

WASH Sector Strategy For Rohingyas Influx January 2019



This living document will be periodically updated.

CONTENTS

1 Introduction

The Violence in Rakhine State, Myanmar, which began on 25 August 2017, has driven an estimated 730,000 people to seek sanctuary in Cox's Bazar, Bangladesh – the fastest growing forced displacement crisis in the world. The speed and scale of the influx has resulted in a critical humanitarian emergency. Basic services that were available prior to the influx are under severe strain due to the massive increase in people in the area. In some of the sites that have spontaneously emerged, there is no access to water and sanitation facilities, raising the risks of an outbreak of disease. The Rohingya population in Cox's Bazar is highly vulnerable for WASH, having fled conflict and experienced severe trauma, and now living in extremely difficult conditions. The influx has also increased the WASH vulnerability of the pre-existing Rohingya population as well as the surrounding host community.

The new arrivals have joined some 212,500 Rohingya in Cox's Bazar that had fled in earlier waves of displacement. The Rohingyas are concentrated in two Upazilas of Cox's Bazar District; Ukhia and Teknaf putting an immense strain on the almost half a million Bangladeshis who live there, and the District government in particular. Infrastructure, health and water services, and the environment, especially fragile forest and land resources, are under massive pressure. Pre-existing settlements and camps have expanded with the new influx, while new spontaneous settlements have also formed. Significant numbers of new arrivals have also been absorbed into the local host community, where a total of over 7,000 Rohingya are estimated to reside. As of November 2018, there were 33 camps and settlements, including two formal Refugee Camps and ranging in size from 9,500 people in Alikali, to more than 607,00 people in the Kutupalong-Balukhali Expansion Site.

More than a year after the major influx began the situation has been slowly stabilizing thanks, in part to a tremendous WASH response. Basic assistance and initial risk mitigation measures have been largely successful and the living conditions are improving. The situation however remains extremely precarious with no SHPERE standards yet achieved in the WASH Sector, implying that there is still an unacceptable risk of disaster and disease outbreak. Congestion also remains the central challenge to the overall response resulting in poor living conditions due to this very high density of population. Continued upgrading and improvement to existing facilities, stronger community engagement and continuing improvement in hygiene is still required to continue to reduce these risks.

The initial Sector strategy focused on the emergency provision of water, emergency latrines and the distribution of hygiene materials, supported by promotion activities. As we moved into the next phase of the emergency the strategy changed to reflect the more settled position of the Rohingyas. The focus has changed to the rationalization and improved construction of water points, the construction of semi-permanent toilets, operation and maintenance of these facilities including sludge treatment, a greater emphasis on hygiene, community engagement, and the initiation of solid waste disposal. This approach meant that, as and where appropriate, facilities constructed were more durable to reduce the need for further costly operation, maintenance and reinvestment. The overall approach also started to begin to put the refugees at the center of the programme rather than the top down approaches initially.

This, the third phase of the WASH response will assist partners to implement in an efficient and effective way the WASH component of the Joint Response Plan issued by the ISCG on 1 January 2019 as well as all future JRPs. It is intended to reflect the growing stability of the situation on the ground and is intended to be an open ended medium-term strategy. It reflects the overall stability of the response, the increased capacity of Sector partners and intends to take advantage of the capacity to better engage the communities in a more meaningful way. Community engagement will over the course of the implementation of the strategy become more the responsibility of all sub-sectors allowing Hygiene to focus on key behaviors. While working to improve community engagement generically there will also be an increased emphasis on

inclusivity, reaching out to the most marginalized to ensure that all are benefiting from the programme. Finally it is very much intended to be a dynamic document and will be updated from time to time throughout the year as the situation on the ground changes or experience dictates.

2 WASH Overview and Key Needs

Without immediate, adequate water, sanitation and hygiene, preventable disease outbreaks will continue and worsen. Acute watery diarrhea is endemic in Bangladesh, and a dangerous combination with the high malnutrition rates of Rohingya populations. At the current density of population, any outbreak has the potential to kill thousands. Within the new settlements that have emerged since August, there were no pre-existing WASH facilities including latrines, water points or bathing places. Emergency facilities that were put up quickly in the first phase of response have been of low quality, necessitating decommissioning and retrofitting. To avoid open bathing and defecation, women wash inside their shelters and reduce their food intake to defecate less frequently and during the night. They often also face unsafe access to wash facilities and to distribution points.

Improved water quantity and quality is a priority. 73% of handpumps are currently functional with a ratio of one water point to 47 people, 56% of households have water access challenges including distance and queuing with a significantly higher rate in the Teknaf camps. Tubewells are vulnerable to flash floods and landslides. Evidence shows that high contamination levels of water are found at the tube well spout (25%), and at the household level (70%) indicating that water transport and storage remains a problem area. Water stress during the dry season has seen families accessing less than 15l/day in Teknaf where groundwater is extremely limited. While there have now been significant investigations into the underlying aquifers in the Ukhia area their aquifers remain undefined. Additional research to ensure the sustainability of this water supply still needs to be done.

As of the end of November 2018, more than 50% of household report challenges accessing sanitation facilities. These challenges include distance to the facility, overcrowding, location and overflowing. Continuing lack of available land is putting a severe strain on effective sludge management. As sludge management continues to be insufficient, and latrines with shallow pits are located close to water points, so water from shallow tube-wells are easily contaminated. Solid waste is often dumped in narrow spaces between shelters. There are limited primary collection centers for solid waste. For safe excreta and solid waste management, finding suitable land has been a challenge. An effective solid waste management system needs to be put in place urgently to improve overall hygiene and reduce the risks of disease outbreak and flooding. The risks have only grown with increasing numbers crammed in the Kutupalong-Balukhali Expansion Site. Add section on fecal sludge challenges

Combined with these factors, sector capacity in hygiene promotion has been generally poor, with few overall numbers of hygiene promoters but with specific challenges recruiting and keeping female promoters and a focus on didactic message dissemination, with a lack of formative research on priority risks per area. Community engagement and participation in siting and design of WASH infrastructure has been limited, with virtually no input from disabled or other marginalized segments of society. Hygiene practices and the barriers to achieving them are still poorly understood, and there remain significant language and communication challenges for hygiene promotion staff in communicating key information in Rohingya and through visual images that are appropriate for the context. The current situation poses a real threat for AWD and other WASH related disease outbreaks, and incidences of Hepatitis A and E have already been reported by the Health Sector.

With the support of the WASH sector and in coordination with the Health and Nutrition sectors, the WASH partners should regularly be informed on WASH, health and nutrition data to adapt on a timely and effective

manner their WASH response and better target population at risks if needed. (E.g. geographical location, or specific groups as pregnant women for Hepatitis E).

WASH partners should reinforce their relationship with the health actors in their intervention zone to ensure that a joint response is provided to public health risks. It is expected that WASH partners will work closely with the health partners to have a better understanding of the population at risks and transmission pathways.

Rumours about diseases and treatment processes should be documented in order inform both WASH and health sector partner activities and information sharing.

3 General Objective

The WASH Sector will, in support of the Protection Sector, progressively recognize, promote, realize and protect the rights of the Rohingya people and the affected Host Communities un Ukhia and Teknaf Upazilas with a focus on their WASH related rights.

4 Guiding principles

- WASH partners respect Humanitarian Principles, the Core Humanitarian Standard and the ‘do no harm’ approach, in their interventions.
- WASH partners will actively participate in the sector and report through the 4W and other mutually agreed upon systems.
- WASH partners adhere to national WASH operational guidelines for WASH in emergencies, where adaptation to local realities is required, as decided by the sector.
- WASH partner interventions will address the ‘three prongs’ of WASH (Water, Sanitation, and Hygiene), either as an integrated program, or in collaboration with other partners.
- WASH partners working in the camps will take responsibility for the operation and maintenance of all facilities provided by them or ensure their handing over to a competent authority or another humanitarian organization working in the same area.
- WASH partners working in Host Communities will hand over facilities as per standard GoB guidelines.
- WASH partner interventions will integrate with the strategic and operational approaches of other sectors, particularly Shelter, Camp Coordination and Camp Management, Health, Nutrition, Protection, including GBV and Child Protection & Livelihoods.
- WASH partner interventions will seek to improve good governance, human rights, gender equality, age appropriateness, and environmental protection in all aspects of WASH program planning.
- WASH partner interventions will incorporate, as a minimum, the priority activities outlined below to attain the targets.
- WASH partners will do their utmost to ensure the equitable provision of services between Rohingyas in camps and Rohingyas in host communities as well as with the host communities themselves.
- WASH partners will do their utmost to avoid duplicating activities in areas already served, and to intervene in areas where there is a lack of active WASH partners.
- All activities/implementation need to be gender/age/disability sensitive

5 Protection Risks and strategic principles

Beyond the obvious importance of meeting basic sanitation needs and preventing disease, access to adequate and appropriate WASH facilities plays an important role in the protection and dignity of affected populations, particularly girls and women. Providing water and sanitation facilities alone will not guarantee their optimal use. Only people centred, participatory approach at all stages of the response can help ensure that an adequate and efficient service is provided.

With the support of the WASH sector and in coordination with the protection sector, the WASH partners will regularly be collecting information on the key WASH protection issues to adapt on a timely and effective manner their WASH response to better target populations at risks as needed. This information will be cross checked with information received by the Protection Sectors and sub-sectors. WASH partners will also reinforce their relationship with the protection actor in their intervention zone to ensure that a joint response is provided on key protection risks related to WASH services.

