	Health and Safety
H ₂ S	Hydrogen Sulphide
HP	Hygiene Promotion
HTH	High Test Hypochlorite
HRF	Horizontal Flow Roughing Filtration
HWTS	Household Water Treatment and Safe Storage
HWWS	Hand Washing With Soap
IDP	Internally Displaced Person
IEC	Information Education Communication
IM	Information Management
KAP/KABP	Knowledge, Attitudes, Beliefs, Practices
M&E	Monitoring and Evaluation
MF	Micro Filtration

Acronyms and Abbreviations

MHM	Menstrual Hygiene Management
MPN	Most Probable Number
NFI	Non-Food Item
NTU	Nephelometric Turbidity Units
O&M	Operations and Maintenance
PPE	Personal Protective Equipment
PE	Polyethylene (Pipe)
PH	Public Health
PHAST	Participatory Hygiene and Sanitation Transformation
PLA	Participatory Learning and Action
PLWHA	People Living with HIV/AIDS
POUWT	Point of Use Water Treatment
PSEA	Prevention of Sexual Exploitation and Abuse
PVC	Polyvinyl Chloride (Pipe)
PWD	People With Disabilities
QIP	Quick Impact Project
RAT	Rapid Assessment Tool
RCM	UNHCR Refugee Coordination Model
RF	Rapid Filtration
RO	Reverse Osmosis
RSF	Rapid Sand Filtration
RWH	Rain Water Harvesting
SAR	Solids Accumulation Rate
SSF	Slow Sand Filtration
TDS	Total Dissolved Solids
TWG	Technical Working Group
UF	Ultra Filtration (Water Treatment)
UFW	Unaccounted For Water
UV	Ultraviolet (Water Treatment)
uPVC	Unplasticized Polyvinyl Chloride (Pipe)
VLOMM	Village Level of Management of Maintenance
VIP	Ventilated Improved Pit (Toilet)
WASH	Water, Sanitation, and Hygiene
WSP	Waste Stabilization Ponds
WSP	Water Safety Plan

Contents – UNHCR WASH Manual Part 1

ACKNOWLEDGEMENTS	I
ACRONYMS AND ABBREVIATIONS	II
CONTENTS – UNHCR WASH MANUAL PART 1	IV
INTRODUCTION	1
Target audience	2
Legal framework and the human rights to water and sanitation	2
Response Phases	3
Overview of Typical WASH Programme Activities by Phase	Error! Bookmark not defined.
1. UNHCR WASH PROTECTION PRINCIPLES	6
Introduction	6
Terminologies useful for understanding protection and accountability	7
Principle 1: Consultation, participation and accountability	7
Principle 2: Equitable access to WASH	9
Principle 3: Protection, safety and privacy	10
Principle 4: Menstrual hygiene	13
Principle 5: Cross-sector collaboration and coordination	15
2. WASH STRATEGY AND OPERATIONAL PLANS	17
Global WASH Strategy	17
Country WASH Strategy	17
Site WASH Operational Plans	18
Common Refugee Sites	19
A comprehensive approach to WASH service provision	19
Appropriate technology selection, quality and value for money	20
Integrated programming with a focus on sustainable solutions	22
WASH interventions in urban settings	23
Cash based interventions	25
Protection of the environment	26
3. WASH SECTOR COORDINATION	28
Refugee Coordination Model and WASH Sector Coordination	28
WASH sector coordination implementation arrangements	29
Establishment of an Advisory Group	30
Creation of Technical Working Groups (TWGs)	30
Practical Guidance for WASH Sector Coordination	31
Establishment of WASH Sector Strategy and Operational Response Plans	33
Establishment of agreed common Standards, and Indicators	33
Coordinated sector preparedness and contingency planning	35
Capture and application of lessons learned and sector best practice	35

4. WASH ASSESSMENTS	37
General principles for WASH assessments	37
Immediate assessment of WASH needs	38
Immediate assessment of potential refugee hosting sites	38
WASH Assessment Processes and Tools	40
WASH Assessment Analysis and Reporting	45
5. WASH MONITORING AND REPORTING.....	47
Establishment of the routine monitoring of WASH indicators	48
Monitoring WASH ‘Access Indicators’ using the monthly report card	49
Monitoring WASH ‘Household Indicators’ using the Standardised KAP Survey	49
UNHCR WASH Standards and Indicators – June 2016	50
Mapping WASH infrastructure	51
Monitoring the cost effectiveness and efficiency of WASH interventions	51
REFERENCES.....	53

Introduction

UNHCR has the primary responsibility for coordinating, drafting, updating and promoting guidance related to water, sanitation and hygiene (WASH) in refugee settings. This WASH Manual has been prepared through a process of open collaboration and discussion in participation with UNHCR's WASH Officers, UNHCR's sister agencies, and experts and practitioners from the WASH community.

Introduction

1. This manual has been written in two parts;
 - a. Part I: UNHCR WASH Programme Guidance
 - b. Part II: UNHCR WASH Technical Guidance.
2. Part I: WASH Programme Guidance aims to provide guidance on general overarching principles that should be considered in all refugee WASH programmes including: protection, safety and privacy; equitable access to WASH services; consultation, participation and accountability; cross-sector collaboration; value for money and cost effectiveness; appropriate technology selection and durable solutions; cash based interventions; reinforcing the capacity of stakeholders; WASH in urban settings; protection of the environment; WASH sectoral and operational plans; WASH sector coordination and contingency planning; WASH assessments; protection of the environment; monitoring the effectiveness of WASH interventions; and ensuring accountability to donors, beneficiaries and local authorities;
3. Part II: WASH Technical Guidance provides technical guidance for water, excreta management, solid waste management, disease vector control and hygiene promotion interventions in refugee settings with a focus on ensuring an adequate level of basic services. It should be noted that the manual has not been written as a detailed technical document but instead aims to present:
 - i) A simple overview of WASH technical options that are suitable for the various phases of refugee programmes including a description of their advantages, disadvantages;
 - ii) UNHCR's policy position related to the various technical options;
 - iii) Where to find more detailed UNHCR approved technical design and operational information (e.g. design drawings, pumping test procedures, water network design specifications, and KAP survey guidelines).

4. Where possible the manual has been written to complement existing WASH technical resources. Some of the core documents that are referenced include:
- ◆ Handbook for Emergencies (UNHCR, 2007)
 - ◆ Water Manual for Refugee Situations (UNHCR, 1992)
 - ◆ Engineering in Emergencies (RedR, 2002)
 - ◆ Water and Sanitation for Populations at Risk (ACF, 2005)
 - ◆ Hygiene Promotion: A Practical Manual for Relief and Development (Ferron, Morgan, O'Reilly, 2007)
 - ◆ Excreta Disposal in Emergencies (WEDC, 2007)
 - ◆ WEDC Technical Briefs (Various)
 - ◆ Oxfam GB Technical Briefs (Various)
 - ◆ Humanitarian Charter and Minimum Standards in Humanitarian Response (SPHERE, 2011)
 - ◆ Guidelines for Drinking Water Quality 4th Ed. (WHO, 2011)
 - ◆ Public Health Engineering in Precarious Situations 2nd Ed (MSF, 2010)
 - ◆ Public Health Guide for Emergencies (John Hopkins and IFRC, 2008)
5. Additional technical design guidelines, technical operational guidelines, and technical drawings, bills of quantity, material and construction workmanship specifications that are complimentary to the material in this document can be found on the wash.unhcr.org website.

Target audience

6. This WASH Manual has been written for use by UNHCR staff, WASH actors, national governmental authorities, emergency response coordinating bodies, contingency planners, programme evaluators, and any individuals or organisations involved in providing WASH services in refugee settings.
7. This manual is relevant for all refugee situations, where UNHCR operates including low-middle-income and high-income countries, emergencies, protracted situations, and eventually repatriation or any other durable solution identified. The focus of the manual is on refugees and asylum seekers, but is also relevant and applicable for other Persons of Concern (PoC) to the High Commissioner for Refugees (ie. stateless persons, internally displaced and returnees).

Legal framework and the human rights to water and sanitation

8. In 2010 the UN General Assembly and the Human Rights Council explicitly recognized the human rights to water and sanitation. These rights are derived from the right to an adequate standard of living as stipulated in Article 11 of the International Covenant on Economic, Social and Cultural Rights and other international human rights treaties. Key aspects include.
- ◆ Water must be sufficient and continuous to cover personal

and domestic uses, which comprise water for drinking, washing clothes, food preparation, and personal and household hygiene.

- ◆ Water for drinking and domestic uses must be safe and acceptable to users. It must be free from elements that constitute a threat to a person's health. Water must also be of an acceptable colour, odour, and taste to ensure that individuals will not resort to polluted alternatives.
- ◆ Water and sanitation facilities must be physically accessible and within safe reach for all sections of the population, taking into account the needs of particular groups, including persons with disabilities, women, children and the elderly.
- ◆ Water services must be affordable to all. No individual or group should be denied access because they cannot afford to pay.

This Manual aims to ensure that all refugees in all settings are guaranteed their rights to water and sanitation as enshrined in this important legislative document.

9. In 2016 the UN established Sustainable Development Goal 6 to '*ensure availability and sustainable management of water and sanitation for all*' by year 2030. This focus on universal coverage, '*for all*', means that Refugees and Persons of Concern must be included in National Development Plans for Water and Sanitation.

Response Phases

UNHCR recognises four main phases of assistance to refugees.

Emergency Phase (Short Term, 0 – 6 months)

10. The definition used by UNHCR for the emergency phase is described in the UNHCR Global Strategy for Public Health (2014 - 2018) as '*the period following a refugee emergency up to six months after population movement has stabilized*'. However, the document notes that this definition should only serve as general guidance and disease outbreaks may constitute a return to the emergency phase. Emergency WASH interventions are typically required at the locations where the refugee population crosses a border and also for establishing services at the sites where refugees are congregating or are being hosted.

Transition Phase (Medium Term, 6 months – up to 2 years)

11. With all WASH response activities there will be a transition period during which time WASH service provision transitions from emergency life-saving activities to long term cost efficient solutions. This is the phase where there will be a movement to solutions with increased household ownership and improved integration with existing National WASH service provision structures.

Post Emergency and Protracted Phase (Long Term, 2 – 20 years+)

12. For the purposes of this manual, the post emergency phase is described as '*the period six months after population*

movement has stabilized up to the period a durable solution has been reached and the population is no longer displaced’.

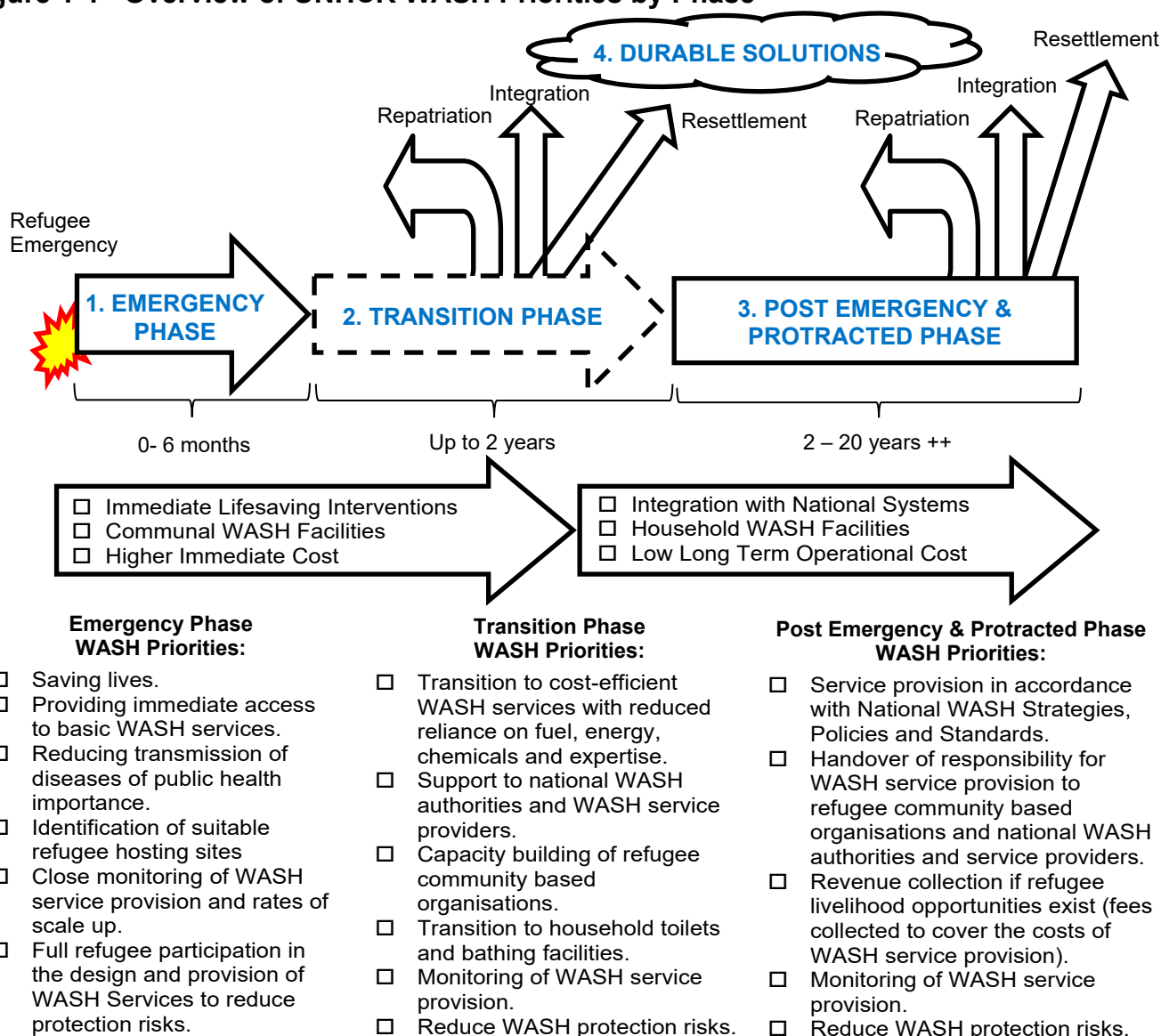
13. During the post emergency phase many refugee situations become long term, protracted situations. The definition used by UNHCR for a protracted refugee situation is described in the UNHCR Global Trends (2015) as ‘a refugee situation in which 25,000 or more refugees of the same nationality have been in exile for five years or longer in a given asylum country’. Based on this definition, 6.7 million refugees

were in a protracted situation at the end of 2015, with an average duration of displacement of 26 years. This represents 41% of refugees under UNHCR’s mandate, and highlights the need to focus on improving long term cost efficient WASH provision for refugees in protracted situations.

Durable Solutions


14. UNHCR defines three options for durable solutions for refugees which include repatriation to their country of origin (if conditions are suitable), integration in the country of asylum, and resettlement in a third country.

