Water, Sanitation and Hygiene in Disaster Prone Communities in Northern Ghana.

Consolidated Final Narrative Report

(Period from June 1, 2014 to May 31, 2017)

For Submission to

GLOBAL AFFAIRS CANADA (GAC)

Country: Ghana

Programme Title: Water, Sanitation and Hygiene in Disaster Prone Communities in Northern Ghana

Assisted Country: Ghana

Joint Programme Outcome(s) derived from UNDAF Outcome 5

1. Improved access to safe drinking water, basic sanitation and hygiene infrastructure and services that are resilient to climate related disasters and appropriate for flood prone communities in the three Northern Regions of Ghana
2. Health education programmes and awareness of hygiene practices improve the sanitation and health conditions in the beneficiary communities and schools
3. Enhanced regional and local capacity in the beneficiary communities to sustainably manage the WATSAN facilities to be put in place.
4. Communities demonstrate a sense of disaster preparedness and minimize future risks in the communities.

Programme Duration: 3 years	**Total estimated budget*:** Can$19,915,904
Start/end dates: 1st June 2014– 31st May 2017	Out of which:
Fund Management Option(s): Pass-through	**Funded Budget:** Can$ 19,915,904
Administrative Agent: UNDP	* Total estimated budget includes both programme costs and indirect support costs
	Total funds received: $US17,122,483
	Total funds expended: $US16,675,098.36 [1]
	Remaining balance: $US447,384.64
	Period covered: 1st June 2014 to 31st May 2017

Source of funded budget:
Donor: Global Affairs Canada

Names and signatures of and participating UN organizations and national counterparts

On behalf of UN organizations	On behalf of National Coordinating Authorities
Name: *Ms. Christine Evans-Klock*	***Name:*** .
Designation: *UN Resident Coordinator in Ghana*	***Designation:***
Signature:	***Signature:***
Date:	***Date:***

[1] Funds expended and the remaining balance will be updated as final financial reports are received.

ACKNOWLEDGEMENT

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We also express gratitude to fellow UN colleagues; UNDP, UN-Habitat, UNICEF and WHO, for their commitment to join effort and assist the flood prone communities and to improve their living conditions; and support to the Government of Ghana in its effort to find sustainable and resilient solution to WASH conditions in disaster related challenges.

Lastly, we would like to extend our sincere gratitude to all the programme office staff whose tireless efforts also contributed significantly to the success of the WASH in DPC programme.

TABLE OF CONTENT

List of tables

List of figures

List of photographs

List of boxes

Acronyms and abbreviations

BCC	Behaviour Change Communication
CBO	Community Based Organization
CCA	Climate Change Adaptation
CLTS	Community Led Total Sanitation
CTV	Community Technical Volunteers
CSO	Civil Society Organisation
CWSA	Community Water and Sanitation Agency
DA	District Assemblies
DDMC	District Disaster Management Committee
DFATD	Department of Foreign Affairs, Trade and Development
DEHO	District Environmental Health Officer
DHIMS	District Health Information Management System
DPC	Disaster Prone Community
DPO	Development Planning Officer
DRR	Disaster Risk Reduction
DRP	District Resource Person
DTTs	District Technical Teams
DWD	District Works Department
DWQT	Drinking Water Quality Testing
DWSMT	District Water and Sanitation Management Team
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EPRP	Emergency Preparedness and Response Plan
ESMF	Environmental and Social Management Framework
FDG	Focus Group Discussion
FMP	Facility Management Plan
FPRP	Flood Preparedness and Response Plan
GAC	Global Affairs Canada
GES	Ghana Education Service
GHS	Ghana cedi
GIS	Geographic Information System
GoG	Government of Ghana
GPRS	Ghana Poverty Reduction Strategy
GSGDA	Ghana Shared Growth and Development Agenda
GSS	Ghana Statistical Service
HFA	Hyogo Framework for Action
HWTS	Household Water Treatment and Safe Storage
HWWS	Hand Washing With Soap
IDSR	Integrated Disease Surveillance and Response
LEAP	Livelihood Empowerment Against Poverty
M&E	Monitoring and Evaluation
MCD	Metropolitan Coordinating Director
MEHO	Metropolitan Environmental Health Officer