The WASH partners have agreed that **5 minimum commitments** should be observed in all their humanitarian WASH programmes to ensure that the distinct assistance and protection needs of the affected population are met. These commitments, centred on people, aim at improving the quality and efficiency of the WASH response programmes, and at ensuring that key issues are taken into consideration by all partners, such as gender, gender-based violence, child protection, disability, and age. The respect of these minimum commitments all along the humanitarian programme cycle reinforces the accountability of the WASH partners to the affected population. These commitments are as follows:

1. Location of WASH facilities and their design are determined through separate consultations with girls, boys, women, men, including older people and persons with disabilities in order to ensure equitable access and minimize risks of violence
2. WASH facilities are designed to respond to distinct dignity, safety and access needs (i.e. separated by sex, locks, lights, pictograms, specific design for people with disability...).
3. Girls, boys, women, and men, including older people and those with disabilities have access to feedback & complaint mechanisms so that corrective actions can address their specific protection and assistance needs
4. Monitoring and evaluation systems of WASH partners and WASH sector include the information on the access and use of WASH facilities, including on how safe people feel using WASH facilities
5. Specific focus group discussions are organized for women and girls during the needs assessment phase and across the response

6 Coordination arrangements

The Department of Public Health Engineering (DPHE) is leading the sector response co-chair by ACF and UNICEF providing oversight and continued support and monitoring of the response. The aim of the coordination is to strengthen partnerships, and the predictability and accountability of international humanitarian action, by improving prioritization and clearly defining the roles and responsibilities of humanitarian organizations. Below are the core functions of the sectorial coordination:

- Supporting service delivery by providing a platform for agreement on approaches and elimination of duplication
- Informing strategic decision-making of the ISCG (Inter Sector Coordination Group) and HCCT for the humanitarian response through coordination of needs assessment, gap analysis and prioritization
- Planning and strategy development including sectoral plans, adherence to standards and funding needs

- Advocacy to address identified concerns on behalf of sector participants and the affected population
- Monitoring and reporting on the sector strategy and results; recommending corrective action where necessary
- Contingency planning/preparedness/national capacity building where needed and where capacity exists within the cluster.
- Ensuring that Accountability to Affected population (AAP) is fully integrated in the programme cycle.

The Strategic Advisory Group, set up in 2018, will support key strategic guidance and discussion for the sector.

6.1 Decentralization of the WASH sector at camp level:

Decentralization of coordination in the WASH involves three levels; the overall coordination described above, mid-level coordination currently carried out by IOM, UNHCR, and UNICEF as Area Focal Agencies and camp focal points (TORs in Annex X). Fundamental to this system is the Camp Focal Agency who are responsible for coordination of all WASH agencies active in the camp. They insure that there is no overlap by mapping by block all aspects of the response where ever possible getting an agency to provide the complete package while still making allowances for agencies that have technical expertise in only one or two technical areas. They are also responsible for establishing a close working relationship with the Camp in Charge from the RRRC as well as focal points of other key sectors. In the case of a suspected WASH related disease outbreak they should be immediately notified by the Health Focal point and conduct a joint investigation.

The Second Tier in the Decentralized Coordination system is the Area Focal Agency. Any issue that cannot be resolved at Camp level are brought to the AFA's attention to be dealt with, only if the AFA is unable to act will it be brought to the Coordination Unit. The midlevel focal points also serve to communicate important decisions taken by the sector to the zones as well as to assist in the operationalization of those decisions and work directly with the site planners and site managers to ensure sufficient WASH facilities are in place in new settlements. In most cases the CFA is on contract to the AFAs who are the source of most of the WASH finance and so the AFAs are able to enforce decisions taken by the sector. This adds an element of command and control that is normally missing from the Cluster approach.

6.2 Inter-sector coordination

Sector	Responsibilities of the WASH sector
Nutrition	<p>Technical advice on WASH infrastructure in Treating Feeding Center</p> <p>Target areas and households where malnourished children are identified (see section 4)</p> <p>Include WASH indicator in SMART survey</p> <p>Coordination around hygiene/nutrition messages</p>
Health	<p>Health sector to provide Health statistics to WASH to monitor response and address specific issue related to WASH.</p> <p>Local coordination at camp level to address WASH related diseases and better target the vulnerable groups (to specific diseases)</p> <p>Develop a joint contingency plan for AWD or other communicable diseases.</p> <p>Technical advice on WASH infrastructure in Health center</p> <p>Coordination around hygiene/health messages</p>

Site Management/ Site Development	<p>Joint camp planning to ensure sanitation corridors and comply with WASH minimum requirement</p> <p>Ensure adequate space for all WASH facilities including sludge and solid waste management</p> <p>Support Camp managers and CiCs to coordinate at the camp level</p> <p>Ensure that drainage of all WASH facilities connect to main drains</p>
Shelter	<p>Discussion around possibility to have shelter constructed with latrine and bathing facilities</p> <p>Harmonize upgrading of family toilets and bathing facilities and shelter</p> <p>Joint planning for facilities protection and reinforcement during adverse weather</p>
Protection	<p>Identified potential protection issues related to WASH</p> <p>Address feedback related WASH issues collected by the protection partners</p> <p>Hygiene promotion intervention in Child Friendly spaces and women friendly spaces</p> <p>Harmonize contents and distribution of the dignity kits and MHM kits, post distribution and information sharing regarding MHM</p> <p>Joint safety audit to identify and address risks</p> <p>Referral to GBV service</p>
Education	<p>Hygiene promotion in school and learning centers – Explore opportunities to develop portable skill curriculum for Hygiene Promoters</p> <p>Technical advice on WASH infrastructure in school</p>
Communication with communities	<p>Address feedback related WASH issues collected by the CWC partners</p>

7 Minimizing Environmental Related Risks

7.1 Taking actions to protect natural resources

The WASH sector is promoting the following measures:

- Climate and other hazard resilience measures will be incorporated in all water infrastructures (tanks, reservoirs, dams, pipe-networks) for flood/landslides and other hazards and or mitigated alternatives in case of any breakdown.
- Design and development of surface and rain water harvesting infrastructure (dams, reservoir, etc.) should include adaptation & seasonal rehabilitation (e.g. rebuilding the dam at the start of dry season and lowering spillway or progressive collapse during rainy season. Erosion control, land protection, adaptable maintenance and water sharing for production & farming is integrated.
- All water supply options should incorporate the resilience marker during the planning and implementation stage.
- An Environmental Impact Assessment will be implemented.

Considering the major increase of population in this area and the known fragility of the second aquifer, the WASH sector under the leadership of the Department of Public health (DPHE) will ensure that:

- A comprehensive study and monitoring of water resources including ground water and surface water is undertaken

- A coordinated effort is undertaken to compile all relevant past and ongoing geophysical and hydrogeological studies conducted in the area
- Geophysical and hydrogeological surveys are harmonized and used. Various initiatives for groundwater monitoring are under consideration to model the hydrogeology of the area.
- A comprehensive mathematical water resource modelling is developed and includes ground water vulnerability and alternative to ground water such as rain and surface water feasibility.
- Surveys and feasibility assessments of surface and rainwater sources to facilitate sustainable water supply and reduce groundwater depletion are undertaken. It will help to define the need to have rain water catchment (dams) to help on the recharge of aquifer and/or use for water supply
- Bangladesh Water Development Board will site three monitoring wells at locations selected by the sector for monitoring water quality and water level fluctuations
- UN agencies and/or technically capacitated government department/NGOs should support the installation of a system of probes to monitor the aquifer and potential salt water intrusion
- Increase the use of surface water by at least by 10% in 2019, and investing in rain water harvesting, water resource management, and water infrastructure (dam, reservoir, sluices)

8 Community Engagement and Inclusion

A sound understanding of the diversity and varied vulnerabilities within affected communities is vital. Resources must be devoted to understanding community perspectives and advocating for community-focused interventions. Specialists, such as anthropologists and epidemiologists, may be required for information to be collected, documented and used effectively

One-size-fits-all models of community engagement are not the best solution. It is better to recognize the potential capabilities of communities in each situation and provide context-specific support. This allows communities to take action to protect themselves using a 'menu' of different strategies, developed using a community-led approach. To do this effectively, key groups (e.g. male and female leaders and community members, traditional healers, religious leaders, Majhis, Community elders, youth, elderly, persons with disabilities and children) need to be identified. It is important to consult with different groups separately at times to allow for confidentiality and open honest feedback. When consulting with persons with disabilities or special needs it is important to pay attention to the type of questions asked or the process followed. It is expected from WASH partners to identify community capacity and develop an appropriate community led approach to develop solutions. As a minimum standard, WASH actors should recognise barriers that different groups of people face and prioritize the needs of those people who face the most difficulty in accessing and using WASH facilities.

The information given to communities must be prioritized to ensure that the crisis affected population understands, transmits to others and uses the most effective protective actions.

WASH partners will work with the Site Management sector to:

- to help develop an effective female civic and religious leadership, the female quoran citing groups Hafzah and the CiCs
- to establish camp WASH committees in place when and only when relevant and ensure that women/children voices are included

In addition, in order to maximize impact, assist the affected population to recover more quickly and to provide a stronger foundation for the affected population to take increased responsibilities for their well-being a strong accountability to affected population will be developed. WASH partners will strive to be primarily accountable to all beneficiaries of humanitarian aid. We will ensure the participation of all sectors of the population in affected communities in all aspects of the response from assessment to evaluation that affect them.

Information will be provided that is relevant to the communities needs so that they may claim their rights and clearly understand what WASH agencies can and cannot provide. In addition, a mechanism for communities to voice both positive feedback and criticism to those providing assistance will be established through the CFA system, feedback will be systematically documented and followed up and those communities will receive appropriate redress.

WASH Partners will:

- Explain and take responsibility for what we do and do not do and build trust in the affected population.
- Follow a systematic process of community consultation before designing and implementing any intervention.
- Provide accessible and timely information on our actions and decisions to affected men, women and children to help them realize their WASH related rights.
- Ensure an ongoing dialog with those affected and invite and seek out feedback/complaints in order to help the programme achieve maximum effectiveness.
- Identify opportunities to enable the affected populations to make decisions about the WASH interventions to help the programme maximize coverage
- Monitor user satisfaction and learn from our work.

9 Monitoring framework

Indicator	Data Source/ Collection Method(s)	Frequency of reporting
# of targeted people in host communities who are benefiting from water and sanitation services (disaggregated by sex)	4W Water quality monitoring Key informant interviews Household Survey	Monthly
% of WASH partners respecting the five minimum commitments regarding safety and dignity of affected population in WASH programming	Survey (5 minimum commitments tools developed by GWC)	Every 3 Months
% of targeted people disaggregated by sex and age, including older people and those with disabilities who are satisfied with the WASH response.	Satisfaction survey Feedback and complaints mechanisms NPM	Every 3 Months

10 Hygiene promotion

10.1 Specific Objectives

Specific Objective 1: Hygiene promotion activities are based on the evidence of need, and behaviour change programming is targeted and specific based on analysis of behavioural factors for different community groups including the most marginalized.