Figure 1-1 Overview of UNHCR WASH Priorities by Phase



UNHCR WASH Response Programme Framework

Note: These options are described in detail in the WASH Technical Guidelines (wash.unhcr.org)

Time Period	Emergency Phase Short Term 0-6 months	Transition Phase Medium Term 6 months – 2 years	Post Emergency / Protracted Phase Long Term 2 - 20 years +
	Communal		Household
Water Supply	<ul style="list-style-type: none"> • Target 7.5 – 15 l/p/d • Water trucking • Emergency elevated tank (D306,D307,D308)* • Emergency tapstand (D300) • Bottled water • Aquatabs/PUR/HTH chlorine** • Jerrycan 10L collapsible (00096)** • Jerrycan 20L rigid** • Bucket with lid/tap (07071)** 	<ul style="list-style-type: none"> • Target 15 – 20 l/p/d • Emergency surface water treatment plant (EmWat). • Jetwells. • Temporary piped water network using Oxfam Tanks, PE pipes and tapstands • Extension of existing water network. • Cash/vouchers 	<ul style="list-style-type: none"> • Target 20+ l/p/d • Borehole source (D304, 305)* • Surface source and treatment • Elevated water tower (D309, D310)* • Pipe network • Tapstand (D301)* • Handpump (D302)* • Rainwater harvesting • Apartment plumbing upgrades • Cash/vouchers
Excreta Management	<ul style="list-style-type: none"> • Target 1:50 (communal) • Trench toilets (D400,401)* • Chemical toilets • Elevated desludgable toilets (D405)* • Daily cleaning/ maintenance • Plastic toilet slab** • Plastic sheeting (03153)** • Latrine digging kits** 	<ul style="list-style-type: none"> • Target 1:20 (shared family) • Increase toilet coverage by commencing household toilet programme, initially with one toilet shared between four families (1:20) and improving to one per household as resources permit. 	<ul style="list-style-type: none"> • Target 1:5 or 1 per Household • Basic pit toilet dome slab (D402, D403)* • UDD Toilet (D406)* • Pour flush toilet (D404)* • Apartment plumbing upgrades • Sewer network • Desludging • Septage treatment • Cash/vouchers
Hand Washing	<ul style="list-style-type: none"> • Target 1 hand wash device per toilet block • Handwash container 50L with tap and stand** • Soap** • Daily refilling/ maintenance 	<ul style="list-style-type: none"> • Increase handwashing promotion at household level and ensure each shared family toilet is equipped with appropriate handwashing device. 	<ul style="list-style-type: none"> • Target 1 hand wash device per HH • 2L container** • Washbasin/sink
Bath Shelters / Showers	<ul style="list-style-type: none"> • 1:50 (communal) • Bath / shower blocks (D700)* • Plastic sheeting (03153)** • Soap 250 g/p/month (01511)** • Drainage 	<ul style="list-style-type: none"> • 1:20 (shared family) • Increase bath / shower coverage, with one bath / shower for four families (1:20). • Encourage families to build their own household bath / shower facility. 	<ul style="list-style-type: none"> • 1:5 or 1 per Household • HH bath/shower cubicle • Encourage refugee families to build their own household bath / shower facility.
Hygiene Promotion	<ul style="list-style-type: none"> • 1:500 Hygiene Promoters • IEC materials** • Hygiene kit** • Baby kit** 	<ul style="list-style-type: none"> • 1:500 Hygiene Promoters • IEC Materials** 	<ul style="list-style-type: none"> • 1:1000 Hygiene Promoters • IEC Materials**
Solid Waste Management	<ul style="list-style-type: none"> • Rubbish bins (Stockpile) • Collection services/incentive workers • Rubbish pits 	<ul style="list-style-type: none"> • Transition to long term cost effective community managed or individual household managed solutions. 	<ul style="list-style-type: none"> • Transfer station / Landfill (D500)* • Household rubbish pits • Recycling, reuse • Clean-up campaigns
Vector Control	<ul style="list-style-type: none"> • Indoor residual spraying** • Treat pit toilets with chlorine or insecticide to kill fly larvae 	<ul style="list-style-type: none"> • Transition to long term cost effective community managed solutions. 	<ul style="list-style-type: none"> • Indoor residual spraying** • Rodent control
Laundry Facilities	<ul style="list-style-type: none"> • Laundry basin** • Soap 200 g/p/mth (01511)** • Drying lines 8mm (06644)** 	<ul style="list-style-type: none"> • Transition to long term cost effective solutions. 	<ul style="list-style-type: none"> • Laundry slabs (D701)* • Drying lines (D701)*
Schools / Health Clinics	<ul style="list-style-type: none"> • Trench toilets (D400,D401)* • Chemical toilets • Bath/shower blocks (D700)* 	<ul style="list-style-type: none"> • Transition to long term cost effective solutions. 	<ul style="list-style-type: none"> • Toilet blocks (D407,D408)* • Shower blocks • Water points / rainwater harvesting / tanks

* Design included in UNHCR Standard Drawings wash.unhcr.org/wash-technical-designs/

** Item Specification found in UNHCR WASH Standard Equipment Catalogue wash.unhcr.org/wash-equipment-catalogue/

1. UNHCR WASH Protection Principles

Conflict and forced displacement affects different people in different ways due to their age, gender identity, sexual orientation, health status, ability, ethnic background, cultural or political perspective, values, attitudes and other beliefs. Some people, such as women, adolescent girls, older people, people with disabilities and people from marginalised groups, are often less visible, have less power, and less ability to share their opinions in the community and hence may be less able to participate as others. They may have differing needs, priorities, capacities and vulnerabilities, which will affect the way they can benefit from services and their ability to attain their rights. Therefore it is important to consider the barriers to their engagement when designing WASH responses.

Introduction

1. WASH programmes in refugee settings must take into consideration UNHCR's protection and accountability principles. These principles are essential for protection of refugees and to create conditions where refugees can live in safety and with dignity.

Principle 1: Consultation, participation and accountability:

Communities are consulted and participate in the assessment, planning, design, monitoring and maintenance phases of WASH interventions; information and feedback mechanisms are established to enable continued community input throughout the programme cycle.

Principle 2: Equitable access to

WASH: Access to WASH infrastructure and services is equitable and considers

requirements for persons with specific needs and vulnerabilities.

Principle 3: Protection, safety and privacy: Factors to enhance protection from violence, safety from accidents and privacy considerations are integrated into WASH programmes, designs and services.

Principle 4: Menstrual Hygiene Management: The needs of women and girls to manage their menstrual periods confidently, in privacy and with dignity are integrated into WASH responses.

Principle 5: Cross-sector collaboration: The WASH sector collaborates with other relevant sectors to strengthen protection aspects of the WASH programme.

Terminologies useful for understanding protection and accountability

Protection: Protection encompasses all activities aimed at ensuring the enjoyment, on equal terms of the rights of women, men, girls and boys of concern to UNHCR in accordance with the letter and spirit of the relevant bodies of law (international humanitarian, human rights and refugee law).¹ It includes interventions by States or UNHCR on behalf of asylum-seekers and refugees to ensure that their rights, security, and welfare are recognized and safeguarded in accordance with international standards. Such interventions will, amongst others, be deemed to: ensuring respect for the principle of non-refoulement; promoting admission to safety and access to fair procedures for the determination of refugee status; upholding humane standards of treatment; realizing the right to assistance and services; promoting non-discrimination, and the implementation of durable solutions.

Accountability: Accountability to affected populations (AAP) can be understood as 'an active commitment by humanitarian actors and organizations to use power responsibly by taking account of, giving account to and being held to account by the people they seek to assist'. The principle of accountability requires that humanitarian actors involve

persons of concern meaningfully in key decisions and processes that impact them, and ensure transparency by continuous communication².

Principle 1: Consultation, participation and accountability

Principle 1: *Communities are consulted and participate in the assessment, planning, design, monitoring and maintenance phases of WASH interventions; information and feedback mechanisms are established to enable continued community input throughout the programme cycle.*

Rationale:

2. UNHCR supports rights-based and community-based approaches, which seek to facilitate the meaningful participation of people of concern in assessment, planning and monitoring processes and, therefore, decisions that affect their lives. Involving people with differing needs, priorities, capacities and vulnerabilities in the design of WASH programmes has multiple benefits:
 - a. It recognises the value that refugees themselves bring to the process and increases their well-being and sense of dignity.
 - b. It contributes to the effectiveness of the interventions as the involvement of a diverse group of refugees means that the final result is more likely to meet their needs.

¹ <http://www.unhcr.org/4371d8362.pdf>

² <https://emergency.unhcr.org/entry/69409/accountability-to-affected-populations-aap>

- c. It results in an increased sense of ownership, satisfaction, and improves the level of use and responsibility taken for long term maintenance.
- d. Ensuring that every affected person can access the information on their rights, entitlements and the good behaviours of staff in a way that they can understand, is particularly important in relation to the Prevention of Sexual Abuse and Exploitation (PSEA).
- e. It contributes to increasing empowerment and equality between diverse individuals
- f. It helps to ensure that more people can attain their rights and can live healthy, safe and dignified lives.
- g. If the refugee population is not involved in the planning of services then the likely outcome will be avoidance, misuse or vandalism of the WASH services and infrastructure.

Table 1.1 below identifies key actions that support this principle...

Table 1.1 Key actions to involve refugees throughout the programme cycle

A - By stage of the project cycle	
Assessment:	Collect disaggregated data and information. Make sure that questions are asked from women as well as men. Use the UNHCR registration process, to identify people who may have other specific needs.
Planning:	Involve refugees, particularly women and girls and people with specific needs in the process of designing WASH facilities and services as soon as people have arrived.
Implementation:	Where possible involve refugees in the process of construction of their own household level WASH facilities.
Maintenance and monitoring:	Where possible involve refugees, in the routine maintenance and monitoring of their own WASH facilities.
B - Throughout the project cycle	
1.	Use different methodologies (such as focus group discussions or household visits) to ensure inclusion of groups that may be able to speak confidently in public or participate equally (for example women, adolescent girls, older people or people with disabilities)
2.	Ensure assessments, or designing and monitoring exercises have both female and male staff members , to ensure that women and girls can speak to females.
3.	Involve women in the drawing up of distribution lists and in supervising the distribution process for the distribution of non-food items.
4.	Build the capacity and confidence of women, men, adolescent girls and boys to engage in each stage of the process.
5.	Provide information to the affected communities about: the organisations supporting them; the principles they adhere to; how they expect their staff to behave; the programmes it is implementing; and what they intend to deliver ³ . <ul style="list-style-type: none"> This enables people to be aware if they are being treated differently or inappropriately in a way that constitutes corruption or sexual exploitation or abuse. Communicate in languages, formats and media that are easily understood, are respectful and culturally appropriate to different members of the community, especially for vulnerable and marginalised groups.
LINK: For useful considerations and tips for the above actions and supporting case studies refer to the UNHCR WASH, Protection and Accountability Briefing Paper .	

³ CHS Alliance, The Sphere Project and Group URD (2015)

Principle 2: Equitable access to WASH



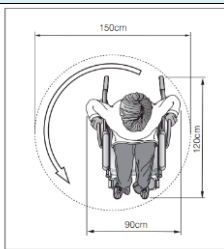
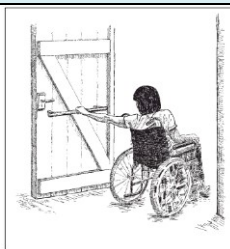
Principle 2: Access to WASH infrastructure, information and services is equitable and considers requirements for persons with specific needs /vulnerabilities.

Rationale:

- Equitable and universal access to WASH facilities and services is

critical for enhanced protection and dignity of refugees and in order to achieve public health objectives. WASH facilities must be accessed and used comfortably by all including children, the elderly, persons with disability and mobility issues, and persons from minority social, ethnic and religious groups. Therefore it is important that steps are taken to understand why sections of the refugee population

Table 1.2 Key actions to support the principle of equitable access to WASH

Key actions			
1. Prioritise household facilities wherever possible. <ul style="list-style-type: none"> Access is improved in all situations by constructing WASH facilities closer to the user. This means wherever technically feasible, <u>household level solutions should always be favoured over communal facilities</u>. In some cases where appropriate it may be possible to provide WASH facilities within the home. 			
2. Involve children and their parents and teachers in identifying NFI needs (potties, scoops, re-usable cloth nappies, etc) and assessing options for designs for toilets, bathing facilities and water collection points to suit children ⁴ .			
3. Work with people with disabilities, their carers, older people and pregnant women – all of whom may have limitations on their mobility. Proactively involve them in designing toilets, bathing facilities, water points and clothes washing facilities that they and other people with mobility limitations can easily access ⁵ . Also involve health staff in designing accessible facilities in health facilities. <ul style="list-style-type: none"> A range of adaptations may be useful such as increased size in the unit, adding a cleanable seat, handrails, ramp with resting platforms, larger locks and door widths. 			
4. Consider different groups when designing hygiene promotion activities (use a variety of channels, learning methods and media to include people with sight or hearing issues).			
5. Consider the needs of different people when distributing non-food items (for example a fast lane for older people, people with disabilities and other people who may be particularly vulnerable, may assist collection quicker and more safely) ⁶ .			
Examples of toilets made accessible for people with disabilities or other mobility limitations			
 <p>Commode chair with strap and ring for comfort (Jones and Reed, 2005)</p>	 <p>Handrails for squat latrine (Jones and Reed, 2005)</p>	 <p>Ensuring space for turning (Jones and Reed, 2005)</p>	 <p>Easy grip door handles (Jones and Reed, 2005)</p>
LINK: For useful considerations and tips for the above actions and supporting case studies refer to the UNHCR WASH, Protection and Accountability Briefing Paper .			

⁴ Ferron, S & Lloyd, A (2014) , ⁵ Jones, H. and Reed, R.A. (2005), ⁶ Help Age (2015, Pilot version)

may be at risk of inequitable access to WASH services and what can be done to ensure WASH facilities and services are accessible to all. Furthermore it is important that WASH service levels also take into consideration levels of access of the host population to avoid potential conflict and resource competition. Table 1.2 identifies key actions that support this principle...

Principle 3: Protection, safety and privacy

Principle 3: *Protection, safety and privacy considerations are integrated into WASH programmes, designs and services.*

Rationale:

4. **Protection:** Sexual and Gender Based Violence (SGBV) refers to any act that is perpetrated against a person's will and is based on gender norms and unequal power relationships. Some people, such as women, adolescent girls, older people, people with disabilities and people from marginalised groups, including people who are LGBTI, tend to have higher vulnerabilities SGBV, which can also be exacerbated in emergency contexts. Whilst poor access to WASH is not the 'root cause' of violence, it can affect people's vulnerabilities to violence. For example if women feel that they have to use facilities after dark or going to remote areas for washing their clothes in a river, both of which increase opportunities for violence to occur without others

seeing³. The types of violence that are of most relevance to WASH include:

- a. **Sexual violence** – Rape, assault, molestation, inappropriate touching
 - b. **Psychosocial violence** – Harassment, bullying, or causing fear, stress or shame
 - c. **Physical violence** – Beating or fighting leading to injury or death
 - d. **Socio-cultural violence** – Social ostracism, political marginalisation, social norms with negative impacts
5. **Safety:** In addition, people can also be injured by inadequate design or unsafe construction of facilities, such as through sharp edges, slippery floors, collapsing pit latrines, or contact with hazardous wastes. Care must be taken during WASH facility design and construction to adequately protect users from accidents.
 6. **Privacy:** Privacy is an important consideration in the design of toilets and bath shelters, and has a direct link to reduction of SGBV.

Table 1.3 describes key actions that support this principle.

Table 1.4 lists features of WASH facilities which can contribute to feelings of privacy and safety.

³ House, S. Ferron, S, Sommer, M, and Cavill, S. (2014)

Table 1.3 Key actions supporting the principles of protection, safety and privacy

Key actions
<p>1. Consulted and involve refugees in decisions on their needs, designs and locations of facilities as soon as they have arrived at the site.</p> <ul style="list-style-type: none"> • In particular make sure that women and adolescent girls are involved in this process. It is essential when designing facilities to take into consideration issues related to privacy, safety and usability in consultation with the users.
<p>2. Involve men and boys in discussions on their feelings of safety and that of their families when using WASH facilities and involve them in processes to support the protection of women, girls and boys.</p> <ul style="list-style-type: none"> • Boys can also be vulnerable to SGBV and also need to feel safe when using WASH facilities; and involving them in solutions also has the potential to contribute to reducing the root cause of violence.
<p>3. Ask for feedback on the ‘usability’ of facilities and also ‘feelings of safety’, so that modifications can be made where problems are being faced.</p> <ul style="list-style-type: none"> • Whilst asking about ‘feelings of safety’ is useful and appropriate, WASH staff themselves should not be asking about actual incidents of violence or for details of what happened⁸. • If incidents of violence are mentioned during discussions, the information should be kept confidential and discretely shared with a protection colleague who will use standard procedures in line with protection ethics to respond. People can be put at further risk if incidents of SGBV against them become common knowledge.
<p>4. Prioritise people with specific needs for WASH services. Ask for protection colleagues to assist with consulting with people from particularly vulnerable groups as to their concerns and solutions for WASH. In particular request them to discretely consult with people who are LBGTI to identify any concerns they may have about using WASH facilities and possible solutions.</p> <ul style="list-style-type: none"> • People who are LBGTI or people from other particularly vulnerable or marginalised groups can face increased risks of discrimination or violence if information about them is not handled appropriately. Hence it is essential to work with the leadership of protection colleagues when determining their needs. • The best solution for most vulnerable groups is likely to be household level toilets and bathing facilities. If communal facilities are essential then ensure that accessible gender-neutral unisex toilets are also provided as well as gender-segregated facilities and that these are in well lit areas.
<p>5. Ensure that WASH facilities comply with national standards in non-camp / urban settings and that host services are not over-burdened and to reduce risks of conflict over limited resources.</p>
<p>LINK: For useful considerations and tips for the above actions and supporting case studies refer to the UNHCR WASH, Protection and Accountability Briefing Paper.</p>
<p>Important note on the need for more learning across contexts: Much more learning is needed in the area of what features can make facilities more user-friendly, safer and provide adequate privacy. Much more consultation, discussion and feedback are needed with the users; particularly women and adolescent girls but also other users. Please document and share your learning widely.</p>

⁷ House, S. Ferron, S. Sommer, M. and Cavill, S. (2014)

Table 1.4 Key features of WASH facilities which have the potential to contribute to feelings of privacy and safety

Design features	
1. Prioritise household toilet and bathing facilities. If not possible then support facilities shared by a max. of 2-3 families.	
2. Communal latrines/ bathing facilities should always be gender-segregated - with clear signage for women and men.	
3. Also support accessible and gender-neutral (unisex) units - if gender-segregated communal toilet / bathing facilities are supported, it is also good practice to include several larger wheel-chair accessible 'gender-neutral' (unisex) units that can be used by either males or females (suggested at 1:500 ratio). These can be used by people with mobility limitations, mothers with small children and people who are transsexual who may face abuse or harassment using gender-segregated facilities.	
4. Internal locks - should be included on door for all latrine and bathing units (communal/shared/household). Doors as & walls should be solid so that it is not easy to poke holes through the material.	
5. Design WASH facilities in a manner that ensures privacy - In particular consult women and adolescent girls for design of privacy features for toilets and showers, such as wall heights, appropriate screening, and wall materials selection.	
6. Provide lighting options for latrines and bathing units - for both female and male users so that they can be used during the hours of darkness. <ul style="list-style-type: none"> The ideal situation is for lighting to be provided in all communal areas of camps and accommodation including bathing units and toilets. Just lighting latrine and bathing units is another interim solution but challenges can be faced where only female latrines have been lit with men congregating under the light making females less willing to use the units. If torches are provided, then a minimum of two should be provided per family with solar or wind up mechanisms. 	
7. Design to reduce risk of physical injury - from sharp objects, slipping or the presence of hazardous wastes.	
8. Ensure WASH facilities are located in safe areas – consult on feelings of safety to establish the perceived safety of different areas.	
	