MGSP	Ministry of Gender and Social Protection
MLGRD	Ministry of Local Government and Rural Development
MMDAs	Metropolitan Municipal District Assemblies
MWRWH	Ministry of Water Resources, Works and Housing
NADMO	National Disaster Management Organization
NCWSSP	National Community Water Supply and Sanitation Programme
NGO	Non-Governmental Organization
NR	Northern Region
OD	Open Defecation
ODF	Open Defecation Free
PCC	Programme Coordination Committees
PMF	Performance Measurement Framework
PMT	Program Management Team
PMV	Pump Maintenance Volunteers
PTA	Parent Teacher association
PTC	Program Technical Committee
PUNOs	Participating United Nation Organizations
REHO	Regional Environmental Health Office
RTT	Regional Technical Team
SC	Steering Committee
SG	Saving Group
SDGs	Sustainable Development Goals
SHCs	School Health Clubs
SHEP	School Health Education Program
TOT	Training of Trainers
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNHABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
UER	Upper East Region
UWR	Upper West Region
WASH	Water, Sanitation and Hygiene
WASH in DPC	Water Sanitation and Hygiene in Disaster-prone Communities
WATSAN	Water and Sanitation
WHO	World Health Organization
WSMT	Water and Sanitation Management Team
WSP	Water Safety Plan
WSPT	Water Safety Plan team

Executive Summary

"Water, Sanitation and Hygiene (WASH) in Disaster Prone Communities (DPC)" was designed to enhance livelihoods and quality of life of households and schools in 265 flood-prone communities in the three (3) Regions of Northern Ghana through the provision of improved and disaster-resilient WASH facilities and services. It is a collective effort through which four UN Partner Organizations (PUNOs) in Ghana viz., UN-Habitat, UNICEF, UNDP and WHO have worked together to prepare, implement, monitor and evaluate the extent to which the expected outcomes of the programme were achieved.

Canada, through the Global Affairs Canada (GAC) provided funding support to implement it over three (3) years, from 1st June 2014 to 31st May 2017, under the spirit of the United Nations' to deliver as one.

A total of 265 communities in 24 Districts in the three Northern Regions with a total population of 323,416[2] including 93,469 school children were selected for the Programme.

A baseline study assessed community drinking water source, sanitation infrastructure or type, hand washing practices, WASH in schools, health implications in terms of WASH-related disease incidence and household or community participation in educational campaigns. Subsequently, a '*gendered*" Performance Measurement Framework (PMF) was developed to track basic indicators for monitoring of the achievements throughout the implementation period.

A Project Implementation Manual (PIM) was developed to serve as a basic tool for programme management. A Steering Committee (SC) was setup as the highest decision-making body for the governance of the programme. The SC was responsible for strategic guidance, fiduciary and management oversight and coordination.

Delivery of resilient flood-prone WASH services

The programme delivered a technological assessment of available WASH infrastructure and made recommendations for appropriate technology options for water supply and institutional and household sanitation infrastructure. The resulting comprehensive Disaster Risk Reduction (DRR) toolkit, a compendium of WASH facilities and technical guidelines did not only guide the implementation of this specific programme but provided a basis for a national sector framework for the delivery of WASH in flood-prone areas.

In general, the programme strengthened resilience in 2653 communities reaching around 323,416 people through a mix of approaches that included construction of flood-resilient water supply in communities and institutional sanitation facilities in schools complemented by appropriate software activities.

The provision of services was accompanied with the promotion of measures to ensure resilience of the facilities to climate related disasters, as well as measures to promote behavioral change towards proper water, sanitation and hygiene practices

sanitation facilities were constructed in in 202 (a total of 224 schools in the compounds including Kindergarten) (target 167) beneficiary schools, which would also serve as safe havens during flooding.

Facility Management Plans (FMPs) were developed for a total of 364 schools (all schools within the targeted communities including ones that did not receive infrastructure support) through

[2] The selected communities' population size was reviewed and updated in 2016, during the implementation phase, resulting in a total population size of 323,416 in the 24 districts.

[3] though the initial target was 265 communities, the actual implementation was in 271 as the CLTS was expanded to an additional 6 flood-prone communities in one district. This was to contribute to sustaining the ODF gains in the adjoining targeted communities.

a collaborative process involving Metropolitan, Municipal and District Assemblies (MMDAs), school and Parent Teacher Association (PTA) representatives. This ensures that financial and other resource commitments are identified to ensure sustainable management of the school WASH facilities.

The choice of appropriate technology by households was facilitated using a Disaster Risk Reduction (DRR) tool kit and flood-resilient designs for household and institutional sanitation infrastructure.

Demand for household toilets was generated in all 271 DPC communities (target 265) through the Community Led Total Sanitation (CLTS) process of triggering. A total of 160 communities of the 271 were certified as ODF.

As at the end of the programme, over 85,945 people live in 160 open defecation free communities. With a total of 7,943 new toilets constructed, that are being used by 79,846 people.