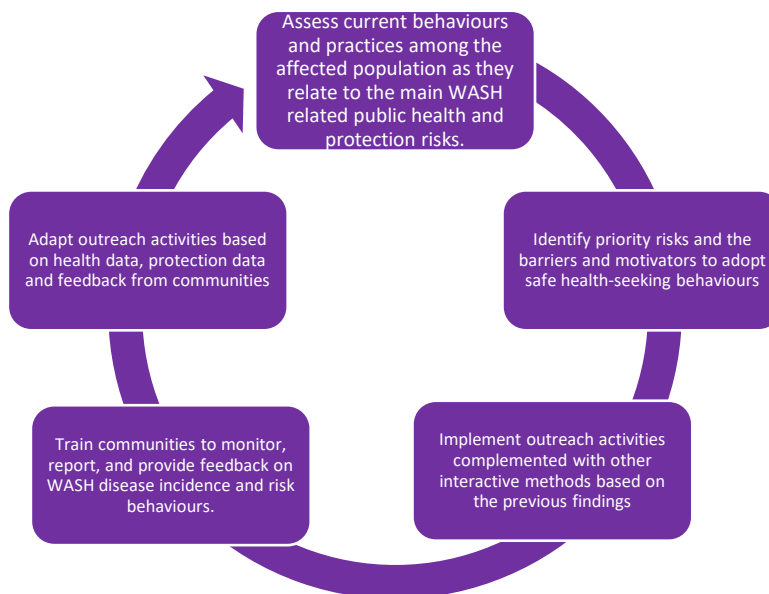
Moving forward Hygiene Promotion will increasingly shift away from didactic message dissemination to approaches based on dialogue and interaction with affected populations.

The sector will seek to continue to widen its understanding of community structures and capacities, both in camps and host communities, and monitoring changes in these to adapt activities on the basis of needs and to ensure the appropriateness of the hygiene promotion model(s) selected.

Given that Rohingya language is a non-written language, the backbone of the hygiene strategy will continue to be face to face dialogue with multilingual visual and audio materials in Rohingya, Burmese, Bangla and English by volunteers facilitating hygiene sessions to both men and women, as well as boys and girls, including small children, older people, people with disabilities and people facing additional vulnerabilities, and responding to the queries of the population. In addition, the hygiene promotion activities will be reinforced by mobilizing civic and religious leaders, including women leaders, by providing a dialogue with radio discussion groups and other interactive methods.

WASH partners will work with the Education Sector and the Child Protection subsector to raise awareness and mobilize schools, and religious schools (if available) children/peer-to-peer networks in temporary learning spaces (TLS), child friendly spaces and schools.

All hygiene intervention will be based on the following basic model:



The behavior change component of the hygiene programme aims to move WASH actors away from the practice of using generic, one way, or un-targeted hygiene messages, towards activities that are based on clear evidence of need for them. This can be determined through knowledge and attitudes discussions,

barrier analysis and structured observations. WASH actors will be encouraged to share their evidence base for specific interventions and design based on this evidence. Capacity building support will be offered to agencies wanting to adopt evidence based approaches to designing hygiene promotion activities.

Secondly, it aims to promote more nuanced behaviour change programmes based on a thorough analysis of behavioural and motivational factors. The HPWG is exploring RANAS as one methodology that could support this approach, with capacity building planned for WASH agencies to explore how to use the methodology and explore the different behavioural factors and how each can be used to motivate different groups. This approach will also rely on WASH actors having a much greater understanding of community composition to better target distinct groups with more inclusive behaviour change programmes.

Changes in behavior will be monitored through proxy indicators. In parallel, the incidence of WASH related diseases will be monitored in collaboration with health sector and the results of this monitoring feedback to the Sector so programs can be adapted and adopted to changing circumstances.

Specific Objective 2: Women, men, girls, boys, older people, people with disabilities and people facing additional vulnerabilities are able to access appropriate hygiene items which meet their needs and preference, safely, in privacy and with dignity at their convenience and with a greater range of choice.

The hygiene component seeks to encourage WASH actors to move away from in-kind distributions of hygiene items, and explore modalities that offer greater choice, greater convenience and promote the use of local markets. The HPWG will undertake research into the hygiene item preferences of different groups within both camp and host communities and will undertake market assessments to determine the feasibility of provision of hygiene items through these markets.

Transition away from in-kind modalities is not expected to occur overnight; in line with the recommendations developed through the assessment processes, the HPWG will support WASH actors by linking them with appropriate capacity building opportunities. It is envisioned that at this stage the most appropriate modality would be a value voucher or e-wallet with a corresponding list of available items (different brands, sizes, types of hygiene items) to allow for greater choice.

Considerable capacity will be required to make this transition successful. The Core Facilitation Team has been highly successful in starting this process and will continue to do much of the capacity building going forward. Additionally, external experts will be utilized to continue to build the skill set of the Core Facilitation Team but also to raise awareness amongst senior sector leaders and office heads as to the importance of hygiene in order to provide more resources to this sub-sector. A full time sub-sector coordinator and assistant coordinator will be employed by the Sector Coordination Unit to oversee the coordination and to build capacity of the sector. Inter-agency mentoring will also be used to transfer capacity from one agency to another.

Specific objective 3: Women and girls of menstruation age, and male and females with incontinence, have access to hygiene products and WASH facilities are adapted to meet their needs, preserve their dignity and well-being

The sector needs to ensure that menstrual hygiene needs for girls and women are being met. Better understanding of socio-cultural practices and barriers to Menstrual Hygiene Management (MHM) need to be identified to provide and appropriate market assessments for appropriate and culturally acceptable materials for MHM must be conducted. Also, women and men with incontinence needs need to be address and consulted on the design, siting and management of facilities.

The HPWG, through the MHM and Incontinence subgroup, will develop guidelines and support partners on consultation with women and girls about preferences and practices, MHM communication, develop IEC materials, provide trainings, and MHM kits content.

The market assessment stage will also examine the possible risks posed by market-oriented approach, particularly for women and people whose limited ability may prevent access to markets. For groups where access will remain challenging, alternative distribution modalities will be explored, including door-to-door delivery and kiosks.

Specific Objective 4: Community engagement and active participation of community in decision making happens regarding WASH facilities & services

Community Engagement in WASH is a dynamic process connecting communities and other stakeholders, ensuring the population affected have more control over the response and the impact on them. Therefore, engaging with the community implies having a further understanding of their perceptions, needs, coping mechanisms, capacities, norms, leadership structures and priorities. In this direction, HPWG will continue to encourage and supporting the WASH actors to:

- Monitor and understand behavior and practice of communities
- Have practical and appropriate for context communication with communities
- Do capacity building of staff and partners
- Welcome and address complaints
- Increase participation, ownership, decision making and control over processes, facilities and services
- Analyze monitoring data, share with communities and agree on adaptations of programme where possible

Key Principles

The following principles will guide the work of the HPWG throughout the year, and through each project:

- **Community engagement is key:** The HPWG will continue to encourage WASH actors to engage meaningfully with various key components, including men, women, girls, boys, older people, people with disabilities and people facing additional vulnerabilities, of the community in every activity and at every stage of the project cycle. Recognizing that communities are our partners, and not passive recipients, but also that communities are not homogeneous, will remain a key principle guiding the TWGs work. HPWG members will strive to bring feedback from key constituents of the communities to WASH fora to ensure that community voices are being heard at the highest levels of coordination in WASH.
- **Gender, GBV and inclusion:** The HPWG will continue to collaborate closely with the GBV Sub-Sector, gender specialists and with age and disability actors for guidance on how to better incorporate gender and inclusion considerations to WASH work. Whilst this is the responsibility of all TWGs, and all WASH actors, HPWG members are in a unique position to bring feedback from women, girls, people with disabilities, older people, children and other vulnerable groups to discussions and inform approaches.
- **Adherence to WASH Sector standards:** The disparity between WASH Sector standards and WASH actor standards was raised as an issue for hygiene promotion during the HPWG reflection session.

The HPWG will continue to support WASH agencies in achieving the minimum standards as agreed by the Cox Bazar WASH Sector.

- **Our work is evidence based:** The HAR highlighted that, despite there being large quantities of data available amongst HPWG members, there was a lack of centralization, or collaboration to present a bigger picture of WASH knowledge, attitudes, practices, preferences and beliefs in the Cox Bazar response. The HPWG’s work this year will be based on evidence collected by WASH agencies, analyzed jointly to provide recommendations to the sector. Stronger IM will also support the collation of findings from different agencies to present a clearer picture of hygiene promotion and community engagement in the response.

Monitoring Framework

Indicator	Data Source/ Collection Method(s)	Frequency of reporting
% of targeted people (disaggregated by sex and age) able to demonstrate at least three critical hygiene behaviours	KAP Survey Household Survey Key Informant Interviews NPM	Every 3 months
% HH that store water that store drinking water safely		
% of caregivers reporting they dispose the children excreta safely		
% of HH reporting who report purchasing and using hygiene items regularly		
# of targeted women and girls of reproductive age who have their menstrual hygiene needs met	Satisfaction Survey Feedback and complaint mechanism NPM	Every 3 months
# of schools with functional HW facilities (presence of soap and water)	Observation	Every 3 months
% of children that HWWS before eating/after toilet	Observation/peer/teacher monitoring	Every 3 months

11 Solid Waste Management

11.1 Context

Within the humanitarian response to the Rohingya crisis in Bangladesh, the mandate to ensure proper Solid Waste Management (SWM) lies with UNDP. UNDP is planning a centralized approach, which is not expected to be implemented and/or operational in 2019. Meanwhile, evidence of poor solid waste management in the camps indicates growing and significant health and environmental risks to the refugees and adjacent hosting communities.

In this context, the Sanitation TWG agrees to take up the responsibility for the implementation of medium-term, (semi-) decentralized SWM systems.

11.2 Specific Objective

To ensure a safe and hygienic living environment free of solid waste in all the refugee camps and adjacent host communities.

Solid waste is defined as all unwanted solid material generated from human residential, industrial and commercial activities. Solid waste can be organic or inorganic. Organic waste is biodegradable and is derived from plants or animals, like food rests, waste from the garden and timber. Inorganic waste is non-biodegradable and refers to substances of mineral origin, like metals, plastics and glass.