<p>Figure – Emergency Showers where users installed their own privacy barrier (Photo credit: Coloni, F/UNHCR)</p>	
<p>LINK: For useful considerations and tips for the above actions and supporting case studies refer to the UNHCR WASH, Protection and Accountability Briefing Paper.</p>	

Principle 4: Menstrual hygiene

Principle 4: *The needs of women and girls to manage their menstrual periods confidently, in privacy and with dignity are integrated into WASH responses.*

Rationale - Menstrual hygiene management (MHM)⁴:

7. Women and girls menstruate for about half their lives, from about the age of 10 to 19 (menarche) until their late forties or fifties (menopause). Menstruation is a natural process that is a healthy part of the reproductive cycle and which is central to life itself. But it is also a process that in almost all contexts around the world often leads to feelings of embarrassment, stress and shame. The blood needs to be managed through appropriate sanitation and hygiene. This means having materials to adequately soak the blood; and the girl and woman needs access to appropriate WASH facilities to change menstrual materials, wash and dry themselves and soak, wash, dry or dispose of used materials. Girls and women may lose their usual coping mechanisms for managing their menses in refugee emergency situations and may have to live in close contact with male relatives and sometimes strangers with limited privacy which adds additional challenges.
 8. They also need opportunities to discuss menstrual hygiene and build their confidence in managing their menses effectively.
- Menstruation and menstrual

hygiene management (MHM) often have a range of taboos associated with it, some of which are not problematic, but some that are. This includes women or girls believing they must not wash / bathe during part or all of their menstrual cycle as they are fearful of negative implications (such as becoming infertile, sick, going insane or dying). A range of practices or restrictions also exist, which vary between people of different backgrounds and cultures.

UNHCR has made Five Commitments to Refugee Women

One of them is:

*'The provision of sanitary materials to **all** women and girls of concern will become standard practice in all UNHCR assistance programs. This is central to women's dignity and health'.*

The commitment is to provide:

- Either absorbent cotton material (4 sqm/year) or disposable napkins (12/month).
- Underwear (6/year).
- Soap (250g/month) – *in addition to the general soap distribution to all affected persons.*

Table 1.5 identifies key actions that support this principle.

⁴ House, S, Mahon, T & Cavill, S (2012)

Table 1.5 Key actions which support MHM in refugee settings

Key actions
1. Consult with women and girls on MHM, including with girls and women with disabilities, and consult with people on their needs and preferences for support.
2. Learn about the practices, norms and beliefs associated with MHM in each society. This can help to counteract harmful practices and to establish the most appropriate support.
3. Provide culturally and age appropriate and affordable menstrual hygiene or incontinence materials. <ul style="list-style-type: none"> • Preferences may vary. It is essential to ensure both appropriate types of materials as well as the required numbers of pieces for a woman or girl to manage their menses effectively. Materials must be provided per person and not per family and must consider needs over time.
4. Provide additional non-food items that support the management of menstruation (such as small buckets and lids, underwear, washing line and pegs and additional soap). <ul style="list-style-type: none"> • Refer to the UNHCR non-negotiable commitment to women on sanitary protection materials.
5. Ensure facilities that enable private, dignified and user-friendly changing of menstrual protection materials. It is critical to ensure that women and adolescent girls are involved in the design. <ul style="list-style-type: none"> • Usability features can include: easy access to water supply; provision of hooks to hang up possessions to have hands free; inclusion of small shelves on which to put pads, soap and other items; and the provision of a $\frac{3}{4}$ length mirror to check for stains and for dignity.
6. Ensure options are available for the soaking, washing, drying and disposal of sanitary protection or incontinence materials. <ul style="list-style-type: none"> • This may require installing collection buckets in each latrine and bathing unit cubicle, but it must then have a system for the sustainable and discrete transfer of the materials to end disposal and training and safety equipment for those handling the bloody wastes.
7. Provide information and opportunities for girls and women to discuss good MHM practices and for men and boys to also learn about menstruation and how to support women and girls ¹¹ .
8. Provide capacity and confidence building for male and female staff, teachers, health staff and other actors on menstrual hygiene ¹¹ .
LINK: For useful considerations and tips for the above actions and supporting case studies refer to the UNHCR WASH, Protection and Accountability Briefing Paper .

¹¹ House, S. Ferron, S, Sommer, M, and Cavill, S. (2014)

Principle 5: Cross-sector collaboration and coordination

Principle 5: *The WASH sector coordinates between agencies and works with other sectors to strengthen protection, the quality of responses and to integrate accountability mechanisms into our work.*

Rationale:

9. Many of the services to be provided to refugees and other affected populations require cross-sectoral knowledge and expertise. It is essential that WASH actors increase their efforts to coordinate between agencies and collaborate across sectors to ensure the most effective and appropriate services; and in particular to ensure that people from particularly vulnerable and marginalised groups receive appropriate services in a safe manner. In some areas the WASH sector has particular knowledge that can strengthen the work of other sectors, such as in the provision and management of WASH facilities in schools and health facilities; and for others, such as the protection sector, specialist protection expertise can help strengthen the WASH responses, particularly in areas such as gender, improving safety and engaging with particularly vulnerable groups.
10. Providing opportunities for and listening to feedback, involving affected persons in decision-making and enabling them to make compliments or complaints enhances their sense of well-being, helps them to adapt to the challenges they are facing and better enables them to make an active role in their own recovery.
11. Capacity should also be built of all staff and partners supporting

Table 1.6 Actions which support cross-sectoral engagement and accountability

Action
1. Coordinate between agencies and collaborate across sectors. See table below for more details.
2. Build capacity of staff, partners and contractors to be able to implement these principles. <ul style="list-style-type: none"> In particular make sure that all frontline workers have their capacity built and in particular they understand the conduct and behaviours that are expected of them and protection principles to ensure that people are not made more vulnerable through their actions.
3. Ensure that response-wide feedback mechanisms are in place that are followed up and acted on. ¹² <ul style="list-style-type: none"> Effective feedback mechanisms enable programmes to receive information on the effectiveness of interventions as well as offering affected populations the opportunity to raise concerns and report abuses.
4. Using resources effectively, efficiently and ethically. ¹²
LINK: For useful considerations and tips for the above actions and supporting case studies refer to the UNHCR WASH, Protection and Accountability Briefing Paper .

¹² CHS Alliance, The Sphere Project and Group URD (2015)

refugee responses, to ensure that they have the capacity and confidence to be able to implement programmes and services in a way that ensures people's safety and dignity in line with these principles; as well as to ensure that resources are utilised in a manner that is

efficient, effective, equitably and ethically for ultimate accountability to the affected populations.

Table 1.6 identifies key actions that support this principle.

Table 1.7 identifies the areas for WASH sector collaboration across sectors.

Table 1.7 Areas for WASH sector collaboration in refugee responses

Areas for collaboration	
Community Services	<ul style="list-style-type: none"> • Menstrual hygiene materials; incontinence materials; and other NFIs. • The establishment and management of feedback systems for refugee responses.
Registration	<ul style="list-style-type: none"> • Identification of numbers of affected populations by area; identification of particularly vulnerable groups, such as older people, people with disabilities, people with incontinence, pregnant women.
Protection	<ul style="list-style-type: none"> • Consulting and involving particularly vulnerable groups, such as people who are LGBTI, people with albinism, people from particularly vulnerable groups; including through specialist organisations that can assist with developing strategies for support and communicating with vulnerable groups. • Clarification on the information to be provided to affected populations on their rights, entitlements and good behaviours of staff. • Supporting monitoring exercises to obtain feedback from women, girls, men and boys on WASH responses, including on feelings of safety; and following up on reports of violence related to WASH. • Developing strategies for responding to gender issues and developing support mechanisms for women involved in management of WASH. • Capacity building for WASH staff.
Education	<ul style="list-style-type: none"> • Ensuring effective WASH facilities in schools that enable students to not miss school, including for girls during their menstrual periods. • Help teachers understand how to ensure schools provide a MHM-friendly environment. • Ensure WASH facilities are kept in a good condition and safe for use by both girls and boys. • To ensure that education on WASH and MHM is integrated into the curriculum.
Other sectors for collaboration	
Shelter	<ul style="list-style-type: none"> • Ensuring that women, girls, men and boys have adequate space for managing their WASH needs, including for adequate privacy within their shelters for the management of menstrual hygiene.
Site planning	<ul style="list-style-type: none"> • Ensuring that women and girls are involved in discussions on the location of WASH facilities and ensuring adequate space is reserved for WASH facilities at safe distances as considered by the users.
Health, Nutrition and HIV	<ul style="list-style-type: none"> • Integration of hygiene messages into broader health, nutrition and HIV activities. • Collaboration on support related to MHM, hygiene support for mothers who have just given birth and for incontinence.

2. WASH Strategy and Operational Plans

Where possible, countries should develop multi-year national and site level WASH Strategy and Operational Plans to provide a clear overview of the WASH situation, needs and gaps, progress against indicators, and a description of the agreed short-term (emergency), medium-term (transition), and long-term (post emergency / protracted) plans. The Strategies and Operational Plans should be linked to the UNHCR Global WASH Strategy and be developed in a multi-stakeholder collaborative approach taking into account the UNHCR principles of refugee protection, value for money, and quality sustainable solutions, and then reflected in the annual UNHCR Country Operation Plan (COP).

Global WASH Strategy

1. UNHCR has a Global Public Health Strategy, which includes the Global WASH Strategy, and is reviewed and updated every five years. The current strategy may be found at wash.unhcr.org.

Country WASH Strategy

2. Wherever possible UNHCR together with WASH stakeholders should develop a multi-year country level WASH strategy for refugees linked to the approaches and principles in the UNHCR Global WASH Strategy. This should briefly describe the refugee context, the baseline WASH situation, WASH coverage, WASH gaps, agreed levels of service standards / indicators, short, medium and long-term strategies for water supply, excreta management, solid waste management, hygiene promotion and disease vector control. The refugee WASH sector country strategy should cover the entire refugee caseload including urban, rural and camp situations, and should be used as the basis for developing site operational plans. Individual refugee site WASH operational plans should be included in annex.
3. The strategy should consider and balance the immediate needs for provision of emergency WASH services at the current geographical location where refugees are situated, and the longer term need to invest in final refugee hosting sites (which may include co-location with host community in urban or rural settings, or purpose built camps). Where possible, it is normally better to focus resources on rapid development of long term WASH facilities at the final refugee hosting sites and accelerating the relocation process, and to minimise allocation of resources

at the short term temporary sites to provide only emergency life-saving assistance.

4. Preparation of the country level refugee WASH strategy should be carried out in full collaboration with all the active WASH stakeholders. A template for a country level refugee WASH strategy can be found at wash.unhcr.org.

Site WASH Operational Plans

5. Wherever possible, UNHCR and WASH stakeholders should develop multi-year, site WASH Operational Plans describing the

short, medium and long-term plans for WASH facilities and services, and will map out the operational activities and resources required to achieve the plan. The plan is best developed in the form of a 4W Matrix that clearly describes WHERE, WHEN, WHAT, WHO and HOW MUCH it will cost. This can then be used for multi-year planning and budgeting purposes, and reflected in the annual UNHCR Country operation plan (COP). A template for a site level refugee WASH Operational Plan and Budget is provided below.

Box 2.1: Example Template for (4W Matrix) Site WASH Operational Plan and Budget

WHERE	WHEN	WHAT	WHO	HOW MUCH
Location X	Short Term (0 - 6mths)	Water: Trucking 15L/p/d	Agency A	Budget Estimate \$\$
		Sanitation: Trench toilets 1:50	Agency B	Budget Estimate \$\$
		Hygiene: Bath shelters 1:50 Handwashing 1:8 toilets	Agency B	Budget Estimate \$\$
		Solid Waste: Collection daily, remove by truck to municipal dump	Agency C	Budget Estimate \$\$
	Medium Term (6mth – 2 yrs)	Water: Jetwells & temporary network 20L/p/d	Agency A	Budget Estimate \$\$
		Sanitation: Shared HH toilets 1:20	Agency B	Budget Estimate \$\$
		Hygiene: Bath shelters 1:20 Handwashing – HH distribution of soap and handwash devices	Agency B	Budget Estimate \$\$
		Solid Waste: Communal rubbish pits	Agency C	Budget Estimate \$\$
	Long Term (2 – 20 yrs)	Water: Borewells, solar pumps & piped water network 20L/p/d Design Construction	Agency X Agency Y	Budget Estimate \$\$ Budget Estimate \$\$
		Sanitation: HH toilets, 1 per HH	Agency Y	Budget Estimate \$\$
		Hygiene: Bath shelters, 1 per HH (self-build by refugees)	Agency Y	Budget Estimate \$\$
		Solid Waste: HH rubbish pits	Agency Y	Budget Estimate \$\$

6. It is critical to make rapid informed decisions about the long term WASH masterplan for any new site, based on comprehensive assessment information. If these decisions can be made and clearly communicated to all stakeholders within the first six weeks of site selection, so that all short and medium term operational response activities fit within the framework of the long term WASH masterplan, then this will lay the foundation for successful and efficient provision of WASH services for the life of the site.
7. The Operational Plan should focus on progressively improving the access indicators and moving as rapidly as possible from emergency communal sanitation facilities towards individual household facilities.

Common Refugee Sites

8. Refugee responses commonly involve a wide number of sites, which will be developed for different purposes, and operated over different timeframes. It is important to plan appropriate WASH responses within all the differing refugee sites.
9. Typical site typologies and associated timeframes of refugee accommodation include:
 - i.) Entry Point / Way Point – refugee residence timeframe (hours – days)
 - ii.) Transit Centre / Reception Centre / Collective Centre – refugee residence timeframe (days – weeks)

- iii.) Camps, Settlements/Rural Villages, Apartments/Houses Urban Cities/Towns – refugee residence timeframe (months – years).

Currently 25% of refugees are hosted in managed camps, 60% are in co-hosted with local communities in urban towns or cities, and 15% are co-hosted with local communities in rural villages.

A comprehensive approach to WASH service provision

Ensuring a comprehensive mix of hardware, software and the enabling environment

10. UNHCR and WASH actors should ensure that all post-emergency WASH programmes are planned based on a comprehensive mix of hardware, software, and enabling environment interventions. In general UNHCR and WASH actors should ensure that the same amounts of energy and time that are invested into building WASH hardware (e.g. pumps, pipes, toilets, showers etc.) is also invested into maximising the health benefits of this infrastructure through hygiene promotion. In addition, the same amount of energy and time should be invested to ensure that the WASH infrastructure is sustainably managed by local service providers, or local communities with limited assistance from UNHCR. Protection and accountability should be considered throughout (see Chapter 1 for more details).

11. In all settings, UNHCR and WASH actors should prioritize investments in the capacity of the refugee population to manage their own WASH programming and to facilitate sustainability, resilience, and eventually independence which can serve the eventual return process. Enabling environment interventions that are suitable in the post-emergency phases include:

- ◆ Demand-led approaches (e.g. marketing for improved sanitation)
- ◆ Establishing and supporting the local WASH private sector (e.g. supporting handpump spare parts markets, local sanitary artisans, local drillers, local producers/distributors of sanitary wares including toilets, toilet slabs, showers, plumbing accessories etc.)
- ◆ Institutional strengthening (e.g. capacity building of local WASH service providers or regulatory authorities).

12. The site WASH plan/strategy should clearly describe the short, medium and long-term strategies for ensuring holistic and comprehensive WASH interventions that address hardware, software and the enabling environment, and the arrangements for WASH integration with other sectors as well as protection and accountability to affected populations.

Appropriate technology selection, quality and value for money

Transitioning into efficient WASH operations as early as possible

13. Emergency phase WASH interventions, in particularly water trucking, toilet desludging, and operating and maintaining large communal WASH blocks, can be very costly and inefficient. Clear strategies should be developed from the start that include transition to more efficient and sustainable technologies. Solutions should be selected to reduce dependence on imported equipment, chemicals and spare parts, fuel supplies, or staff with specialised skills not available locally. Examples of low-cost and appropriate technologies for refugee settings include solar, wind or ram pumping, rainwater harvesting, spring captures, gravity-flow roughing filtration, gravity flow piped networks (for both water and wastewater), household UDDT toilets, greywater reuse, solid waste recycling and reuse.