Household toilet construction in the targeted communities also considered appropriate technology options, resulting in the construction of 2,528 (target 2,000) flood-resilient household latrines.

Water supply to communities

Under the resilient water supply component, all the 265 communities have 100% access to sustainable and safe drinking water sources, through 659 interventions (see detail in figure 11) done on 169 new water points and 396 existing facilities which were rehabilitated. The total number of direct beneficiaries is appraised to 269,727 people (target of 200,000) with 137,561 women and 132,166 men. The infrastructures are compliant with the flood-prone design adopted through a national, regional and district consultation process, in line with the CWSA recommendations for rural and semi-rural areas. The innovative elements in the design and development of the resilient water supply infrastructure is being considered for mainstreaming into the national standard for water supply

The sustainability and the ownership of the facilities provided was ensured with the formation and training of 265 Water and Sanitation Management Teams (WSMTs), as part of the community entry strategy. A total of 1891 people (850 Females and 1041 Males) were trained in the 265 communities, for the daily operation and maintenance of the water points, including the sanitation aspects around them.

Water supply to schools and safe havens

Water facilities were developed in about 112 schools, 37 of which are used as safe havens during floods.

Sanitation marketing

A comprehensive sanitation marketing (Sanmark) programme was rolled out during implementation to complement CLTS and enable the uptake of flood-resilient household latrines

A total of 558 latrine artisans acquired knowledge and skills in the construction of safe and flood-resilient household latrines (Photo 3 and 4) while 2,284 CTVs acquired skills to support household latrine construction. The support of the CTVs is vital in reducing costs particularly in areas where latrines do not require highly advanced technology considerations to meet minimum standards of sustainability

Equipping community volunteers with skills for supporting household latrines is one of the approaches geared towards reducing cost of flood-resilient household latrines and facilitating upscale of sustainable household sanitation facilities

An integrated approach to implementation also ensured the linkage between trained artisans and VSLAs to ensure that members of VSLAs get the requisite technical support to construct sustainable latrines. This was achieved via introduction of artisans to community members as potential service providers to construct toilets, at which points the artisans discussed potential technical options with households and VSLA groups

The sanitation social fund is employed as one of the means of sanitation financing for sustainable household sanitation facilities. The social fund is a pro-poor approach that uses the government Livelihood Empowerment Against Poverty (LEAP) targeting mechanisms to identify and support poor and vulnerable households to own sustainable (which includes being flood resilient in flood prone communities) toilets.
Over 323000 people were reached with messages on use of improved sanitation facilities through at least 271 sensitization meetings in communities and 364 sensitization fora in schools

Capacity enhancement and sustainability

As part of plans to sustain the interventions, the WASH in DPC programme implemented activities such as modular training for Community Based Organizations (CBOs), creation of platforms for monitoring of water facilities and Provisioning of maintenance tool kits have all been completed with the expectation of strengthening community capacity for sustainability of interventions.
As part of the ownership transfer, the water supply facilities were handed over to the communities and the District Assemblies. The role of DA and WSMTs were specified in the agreement documents signed between the community representative, the DA and the Implementing partner (on behalf of the contractor). This transfer also empowers local authorities to take full responsibilities for the sustainability of the facilities.
Facility Management Plans (FMPs) were developed for a total of 364 schools (all schools within the targeted communities including ones that did not receive infrastructure support) through a collaborative process involving Metropolitan, Municipal and District Assemblies (MMDAs), school and Parent Teacher Association (PTA) representatives. This ensures that financial and other resource commitments are identified to ensure sustainable management of the school WASH facilities.
A total of 1891 individuals (1041 men, 850 women) from 265 communities in 24 districts have been trained as Water and Sanitation Management Teams (WSMTs) to manage the 565 resilient water supply systems. Where adequate human resources were available three (3)
The capacities of the WSMTs and PMV have been built in the areas of revenue mobilization, Operations and Maintenance (corrective, preventive and routine maintenance) as part of strengthening communities.
Sensitization and stakeholder engagement activities were also organized in the beneficiary communities' prior to and after the implementation of water and sanitation interventions. Among those targeted were staff of: District Works Departments (DWD), Planning Units, Environmental Health Departments, NADMO and Administrative Departments, Chiefs and elders, Assembly men and women and among other leaders.