11.3 Guiding Principles

Only *full chain* solid waste management systems are allowed (including collection, transport, disposal/reuse/recycling AND corresponding behavioural change activities and campaigning) – collaboration between different agencies is possible and allowed, i.e. different stages of the process can be managed by different actors.

- Encourage the reuse, recovery or recycling of solid waste by the community. Consider the potential of small-scale business opportunities or supplementary income from waste recycling.
- Encourage separation of organic and inorganic waste at the source.
- Discourage open burning in the camps and in the adjacent hosting communities.

The WASH area focal agency (AFA) is responsible to ensure that Solid Waste Management activities are implemented by all WASH partners.

11.4 Key Activities

Because UNDP is planning a long-term centralized SWM system, this strategy refers to only the implementation of medium-term, (semi-) decentralized SWM systems. Medium-term, (semi-) decentralized solid waste systems, include the following steps:

- ✓ Collection of solid waste at the household: primary collection.
- ✓ Collection of solid waste at the community (20 households) level: secondary collection.
- ✓ Transport to and disposal of waste at the decentralized disposal site: tertiary collection.

The decentralized disposal sites are small scale sites inside or surrounding the camps, as UNDP will implement a centralized large scale disposal solid waste site in a later phase.

Primary collection

1. Provide two different color (green and red) covered 10 liter bins (organic waste and inorganic waste) per household¹. Bins should have lids and drainage holes. These bins are to be kept inside the household. Each household is responsible for the transport of the household waste, to the community bins.

Secondary collection

1. Provide two different color (green and red) covered 80 liter bins (organic waste and inorganic waste) per 20 households. Bins should have lids and drainage holes.
2. Provide two different color (green and red) 80 liter bins (organic waste and inorganic waste) for schools, CFS and market areas. Bins should have lids and drainage holes.
3. The implementing agency is responsible for the hygiene around solid waste collection points. The concrete garbage pit is discouraged, as they are difficult to keep clean.

Transport to decentralized disposal site (tertiary collection)

4. Ensure a frequent collection of all solid waste from secondary collection bins. These should be emptied at least twice per week.
5. Transport solid waste preferably by mechanized vehicle, pull kart or wheelbarrow. Manually transport should only be used when alternatives are not (yet) possible.

Disposal (at the tertiary site)

6. Ensure that treatment and disposal sites are appropriately, adequately and safely managed. A safely managed waste treatment and/or disposal site is fenced. Currently accepted technologies are:
 - For organic waste (these can remain operational even after UNDP implements a centralized solution)
 - composting (HH, community or centralized level);
 - co-digestion;
 - Managed burying sites.
 - For inorganic waste (recycling systems can remain operational after UNDP implements a centralized solution. Incineration and landfill sites will be decommissioned after UNDP implements a centralized solution.
 - Recycling;
 - Incineration;
 - Managed landfill disposal.

Organization and community engagement

7. Employ a minimum of a 3-person 'solid waste management and maintenance team' per population of 1000 beneficiaries. These can be community volunteer, but they need proper training.
8. Organize capacity building activities² with communities to use waste bins and separate waste types (similar approach as for CLTS i.e. CLEANEST BLOCK AWARD, certificates, competition between camps/household areas or any other community activation mechanism). Signage to promote use of bins or SWM systems needs to be appropriate and pictorial. Include schools and mosques in capacity building activities.

¹ Assuming 0,7 kg/day/HH total waste with a composition of 50% organic and 50 % inorganic waste (IFRC SWM feasibility study, Nov 2018 – to be updated when new data is available) and a density of 200 – 400 kg/m³ (SPHERE), the average produced solid waste volume amounts to 0,0023 m³/day/HH.

² In accordance with the coordinated HP activities and messaging to be defined by the SWM focus group

9. Activate block level solid waste management committees³. These can be combined with WASH committees.
10. Organize regular block cleaning campaigns with a focus on drains, stream and other problematic areas focussing on the elimination of vector breeding and feeding sites. This is to be combined with distribution of PPE's and cleaning kits⁴.
11. Organize mass cleaning campaigns every three months. This is to be combined with distribution of PPE's and cleaning kits.
12. Organize trainings for all solid waste workers, volunteers, SWM committees, shopkeepers and local entrepreneurs on source segregation, disposal technologies and different kinds of reuses.
13. Always involve the host communities in SWM activities.

General

14. Waste generated during special festivities, like Eid or wedding ceremonies, is managed according to Guidelines in appendix X.⁵
15. Stimulate distributors of food and NFI-items to take back the corresponding waste products and reduce plastic bags by linking Retail & E-vouchers to use reusable shopping bags.

11.5 Monitoring Framework:

In line with the reporting of all other activities under the Inter Sector Coordination Group (ISCG) in Cox's Bazar, SWM activities will be reported using the 4W tool. The relevant components are shown in the table below.

Sector of Assistance	Sub Sector of Assistance	UNIT
Hygiene	Distribution of bins HH level (10 L)	# of 10 L bins
Hygiene	Distribution of bins community level (80 L)	# of 80 L bins
Hygiene	Activation of block level solid waste management committees (potentially combined with WASH committees)	# of committees activated and supported
Hygiene	Periodic Block cleaning	# of block cleaning campaigns organized
Hygiene	Drain cleaning	# of drain cleaning campaigns organized
Sanitation	Collection and transport of solid waste from secondary to tertiary sites.	# of bins emptied
Sanitation	Disposal of solid waste	# of bins safely disposed

³ The SWM focus group will define ToRs for block level solid waste management committees.

⁴ Composition of cleaning kit to be defined by SWM focus group

⁵ As available on the WASH sector website

12 Sanitation Facilities

12.1 Context

Of the 1.2 million affected people 77%⁶ are women and children including female headed households, widows, orphans, those from marginalised groups or older people living alone, all of whom are more likely to face additional challenges accessing and using sanitation facilities. Approximately 9% of the population are over 50 years old,⁷ and somewhere between 3-14% of the population⁸ (36,000 – 168,000 people) may be considered to have a disability or some form of impairment. Of those aged under 70 up to 35% have some form of disability however for those aged over 70 this increases to 82% and over⁹.

Whilst there has been some improvement in the designs of the WASH facilities over time, there still remain multiple barriers to the use of WASH facilities for a significant proportion of the affected population. It has been found that girls and women may feel uncomfortable when they can be seen queuing by men and boys, or accessing WASH facilities during the day and therefore only use them at night, potentially increasing risks of GBV. In the most extreme circumstances girls and women are reducing the amount of food they eat or drink to avoid using the toilet. In many families bathing, urination and defecation with improper disposal occurs within the shelter, sometimes in close proximity to the cooking area or utensils, contributing to sewerage, drain and storm water containing similar amounts of faecal coliforms¹⁰.

Going beyond Unified to inclusive designs is critical to begin meeting the broader needs of large sections of the affected population yet is currently only being undertaken by a limited number of partners. The WASH Sector is striving to make inclusive sanitation a lens through which actors perceive the different needs and barriers that people are facing. This lens and use of the term inclusive throughout this document aims to highlight that all sanitation should be gender-sensitive, accessible and considerate of all needs faced by the affected population. Without this lens, one where we effectively consult and respond to the needs of different groups of people, they will continue to struggle to meet their WASH needs with potential negative effects on the environment, their health, dignity, safety and quality of life.

12.2 Key Principles

Principle 1 - Put gender, GBV and inclusion at the centre of the Government and WASH Sector by recognising different people face different barriers to exercise their equal rights to live in safety and with dignity

The WASH Sector will identify and recognise different groups within communities as central to the planning of WASH interventions by pro-actively integrating inclusive approaches into strategies, proposals, budgets, plans and actions.

Principle 2 – Consult and involve different groups

The WASH Sector will consult with girls, women, boys and men, including small children, older people, people with disabilities and people who may be facing additional vulnerabilities throughout the planning process, listening to their different barriers to access and practice their WASH needs and reflecting this in implementation where the recognised groups decide on their own solutions within parameters available to WASH Partners.

Principle 3 - Prioritise those who face most difficulty in practicing their WASH needs

⁶ REACH, [WASH Follow Up Assessment Aug – Oct 2018](#) pg. 1

⁷ HelpAge International unpublished camp data

⁸ HelpAge International unpublished camp data

⁹ HelpAge International unpublished camp data

¹⁰ Initial data from UPM Wastewater Characterisation Study

The WASH Sector will implement projects where those facing the most difficulty are treated with additional importance and facilities are ordered in a way which ensures their ability to access and use, whilst engaging other groups to understand and support their needs.

Principle 4 - Improve effectiveness through increasing knowledge, capacity, commitment and confidence

The WASH Sector will support the review, analysis and creation of technical and operational knowledge deployed through appropriate capacity building and reviewed through a continuous commitment to evaluation and iterative learning. Resulting increases in the effectiveness of implementation will achieve minimum standards and reduce negative coping mechanisms through a better understanding of barriers and appropriate behaviours.

12.3 Strategic Objective:

All affected girls, women, boys and men, including small children, older people, people with disabilities and people who may be facing additional vulnerabilities, are able to access and use sanitation facilities to practise their WASH needs with safety, privacy and dignity whilst protecting the environment from contamination.

12.4 Specific Objectives and Activities:

Specific Objective 1 – Increase knowledge and capacity

Provide comprehensive, up-to-date data knowledge on inclusive sanitation implemented through increased human and financial capacity allocated to meeting the needs of different groups.

Activities:

1. Conduct a review of all sanitation guidelines, SOPs and information disseminated to date. The review will precede a gap analysis and updating process.
2. Lead the creation of a Sector level data sharing process to enable the safe and confidential identification of people with different currently unmet sanitation needs for support by WASH Partners at camp level.
3. Adapt the Unified Designs by adding a limited number of variations using input from community consultation with different people, the experience of implementing partners and existing designs by specialist organisations. The adapted designs should include a menu of adaptations so as to remain customisable to the individual needs of beneficiaries, whilst retaining the original intention of the design.
4. Transfer the knowledge of the reviewed information products and designs to WASH Partners.
5. Advocate for additional funding to further the capacity of specialist organisations.

Specific Objective 2 – Plan for inclusive sanitation

Recognise, engage and reflect in plans the needs of different people facing different barriers in all sanitation activities.