14. The general theme in any WASH programme should be to move away from communal sanitation facilities towards household owned and managed sanitation facilities as quickly as possible (toilets, showers, laundry areas, rubbish pits). Alternatively, if it is clear that the emergency will last for at least six months it may be appropriate for programmes to start directly with household facilities. Overall, the increased level of ownership at the

household level increases refugee protection, satisfaction, feelings of dignity, and sense of ownership for ongoing operation and maintenance, and reduced cost for the operation.

15. Wherever possible refugees should be involved in the design and construction of their own WASH facilities at the household level, particularly women, girls and people with specific needs. If it is possible to go directly for household level sanitation facilities at the start of an emergency response then this should be the preferred option. Otherwise a progressive move from 'communal', to 'shared family' and then finally to 'individual household' level sanitation facilities should be planned from the start.
16. Generally water supply facilities will be more effectively owned and managed at the communal level, but where appropriate may move towards provision of individual household connections for an increased level of service.

Selecting WASH technology based on local technical and financial conditions

17. Ensure that all post-emergency WASH hardware is appropriate for the local technical and financial conditions. Designs should reflect the norms and traditional practices of the refugee and local population and the privacy and safety needs of women, adolescent girls, children and particularly vulnerable groups, whilst respecting public health best practice. Technologies should be simple enough to be

operated and maintained by local WASH service providers or refugees with limited assistance. In all cases, programmes should make use of locally available equipment, materials and spare parts. All consumables should be readily available in-country.

Evaluating WASH technologies based on total lifetime costs

18. Technology should be selected taking into account total life-cycle costing over a period of 15-20 years (average lifespan of a refugee camp) and encouraging the use of technologies that may have higher up front capital costs, but lower long term operations and maintenance costs. Select the best quality technology with the lowest life cycle cost. For example solar/wind power for off-grid water pumping has the benefit of affordable operation and maintenance costs and additional environmental benefits.
19. WASH programmes should also track the ongoing per-beneficiary costs of supplying WASH services on an annual basis. Small changes in how WASH staff, vehicles and resources are managed can yield enormous cost-savings. This may include:
 - ◆ The cost of water supply (cost per m³ and per refugee)
 - ◆ The cost of sanitation and hygiene services (cost per person per year)

UNHCR WASH Technical Design Quality Standards and Guidelines

20. All WASH activities within refugee settings should be undertaken in accordance with the UNHCR WASH Technical

Design Guidelines and Quality Standards (see wash.unhcr.org). These technical design standards and guidelines, present the most commonly constructed WASH facilities and provide detailed drawings and quality specifications to which the facilities should be constructed.

21. WASH items procured should be in compliance with the UNHCR WASH equipment quality standards as defined in the UNHCR WASH Equipment Standard Specifications wash.unhcr.org/wash-equipment-catalogue/

Integrated programming with a focus on sustainable solutions

WASH and SDGs

22. Sustainable Development Goal 6 targets “Sustainable access to water and sanitation FOR ALL”, with a focus on Universal Coverage, which means that Refugees and Persons of Concern must be included in National Development Plans for Water and Sanitation. SDG 6 therefore becomes key to unlocking development funding for improving WASH service provision to refugees in protracted situations. UNHCR is therefore encouraging national governments to integrate refugee WASH services with national systems and to include refugees in development planning and funding. To this end UNHCR works in collaboration with UNDP, UNHABITAT, UNICEF, World

Bank and other relevant development partners.

23. Ensure, where possible, that WASH programmes are developed and run in full collaboration with the local water, waste, hygiene and vector control service providers and regulatory authorities, extending existing services to refugees where possible.
24. Ensure that where possible refugee WASH interventions build on and support existing local markets with minimum distortion.
25. Ensure that national standards for water supply, water quality, sanitary codes, and environmental measures and monitoring are respected. Where national standards exist they should take precedence over UNHCR standards, unless exceptions are agreed.
26. Ensure that all post emergency phase WASH programmes are accompanied with adequate capacity building to facilitate eventual handover.
27. Ensure that programmes prioritize the development of WASH related skills which can serve the refugee population during eventual return, integration, or resettlement.

Handing over responsibility for WASH services

28. Wherever possible UNHCR should work towards integrating WASH services with existing national WASH management structures. This may include management by Government, WASH Utility Companies, or local

Community WASH User Groups. UNHCR and WASH actors should ensure that WASH infrastructure is sustainable, cost-efficient, affordable, easily operated, maintained and repaired using locally available resources and expertise. In addition, UNHCR and WASH actors should ensure that the technical, managerial, financial, administrative and logistical capacity of the potential organisation is sufficient to take on responsibility for running the WASH services. Any transfer of WASH service provision should be carried out slowly and carefully with constant monitoring and support. Once WASH services are handed over, work with national regulatory authorities to ensure that the quality of services continues to be carried out to defined standards.

Charging for WASH service provision in long term settings

29. In protracted refugee situations, if income generation and livelihoods are possible for the refugees then UNHCR and WASH actors may consider developing equitable tariff structures for WASH services in line with national and local norms. Prior to introduction of tariffs for WASH services, an 'ability to pay' and 'willingness to pay' survey should be undertaken to determine the ability and willingness of the refugees to pay for services, and therefore to determine the likely success of the tariff system.

WASH interventions in urban settings

30. Currently 60% of refugees globally are hosted within urban environments, and this percentage is likely to increase in the future. Housing options depend greatly on the context but are likely to include renting, collective centres, staying with host families, or informal housing within public (or private) buildings or land. An influx of refugees into an urban environment can quickly overburden municipal WASH services leading to water shortages, increases in open defecation, waste dumping, contamination of water supplies and conflicts over WASH resources. It is therefore essential that the full range of water supply, excreta management, solid waste, hygiene promotion, and disease vector control interventions covered by these WASH guidelines is provided. In urban displacement settings, WASH interventions may be required for both the host and refugee populations to bring WASH service provision back to levels experienced before the displacement crisis and must consider protection and accountability of both refugee and host communities.
31. Provision of WASH services for refugees in urban settings can be significantly more complicated than in camp-based settings as it is harder to provide structured and timely WASH assistance in a dispersed setting. Moreover, monitoring is harder and also

evaluating the impact of the WASH response can be more complicated. In addition, many problems with poor WASH service delivery in the urban setting may be chronic, existing prior to the refugee situation. In some cases, WASH services and conditions for the resident urban poor may be worse than for the newly arrived refugee population.

Overburdening of WASH services by a refugee influx affects both the refugee and host population and the WASH needs of both groups may need to be reinforced.

32. UNHCR and WASH actors should ensure that efforts are made to differentiate the different WASH needs of refugee families in rental accommodation, refugee

families that have congregated on public land, or in collective centres, refugee families that are staying with hosts, and blanket WASH interventions for both the refugee and host populations in areas that are generally heavily impacted by the newly arrived population. As a minimum UNHCR core WASH indicators including per capita water consumption, water quality, safe toilet access, household water storage capacity and access to soap and sanitary protection materials, must be fully evaluated for all groups. Following the evaluation phase UNHCR and WASH actors should draft clear short, medium and long term WASH strategies for each of these groups.

Table 2.1 Types of WASH interventions in Urban Settings

WASH assistance for refugee families in urban settings congregated in public (or private) buildings, land, or collective centres	WASH assistance for refugee families in urban settings in rented accommodation	WASH assistance for refugee families in urban settings living with host families	WASH assistance to both the refugee and host population in urban districts where the refugee influx heavily inundates the local population
<ul style="list-style-type: none"> Establishment of supplementary public water points. Clean up campaigns (open defecation, waste dumps, ditches) Reinforcing solid waste collection services. Distribution of WASH hygiene kits, water filters and water vouchers. Construction of temporary toilet and bathing facilities. Identification of suitable unused urban buildings and spaces that can be safely and adequately occupied by refugee families, in close collaboration with municipal authorities. WASH assessments should be undertaken to determine the required WASH upgrades that are necessary so that the buildings or land is habitable and meets UNHCR minimum WASH requirements. 	<ul style="list-style-type: none"> Distribution of WASH hygiene kits, water filters and water vouchers. Distribution of a sanitation improvement package or cash grant if the refugee family is expected to remain for longer than six months. 	<ul style="list-style-type: none"> Distribution of WASH hygiene kits, water filters and water vouchers. Distribution of a sanitation improvement package or cash grant if the refugee family is expected to remain for longer than six months. 	<ul style="list-style-type: none"> Establishment of supplementary public water points. Rehabilitation of existing public WASH infrastructure. Clean up campaigns (open defecation, waste dumps, ditches). Reinforcing solid waste collection services. Distribution of WASH hygiene kits, water filters and water vouchers. WASH related community driven Quick Impact Projects (QIPs). <p>Activities must be carried out as much as possible through existing national WASH service providers.</p>
<p>Note: Provision of WASH assistance for families that are renting or staying with hosting families (i.e. WASH NFSs, water vouchers and construction materials for sanitation upgrades) should be prioritized according to UNHCR vulnerability criteria.</p>			

Working with urban municipal authorities

33. Where necessary, work with municipal authorities to identify suitable buildings and public spaces that can be safely and adequately occupied by urban refugee families. Undertake WASH assessments to determine upgrades that are necessary so that buildings or land meets UNHCR minimum WASH requirements. Before undertaking any works there must be a clear agreement describing rights, duties, ownership and responsibilities in place with the landowner.

CASH Based Interventions

34. Cash based interventions are particularly useful for refugee WASH programming in urban settings where the refugee population is dispersed among the general population. Voucher schemes can be established for purchasing potable drinking water, hygiene supplies, or toilet upgrading or desludging services. More guidance for cash based interventions can be found at wash.unhcr.org and in the references.

Coordination with the shelter sector

35. In urban settings, the WASH response is closely dependent on the Shelter sector to identify the types of accommodation that are being planned and exactly where and when the refugee persons of concern will be accommodated. In addition, the Shelter programme will typically establish a refugee financial and material support package to match each of the settlement options which should

include WASH items including: hygiene kits; water and desludging vouchers; and possibly a household upgrade packages that may be used for improving household sanitation, water supply, or water storage. If the refugees are to be located in collective centres, generally, the Shelter sector will take responsibility for ensuring humanitarian shelter standards are met in terms of building conditions (structural stability, safety, earthquake resistance, sealing, weather protection, roofing, windows, partition walls, ventilation, winterization, electrical wiring, access, damp, noise) and WASH will ensure that there are adequate water supply, excreta management, bathing, laundering, solid waste, wastewater, hygiene and disease vector control services. UNHCR and WASH actors should ensure that close coordination is also carried out during the assessment and shelter identification stages to ensure that refugee sites are selected based on the feasibility of providing on-going WASH services.

Cash based interventions

36. Where appropriate refugee WASH programs should use Cash Based Interventions (CBIs) to stimulate existing WASH markets and empower refugees to determine their own WASH needs. Voucher schemes may be established for the topping-up of hygiene related non-food items (e.g. voucher schemes for market purchase of soap, buckets, bowls,

sanitary products, water treatment products, or menstrual hygiene items). Cash based interventions are particularly useful for refugee WASH programming in urban settings where the refugee population is dispersed among the general population. Voucher schemes can be established for purchasing drinking water, water tanks, hygiene supplies, plumbing services, toilet upgrading or desludging services. More guidance for cash based interventions can be found on wash.unhcr.org, and in the UNHCR WASH and CASH Review Document in the references.

Protection of the environment

37. Poorly managed WASH activities in refugee settings can potentially have an extremely negative impact on the environment. The major environmental risks from WASH programmes are related to pollution and degradation of the environment from poorly managed excreta, greywater, solid waste, and disease vector control related activities. In addition over-exploitation of fragile water resources may lead to rapid depletion with irreversible impacts on water reserves or fragile ecosystems. Finally, unsustainable procurement of wood or burned bricks for toilet construction may present a large environmental risk particularly in locations where sustainable supplies of wood are in limited supply.

38. In all cases short, medium and long-term environmental impacts

from WASH interventions must be considered from the outset of a refugee emergency. Failure to do so can have widespread ramifications and prove costly to address. Preventative and mitigation measures are far more cost-effective than remedial actions. Environmental measures must be budgeted from the start.

Respect of local sanitary codes and national environmental legislation

39. In all settings, local sanitary codes and environmental legislation related to water, wastewater, excreta, blackwater, sewage, solid waste, vector control must be respected. During short term emergency responses it may be possible to negotiate with national authorities for relaxation of sanitary codes and environmental standards. In cases where national sanitary codes and environmental legislation do not exist then the minimum guidance provided in this UNHCR document must be met. WASH programmes should be designed and monitored in close collaboration with local regulatory authorities. All environment related rules, regulations and norms should be clearly communicated to the refugee population.

Environmental impact assessments

40. Where feasible, refugee sites should complete a WASH related environmental impact assessment that includes at a minimum:

- ◆ An assessment of environmental related risks at each stage of water supply, excreta management,

greywater disposal, solid waste management, and disease vector control. The risks should be ranked according to an assessment of their likely probability and impact.

- ◆ A matrix of short, medium and long-term mitigation measures to address the WASH related risks identified as having both “high impact” and “high probability”.
- ◆ A matrix of environmental monitoring parameters (along with their means of verification, monitoring frequencies, and target thresholds) to measure WASH related risks identified as having both “high impact” and “high probability”.
- ◆ A checklist of emergency corrective actions to be carried out if the environmental monitoring programme identifies parameters that exceed their target thresholds.
- ◆ An overview of national environmental legislation related to water supply, excreta management, greywater disposal, solid waste management, and disease vector control; along with how they are being addressed.

41. Overall preparation and monitoring of the WASH environmental impact assessment and action plan is the responsibility of the WASH programme however the activities should be undertaken in close collaboration with UNHCR’s environmental stability and management specialists and national environmental monitoring authorities. More details can be

found on wash.unhcr.org including a WASH related environmental impact assessment template.

Site Closure

42. Where there is requirement for site closure all WASH facilities, especially toilets and solid waste disposal facilities should be safely decommissioned safely, and environmental restoration work carried out. Refer OG-800/2015a UNHCR WASH Guidelines on Camps Closure (UNHCR, 2014)

<http://wash.unhcr.org/wash-refugee-guidelines/>

3. WASH Sector Coordination

WASH sector coordination is an essential activity in all refugee settings to ensure there is a united and common approach to providing WASH services to the refugee population. Refugee WASH sector coordination includes ensuring that there is a common WASH strategy; harmonized assessment of WASH needs; avoidance of gaps and duplication; definition and application of appropriate technical standards; joint mobilisation and allocation of resources; building of capacity; monitoring of performance; combined advocacy efforts; joint information sharing; joint preparedness and contingency planning; and to ensure there is capture and application of lessons learned and sector best practice.

Refugee Coordination Model and WASH Sector Coordination

1. UNHCR is ultimately responsible for ensuring there is effective WASH sector coordination in all refugee settings. In 2013, UNHCR has defined the Refugee Coordination Model (RCM) which outlines UNHCR's role and responsibilities in refugee operations and mixed displacement situations and has been built on UNHCR's best practices from the field in particular interaction with the Cluster system. A clear explanation of UNHCR's refugee response coordination model in mixed settings and the interface with broader humanitarian coordination structures and the IASC cluster system can be found in the briefing document in the references section and wash.unhcr.org. In the context of a complex emergency where the cluster mechanism has been activated and refugees are a part of a much larger response then UNHCR will undertake coordination of the WASH activities in the refugee settings and will ensure that the refugee situation is represented at the wider coordination meetings.
2. It is important to understand the difference between: a) "WASH Sector" Coordination during a refugee response, which is always the responsibility of UNHCR together with the host government, but may be delegated by UNHCR to other actors; and b) "WASH Cluster" Coordination which may be declared during a natural (or man-made) disaster, disease outbreak and/or IDP response, which is the responsibility of UNICEF, as Cluster Lead Agency, together with the host government, under the IASC Cluster mechanism, but which may also be delegated by UNICEF to other actors. It is

important to understand and use the correct terminology.

3. WASH sector coordination is an essential activity in all refugee settings to ensure there is a united and common approach to providing WASH services to the refugee population. This includes a common WASH strategy, a coordinated and harmonized baseline assessment of WASH needs, avoidance of gaps and duplication, definition and application of appropriate technical standards, common mobilisation and prioritisation of resources, building of capacity, monitoring of sector performance, joint advocacy, sharing of information, and a common long term vision. In addition, the refugee WASH Sector lead is responsible for ensuring there are common inter-sectoral strategies and information sharing between WASH and the Health, Shelter, Education, Livelihoods, Protection, Nutrition, Site Planning and Community Based Protection Sectors.

WASH sector coordination implementation arrangements

4. Appropriate refugee WASH Sector coordination arrangements will depend on the scale, phasing, and anticipated duration of the refugee situation. Other factors to consider include government, UN and NGO response capacity and the presence and effectiveness of existing coordination mechanisms, including committees or temporary

ministries run by the refugees themselves. Whatever the structure adopted, it must be flexible enough to suit all stages of the response e.g. expanding during intensive relief activities and scaling back during post emergency and protracted phases.