Eighty-five (85) Communities Saving Groups were promoted and trained to operate effectively and contribute to the maintenance of water facilities.
Water Quality Assessment and Monitoring, with a particular focus on flood conditions involved Eighty-six (86) regional and district staff.
Orientation on Water Safety Planning (WSP) was also conducted resulting in raising awareness with regards to the risks associated with water sources management and water conservation before, during and after floods and how to mitigate those risks.
Hygiene promotion in schools on flood-resilience, was implemented through School Health Clubs and communities. To that effect, Behavior Change Communication (BCC) materials were also developed to trigger discussions around the disaster risk reduction mechanisms to be established across the whole community. It helped enhance their awareness on basic hygiene.

To ensure adequate flood disaster emergency preparedness, the capacity of fifty-four (54) key staff from national, regional and district level institutions was enhanced through an on-

job training to develop Flood Preparedness and Response Plans (FPRPs). It enabled these personnel to improve upon their ability to deliver on their mandate related to flood preparedness and WASH. A full-scale flood simulation exercise was subsequently implemented in Bunkpurugu-Yunyoo District to strengthen disaster preparedness and response capacity of relevant stakeholders. Participants sharpened their understanding, roles and responsibilities in a flood crisis, and reinforce coordination and synergy building among government and non-government agencies whose mandates involve humanitarian response to emergencies.

Management effectiveness

The scope of work and deliverables expected of respective agencies was discussed and agreed upon following the approval of the project proposal. The agreed targets were fed into a Performance Measurement Framework (PMF).

Schedule

As a result of time taken to complete inception activities, the programme suffered significant initial delays. A fast track approach (Incremental Management Model) was adopted to ensure the delivery of programme results. The schedule was updated as practically as possible, based on the implementation trend, making sure all the infrastructures were delivered during the agreed implementation period, by May 2017.

Budget

In accordance with the Paris Declaration on efficient use of resources and the commitment of UN agencies to deliver focused on a "value for money" orientated basis, the programme costs were managed broadly within the original costs. The variance in the cost of school sanitation facilities enabled the programme to expand to more schools and increase flood resilience of community sanitation and hygiene services. With the water facilities, the initial cost of infrastructures was reduced through the combination of alternative cost effective technical measures.

Implementation

The monthly progress reports submitted by all the PUNOs gave the status of programme implementation as well as the delivery trend. Keeping the programme on track was however continued to be fragile as there were potential risks, such as the onset of floods that could set back progress.

Quality Control

During the field joint monitoring activities, quality control was conducted as frequently as possible, particularly at district level by all participating institutions. The Community Water and Sanitation Agency (CWSA) is, by mandate, the agency responsible for the quality of WASH infrastructure delivery in rural and semi-rural areas. They were mandated to undertake quality control of the water supply schemes, with spot check monitoring in the construction of school sanitation facilities while quality control was managed by UNICEF through technical supervision and monitoring.

Risk

The flood prone communities, in most of the cases, are located in remote areas with difficulties of access. The greatest risk was at the planning stage when the exact locations of the beneficiary communities were not known. The implementation plans assessed that risk as high but resulted to be very high when the community selection was completed. As a consequence, the implementation schedule had to be adapted several times, and

management plans readjusted accordingly. Another greatest risk to the programme was the target of achieving 100 per cent ODF communities. Aside of the above, the overall achievement of the WASH in DPC programme was mostly in line with expectations.

Communication and Stakeholder Management

UN-Habitat, UNICEF, UNDP and WHO implemented this joint programme in partnership with a range of other organizations. MLGRD (Environmental Health and Sanitation Directorate - EHSD)- As the GoG focal Ministry for the WASH in DPC programme, played the lead role in coordination and harmonization in close collaboration with the UN team. They provided technical direction and guidance for the implementation of the programme. EHSD supported also the implementation of the environmental sanitation components of the programme as well as the formation and coordination of WASH in DPC Technical Working Group (Co-Chair with MWRWH).

Human Resources

The different agencies provided human resource capacity for the programme and implementation based on their respective mandates. The initial staff structure, from the project document, was slightly modified to accommodate respective agencies staff policy and regulations.

Challenges, lessons learned and recommendations

The programme itself was a learning process for the WASH sector as a whole, given that it was the first of its kind in the WASH sector in Ghana.

Challenges

- Slow progress in CLTS uptake in some communities due to subsidies being applied in adjoining communities by other implementing agencies.
- Weak supportive monitoring, supervision and follow up to ensure household level latrine construction is properly done after triggering in each community.
- Weak capacity of decentralized government for Operation and Management.
- Weak decentralized government ownership of the programme especially for CLTS implementation.
- As a consequence, there was a need to advocate with Regional and District Management helped to increase ownership at the district level.