Activities:

1. Advocate for WASH Partners to write sections on inclusive sanitation into strategies and proposals, reflecting commitments in specific budget lines dedicated to inclusive design and indicators to measure performance¹¹.
2. Support training on Washington Group Questions and Relative Difficulty to ensure organisations understand and perceive vulnerability in ways similar to those of beneficiaries, ensuring to capture home-based groups.
3. Advocate for WASH Partners to always engage in specific consultation with girls, women, boys and men, older people, people with disabilities and people who may be facing additional vulnerabilities.
4. Advocate for WASH Partners to reflect specific consultation with groups in plans and implementation and reporting.

Specific Objective 3 – Sanitation facilities meet different WASH needs with safety, privacy and dignity whilst protecting the environment from contamination.

Adapt, construct and maintain facilities to meet the different needs of people, or where not possible provide relevant NFI, prioritising access and use by those facing the most difficulty.

The approach to latrines has shifted from emergency standard communal latrines to shared at 1:3 families and at minimum 1:20 people within 50m of the furthest house and according to the Unified Designs. Measures to ensure dignified use through improvements to access, privacy and safety should be undertaken in consultation with different groups of people in communities and implemented alongside inclusive design to avoid negative coping mechanisms. Given the way in which latrines exist in groups, pairs and single units more than the percentage of people of disabilities must be adapted. It is recommended that the WASH Sector aim for 15% of latrines to include basic adaptations such as rails and handrails¹² and that new latrines are sited as close as possible to their shelter.

Operation, cleaning and maintenance should be undertaken on a regular basis to ensure that all latrines have locks, lighting and are desludged before becoming non-functional, in addition to an accessible and accountable referral and rapid response mechanism. Desludging should connect and support the FSM approach. Sanitation facilities should be constructed, retrofitted and maintained to be resilient to natural disasters including rain, flood, cyclones and landslides. All emergency latrines, in flood-prone locations, on steep slopes, cannot be desludged or less than 1.5m deep should be decommissioned as soon as possible. Technical and operational details for latrines will be produced and shared to WASH Partners.

Girls of reproductive age and women are facing barriers managing menstruation primarily around the lack of privacy, safety and dignity with additional concerns for NFI. To meet MHM needs WASH Partners will improve facilities alongside the distribution of materials and education on reproductive health by other Sectors. Equal consideration will also be made to those facing incontinence or similar issues.

The approach to bathing facilities has shifted from emergency standards towards shared at 1:3 families however behaviour within the camp indicates that HH level is desired. The WASH Sector will support widespread behavioural practices by the affected population and based upon the experience of pilots HH

¹¹ Documents frequently reference gender however this can be strengthened and budgets should be increased by 1% of total as per *Humanitarian inclusion standards for older people and people with disabilities* pg. 35

¹² *Humanitarian inclusion standards for older people and people with disabilities* pg. 129

level bathing is an option, where a planned drainage connection already exists and faecal contamination can be minimised or soil permeability allows for infiltration. Technical and operational guidance will be produced in collaboration with relevant groups.

Drainage should remove waste water from the environs of people and their shelters however the primary responsibility for drainage is with the SMS Sector and the WASH Sector is responsible for the connection, and maintenance of connection, from facilities into secondary drains. Additionally, the WASH Sector will improve existing approaches to address the issue of the appropriate disposal of children’s faeces to reduce grey and storm water contamination.

Activities:

- a. In regards to latrines
 - a. Support the continued O&M of facilities.
 - b. Support the installation of new latrines at 1:3 families or at minimum 1:20 people and within 50m of the furthest house.
 - c. Support WASH Partners when adjusting design, siting, lighting, gender segregation, privacy and accessibility including of the surrounding area to support groups with different needs.
 - d. Support WASH Partners to define complementary NFI kits for people with different needs.
 - e. Site latrines as close as possible to those facing the greatest challenges in access.
- b. In regards to MHM
 - a. Alongside MHM material provision, improve latrine, bathing and laundry facilities to support women and girls.
 - b. Support the review and consolidation of existing guidance and materials on MHM being used across agencies
- c. In regards to bathing
 - a. Support the continued O&M of existing facilities.
 - b. Support WASH Partners to develop designs for bathing facilities in shelters and female-only combined latrine, bathing and laundry facilities.
- d. In regards to drainage
 - a. Support improvements for the connection of facilities to secondary drains

Specific Objective 4 – Monitor and evaluate

WASH Sector will support monitoring, evaluation, collaboration and iterative learning through theoretical and practical sessions to continue improving the deployment of inclusive sanitation and meet needs across the camp.

Activities:

1. Enhance existing response wide, camp level service mapping, gap analysis, indicator monitoring and complaints and response mechanisms.
2. Review existing referral pathways and complaint response mechanisms.
3. Support collaborative approaches to sharing designs and implementation experience.
4. Support requests for evaluations made through the Sanitation TWG.
5. Lead a review of adaptations for people with different needs.

12.5 Monitoring Framework:

Sector	Sub Sector of Assistance	UNIT
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Sanitation	Permanent household latrine construction	# of latrines
Sanitation	Permanent shared latrine construction	# of latrines (stances)
Sanitation	Latrines upgraded (H/w, lighting etc.)	# of latrines (stances)
Sanitation	Latrines adapted to gender	# of latrines (stances)
Sanitation	Latrines adapted to PwD and older people	# of latrines (stances)
Sanitation	Latrines adapted to children	# of latrines (stances)
Sanitation	Latrines with a lock	% of latrines with lock
Sanitation	Latrines found to have functional handwashing with soap	% of latrines with HW & soap
Sanitation	Latrines found to be clean	% clean latrines
Sanitation	Latrines including handwashing station repaired	# of latrines (stances)
Sanitation	Substandard latrines decommissioned	# of latrines (stances)
Sanitation	Permanent household bathing facility construction	# bathing facilities
Sanitation	Permanent shared bathing facility construction	# bathing facilities
Sanitation	Bathing facility adapted to gender	# bathing facilities
Sanitation	Bathing facility adapted to PwD and older people	# bathing facilities
Sanitation	Bathing facility with a lock	% of bathing facilities with lock
Sanitation	Bathing facility found to be clean	% clean bathing facilities
Sanitation	Bathing facility repaired	# bathing facilities
Sanitation	Substandard bathing facility decommissioned	# bathing facilities
Sanitation	Permanent shared laundry facility construction	# laundry facility
Sanitation	Number of NFI kits distributed to support inclusive sanitation	# NFI kits

13 Faecal Sludge Management

13.1 Context

It is generally accepted that faecal sludge management (FSM) is traditionally given less priority in emergencies than other humanitarian WASH interventions such as water supply and latrine construction. This is despite the fact that many of the most common diseases occurring in emergency situations are directly or indirectly linked to contact with faecal sludge.

Within the humanitarian response to the Rohingya crisis, FSM has received significant attention. Among other factors, this can be explained by the lack of space in the camps resulting in a high number of users per latrine and the non-existence of a host community FSM system to which the camps could be connected. Despite the fact that many humanitarian actors had little to no previous experience in the field of FSM, a wide range of actors started piloting and implementing a range of FSM systems. Full-chain sanitation, including the collection, transport and proper disposal of faecal sludge, has the potential to save lives. However, poorly implemented or managed FSM does not.

Due to the lack of experience, there is no clear definition of what is considered 'safe' FSM within the emergency context. The final objective should always be to achieve local legislation and effluent standards. However, in the process towards that goal, minimum standards and guidelines need to be agreed upon.

The content of this document is the result of a participatory process with all the WASH partners active in the Rohingya response in the field of Sanitation.

13.2 Specific Objective

The broad objective of FSM in the camps and in the hosting communities is to sustain and protect public health by minimizing faecal disease transmission. Faecal disease transmission should be diminished through minimizing direct exposure to faecal sludge, minimizing the impact of disease spreading vectors and minimizing the contamination of the environment.

13.3 Guiding Principles

To achieve the objective, only full-chain FSM approaches need to be implemented. A full-chain FSM approach follows the following key principles:

- Untreated faecal sludge is separated from people, food, vectors and surface water sources.
- All sections of the community have access to safe, culturally acceptable and hygienic latrines. Operation & maintenance should be ensured by community engagement.
- Latrine designs should meet RRRC approved designs and minimise the need for sludge handling i.e. emptying.
- Direct contact with faecal sludge is prevented by assuring the regular emptying of full pits.
- Faecal sludge is transported in a way that minimizes direct contact and spillage. Where possible, mechanical transport systems need to be implemented rather than manual transport.
- Faecal sludge is treated and discharged in a way that minimizes the direct human exposure to it, minimizing the impact of disease spreading vectors and minimizing the contamination of surface water bodies
- Everybody that handles faecal sludge is protected through the use of proper protective equipment to protect their health and safety (see attachment for list of minimal PPE's) and has access to cleaning and disinfection facilities.
- When possible, it is preferred to use treated sludge for agriculture (not possible for lime treated sludge), filling material or as a resource for bricks.

13.4 Key Activities

Containment and collection

1. All latrines should be constructed in accordance with the RRRC and WASH Sector agreed latrine designs¹³. New, inclusive designs, should be shared with the sector to be included and endorsed by RRRC.
2. As the exposure of faecal sludge to the environment is directly related to the overfilling of latrine pits and septic tanks and the actual emptying process itself, design wherever possible should encourage safe on-site biological treatment (volume reduction) and the most infrequent emptying possible, given cost and space constraints.
3. Latrines need to be accessible and acceptable for the full affected population, including children (specifically < 5 y/o), girls, women, elderly and people with special needs. Guidelines to be

¹³ RRRC agreed designs can be accessed at <https://www.humanitarianresponse.info/en/operations/bangladesh/document/unified-standard-design-latrines-cxb-bws-0>

developed by the ‘inclusive sanitation facilities Focus Group’ need to be followed¹⁴. New, inclusive designs, should be shared to be included and endorsed by RRRC/WASH sector.