5. A key element of the UNHCR Refugee Coordination Model is that sector coordination, whenever possible, should be led by Government line ministries and/or (co)chaired by UNHCR and/or (co)chaired by one of UNHCR partners through a standby-arrangement. If WASH coordination mechanisms already exist then the UNHCR must ensure that coordination is supported, reinforced and functioning effectively - avoiding creating parallel coordination structures.
6. During large emergencies a decision may be taken by UNHCR Senior Management to mobilize arrangements for rapid refugee WASH sector coordination which includes a dedicated refugee WASH sector coordination focal point, Information Manager, and resources for coordination either within UNHCR or a partner organisation. If standby arrangements are not activated, UNHCR Senior Management must ensure that effective coordination of the refugee WASH response is taking place at the national, sub-national and site levels. Depending on the coordination arrangements, the refugee WASH sector coordination focal point may be

hosted at either UNHCR, or within national government authorities (if a co-leadership arrangement of sector coordination is established).

7. In refugee responses WASH sector coordination is likely to be required at two levels:
 - a. **National Level:** primarily country level strategic planning and decision making, liaison, information sharing and reporting into broader multi-sector refugee coordination platforms.
 - b. **Sub-National / Site Level:** coordination for planning and response activities within the region or at specific refugee sites.

The importance of dedicated coordination personnel and resources

8. In large refugee emergencies WASH sector coordination may be required at the national, and sub-national / site level. UNHCR senior management should ensure that resources are available to make sector coordination work from the start of the refugee emergency through the appropriate allocation of resources for WASH coordination staff and Information Managers, tools, computers and mapping facilities.
9. The role of the refugee WASH sector coordination focal point is to facilitate a well-coordinated and effective humanitarian response to a refugee situation. At all times the refugee WASH sector coordination focal point should act in the best interest of the refugees

and the WASH sector as a whole rather than his or her own organisation.

Establishment of an Advisory Group

10. In large refugee emergencies a Refugee WASH Advisory Group should be established to ensure that there is an element of democratic and transparent decision making on behalf of WASH actors. The Advisory Group is able to share some of the coordination workload in particular the responsibility for decision making. An Advisory Group is essential to be able to demonstrate that critical or influential decisions have been made by a group of persons rather than a single individual. The steering or Advisory Group size should generally be managed to ensure the balance between the need for rapid decision making and effective management, and the need for broad participation. The group should aim to represent all major stakeholders including national WASH actors and sub-national WASH sector leads.

Creation of Technical Working Groups (TWGs)

11. Technical, working, or sub-groups are useful in producing technical guidelines, analysing problems, resolving concerns, and formalising principles and responsibilities. Consensus is more easily achieved within a smaller group. To establish a TWG, a focal point should be elected with responsibility for

establishing the group, defining the terms of reference, and feeding back on their activities and recommendations to the wider sector group.

12. A TWG's life-span should be determined by its purpose and deliverables. Once the purpose and deliverables have been achieved it is better to dissolve the group rather than have many smaller groups that continue to meet without clear objectives. Membership of TWG's should be through voluntary self-selection, and special expertise may be co-opted as required.

Practical Guidance for WASH Sector Coordination

Immediate establishment of sector coordination arrangements

13. Refugee WASH sector leadership and coordination is an essential activity that is ideally commenced during the contingency planning process prior to any refugee emergency. And must be in place immediately at the onset of any refugee emergency. The provision of basic coordination activities (for example establishing a regular time and place for WASH organisations to meet and share information) is better than delayed provision of improved systems. If WASH coordination mechanisms for refugees already exist at National or Sub-national level then ensure that coordination is supported, reinforced and functioning effectively - avoiding creating parallel coordination mechanisms. Where possible, WASH coordination arrangements

should be co-chaired by the national government or relevant local authorities with strong support from UNHCR.

Establishment of a programme of refugee WASH coordination meetings

14. Coordination meetings at the national, sub-national / site levels are essential for leading the response planning, monitoring progress, and communicating information. It is essential that the refugee WASH sector lead ensures effective and efficient coordination meetings are taking place that are productive and do not waste the time of the participants.
15. To this end, ensure that refugee WASH meetings have clear agendas, and any action points are clearly documented. The interval between meetings should be changed to meet the needs.

Assessment of needs and gaps

16. Harmonized WASH assessments are an essential activity in every refugee setting to identify the locations of the most affected sections of the population, their coping mechanisms, public health related risks and the most urgent WASH interventions that are required. Coordination is essential to ensure that where possible WASH agencies use harmonized WASH data collection tools, indicators and common operational datasets (common population names, population sizes, administrative boundaries). Use of harmonized tools and approaches means that a common analysis of WASH needs

Box 3.1: Guidance for Refugee WASH Coordination Meetings

Before the meeting

1. If appropriate, ensure (or advocate strongly) for government chairing or co-chairing of refugee WASH coordination meetings, particularly in the early response.
2. Ensure that there is a clear agenda that is circulated well in advance. Ensure the agenda is approved by the Advisory Committee.
3. Ensure there is sufficient information for participants to know what they need to do to prepare in advance (especially those that are making presentations).
4. Ensure WASH actors have been contacted to facilitate different parts of the meeting in order to change presentation style and demonstrate open collaboration.
5. Ensure that there is a suitable venue for meeting that is comfortable and facilitates productivity and sharing of information. Consider whether venues are appropriate e.g. many INGOs are uncomfortable or have security restrictions imposed on attending meetings within UN compounds or in hotels used mainly by expatriates. Consider rotating the meeting among refugee WASH sector members' offices.
6. Ensure that all the required resources (projectors, extension cables, whiteboards, maps, reports, refreshments) are prepared.
7. Ensure attendance of key decision makers – encourage their involvement in meetings through maintaining regular, personal contact. The better the relationships with refugee WASH actors the better the coordination.
8. Only call a coordination meeting when it is absolutely necessary and review the meeting frequency frequently with the Advisory Committee.

During the meeting

1. Ensure that the meeting starts promptly and finishes on-time. Try to keep the timings to those in the published agenda without limiting time for discussion.
2. Allow time for all members to introduce themselves and provide a short (two minute) agency update. Allow actors enough time to feel engaged in the meeting (break the ice) – but do not allow actors to talk endlessly. Detailed agency updates should be shared via other means (e.g. written updates and 3W, 4W).
3. Ensure that the objective of the meeting is understood and achieved. As the meeting progresses, compile a clear summary of short, medium and long term action points (WHO, WHAT, WHERE, WHEN, HOW). At the end of the meeting summarize the action points focusing on what needs to be done before the following meeting.
4. Share and discuss the latest 4W Matrix. Update the 4W matrix based on WASH agency resources. Allocate additional resources if available.
5. Share and discuss the short, medium and long-term thematic strategies.
6. If lengthy topics for discussion arise, consider the option of tackling them within a separate Technical Working Group or the Advisory Group.

After the meeting

1. Ensure that all presentation materials from the meeting are uploaded onto the

and gaps can be developed through sharing of assessment information and analysis resources. It is essential that all assessment teams include both female and male members so that women can speak to women during the process. See Chapter 4 for more information.

Establishment of WASH Sector Strategy and Operational Response Plans

17. UNHCR and WASH actors should ensure that coordination efforts lead to the creation of common refugee WASH Strategy and Operational Plans at the national, and sub-national / site levels. This is essential so that WASH actors (including donors) are able to understand, contribute to and budget for both the immediate activities and the long term vision for WASH service provision. It is also essential to agree common approaches for levels of service provision, appropriate technology / approaches, value for money, and protection considerations (refer to section 2 for more details).
18. The 4W Matrix (WHERE, WHEN, WHAT, WHO, HOW MUCH) should become the heart of the operational response plan, and should be used to lead and guide the response. The plan will show the overall masterplan of WASH activities planned in the short, medium and long term, and will show operational gaps where new partners can step in to implement activities, and can also be used to

monitor progress of partners on the agreed activities.

Establishment of agreed common Standards, and Indicators

19. Refugee WASH actors must agree and use common WASH standards and indicators for the refugee WASH response. The UNHCR WASH Standards and Indicators are listed at wash.unhcr.org/wash-indicators/. The short term emergency standards and indicators are derived from SPHERE, while the post emergency standards and indicators are designed for a higher level of service for longer term protracted situations.
20. Where possible post-emergency / protracted WASH Standards should be aligned with National Standards, or existing service levels within the surrounding host community.

Establish common Indicator monitoring (WASH Monitoring System)

21. Reporting on the refugee WASH sector's needs, progress indicators and gaps is essential so that stakeholders inside and outside of the sector are aware of WASH service coverage, resource availability, and implementation progress towards defined targets. In many cases, common reporting is vital to mobilize additional resources and raise awareness of key problems (particularly lack of funding). In every refugee setting the WASH Sector lead must ensure that they

have the capacity to collate, analyse and report on collective progress and outcomes. Regardless of whether they are bilaterally funded or funded by UNHCR, all WASH agencies working in refugee settings must report their activities to the refugee WASH sector coordination focal point.

22. As a minimum the UNHCR core WASH indicators wash.unhcr.org/wash-indicators/ must be routinely monitored in all refugee settings. These same indicators should be recorded monthly in the TWINE WASH Monitoring System wash.unhcr.org/wash-monitoring-system/. In addition, the indicators may also be communicated via the UNHCR Information Management Portal data.unhcr.org, or other external Information Management Portals such as Activity Info. And for UNHCR funded Partners reported bi-annually to the UNHCR Programme Officer for recording in the FOCUS database. Normally additional detailed indicators related to the WASH response will also need to be collected and analysed at the field level to enable detailed management of specific programme activities.

23. Where possible joint field visits with WASH Partners should be arranged to monitor progress and ensure accountability.

Information Management, Mapping and Reporting

24. The ability to produce maps is an essential coordination activity in large refugee emergencies.

Information Management staff with skills in using mapping software should be considered as a core function within the sector. Any new WASH facilities constructed should be mapped and the information fed into the UNHCR asset mapping systems (eg. UNHCR Borehole database, and camp mapping GIS platform).

25. Often the clearest way to present indicator monitoring and 4W data is graphically in the form of a thematic map (eg. Map showing distance to water points), or infographic. These maps and infographics allow refugee WASH actors to obtain a very clear picture of where WASH interventions have recently been carried out in addition to gaps and duplications.
26. Refugee WASH sector situation report (sitrep) updates should also be regularly produced. These sitreps should provide a narrative snapshot of the current WASH situation faced by the refugee population and updates of key WASH indicators. The data in the sitreps should be drawn from the 4W matrix and the progress indicator reports. These may be prepared as a stand-alone documents or may feed into the UNHCR multi-sector reporting mechanisms

27. An important aspect of Information Management is the ability to rapidly share different types of information with the refugee WASH community. It is essential that the refugee WASH sector not only has an active physical presence but also continues to interact through a

virtual presence. In every refugee setting WASH information should be closely integrated with UNHCR's Inter-agency Information Sharing Portal data.unhcr.org. In addition, refugee WASH coordination structures may consider establishing additional web based coordination mechanisms for the sharing of documentation, contact information, meeting minutes and other WASH information. This can be as simple as a DropBox or Google Drive account, or where required a dedicated website (Wordpress or Drupal 7 Distro).

Coordinated sector preparedness and contingency planning

28. UNHCR and WASH actors should ensure that country level and site level refugee WASH contingency plans are prepared in conjunction with multi-sectorial plans that include an analysis of historical and probable scenarios, likely impacts, WASH needs, WASH stockpiling and stand-by arrangements, coordination arrangements, and links to early warning systems.
29. Part of the preparedness activities include ensuring that there is consensus over common interagency WASH rapid and comprehensive assessment tools and approaches in addition to common emergency response implementation methods, approaches and standards. Efforts undertaken during the preparedness phase can dramatically improve the quality

and effectiveness of any future WASH responses.

Capture and application of lessons learned and sector best practice

30. Refugee WASH sector coordination mechanisms should strive to continuously evaluate the refugee WASH sector response in terms of speed, relevance, effectiveness, efficiency, impact and sustainability. Ensure that all lessons learned are used to inform policy change and sector best practice on a national and global level.

Ensure WASH interventions are fully coordinated with other sectors

31. UNHCR and WASH actors should ensure that WASH activities are closely coordinated with Site Planning, Protection, Education, Livelihoods, Community Based Protection, Public Health, Nutrition, HIV/AIDS and Shelter interventions. This is essential in order to avoid confusion, and ensure there are no overlaps or gaps. Examples of intersectoral interaction with WASH include:
 - ◆ **Site Selection:** WASH supports the overall site selection process by undertaking an assessment of the water availability, quality, ease of abstraction, ease of treatment, and ease of water distribution for various sites. In addition, WASH will assess the serviceability of any existing WASH infrastructure at the potential sites in addition to assessing ground conditions

for toilet construction and water infiltration (water point drainage)

- ◆ **Site Drainage:** Site Planning is responsible for overall site level storm water management and drainage. WASH is responsible for localized wastewater drainage from water points, bathing facilities, and laundering facilities.
- ◆ **Site Layout:** Site Planning is responsible for the overall layout of roads, family plots, and communal structures within a refugee site. WASH is responsible for planning the design and physical locations of all WASH facilities in collaboration with the Site Planner and refugee community. Collaboration with protection specialists to consider the safety aspects of the layout.
- ◆ **NFIs:** Field Offices are responsible for procurement, distribution, and monitoring of the general household support package. WASH are responsible for specifying WASH items to be included in the general household support package in collaboration with the refugee population. Particular care needed to consult on menstrual hygiene and incontinence needs.
- ◆ **WASH in Schools:** Education is responsible for all WASH related activities that take place within refugee school grounds. Education may request support from WASH for assistance with design and construction of WASH facilities within the school. Education is

responsible for ensuring ongoing operation and maintenance of WASH facilities within the school. WASH may do routine monitoring of the WASH facilities to ensure they meet with required standards and highlight to Education any areas of concern. Protection colleagues should be involved to collaborate to ensure that gender, safety and privacy have been considered in the infrastructure location and design.

- ◆ **WASH in Healthcare Facilities:** Health are responsible for all WASH related activities that take place within refugee health-care facilities. Health may request support from WASH for assistance with design and construction of WASH facilities within the Health care facility. Health are responsible for ensuring ongoing operation and maintenance of WASH facilities within the Health care facility, including on-site medical waste management. WASH may do routine monitoring of the WASH facilities to ensure they meet with required standards and are gender-segregated, safe and accessible for people with limited mobility and highlight any Health areas of concern.

4. WASH Assessments

WASH assessments are an essential activity in every refugee setting to identify the locations of the most affected sections of the population, public health related risks, their coping mechanisms, and the most urgent WASH interventions that are required. Timely WASH assessments provide the basis for planning, implementation, and prioritisation of all refugee WASH activities and in many settings are an important factor in saving lives.

General principles for WASH assessments

1. UNHCR and WASH actors should ensure that all WASH assessments are undertaken in a coordinated manner, adhering to the principles and methodologies generally defined in the publications *'The UNHCR tool for participatory assessment in operations (UNHCR, 2006)'*, and *'Operational Guidance for Coordinated Assessments in Humanitarian Crises (IASC, 2012)'*.
2. WASH assessments should be designed in a participatory and transparent manner taking into account local preferences and cultural norms. More guidance on participatory assessment approaches can be found in the UNHCR publication *'The UNHCR tool for participatory assessment in operations' (UNHCR, 2006)'*. Whenever possible WASH assessments should be carried out in collaboration with national refugee and WASH authorities. Female and male team members must be included in all assessment teams to ensure that females can speak with females. Wherever possible teams should also include representatives of minority groups in the affected areas.
3. WASH assessments should not overburden the population and collect any more information than is required. Effort should be made to ensure that assessments are well coordinated and affected refugee populations are not visited on multiple occasions by different agencies asking for the same information.
4. Assessment surveys should be carried out with a properly designed survey instrument, a sampling plan, and a sample size calculation. No more data should be collected than absolutely necessary.
5. Where possible, all WASH agencies should use common data collection tools, methodologies, indicators and operational datasets (agreed common population names, population sizes, and administrative boundaries). A

common approach is essential to ensure that the data collected can be compared, contrasted, and compiled into a single database for shared analysis. In ideal settings, these tools and methodologies would have been developed and finalised as part of ongoing WASH preparedness activities.

Immediate assessment of WASH needs

6. A rapid WASH assessment should be carried out at the start of any refugee emergency, ideally within the first 72 hours to identify priorities. Rapid assessment forms may be found at <http://wash.unhcr.org/emergency-tools/>
7. In order to obtain the most complete picture possible of the WASH needs, the rapid assessment should aim to collect an equal amount of both qualitative (descriptive) and quantitative (numerical) data. In most settings, it is recommended UNHCR and WASH actors undertake rapid WASH assessments by carrying out all of the following activities:
 - ◆ Key informant interviews
 - ◆ Focus group discussions (gender and age segregated)
 - ◆ Rapid household surveys
 - ◆ Observation walk
 - ◆ Assessment of existing WASH infrastructure and services
 - ◆ Assessment of existing WASH management arrangements
8. Initial assessments may be carried out either as part of a multi-sectoral assessment with

other life-saving sectors (typically shelter, protection, nutrition and health) or as a separate WASH rapid assessment.