4. All emergency latrines, latrines on flood-prone locations, on steep slopes and latrines that are undesludgable should be decommissioned as soon as possible.
5. Users need to be sensitised and educated to understand the need and reasons for all human faecal waste to be contained and collected. Users need to be involved and empowered to take responsibility for the cleaning and maintenance of the facilities, this needs to be aligned with hygiene promotion activities and community engagement

Emptying and Transport

6. Each WASH Camp Focal Agency is responsible to ensure that latrines are desludged regularly, either by conducting the work or by coordinating with the respective implementing agencies.
7. The aim is that the emptying of latrines and transport of faecal sludge is done mechanically, with a focus on the minimization of direct contact and spillage. A ‘best practice’ example which is endorsed is Oxfam’s *Intermediate Sludge Transfer Network (ISTN)*¹⁵.
8. All kinds of manual emptying and transportation are discouraged. Manual transport of sludge is dangerous and undignified. Manual desludging and transport is only acceptable as a last resort (to be determined in consultation with WASH Camp Focal Agency)

Faecal sludge treatment and disposal

9. All agencies active in FSM should map all active faecal sludge treatment sites and the data should be shared with the Sanitation TWG¹⁶ regularly. The basic information required for each FSM site is:
 - Faecal sludge ID (given by implementation partner)
 - GPS coordinates
 - Summary of treatment steps. In appendix A an overview is given of which treatment processes fall under which category.
 - Does the liquid faecal sludge treatment include:
 - a. Disinfection
 - b. Separation of liquids and solids
 - c. Biological treatment (biological degradation of COD/BOD in liquid and volume reduction in solids)
 - Does the solid faecal sludge treatment include:
 - a. Disinfection
 - b. Separation of liquids and solids
 - c. Biological treatment (biological degradation of COD/BOD in liquid and volume reduction in solids)
 - d. Drying of solids
 - How is the liquid effluent disposed?

¹⁴ See the strategy chapter on inclusive sanitation facilities for more details.

¹⁵ A design of the intermediate sludge transfer network (ISTN) will be attached as an example

¹⁶ Data sharing format to be supplied by San TWG

- How is the solid effluent disposed?
- Volume of faecal sludge treated daily (m³/day)
- Minimum safety standards:
 - Fencing available?
 - PPEs available?
 - Cleaning mechanism in place for PPEs and workers?
- Radius in which faecal sludge is collected (preferably including maps)
- Transport mechanism (manual or mechanical)

10. The final objective of any FSM intervention should be to meet national effluent standards (*Standards for Sewage Discharge* - The Environment Conservation Rules, 1997, Government of the People's Republic of Bangladesh, Ministry of Environment and Forest) and Bangladesh Standards and Guidelines for Sludge Management (Feb 2015). The national effluent standards can be found in appendix C. In 2017, the DoE has revised the standards, the new standards will come into effect in 2019, which are also shown in appendix C.

Recommended Optimal Faecal Sludge Treatment Processes

The agreed recommended faecal sludge treatment processes are resulting from a pragmatic approach, to balance what is ideal and what is reasonable in the contexts of the camps. Different guidelines apply for new and existing faecal sludge treatment sites.

The overall objective is to achieve full-chain faecal sludge treatment, which addresses the following processes:

- a. Disinfection,
- b. Separation of liquids and solids,
- c. Biological treatment processes and
- d. Drying of sludge

Appendix A gives an overview of which implemented faecal sludge treatment processes fall into these four treatment process categories.

New faecal sludge treatment sites

1. If possible, only full-chain faecal sludge treatment should be implemented. Full-chain faecal sludge treatment refers to a treatment which addresses
 - e. Disinfection,
 - f. Separation of liquids and solids,
 - g. Biological treatment processes and
 - h. Drying of sludge

Faecal sludge treatment sites which addresses the full-chain treatment processes are allowed to **discharge the liquid effluent to open water bodies** when national guidelines are met. If national guidelines are not met, the liquid effluent should be **infiltrated**.

2. When full-chain sanitation is not possible, a faecal sludge treatment processes without disinfection is acceptable only when the liquid effluent is infiltrated and strict conditions as shown in appendix B are proven and met.

For existing faecal sludge treatment sites

For existing faecal sludge treatment sites, three different categories exist:

Good faecal sludge treatment sites

These sites make use of full-chain faecal sludge treatment, addressing:

- a. Disinfection,
- b. Separation of liquids and solids,
- c. Biological treatment processes and
- d. Drying of sludge.

Faecal sludge treatment sites which addresses the full-chain treatment processes are allowed to **discharge the liquid effluent to open water bodies** when national guidelines are met. If national guidelines are not met, the liquid effluent should be **infiltrated**.

Acceptable faecal sludge treatment sites

These sites do not address all required treatment steps to be considered full-chain faecal sludge treatment, but are acceptable if they meet the following requirements:

1. Faecal sludge treatment sites which only include:
 - a. Disinfection,
 - b. Separation of liquids and solids,
 - d. Burying/Drying of sludge.

An example are the lime stabilization sites. Even though these sites don't include a biological treatment step, these sites are acceptable due to their focus on disinfection. These sites are considered emergency FSM sites and can continue their operation but new sites should not be implemented.

2. Faecal sludge treatment sites which only include:
 - b. Separation of liquids and solids,
 - c. Biological treatment processes
 - d. Drying/burying of sludge

→ This is only acceptable when liquid effluent is infiltrated in line with standards in appendix B!!!!

An example of such a faecal sludge treatment site is the decentralized anaerobic digester. Because the focus of faecal sludge treatment should be on protection of public health, a faecal sludge treatment sites which does not include disinfection is only acceptable when the effluent is properly infiltrated in line with infiltration guidelines in appendix B.

Unacceptable faecal sludge treatment sites

Faecal sludge treatment sites which are discharging pathogen holding water into the open water bodies and/or gutters are not acceptable.

Examples of unacceptable faecal sludge treatment sites (or dumping sites, as some sites cannot be considered to be faecal sludge treatment) are:

- Open desludging ponds
- Unlined constructed wetlands

- Sites which only address biological treatment and separation of liquids and solids without infiltrating the effluent properly. An example is an anaerobic digester which discharges the non-disinfected liquid effluent in a gutter.

Unacceptable sites which are discharging non-disinfected liquid into the open should either be upgraded with a proper infiltration step (in line with the guidelines in appendix B) or decommissioned.

Open desludging ponds need to be decommissioned as soon as possible.

Figure 1 shows a simplified overview of minimally required treatment processes, separated per disposal method.

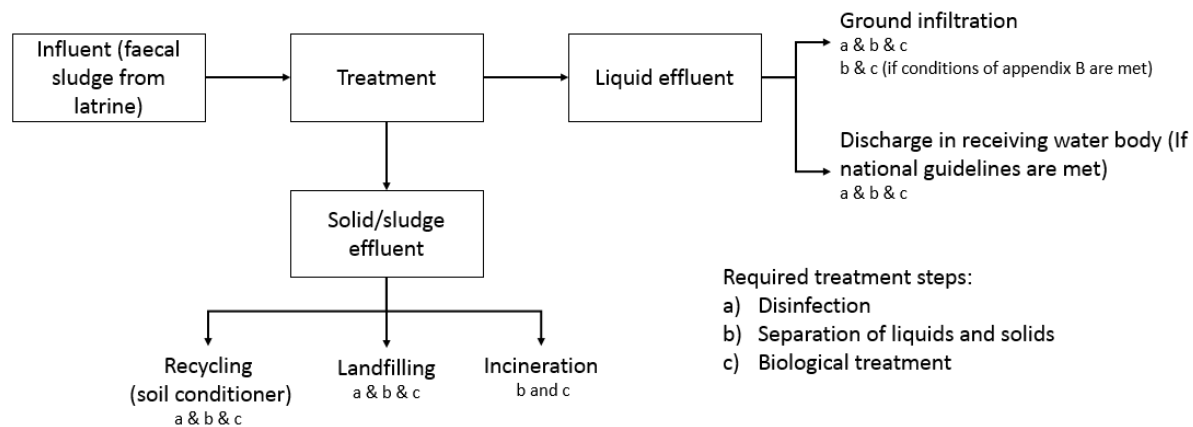


Figure 1. Overview of minimally implemented treatment steps for faecal sludge treatment plants

Safety and community engagement

11. All faecal sludge treatment sites should be properly separated from the general population.
12. Faecal sludge treatment sites must be protected against flooding. Flood prone sites are not suitable for faecal sludge treatment.
13. Agencies who are paying workers to engage with faecal sludge are responsible for the education and safety of the workers.
14. Workers involved in the emptying, transport, treatment or disposal of FS need to be provided with adequate PPEs, bathing and laundry soaps and follow protocols to protect their health and safety. Protocols should include the putting on and off of protective gear, as well as the cleaning of the PPEs. The supply of PPEs and the education of the FSM workers is the sole responsibility of the implementation actor. In appendix D a list with minimal PPEs is shown.
15. Sludge Treatment site should have facilities for hand washing and bathing. Agencies should provide soap.

16. All staff and community volunteers who are working with faecal sludge or at the faecal sludge treatment site should be vaccinated against tetanus and cholera and if possible also typhoid, Hepatitis A and B.
17. Agencies active in desludging should engage the community by educating the beneficiaries on the health risks, minimal safety distances while desludging and the communication structure to follow once a latrine is full.
18. Additional required measures in FSM are incorporated in the AWD response plan.

13.5 Monitoring Framework

In line with the reporting of all other activities under the Inter Sector Coordination Group (ISCG) in Cox's Bazar, FSM activities will be reported using the 4W tool. The relevant components are shown in the table below.

Sector of Assistance	Sub Sector of Assistance	UNIT
Sanitation	Emergency latrines decommissioned	# latrines decommissioned
Sanitation	Volume of sludge treated	# m ³ /day received at faecal sludge treatment site
Sanitation	Volume of sludge desludged and transported to treatment plant	# m ³ /day

In parallel to the 4W tool, actors active in FSM are encouraged to implement an internal evaluation and monitoring system to periodically follow the functionality of the faecal sludge treatment site.

Implementing agencies are advised to minimally monitor the following parameters:

- Total solids (TS) [g/l]
- COD [mg/l]
- E-coli [CFU/100ml]

In addition, implementing agencies are advised to monitor the following parameters for a thorough understanding of the treatment process:

- pH [-]
- Total Solids (TS) [g/l]
- Total Suspended Solids (TSS) [g/l]
- COD [mg/l]
- BOD [mg/l]
- NO₃ [mg/l]
- TN [mg/l]
- NH₄ [mg/l]
- PO₄³⁻ [mg/l]
- TP [mg/l]
- E-coli [Coliform Forming Unit (CFU)/100 ml]
- Estimated produced effluent [m³/day]

Once the influent and the effluent are sampled, a mass balance can be calculated over the faecal sludge treatment, indicating the removal rates for Total solids, COD, Total Nitrogen, Total Phosphate and E-coli.