9. The data collected during the rapid WASH assessment should be processed the same day (typically during the afternoon or evening) and the assessment team should meet and prioritise the findings into those needs that are lifesaving and must be met immediately and those that need a medium term approach.
10. Immediate rapid assessments of WASH needs should be followed up with comprehensive sectoral assessments which are typically carried out within the three months with a similar methodology to the rapid WASH assessment but in greater depth and over a longer period of time (typically several days).

Immediate assessment of potential refugee hosting sites

11. In parallel with the assessment of the refugee needs, it will be necessary to carry out an immediate assessment of potential refugee hosting sites. This process must be carried out in close collaboration with the UNHCR Management, National Government, local authorities, and site planning experts.
12. When large numbers of refugees have crossed a border and are congregating in a particular location, often the best solution for adequate provision of WASH services is to 'decongest' and

relocate the refugees to a better site. This may be a purpose built 'transit facility', dispersed sites within the host community (either urban or rural areas), or a purpose built 'camp'.

13. Normally the site selection process becomes a negotiation process between UNHCR Management, and the National and Local Governments. This process must be informed by clear and accurate technical information, and often most importantly from the WASH Sector with regard to access to water at the proposed sites, and potential challenges with provision of sanitation at the proposed sites, including flood risks.

14. Normally the selection of suitable refugee hosting sites is an iterative process, and will become a balance between managing immediate needs, and longer term objectives. WASH assessments at potential refugee hosting sites should consider the following key elements:

- ◆ Potential water sources - access to existing piped water network, location of water source (GPS coordinates), volume available, quality of water, cost of development, existing users, protection considerations.
- ◆ Sanitation considerations - access to existing sewer network, assessment of ground conditions including soil type (rocky, sandy, clay), soil permeability (percolation test), requirements for specialised construction equipment, access to desludging

equipment and location nearest sludge disposal site.

- ◆ Environmental considerations – flood risk, access to suitable building materials, potential for vector breeding, access to existing electricity grid (and reliability of grid).
- ◆ Solid Waste Management – access to existing waste collection services, location of nearest landfill or transfer station, or identification of suitable sites for new waste disposal pits or landfill.
- ◆ Protection considerations – limitation of protection risks (such as limited risk of conflicts over water or other natural resources).

15. Once a site is identified and approval obtained for site assessment, it is critical for the WASH team to undertake a rapid assessment as soon as possible. Ideally the assessment will be jointly undertaken with the site planning team and local authorities. After assessment the findings should be documented and a report issued as soon as possible to inform decision makers. The report should ideally be combined with the findings of the site planning team and other relevant stakeholders.

16. Once a site is confirmed, then detailed site assessments will need to be undertaken to inform decisions related to requirements for any WASH upgrades (in the case of existing buildings / co-location with host communities), and for detailed strategic planning of new WASH infrastructure (in the case of new camps).

Box 4.1: Principles for rapid assessments

- i). Involve all groups, particularly persons with specific needs, in the assessment to identify potential areas or issues needing immediate attention.
- ii). Explain the objectives and purpose of the assessment to the respondents to ensure their participation. Explain and ensure that all information will remain confidential.
- iii). Try to obtain responses from different sources whenever possible. Do not ask questions if you already know the answer from another source.
- iv). Obtain consent from all adult participants in any activity, and inform them that they can refuse to take part in the assessment without negative consequences. Obtain consent from parent or guardian for the children participants.
- v). Respect the dignity and self-worth of individuals at all times.
- vi). Report incidents immediately to the protection focal point (see Protection incident reporting).

Source: Joint Assessment Missions: A Practical Guide (UNHCR, 2013)

WASH Assessment Processes and Tools

17. Assessments are generally based around five key steps:

- ◆ Identify resources and compile assessment plan
- ◆ Collect data
- ◆ Analyse and interpret
- ◆ Report conclusions
- ◆ Design / modify interventions

Assessment team composition

18. During assessments it is generally faster to cover multiple sites with small independent multi-sectoral teams each with their own allocated vehicle and guide. Ideally assessments will be carried out in conjunction with Site Planners and Protection colleagues. Team composition may be based on the following:

Team Member	Proposed Activity
WASH Specialist	- Engineering Assessment / Sanitary Survey / Key Informant Interviews
Site Planner	- Site Assessment / Key Informant Interviews
Hygiene Specialist	- Focus Groups / Key Informant Interviews
Protection Specialist	- Focus Groups / Key Informant Interviews
Local Community Representative	- Guide / Introductions - Assist with Key Informant Interviews / Focus Groups

19. The team members must include both women and men and if possible, the WASH assessment team should include at least one representative of the relevant local authority (Region / Provincial / District, as appropriate) for

WASH issues and the national entity responsible for refugees should be fully informed of the planned assessment and its purpose.

20. At all stages the reliability of the information being collected should be assessed according to the following categories:

- ◆ **Somewhat Reliable:**
Reasonable but questionable source, method or time relevance of data
- ◆ **Reliable:** From a reliable source, using scientific method and data reflecting current or projected conditions.
- ◆ **Very Reliable:** Effectively unquestioned source, method and time relevance of data.

Box 4.2: Principles for rapid assessments

- i). Involve all groups, particularly persons with specific needs, in the assessment to identify potential areas or issues needing immediate attention.
- ii). Explain the objectives and purpose of the assessment to the respondents to ensure their participation. Explain and ensure that all information will remain confidential.
- iii). Try to obtain responses from different sources whenever possible. Do not ask questions if you already know the answer from another source.
- iv). Obtain consent from all adult participants in any activity, and inform them that they can refuse to take part in the

assessment without negative consequences. Obtain consent from parent or guardian for the children participants.

- v). Respect the dignity and self-worth of individuals at all times.
- vi). Report incidents immediately to the protection focal point (see Protection incident reporting).

Source: Joint Assessment Missions: A Practical Guide (UNHCR, 2013)

Identification of assessment locations

21. Typically assessments may be required at border crossing points, way stations, transit centres, reception centres and at the final sites where refugees will be hosted for the long term. The assessment format will need to be adjusted depending on whether refugees are already resident at the site, or if it is a future planned site where refugees are not yet resident.

Key informant interviews

22. Key informants should be selected based on their specific knowledge of hardware or software aspects of the site or WASH programme. During the needs assessment, the assessor should try to collect information from as many different sources as possible ensuring gender balance overall, and should try to triangulate the information to ensure it is correct. The UNHCR WASH Key Informant Interview Primer Questions from wash.unhcr.org can be helpful to

guide the conversation. Note that it is often useful to interview men and women separately as women may not feel able to speak or be honest in front of men.

Focus group discussions

23. Focus group discussions may be used to gather information about social and cultural preferences and practices, or to facilitate feedback on proposed technical solutions. The UNHCR WASH Focus Group Primer Questions from wash.unhcr.org can be helpful to guide the conversation. When undertaking focus group discussions, UNHCR staff and WASH actors should try to observe the following considerations:

- ◆ Females should facilitate female FGDs.
- ◆ Select focus group members who can contribute to the topic under discussion.
- ◆ Try to limit the numbers to a maximum of eight participants.
- ◆ Use a note taker so the facilitator can remain engaged.
- ◆ Encourage all voices, respect all answers.
- ◆ Listen as much as possible and speak as little as possible.
- ◆ Respect the time of participants and limit the session duration to 30 minutes.

Rapid household surveys

24. During the rapid needs assessment it is essential to get a clear picture of the WASH needs not only on a macro-level but also on a household level. Data collected from individual households is invaluable as it allows a snapshot of the current

WASH conditions experienced by a representative sample of refugee households to be presented.

25. In order to be able to cover as many households as possible during the emergency site visit the number of questions in the UNHCR rapid household survey tool has been kept to the absolute minimum essential WASH indicators. The aim is that the rapid household survey tool should take no more than 5 minutes to complete at every household. Questions in the rapid household survey tool include:

- ◆ Water:
- ◆ Where do you collect drinking water?
- ◆ How much drinking water was collected the previous day?
- ◆ How many people in this household? (allows the calculation of per capita water consumption, and per capita water storage)
- ◆ How much water storage capacity does the household have?
- ◆ Observation of condition of water storage containers?
- ◆ Sanitation:
- ◆ Where do you go to defecate?
- ◆ Observation of condition of toilet or defecation area?
- ◆ Hygiene:
- ◆ Where do you go to bathe/shower/wash?
- ◆ Observation of condition of shower/bathing area?
- ◆ Does the household have access to soap? (directly observe the presence of soap within 1 minute)

- ◆ Self-reported occurrence of watery diarrhoea within the household in the last week?

26. The rapid household survey tool and guidance for sampling and sampling size calculations can be found on the wash.unhcr.org website, and additional assessment questions are included in the Annex..

Observation walks

27. An observation walk of the refugee site does not have to take long, and can easily be incorporated into the general assessment schedule. For safety and security reasons it should generally be undertaken using a member of the refugee population as a guide. This also allows the possibility to pose questions and collect first-hand information about problems and solutions. Try to obtain an even balance of places the guide wants to show you and places they may not want you to see. Make sure you have a digital camera and field notebook to record any public health risks related to water supply, water storage, excreta, hygiene, disease vector, solid waste, hazardous waste, or drainage.

Assessment of existing WASH infrastructure conditions

28. Assessment of the condition and serviceability of existing WASH infrastructure is an essential part of any needs assessment especially in contexts where there is insufficient or aging infrastructure (for example in urban contexts). When assessing existing WASH infrastructure, it is essential to assess each step of

the water supply, excreta disposal, or solid waste, chain from point of origin to point of use/reuse/disposal. At each step, the key characteristics and condition of the infrastructure and resources should be noted, along with risks to public health, and corrective actions to bring the system back into serviceability. Some large scale WASH infrastructure can be complex to assess and may require specialized expertise. A female assessor should ask females separately about their feelings on safety, privacy and usability when using existing facilities.

29. During the infrastructure assessment, it is essential to logically record details of what is observed. The following equipment can be useful as part of the infrastructure assessment:

- ◆ Digital camera
- ◆ GPS unit
- ◆ Tape measure / Laser Distometer / well dip meter
- ◆ Water quality testing equipment
- ◆ Water flow rate testing equipment
- ◆ Sanitary surveying templates

Detailed Assessment of New Sites

30. Potential water sources - Specialist expertise is generally essential to identify and evaluate potential new water sources for refugee settings. For groundwater sources a detailed hydrogeological survey should be undertaken prior to drilling, and for surface water sources a detailed study considering seasonal variations in flow volume, turbidity, water quality

and other relevant factors should be completed prior to design of the abstraction system and treatment plant. These assessments are typically carried out in collaboration with UNHCR's site planning section. It is also very important to also consider the human aspects of water sources when undertaking assessments, particularly to understand who are the existing users, who owns the land, risks for the environment and for conflict with the host community if the source is to be used for refugee populations.

31. Sanitation considerations - assessment of ground conditions including soil type (rocky, sandy, clay), soil strength, and soil permeability (percolation test) should be undertaken by digging test pits in various locations across the site, this will normally require specialist equipment and expertise.
32. Environmental considerations – flood risk modelling may be requested from UNHCR Site planning section, via an arrangement with UNOSAT.

Assessment of existing WASH management arrangements

33. Assessment of the existing management arrangements (e.g. who owns, takes care of, and pays for existing WASH infrastructure) is an essential part of any needs assessment especially in contexts where there is aging or inadequate infrastructure. When assessing WASH infrastructure management arrangements, it is essential to describe WHO does

WHAT, WHERE, WHEN and HOW for each separate part of the water, excreta management, waste, hygiene, or disease vector control activities. At each step, the key characteristics and condition of the management activities being undertaken (including any transportation, labour, fuel, spare parts and consumable needs) should be noted. Some large scale WASH infrastructure can be complex to assess and may require specialized expertise.

Assessment of existing WASH legislation

34. After the emergency phase, UNHCR and WASH actors should take a moment to ensure that national legislation concerning water supply, excreta management, hygiene, solid waste, disease vector control, and drainage are being fully respected. The best way to rapidly assess and understand existing legislation and practice is to involve local experts and authorities in the assessment process as early as possible. During the emergency and stabilisation phases it may be possible to get exemptions to existing legislation for short term interventions.

Institutional capacity assessments

35. During the stabilisation phase, or earlier if possible, it is important to take a moment to assess the capacity and needs of waste service providers and local waste authorities along with what additional priority support they may need to carry out their roles. An institutional capacity assessment is a useful exercise

to achieve this. In order to get the best results from the capacity assessment process, it is important that this activity is undertaken with a spirit of collaboration and open reflection with the institution; with a view towards longer term integration of refugee WASH services with host community WASH service management structures. In order to achieve this, a review of the following with the service providers is helpful:

- ◆ WASH equipment ages, types, capacities and conditions.
- ◆ WASH infrastructure ages, types, capacities and conditions.
- ◆ Human resources structure (organigram) including technical and managerial capacity and experience
- ◆ Fleet maintenance and logistics capacity
- ◆ Operational budgets

WASH Assessment Analysis and Reporting

Analysis of assessment findings and development of a WASH action plan

36. The analysis process aims to organise, review, synthesise and interpret the information collected throughout the WASH assessment process. An analysis plan should be used to outline how information collected will be utilised. The final output of the analysis process will be key findings and recommendations and a WASH action plan that clearly describes the short and medium term WASH response strategies in terms of WHERE,

WHEN, WHAT, WHO and HOW MUCH.

Format of a comprehensive WASH assessment report

37. A comprehensive WASH assessment report should be a maximum of 20 pages (excluding executive summary and annexes) and follow the outline below.
- i). **Executive Summary:** 2-3 pages, including key background information, needs identified and recommendations.
 - ii). **Introduction:** Background to comprehensive WASH assessment, objectives, why the assessment was conducted, overview of current situation, what the assessment aimed to achieve.
 - iii). **Methodology:** How the assessment was conducted, when, which methods and tools were used.
 - iv). **Limitations and challenges:** Description of any problems faced in achieving the overall objectives of the WASH assessment.
 - v). **Findings:**
 - Overall picture of the refugee situation: origin, number, sites, surrounding community relations.
 - Context: brief overview of the humanitarian context.
 - Key findings (organised geographically per site and by WASH thematic area). In particular the key findings should describe:
 - Will the site require a centralized or decentralized water supply solution?

questionnaires, sanitary survey tools, etc.)

- Will the water supply solution be integrated into local infrastructure or will it be stand-alone?
- Are the soil and groundwater conditions suitable for on-site sanitation?
- What will be the big WASH ticket items?

vi). **Needs and gaps:** how current assistance is addressing the WASH needs in addition to any WASH gaps. This section should also include any likely future scenarios and evolution of needs.

vii). **Conclusions and recommendations:** This section should summarise the main conclusions of the WASH assessment and likely evolution of the situation in the short and medium term.

viii). **Recommended activities:** Description of the WASH short and medium term action plans in terms of WHO, WHAT, WHERE, WHEN and HOW.

ix). **Annexes:**

- ToR.
- Detailed statistics.
- Maps.
- Participants (including names of organisations and individuals).
- List of secondary data sources analysed.
- List of sites visited, people met, FGD held, key informants interviewed.
- Copies of data collection tools used (key informant primer sheets, rapid household survey

Box: 4.3 Essential WASH assessment questions for refugee settings

General questions

- ☐ How many displaced women, men, children and families are present?
- ☐ Is the number of refugees increasing, staying the same, or decreasing?
- ☐ Water availability
- ☐ From where are water supplies currently being collected
 - ☐ (Note also the origin i.e. groundwater, surface water, rainwater)?
- ☐ How far are these water sources? Who owns these water sources?
- ☐ What is the average number of refugees per water collection point?
- ☐ How much water is being collected per household per day?
- ☐ How much water storage capacity does each household have?
- ☐ Are the water supplies protected from contamination?
- ☐ Is there sufficient yield / quantity? Are supplies reliable / available all day / year?
- ☐ What is the quality of these water sources? Are they chlorinated?
- ☐ What resources do families have for treating water?
- ☐ What alternative water sources exist nearby?

Excreta management

- ☐ What is the current defecation practice? Is there a designated area?
- ☐ Is the current defecation practice a threat to water supplies or living areas?
- ☐ Are there existing toilet facilities? If so, are they used, are they sufficient and are they operating successfully? Are they segregated by sex? Can they be improved?
- ☐ Would the population be willing to share or are communal toilets preferred?
- ☐ What local materials are available for constructing toilets?
- ☐ Is there sufficient space toilets? What is the slope of the terrain?
- ☐ What is the level of the groundwater table?
- ☐ Are soil conditions suitable for on-site excreta disposal?
- ☐ What do people use for anal cleaning? Are there sufficient materials available?
- ☐ Is there water available for anal cleansing, flushing or hand-washing?
- ☐ How did people manage excreta before the emergency?
- ☐ Do men / women / children feel safe using facilities? Do the toilet doors lock adequately?