When actors are interested in using the dried solids, it is advisable to add one parameter:

- Helminth eggs [# egg/l]

A basic guideline on sampling and faecal sludge analyses will be prepared by UPM.

14 Water

14.1 Specific Objectives

Objective 1: Communities are supported to contribute to and exert influence over the design, implementation, operation and maintenance of water supply systems

14.2 Water Supply

As of 31 December 2018 more, than 6000 shallow wells and 3000 deep wells have been installed of which 73% of hand pumps are functional, with a ratio of 1 water point to 47 persons, 56% of households still have water access challenges including distance and queuing time with significantly higher rates in the Teknaf camps. Tubewells are vulnerable to floods and landslides. Evidence shows that high contamination levels of water are found at the tube well spout, and at household level which likely occurs during transport, and storage. 25% of water samples from the source and 70% from households are contaminated. As a result of this a change in strategy was developed in Ukhia Upazilla to change the focus away from dependence on handpumps to an increasing reliance on chlorinated piped water supply. A water masterplan was developed for Kutapalong and currently approximately 140 piped water supplies are being implemented.

A similar process is needed for Teknaf Upazilla although given the scarcity of ground water in the south it will need to take into consideration a combination of piped groundwater from further north as well as increased reliance on surface water sources.

In conjunction with these two masterplans an integrated water resources management plan will need to be developed. The over utilization of scant surface and ground water sources can have long-term irrevocable effect on the natural environment and ecosystem. The depletion of groundwater sources, the salt water intrusion, faecal pollution of surface and shallow groundwater will pose potential threat and may be the cause of conflict among users (particularly among refugees and host community) in the long run. The current situation in Mega camp and Teknaf areas demands the planning and implementation of integrated water resource management (IWRM) to promote coordinated development and management of water resources to maximize social welfare and water security in the area. The long-term sustainable water governance in the camps and host community should rely on the basic principles of integrated water resource management.

Most of the water supply in Ukhia area will be supplied using solar power. As during rainy season the water pumped might be reduced, an option to collect enough water to cover the needs of the beneficiaries could be harvesting the rain water. In Teknaf, ground water source is not available as per demand. To solve this problem Rainwater Harvesting could be also a great alternative of water source. NGO Forum is going to pilot a rainwater harvesting system project in Nayapara surrounding, Teknaf. This project can be studied during the implementation and operation to find challenges & advantages of rainwater harvesting system, always in constant communication with the community.

Although the Community Engagement has been always linked with the Hygiene Promotion in this response, the water distribution master plan and the workshops for inclusion in WASH activities have showed that the approach of community engagement must be always used to design and implement WASH programs. It will be designed a schedule for trainings and workshops to improve the knowledge of this approach. The water TWG in coordination with the HP TWG would support the WASH partners to organize Community Engagement training for their field staff.

14.3 Ground Water Monitoring

The sudden population increase in Ukhia and Teknaf caused by the massive influx is impacting the water demand. The direct consequence will have an additional stress on the groundwater resource with a risk of over exploitation, especially with the up scaling of piped water supply system which be supplied by more than a hundred of deep productive boreholes (700 to 800 ft).

The safe water supply master plan for Rohingya response is an occasion to collect key information such as drill logs, pumping test, geophysical data able to inform on physical characterization and geometry of the aquifers and hence on water availability.

During the last years, several projects and studies focused on groundwater have been achieved by many partners and stakeholders (UNHCR, JICA/IOM, IWM, MSF, Groundwater Relief, etc). A significant amount of hydrogeological data including groundwater level time series have been produced allowing to identify the Tipam sandstone aquifer as the most important water bearing geological formation for supplying water in Kutupalong mega camp and partially met the water demand in Teknaf. Nevertheless, it has also been shown that this aquifer has a high spatial heterogeneity.

To avoid over exploitation of this resource, the recharge process and aquifer capacities have to be confirmed by observing the responds of the water table over time and improving the water management capacities of the DPHE/ WASH sector at Cox's Bazar province.

In other words, the objective is to capitalize the existing information and optimized the data collection related to the hydrogeology for the next years in order i) to improve the geological conceptual model of the aquifer, and located the most productive zones ii) to establish a realistic and reliable water balance of the resource, iii) develop a groundwater model as a management tools able to predict the impact of the water demand. Hence, it is requested to:

- Develop standards for pumping test and technical specification on the requested equipment;
- Carry out a desk review and collect secondary data related to lithology, water quality and availability which have been produced so far;
- Gather hydrogeological data in a centralized GIS database sharable with all the sector;
- Provide a conceptual model of the geology aiming to show the spatial variability of geological and hydrogeological conditions through;
- level all the monitoring wells and unified the groundwater level monitoring system and identified the gap for potential extension;
- Develop a groundwater flow model as a water management tool and ensure its takeover of the DPHE

14.4 Operation and Maintenance

The main objective of operation and maintenance (tubewells and water networks) is to ensure quality service continues with minimum interruptions as per sector guidelines. Community block-based water infrastructure monitoring teams of at least 1person per 10 water points (hand pump and/or pipe stands)

will be established. These will be trained and will be responsible for reporting using agreed standard reporting procedure weekly.

Operation and maintenance guidelines and standard response procedures will be developed for the three major water source categories i.e. hand pumps, water supply networks and surface water sources.

Based on spare part and material requirements supplier mapping will be conducted to help expedite procurement and improve quality of material and extend the lifespan of installed equipment.

Furthermore, operation and maintenance will be guided by the following:

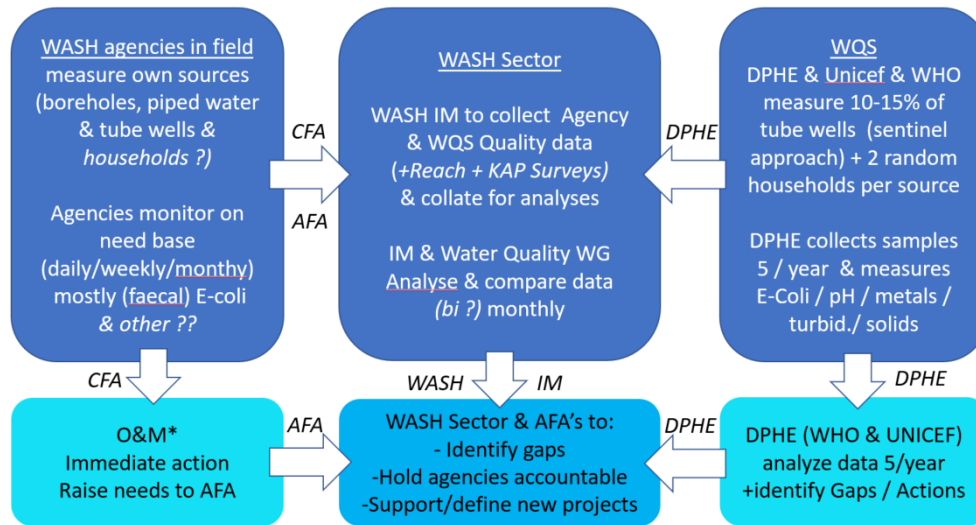
Communities will be assisted in developing tailor-made community-based O&M plans that include funding mechanisms to ensure sustainability.

- After repairs of water infrastructure standard water quality, sampling, testing and disinfection procedures should be followed.
- Based on assessment reports partners must preposition common supplies and equipment at Camp level.
- At sector level tools will be developed to allow partners to share best O&M practices and challenges.
- Capacity to use remote based reporting techniques will be build. In addition, standard procedures will be developed in line with standard water point markers.

14.5 Water Quality

For a healthy life, people have to access to safe and water for drinking and other pureposes. National Standards on water quality have been established by the government and will be followed by the sector to applied in the camps as well as the host communities. During 2017 and 2018, tube wells equipped with hand pump have been the main water source for water supply. WHO and UNICEF water quality monitoring showed that the tubewell are vulnerable to fecal contamination. E. Coli contamination mainly occurs during transportation from the water resource to the households. To reduce the risk of contamination at the water point, especially during the post-monsoon season, mid to small scale chlorinated water supply system are being implemented by the various agency during 2019. The difference stakeholders/ agencies have been collected water quality data (UNICEF, WHO, IOM, UNHCR). For 2019, UNCEf, WHO and DPHE have developed an unified Water Quality Surveilence to monitore drinking water quality mainly focused on tubewells and households. The WASH Sector s sentinel approach as well as the Drinking water Identifcaton for prioritize Operation and maintenance have been incorporated.