Solid waste management

- ☐ How is solid waste currently managed? What sorts of wastes are being created?
- ☐ Are there designated collection points? How frequently is waste collected?
- ☐ Where is waste taken and how is it disposed?
- ☐ Are there any festering wastes or uncontrolled dumping of wastes?
- ☐ Are waste practices a threat to water supplies or living areas?
- ☐ How are hazardous wastes managed? Where are these wastes situated?
- ☐ Are any organisations responsible for waste collection and disposal?
- ☐ What resources (excavators / trucks / staff) do they have?
- ☐ Are there existing landfill sites? Who owns the site? Is the site operating successfully?
- ☐ Is there sufficient space for a landfill? What is the slope of the terrain? What is the level of the groundwater table? Are geological conditions suitable for landfill?

Hygiene

- ☐ Is soap available for hand washing and laundering?
- ☐ How and where are children's faeces disposed?
- ☐ What is the condition of water storage containers? Is water stored safely?
- ☐ Is food stored and prepared safely?
- ☐ Are there facilities for bathing, clothes laundering and airing? Are they segregated?
- ☐ Do current facilities offer sufficient levels of privacy and security?
- ☐ Do women have a place to soak/wash/dry/dispose of MHM materials with dignity?
- ☐ Would people be willing to share bathing facilities?

Vector control

- ☐ Are there problems with flies, lice, fleas, ticks, rodents, bats, birds, or mosquitoes?
- ☐ Is household waste covered daily with at least 20cm soil cover?
- ☐ Are there problems of stagnant water or blocked ditches?

Note: The list of questions is not exhaustive and is merely intended as an *aide memoire*. Additional questions should be formulated based on the replies received and the context.

5. WASH Monitoring and Reporting

Regular monitoring of WASH indicators is essential to understand if WASH programmes in refugee settings are on track to meet basic needs and agreed targets. Reporting of WASH indicators is essential so that all actors can understand the progress that is being made by WASH activities, including the refugees themselves.

Establishment of the routine monitoring of WASH indicators

1. Routine monitoring of the UNHCR core WASH indicators needs to be started immediately during the emergency phase and continued until a durable solution has been reached for the refugee population. This is regardless of whether the context is emergency, post-emergency, camp-based, non-camp based, urban, or rural.
2. WASH programmes should also monitor the rate of change of core WASH indicators to clearly show that the UNHCR target values will be met on-time. During the initial response period, the coverage of water points, toilets, showers, water containers, hygiene kits, access to sanitary protection materials, underwear and soap should be closely monitored. If the scale-up rates show that UNHCR target will not be met on-time, additional financial, material, and human resources should be allocated.
3. UNHCR uses an online WASH Monitoring System <http://wash.unhcr.org/wash-monitoring-system/> which is part of the wider Public Health Monitoring Platform called TWINE <http://twine.unhcr.org/> used to manage and analyse public health data collected in refugee operations. The WASH Monitoring System is used to create WASH report cards for refugee sites that monitor trends in key water, sanitation and hygiene indicators at household and community levels.
4. WASH Partners and UNHCR Staff can become registered users of the TWINE WASH Monitoring System (WMS) by registering online and then requesting relevant level of access (country, regional or global) or by emailing hqhis@unhcr.org for registration authorisation.
5. WASH indicator data is entered directly into the WASH Monitoring System website by the WASH Partner (or UNHCR WASH Officer) at country level and then reviewed and approved by UNHCR at the regional level and global levels.
6. As a minimum the UNHCR core WASH 'access indicators' should be measured monthly and

‘household indicators’ measured annually. The current version of the core UNHCR WASH Indicators and Standards are listed below and updated versions may be found at

<http://wash.unhcr.org/wash-indicators>.

7. Registered users may view historical WASH indicator data via the reporting functions on the TWINE WMS website. Progress against indicators can be visualized over time and comparisons can be made with Health and Nutrition data to inform WASH programming.

Monitoring WASH ‘Access Indicators’ using the monthly report card

8. ‘Access Indicators’ should be monitored on a monthly basis using the UNHCR Monthly Report Card and the results recorded at wash.unhcr.org/wash-monitoring-system/. Detailed instructions on the use of the monthly report card are available to registered users via the website. The UNHCR Monthly Report Card is used to routinely monitor the following:

- ◆ Average # liters of potable water available per person per day
- ◆ Average # l/p/d of potable water collected at household level $\geq 15 \geq 20$ Number of persons per usable water tap
- ◆ % water quality tests at non chlorinated water collection locations with 0 CFU/100ml
- ◆ % of water quality tests at chlorinated collection locations

with FRC in the range 0.2-2mg/L and turbidity <5NTU

- ◆ Number of persons per toilet/latrine
- ◆ Number of persons per bath shelter / shower
- ◆ Number of persons per hygiene promoter

Monitoring WASH ‘Household Indicators’ using the Standardised KAP Survey

9. ‘Household Indicators’ should be monitored on an annual basis using the UNHCR Standardised KAP Survey (Knowledge, Attitudes and Practices) and the results recorded at <http://wash.unhcr.org/wash-monitoring-system/>. WASH actors should aim to carry out an initial KAP baseline survey within the first 6 months of the emergency and then at least once a year (ideally twice if there are distinct rainy and dry seasons). Results from the KAP survey should be used to assist in the modification of the WASH activities in particular the hygiene promotion aspects. The KAP Survey Manual can be found on the wash.unhcr.org website and includes core WASH questions and a description of several scientifically robust representative sampling methodologies.
10. The UNHCR Standardised KAP Survey is used to routinely monitor the following indicators:
 - ◆ Average # l/p/d of potable water collected at household level

Table 5.1 UNHCR WASH Standards and Indicators – June 2016

Indicator		Emergency ¹ Standard	Post Emergency Standard	Means of Verification
Water Quantity	Average # liters of potable ² water available per person per day	≥ 15	≥ 20	Monthly Report Card
	Average # l/p/d of potable water collected at household level	≥ 15	≥ 20	Annual KAP
	% Households with at least 10 liters/person potable water storage capacity	≥ 70%	≥ 80%	Annual KAP
Water Access	Maximum distance [m] from household to potable water collection point	≤ 500m	≤ 200m	Mapping Annual KAP
	Number of persons per usable handpump / well / spring ³	≤ 500	≤ 250	Monthly Report Card
	Number of persons per usable water tap ⁴	≤ 250	≤ 100	Monthly Report Card
Water Quality	% Households collecting drinking water from protected/treated sources	≥ 70%	≥ 95%	Annual KAP
	% water quality tests at non chlorinated water collection locations with 0 CFU/100ml	≥ 95%	≥ 95%	Monthly Report Card
	% of water quality tests at chlorinated collection locations with FRC in the range 0.2-2mg/L and turbidity <5NTU ⁵	≥ 95%	≥ 95%	Monthly Report Card
Sanitation	Number of persons per toilet/latrine	≤ 50	≤ 20 ⁶	Monthly Report Card
	% Households with household or shared-family toilet/latrine ⁷	-	≥ 85%	Annual KAP / MRC
	% Households reporting defecating in a toilet	≥ 60%	≥ 85%	Annual KAP
Hygiene	Number of persons per bath shelter / shower	≤ 50	≤ 20 ⁶	Monthly Report Card
	Number of persons per hygiene promoter	≤ 500	≤ 1000 ⁸	Monthly Report Card
	% Households with access to soap	≥ 70%	≥ 90%	Annual KAP
Solid Waste	% Households with access to solid waste disposal facility	≥ 70%	≥ 90%	Annual KAP

UNHCR WASH Standards for Communal Buildings

Schools	Average 3 liters of potable water available per pupil per day 400 of pupils per usable handpump/well 200 pupils per usable water tap 50 pupils per toilet/toilet (30 girls per toilet, 60 boys per toilet – add urinals for boys)
Health Clinics / Nutrition Feeding Centre	Average 10 liters of potable water available per outpatient per day Average 50 liters of potable water available per inpatient/bed per day 1 separated water point per health facility 20 outpatients per toilet/toilet 10 inpatients/beds per toilet/toilet

¹ An emergency is arbitrarily defined as the first six months after the population movement has stabilized. However, this definition is context specific and should only serve as general guidance

² Potable water = safe for drinking

³ For decentralized systems

⁴ For centralized systems

⁵ Minimum target at water collection point should be 0.5mg/L FRC in general, and 1mg/L FRC during an outbreak

⁶ Post-emergency standard is 20 persons per toilet/shower, **aiming** for 1 toilet/shower per household or ≈5 persons

⁷ Toilets/toilets should be facilities that are cleanable, guarantee privacy and are structurally safe

⁸ In protracted situations, Hygiene Promoters should be combined with community health workers as much as possible

NB: Where appropriate the standards should be adapted based on context or existing National Standards

NB: an updated version may be found at <http://wash.unhcr.org/wash-indicators>

- ◆ Households with at least 10 liters/person potable water storage capacity
- ◆ Maximum distance [m] from household to potable water collection point
- ◆ % Households collecting drinking water from protected / treated sources
- ◆ % Households with household or shared-family toilet/toilet
- ◆ % Households reporting defecating in a toilet
- ◆ % Households with access to soap and specific device for hand-washing
- ◆ % Households with access to solid waste disposal facility



Figure 1 TWINE Work Flow

Mapping WASH infrastructure

- Simple mapping of WASH facilities (for example water points, toilets, bathing cubicles, solid waste collection points) can help obtain a clear snapshot of coverage and conditions. Colours may be used to plot WASH facilities in green if they are functional, yellow if they have minor issues, and red if there is

an issue for immediate attention. An example can be found in the figures below. These simple geographical information systems can also be shared with the health programme to investigate the linkages between disease, where patients reside, and poor access to WASH services. Maps are particularly useful to analyse disease outbreak data (case mapping), and to determine gaps in WASH service coverage.

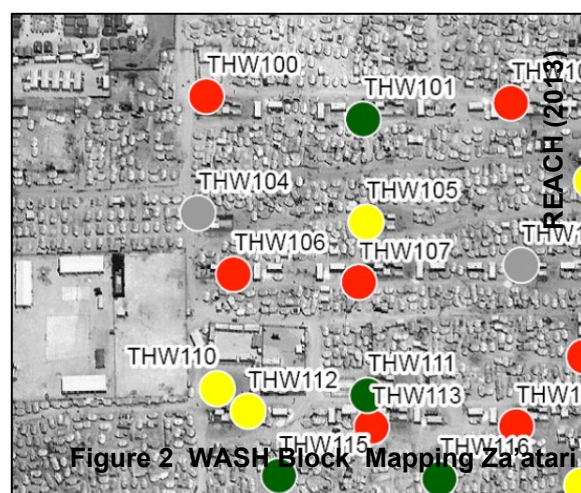


Figure 2 WASH Block Mapping Za'atari

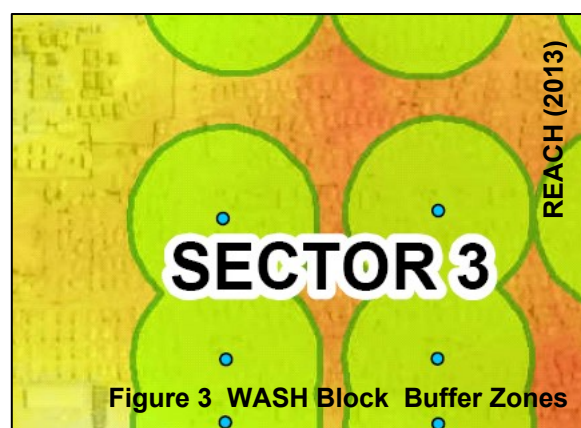


Figure 3 WASH Block Buffer Zones

Monitoring the cost effectiveness and efficiency of WASH interventions

- During the post-emergency phase, UNHCR and WASH actors should monitor the cost and efficiency of all WASH interventions over time. Core value-for-money indicators include:

- ◆ The cost of water supply (per m3 and per refugee)
 - ◆ The cost of excreta management (per m3 and per refugee)
 - ◆ The cost of solid waste management services (per ton and per refugee)
13. The monitoring of WASH expenditure per refugee allows different refugee settings to be compared and can also be used to explain why indicators are not achieved in some settings due to a lack of funding. The monitoring of WASH expenditure can also highlight locations that are not making efficient use of resources.
14. In addition to monitoring costs, UNHCR and WASH actors should also monitor the productivity of WASH programmes in an effort to maximize. WASH programmes typically employ a large number of staff (e.g. construction teams, operation and maintenance teams, hygiene promoters, cleaners, waste collection team), vehicles (e.g. waste collection vehicles, water tankers, maintenance pick-ups), and machines (e.g. water pumps, water treatment machines, sludge pumps). Small changes in how these assets operate can result in large increases in efficiency. Basic log sheets should be used to monitor how vehicles, machines and staff are working. For example water tankers, or waste vehicles may be logged to measure how many return trips are being carried out per shift, how much time is spent waiting, loading, collecting, or transporting.
15. UNHCR and WASH actors should ensure that infrastructure break-down rates (in particularly programmes that use handpumps for water supply), and spare-parts replacement rates are closely tracked to ensure that strategies to reduce breakdown frequency and replacement are functioning (and to identify irregularities and increasing frequency in breakdown rates and spare-part replacement). Core break-down indicators include:
- ◆ % reliability (# operating days / total elapsed days)
16. All data collected by the WASH programme should be collected with a purpose to inform decisions and improve the performance and cost-efficiency of the programme. This is not just to save the donors money but to move to a cost efficient model that may be handed over to the refugee population or local authorities. More information on monitoring the cost and efficiency of WASH interventions in refugee settings can be found in the UNHCR “Cost for Water” project which is accessible from the wash.unhcr.org website.
17. Monitoring should also be undertaken of protection and accountability issues, particularly feelings of safety, privacy and usability of facilities. Particular care should be taken to obtain feedback from women, girls, older people and people from marginalised or vulnerable groups. This monitoring should be undertake in collaboration with protection colleagues. See Chapter 2 for more details.

References

Introduction

WASH Technical Reference Documents

- ◆ ACF (2005), Water and Sanitation for Populations at Risk. ACF, Paris.
http://www.actionagainsthunger.org/sites/default/files/publications/Water_sanitation_and_hygiene_for_populations_at_risk_12.2005.pdf
- ◆ Davis J, Lambert R, (2002), Engineering in Emergencies 2nd Ed. ITDG, UK.
- ◆ Ferron, Morgan, O'Reilly, (2007), Hygiene Promotion: A Practical Manual for Relief and Development.
- ◆ John Hopkins and IFRC (2008), Public Health Guide for Emergencies.
http://www.jhsph.edu/research/center-for-refugee-and-disaster-response/publications_tools/publications/CRDR_ICRC_Public_Health_Guide_Book/Public_Health_Guide_for_Emergencies
- ◆ MSF (2010), Public Health Engineering in Precarious Situations 2nd Ed.
http://refbooks.msf.org/msf_docs/en/public_health/public_health_en.pdf
- ◆ SPHERE (2011) Humanitarian Charter and Minimum Standards in Humanitarian Response. <http://www.ifrc.org/PageFiles/95530/The-Sphere-Project-Handbook-20111.pdf>
- ◆ UNHCR (2007), Handbook for Emergencies, 3rd Ed. UNHCR, Geneva.
http://www.sswm.info/sites/default/files/reference_attachments/UNHCR%20007%20Handbook%20for%20Emergencies.pdf
- ◆ UNHCR (1992), Water Manual for Refugee Situations. UNHCR, Geneva.
<http://www.unhcr.org/publications/operations/3ae6bd100/unhcr-water-manual-refugee-situations.html>
- ◆ WEDC (2007), Excreta Disposal in Emergencies. Water, Engineering and Development Centre (WEDC), Loughborough University, UK.
http://www.sswm.info/sites/default/files/reference_attachments/HARVEY%202007%20Excreta%20Disposal%20in%20Emergencies%20%20A%20Field%20Manual.pdf
- ◆ WHO (2011), Guidelines for Drinking Water Quality 4th Ed. World Health Organisation, Geneva.
http://apps.who.int/iris/bitstream/10665/44584/1/9789241548151_eng.pdf

WASH Legal and Policy Reference Documents

- ◆ SDG 6 (2015) <https://sustainabledevelopment.un.org/sdg6>
- ◆ UNHCHR (2010), 'Legal obligations of the rights to water and sanitation', Human right to water and sanitation UN special rapporteur, Office of the United Nations High Commissioner for Human Rights, UNHCHR, Geneva.
http://www.ohchr.org/Documents/Issues/Water/LegalObligations_en.pdf
- ◆ UNHCHR (2010), 'The right to water: Factsheet #35'. Office of the United Nations High Commissioner for Human Rights, UNHCHR, Geneva.
<http://www.ohchr.org/Documents/Publications/FactSheet35en.pdf>