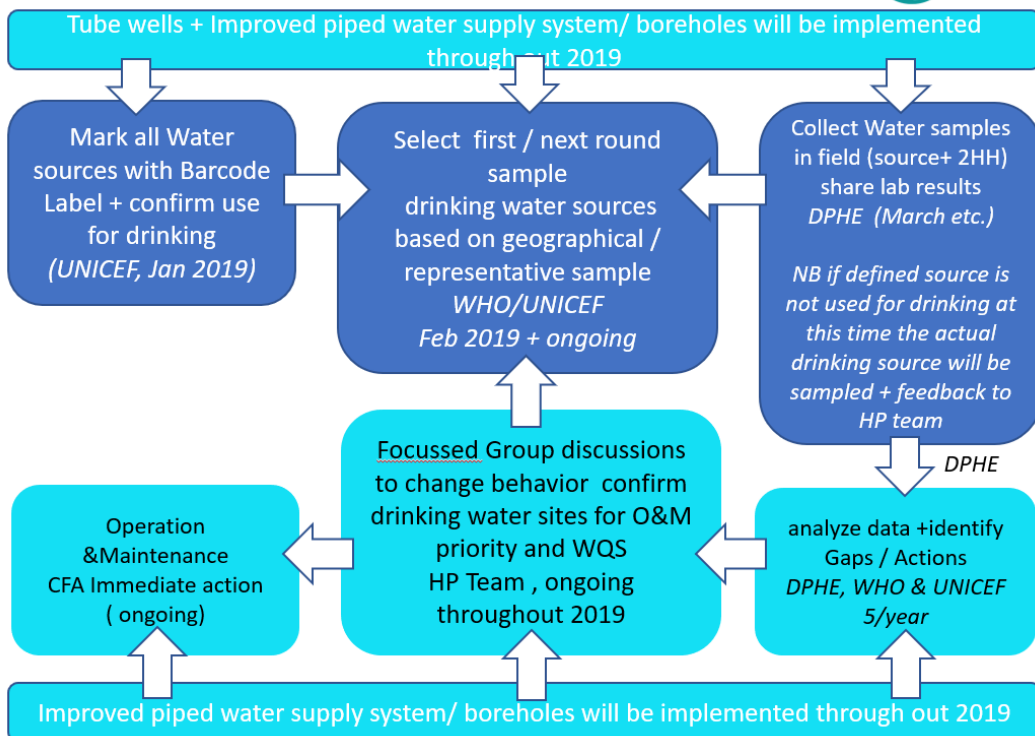
Water Quality Surveillance & Data Analyses



* Operation & Maintenance



Identification of Drinking Water Sources



Capacity building at DPHE CXB for sampling, analyzing data and developing improvement plan,
Develop Water safety plan standard,
Community consultation with Hygien promotion

Develop guideline for surface water quality listing the different type of contamination, the related appropriate treatment

14.6 Monitoring Framework

Indicator	Data Source/ Collection Method(s)	Frequency of reporting
# of targeted people in camps benefitting from at least 20 l/day safe water for drinking and other domestic purposes	Infrastructure Mapping 4W Water quality monitoring Key informant interviews Household Survey	Monthly

15 Disaster Preparedness and Risk Reduction

The Cox's Bazar area receives on average 3.5 meters of rain a year, primarily in a 6 month period and a cyclone every 3 to 4 years. As a result regular flash floods, landslides and periodic cyclones can be expected. WASH has in response to this situation, under the leadership of the ISCG developed a 2018 Rohingya Preparedness and Response WASH Plan/Monsoon Cyclone which is available on the website.

This plan will, in conjunction with other sectors be amended and updated annually based upon experience and the evolving situation in the camps. WASH will rely heavily on the Site Planning vulnerability mapping in order to reduce risk. Stocks of key NFIs will be prepositioned in Cox's Bazar, Ukhia, Teknaf and in the camps. Key NFIs are tracked by the Coordination Unit and updated regularly on the website. These plans will in all cases be based upon worst case scenario.

In the event of an emergency the Camp Focal Agency, under the leadership of the Site Managers and CiCs and with the support of the Area Focal Agency will lead the WASH response.

Overtime as communities develop and gain experience with the local situation, and the Sectors ability to interact with them improves these disaster preparedness plans will be increasingly community based.

Annex 1 WASH related Public Health Risks

The table bellows gives basic information about the most likely WASH related public health risks as well as additional activities that should be undertaken by the sector in the case of an outbreak. This would be in addition to all normal activities which will be undertaken as part of the overall strategy to reduce risk.

Diseases	Key information	Expected WASH partners' actions
<p>Acute Watery Diarrhea</p>	<p>Caused by the bacterial <i>Vibrio Cholerae</i>. Transmitted via the faeco-oral route. Approximately 80% of infected people are asymptomatic (can transmit the bacteria but show no signs of cholera infection). Severe cases will need rapid treatment with intravenous fluids and antibiotics.</p> <p>It takes between 12 hours and 5 days for a person to show symptoms after ingesting contaminated food or water. AWD affects both children and adults and can kill within hours if untreated</p>	<p>WASH Partners to train WASH teams including symptoms and transmission pathways.</p> <p>WASH Partners scale up water treatment point of use and household water treatment and promotion of household water treatment.</p> <p>WASH Partners strengthen handwashing with the promotion, provision of soap and installations in public places, including restaurants.</p> <p>WASH Partners with the Community Health dialogue with communities to identify a measure to block transmission pathways and pathways.</p> <p>WASH Partners with the CHW support the affected persons to enhance health-seeking.</p>
<p>Hepatitis E</p>	<p>Hepatitis E is a liver disease caused by infection with a virus known as hepatitis E virus (HEV).</p> <p>The virus is transmitted via the faecal-oral route, principally via contaminated water.</p> <p>The incubation period following exposure to the hepatitis E virus ranges from 2 to 10 weeks, with an average of 5–6 weeks. The infected persons are believed to excrete the virus beginning a few days before to around 3-4 weeks after the onset of disease.</p> <p>During outbreaks of hepatitis E, the disease attack rates are the highest among adolescents and young adults in the age group of 15–40 years.</p> <p>The disease appears to be somewhat more common among men than among women.</p> <p>HEV infection in pregnant women is associated with an increased likelihood of symptomatic disease, fulminant hepatic failure and death, as compared with men and non-pregnant women.</p>	<p>WASH Partners to train WASH teams including symptoms and transmission pathways.</p> <p>WASH Partners scale up water treatment point of use and household water treatment and promotion of household water treatment.</p> <p>WASH Partners with the Community Health dialogue with pregnant women to enhance</p>
<p>Malnutrition</p>	<p>Preliminary results of Standardized Monitoring Assessment for Relief and Transition (SMART) Surveys currently reveal a Global Acute Malnutrition (GAM) prevalence of 24.3%, which is above the World Health Organization emergency threshold level of 15%. The surveys also show 7.5% prevalence of Severe Acute Malnutrition (SAM).</p> <p>All surveys indicate a dangerously low level of exclusive breastfeeding, with less than 16% of children aged 6-23 months achieving a minimum acceptable diet that make them vulnerable to malnutrition and infectious diseases.</p>	<p>WASH Partners to train WASH teams including symptoms.</p> <p>WASH Partners with the Nutrition treatment WASH kits after the discharge of the patient.</p> <p>WASH Partners target and support the household children under 2 years” to ensure safe ex hygiene practices for the child.</p> <p>WASH will work with the Nutrition Sector to handling in the household targeting women</p>

	Additionally, the presence of aggravating factors could exacerbate the already poor nutrition state of the most vulnerable young boys, girl and adolescent girls. These include the increasing cases of diarrhea, Acute Respiratory Infection (ARI) and anemia.	
Fecal-oral diseases	<p>WASH Partners to train WASH teams including outreach workers on symptoms and transmission pathways</p> <p>Regular WASH services at agreed standards.</p> <p>WASH Partners strengthen handwashing with soap practices through the promotion, provision of handwashing stations in public places, including restaurant and markets.</p> <p>Quick response to diarrhea outbreaks to control spread: Identification of water source affected, Remediation, and</p> <p>dissemination</p>	
Malaria	<p>Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. It is preventable and curable.</p> <p>Young children and pregnant women are particularly vulnerable to malaria infection and deaths.</p>	<p>WASH Partners to train WASH teams including outreach workers on symptoms and transmission pathways.</p> <p>Reduce mosquitos breeding areas with appropriate WASH facilities.</p>
Communicable diseases (non-WASH related)	<p>WASH Partners to train WASH teams including outreach workers on symptoms and transmission pathways</p> <p>WASH Partners strengthen handwashing with soap practices through the promotion, provision of handwashing stations in public places.</p>	

16 Annex 2 National Disaster Management Institutional Framework

The National Disaster Management Institutional Framework in Bangladesh is outlined in the Disaster Management Act, 2012 and includes a series of inter-related institutions at both national and sub-national levels to ensure effective planning and coordination of disaster risk reduction (DRR) and emergency response management.

Under the disaster management institutional framework, the different entities at national level and at sub-national levels and their functions are narrated below.

At the national level

1. National Disaster Management Council (NDMC) headed by the Honorable Prime Minister to formulate and review the disaster management policies and issue directives to all concerns.
2. Inter-Ministerial Disaster Management Co-ordination Committee (IMDMCC) headed by the Hon'ble Minister in charge of the Ministry of Disaster Management and Relief (MoDMR) to implement disaster management policies and decisions of NDMC/ Government.
3. National Disaster Management Advisory Committee (NDMAC) headed by an experienced person having been nominated by the Honorable Prime Minister with 8 members of parliament as its members advises the ministry and DDM to formulate management policies to face the disasters.
4. National Platform for Disaster Risk Reduction (NPDRR) headed by Secretary, MoDMR and DG, DDM functions as the member secretary. This platform coordinates and provides necessary facilitation to the relevant stakeholders.

5. Earthquake Preparedness and Awareness Committee (EPAC) headed by Honorable minister for MoDMR and DG, DDM act as member secretary.
6. Cyclone Preparedness Program Implementation Board (CPPIB) headed by the Secretary, MoDMR to review the preparedness activities in the face of initial stage of an impending cyclone.
7. Cyclone Preparedness Programme (CPP) Policy Committee headed by Honorable Minister, MoDMR and Secretary, MoDMR act as member secretary. Disaster Management Training and Public Awareness Building Task Force (DMTATF) headed by the Director General of Department of Disaster Management (DDM) to coordinate the disaster related training and public awareness activities of the Government, NGOs and other organizations.
8. Focal Point Operation Coordination Group of Disaster Management (FPOCG) headed by the Director General of DDM to review and coordinate the activities of various departments/agencies related to disaster management and also to review the Contingency Plan prepared by concerned departments.
9. NGO Coordination Committee on Disaster Management (NGOCC) headed by the Director General of DDM to review and coordinate the activities of concerned NGOs in the country.
10. Committee for Speedy Dissemination of Disaster Related Warning/ Signals (CSDDWS) headed by the Director General of DDM to examine, ensure and find out the ways and means for the speedy dissemination of warning/ signals among the people.

At sub-national levels

1. District Disaster Management Committee (DDMC) headed by the Deputy Commissioner (DC) to coordinate and review the disaster management activities at the District level.
2. Upazila Disaster Management Committee (UzDMC) headed by the Upazila Chairman to coordinate and review the disaster management activities at the Upazila level.
3. Union Disaster Management Committee (UDMC) headed by the Chairman of the Union Parishad to coordinate, review and implement the disaster management activities of the concerned Union.
4. Pourashava Disaster Management Committee (PDMC) headed by Mayor of Pourashava (municipality) to coordinate, review and implements the disaster management activities within its area of jurisdiction