- ◆ UNHCR (2014), 'UNHCR policy on alternatives to camps'. UNHCR, Geneva. <http://www.unhcr.org/5422b8f09.pdf>
- ◆ UNHCR (2014), Global Strategy for Public Health 2014-2018. UNHCR, Geneva. <http://www.unhcr.org/530f12d26.pdf>
- ◆ UNHCHR (2014), 'Realizing the human rights to water and sanitation: A Handbook', Office of the United Nations High Commissioner for Human Rights, UNHCHR, Geneva. <http://www.ohchr.org/EN/Issues/WaterAndSanitation/SRWater/Pages/Handbook.aspx>
- ◆ UNHCR (2015), Global Trends Forced Displacement in 2015. UNHCR, Geneva. <http://www.unhcr.org/576408cd7.pdf>

Chapter 1 – UNHCR WASH Protection Principles

WASH, protection, accountability, participatory techniques:

- ◆ CHS Alliance, The Sphere Project and Group URD (2015) Core Humanitarian Standard; CHS Guidance Notes and Indicators, CHS Alliance, The Sphere Project and Group URD. <https://corehumanitarianstandard.org/resources/chs-guidance-notes-and-indicators>
- ◆ Ferron, S & Lloyd, A (2014) Emergency WASH for Children, Scoping Study, 2014, Save the Children. <http://www.elrha.org/wp-content/uploads/2015/02/2014-10-11-Emergency-WASH-for-Children-Final.pdf>
- ◆ Help Age (2015, Pilot version) Minimum Standards for Age and Disability Inclusion in Humanitarian Action, Age and Disability Capacity Project (ADCAP). <http://www.helppage.org/what-we-do/emergencies/adcap-age-and-disability-capacity-building-programme/>
- ◆ House, S. Ferron, S, Sommer, M, and Cavill, S. (2014) Violence, Gender & WASH: A Practitioner's Toolkit - Making water, sanitation and hygiene safer through improved programming and services. London, UK: WaterAid/SHARE (co-published by 27 organisations) <http://www.violence-wash.lboro.ac.uk/toolkit/>
- ◆ IASC (2006), 'Gender and Water, Sanitation and Hygiene in Emergencies'. Inter-Agency Standing Committee, Geneva, Switzerland. <http://www.ungei.org/resources/files/13.pdf>
- ◆ IFRC (2006), Gender in water, sanitation and hygiene promotion guidance note'. The International Federation of Red Cross and Red Crescent Societies, Geneva, Switzerland. <http://watsanmissionassistant.wikispaces.com/Gender%20in%20WASH.pdf>
- ◆ UNHCR (2006), 'The UNHCR Tool for Participatory Assessment in Operations'. UNHCR, Geneva. <http://www.refworld.org/pdfid/462df4232.pdf>
- ◆ UNHCR (2008) Handbook for the Protection of Women and Girls. UNHCR, Geneva. <http://www.unhcr.org/47cfa9fe2.pdf>
- ◆ UNHCR (2016), 'WASH, Protection and Accountability Briefing Paper'. UNHCR, Geneva.

- ◆ UNHCR (2008), 'A Community Based Approach in UNHCR Operations'. UNHCR, Geneva. <http://www.unhcr.org/47f0a0232.pdf>
- ◆ UNHCR (2009), 'Policy on Refugee Protection and Solutions in Urban Areas'. UNHCR, Geneva. <http://www.unhcr.org/4ab356ab6.pdf>
- ◆ UNHCR (2013), 'Understanding community based protection'. UNHCR, Geneva. <http://www.unhcr.org/51d19cb79.html>
- ◆ UNHCR (2015) UNHCR Age, Gender and Diversity, Accountability Report, 2015. UNHCR Geneva. <http://www.unhcr.org/5769092c7.pdf>

Age, Gender and Diversity:

- ◆ De Lange, R., Lenglet, A., Fesselet, J.F., Gartley, M., Altyev, M., Fisher, J. and Shanks, A. (2014) Keeping it simple: a gender-specific sanitation tool for emergencies , Waterlines 33, 1, 45-54.
<http://fieldresearch.msf.org/msf/handle/10144/550709>
- ◆ Mooijman, A. (2006), 'Girl-friendly toilets for schoolgirls: helping adolescent girls', IRC International Water and Sanitation Centre (IRC), The Hague, The Netherlands. <http://www.ircwash.org/sites/default/files/Roberts-2006-Girl-friendly.pdf>
- ◆ IFRC (2006), Gender in water, sanitation and hygiene promotion guidance note'. The International Federation of Red Cross and Red Crescent Societies, Geneva, Switzerland.
http://watsanmissionassistant.wikispaces.com/file/Gender%20in%20water%20and%20sanitation-EN_LR.pdf
- ◆ UNHCR (2000) Policy on Older Refugees. UNHCR, Geneva.
<https://cms.emergency.unhcr.org/documents/11982/43853/UNHCR%2C+Policy+on+Older+Refugees%2C+2000/084c44bf-1dd6-461c-b72f-b603b07bccde>
- ◆ UNHCR (2003) Sexual and Gender Based Violence against Refugees, returnees and Internally Displaced Persons, Guidelines for Prevention and Response. UNHCR, Geneva. <http://www.unhcr.org/3f696bcc4.pdf>
- ◆ UNHCR (2011) Age, Gender and Diversity Policy, Working with people and communities for equality and protection. UNHCR, Geneva.
<http://www.refworld.org/pdfid/55a61f794.pdf>
- ◆ UNHCR (2011) Need to know guidance: Working with persons with older persons in forced displacement. UNHCR, Geneva.
<http://www.unhcr.org/4ec3c81c9.pdf>
- ◆ UNHCR & IOM (2015) Working with Lesbian, Gay, Bisexual, transgender and Intersex (LBGTI) Persons in Forced Displacement, Training Package:
<http://www.unhcrexchange.org/topics/15810>
- ◆ Zomerplaag, J., and Mooijman, A. (2004) 'Child friendly hygiene and sanitation facilities in schools'. IRC Netherlands.
http://toolkit.ineesite.org/1071/Child_Friendly_Facilities.pdf

Accessibility:

- ◆ Jones, H.E., and Reed, R.A. (2005), 'Water and sanitation for disabled people and other vulnerable Groups: designing services to improve accessibility', Water, Engineering and Development Centre (WEDC), Loughborough University, UK.
http://wedc.lboro.ac.uk/resources/WASH_for_Disabled_People.pdf

- ◆ Jones, H & Wilbur, J (2014) Compendium of accessible WASH technologies, WEDC, WaterAid, SHARE. <http://hrbaportal.org/wp-content/files/Compendium-of-accessible-WASH-technologies.pdf>
- ◆ Oxfam (2007), 'Excreta disposal for physically vulnerable people in emergencies.' Oxfam GB, Oxford, UK. <http://policy-practice.oxfam.org.uk/publications/excreta-disposal-for-physically-vulnerable-people-in-emergencies>
- ◆ UNHCR (2011), 'Working with persons with disabilities in forced displacement. UNHCR, Geneva. <http://www.unhcr.org/4ec3c81c9.html>
- ◆ Vincent, D., et al (2008), 'How to build an accessible environment in developing countries. Manual 1: introduction and accessibility standards', Handicap International France, Cambodia Program, Phnom Penh. http://www.handicapinternational.f/documents/Manual1_light.pdf
- ◆ Vincent, D., et al (2008), 'How to build an accessible environment in developing countries. Manual 2, part 1: toilets and closed showers', Handicap International France, Cambodia Program, Phnom Penh. http://www.handicap-international.fr/documents/Manual2-1_light.pdf
- ◆ Vincent, D., et al (2008), 'How to build an accessible environment in developing countries. Manual 2, part 2: open washing areas and water points', Handicap International France, Cambodia Program, Phnom Penh. http://www.handicap-international.fr/documents/Manual2-2_light.pdf
- ◆ Vincent, D., et al (2008), 'How to build an accessible environment in developing countries. Manual 3: free movement', Handicap International France, Cambodia Program, Phnom Penh. http://www.handicapinternational.fr/documents/Manual3_light.pdf

Menstrual hygiene management (MHM):

- ◆ Ferron, S and Khan, M Eds. (2015) Hygiene Promotion in Emergencies, No 6. MHM and HP innovation, July 2015
- ◆ House, S., Mahon, T., and Cavill, S. (2012) 'Menstrual hygiene matters. A resource for improving menstrual hygiene around the world'. WaterAid, London, UK. http://www.wateraid.org/media/Files/Global/Compiled_LR.pdf
- ◆ Robinson, A & Obrect, A (2016) Improving menstrual hygiene management in emergencies: IFRCs MHM Kit, HIF & ALNAP. <http://www.alnap.org/pool/files/alnap-ifrc-menstrual-hygiene-case-study-2016.pdf>
- ◆ SPLASH (2015) Menstrual Hygiene Management Toolkit, USA, Washington D.C., USA, USAID/WASHplus Project. http://pdf.usaid.gov/pdf_docs/PA00KKKD.pdf
- ◆ Sommer, M. (2012), 'Menstrual hygiene management in humanitarian emergencies. gaps and recommendations'. Waterlines 31, 83-104, Intermediate Technology, UK. <http://www.sswm.info/files/Menstrual%20hygiene%20emergencies.pdf>

Chapter 2 – WASH Strategy and Operational Plans

Cash based interventions

- ◆ UNHCR (2013), 'An introduction to cash-based assistance in UNHCR operations'. UNHCR, Geneva. <http://www.unhcr.org/515a959e9.pdf>
- ◆ UNHCR (2015), 'Operational guidance for cash-based interventions in displacement settings'. UNHCR, Geneva. <http://www.refworld.org/docid/54d387d14.html>
- ◆ UNHCR (2017), Cash based interventions for WASH programmes in refugee settings. UNHCR, Geneva. <http://wash.unhcr.org/download/cash-based-interventions-for-wash-programmes-in-refugee-settings/>

Operation and maintenance

- ◆ Brikké, F. (2000), 'Operation and maintenance of rural water supply and sanitation systems'. World Health Organisation (WHO), Geneva, Switzerland. http://www.who.int/water_sanitation_health/hygiene/om/omruralsystems/en/
- ◆ Davis, J., and Brikké, F., (1995) 'Making your water supply work: Operation and maintenance of small water supply systems'. International Water and Sanitation Centre (IRC), Delft, The Netherlands. <http://www.wsp.org/Hygiene-Sanitation-Water-Toolkit/Resources/Readings/davis-brikke.pdf>
- ◆ Harvey, P. (2004), 'Sustainable handpump projects in Africa'. WEDC, Loughborough University, UK. http://wedc.lboro.ac.uk/docs/research/WEJW2/Report_-_Uganda.pdf
- ◆ Skinner, B. and Shaw, R. (1989), 'VLOM handpumps: WEDC technical brief #41'. WEDC, Loughborough University, UK. <http://www.lboro.ac.uk/well/resources/technical-briefs/41-vlom-pumps.pdf>

WASH and protection of the environment

- ◆ BGS (2002), 'Assessing risk to groundwater from on-site sanitation'. British Geological Society, Nottingham, UK. <http://r4d.dfid.gov.uk/pdf/outputs/r68692.pdf>
- ◆ CARE (2003), 'Guidelines for rapid environmental impact assessment in disasters'. CARE International. http://www.preventionweb.net/files/8267_bhrcgen30apr1.pdf
- ◆ UNHCR (2001), 'Refugee operations and environmental management: selected lessons learned'. UNHCR, Geneva. <http://www.unhcr.org/406c38bd4.pdf>
- ◆ UNHCR (2005), 'UNHCR environmental guidelines'. UNHCR, Geneva. <http://www.unhcr.org/3b03b2a04.html>
- ◆ UNHCR (2009), 'Framework for assessing, monitoring and evaluating the environment in refugee related operations'. UNHCR, Geneva. <http://www.unhcr.org/4a97d1039.html>
- ◆ WHO (2006) 'Guidelines for the safe use of wastewater, excreta and greywater'. World Health Organization, Geneva. http://www.who.int/water_sanitation_health/wastewater/gsuww/en/

Urban refugees

- ◆ UNHCR (1997), 'UNHCR policy on refugees in urban areas'. UNHCR, Geneva. <http://www.refworld.org/pdfid/3cbaedf74.pdf>

- ◆ UNHCR (2009), 'UNHCR policy on refugee solutions in urban areas'. UNHCR, Geneva. <http://www.unhcr.org/4ab356ab6.pdf>
- ◆ UNHCR (2012), 'The implementation of UNHCR's policy on refugee protection and solutions in urban areas – global survey'. UNHCR, Geneva. <http://www.unhcr.org/516d658c9.pdf>

Chapter 3 – WASH Sector Coordination

- ◆ Global WASH Cluster (2009), 'Intercluster matrices of roles and accountabilities'. UNICEF, Geneva. <http://washcluster.net/?get=000596|2014/04/ICM-final-13-01-2010-2.pdf>
- ◆ Global WASH Cluster (2009), 'WASH Cluster Coordinator Handbook'. UNICEF, Geneva. http://humanitarianlibrary.org/sites/default/files/2014/02/WASH_Cluster_Coordinator_Handbk_FINAL_VERSION_Jan09-1.pdf
- ◆ UNHCR (2013), 'UNHCR refugee coordination model: Adaptation of UNHCR's refugee coordination in the context of the Transformative Agenda'. UNHCR, Geneva. <http://www.unhcr.org/53679e2c9.pdf>
- ◆ UNHCR (2014), 'UNHCR refugee coordination model: Frequently asked questions'. UNHCR, Geneva. <http://www.unhcr.org/54f6cb129.pdf>
- ◆ UNHCR (2014), 'Joint UNHCR – OCHA note on mixed situations: Coordination in practise'. UNHCR / OCHA, Geneva. <http://www.unhcr.org/54f6cb129.pdf>

Chapter 4 – WASH Assessments

Needs assessments

- ◆ Global WASH Cluster (2014), 'WASH Cluster Indicators: Humanitarian Indicator Registry (HIR) & Associated Question Bank', Global WASH Cluster, UNICEF, Geneva, Switzerland. <http://www.humanitarianresponse.info/applications/ir>
- ◆ IASC (2012), 'Operational guidance for coordinated assessments in humanitarian crisis', United Nations Office for Coordination of Humanitarian Affairs (UNOCHA), Geneva, Switzerland. https://docs.unocha.org/sites/dms/Documents/ops_guidance_finalversion2012.pdf
- ◆ IASC (2012), 'Multi Cluster/Sector Initial Rapid Assessment (MIRA)', United Nations Office for Coordination of Humanitarian Affairs (UNOCHA), Geneva, Switzerland. https://docs.unocha.org/sites/dms/Documents/mira_final_version2012.pdf
- ◆ NRC (2014), 'Humanitarian needs assessment: The good enough guide', Norwegian Refugee Council (NRC), Oslo, Norway. <http://reliefweb.int/sites/reliefweb.int/files/resources/h-humanitarian-needs-assessment-the-good-enough-guide.pdf>
- ◆ UNHCR (2006), 'The UNHCR tool for participatory assessment in operations', Office of the United Nations High Commissioner for Refugees (UNHCR), Geneva, Switzerland. <http://www.unhcr.org/450e963f2.html>

- ◆ UNHCR (2013), 'Needs assessment for refugee emergencies (NARE) checklist', Office of the United Nations High Commissioner for Refugees (UNHCR), Geneva, Switzerland.
<http://data.unhcr.org/imtoolkit/documents/download/5846b9c1163c14616bc5dd81d6278ad1/lang:eng>

Chapter 5 – WASH Monitoring and Reporting

- ◆ UNHCR (2006), 'Practical guide to the systematic use of standards and indicators in UNHCR operations', Office of the United Nations High Commissioner for Refugees (UNHCR), Geneva, Switzerland.
<http://www.unhcr.org/40eaa9804.pdf>
- ◆ UNHCR (2014), 'WASH report card preparation using TWINE', Office of the United Nations High Commissioner for Refugees (UNHCR), Geneva, Switzerland. [http://www.ben-harvey.org/UNHCR/WASH-Manual/Wiki/index.php/File:WASH_Report_Card_Preparation_TWINE_\(UNHCR\).pdf](http://www.ben-harvey.org/UNHCR/WASH-Manual/Wiki/index.php/File:WASH_Report_Card_Preparation_TWINE_(UNHCR).pdf)
- ◆ Global WASH Cluster (2014), 'WASH information management guidance note', Global WASH Cluster, UNICEF, Geneva, Switzerland.
www.alnap.org/pool/files/wash-im-guidance-note1.pdf
- ◆ UNHCR (2014), 'Emergency information management toolkit ', Office of the United Nations High Commissioner for Refugees (UNHCR), Geneva, Switzerland. www.unhcr.org/55005ae59.pdf
- ◆ UNHCR (2017), 'UNHCR WASH Standards and Indicators for Refugee Settings'. UNHCR, Geneva. <http://wash.unhcr.org/unhcr-wash-standards-and-indicators-for-refugee-settings/>