Lessons learnt

- Communities are ingenious and resourceful. When empowered, they often have the capacity to develop and implement solutions themselves.
- The programme was implemented in phases. Lessons from previous phases were incorporated into the next phase. This practice enhanced ideation and learning.
- The commitment of the UN Resident Coordinator was incremental for the success of the programme.
- A governmental donor and implementation by PUNOs gave political weight and therewith contributed to the motivation and active involvement of and uptake of lessons, methods and good practices by the Government of Ghana and contributed to the speed and successes of the programme.
- The PUNO partnership was a novelty harnessing several capacities for WASH implementation.
- Guidance documents such as technical guidelines and standards were necessary to establish the necessary guidelines and national standards for flood-resilient WASH infrastructure.

- Joint UN programmes involving UN Agencies with different and complementary capacities in the theme areas require substantial conceptualization and planning to deliver on expected results.
- The timeframe was overambitious (too short) looking at the seemingly national focus and technical nature of the programme.
- For sustainability, there must be follow-up and further support to the DTTs and RTTs to adequately encourage and resource them to apply the knowledge and capacity they gained.
- Where defects were noted on the water and sanitation facilities provided, take immediate corrective actions, in collaboration with the WSMTs and DTTs.
- Success stories, lessons learnt and knowledge products from this programme should be shared among the key WASH stakeholders for possible replication.
- For future actions, all potential stakeholders and partners should be actively involved in the
- It is also recommended that national institutions are empowered and expected to lead in the conceptualization, design and implementation of projects to ensure that ideas and plans are nationally owned to ensure sustainability.

Results of the terminal evaluation

- Community hardware is in most cases functional, nearby, easily accessible and properly used, while beneficiaries indicate to be satisfied with the facilities.
- Community software scores well on issues such as coverage of beneficiaries and utilization of the raised awareness, although people still need more sensitization so that they practice effectively what they learnt
- Effectiveness of capacities realized in the districts would need follow up with further training and guidance.
- Most hardware is suitable for use by handicapped persons, attempts were made to be ready for floods, while human rights and gender were also important issues in the designs and software.
- A major achievement has been the initially cumbersome but finally successful coordination and exchange between UN parties, NGOs, companies and the different institutes of the Government of Ghana. The steering committee was particularly important in providing strategic decisions and ensuring accountability while the UN Resident Coordinator fulfilled an important role in improving the coordination and collaboration of all programme level stakeholders.
- The programme set up and approach was partly dictated by the desire to 'deliver-as-one'. This had the advantage of exchange of expertise and infrastructures, contacts and collaboration with the GoG and putting weight to the programme, enhancing also the GoG's motivation and commitment for the programme and its results.
- The programme set up DTTs and RTTs at the district and regional levels respectively. They were pivotal in the implementation of the CLTS component. Still, communication from the top to regions and districts should be enhanced.

1 - INTRODUCTION

Recurrent flooding events in Northern Ghana usually result in the disruption of WASH services and trigger other emergency situations such as outbreaks of diarrhea, cholera, and other water related/borne diseases.

Evidence from recent flooding trends in Northern Ghana confirms that floods typically destroy community infrastructure such as: houses, irrigation, water and sanitation facilities. They exacerbate impoverishment, disease and livelihood challenges among residents of the hard-hit communities[4].

In view of this, the UN System and the Government of Ghana (GoG) developed a programme proposal on "Water, Sanitation and Hygiene (WASH) in Disaster Prone Communities (DPC)". It was designed to enhance livelihoods and quality of life of households and schools in 265 flood-prone communities in the three (3) Regions of Northern Ghana through the provision of improved and disaster-resilient WASH facilities and services. The prooposal was conceived within the framework of the Joint UN Programming approach and was aligned with Outcome 5 of the 2015 United Nations Development Assistance Framework (UNDAF) for Ghana. The expected outcomes are:

1. Improved access to safe drinking water, basic sanitation and hygiene infrastructure and services that are resilient to climate related disasters and appropriate for flood prone communities in the three Northern Regions of Ghana
2. Health education programmes and awareness of hygiene practices improve the sanitation and health conditions in the beneficiary communities and schools
3. Enhanced regional, district and local capacity in the beneficiary communities to sustainably manage the WATSAN facilities to be put in place.
4. Communities demonstrate a sense of disaster preparedness and minimize future risks in the communities.

Thus, the WASH in DPC Programme reflects the collective effort through which four UN Partner Organizations (PUNOs) in Ghana (viz., UN-Habitat, UNICEF, UNDP and WHO have worked together to prepare, implement, monitor and evaluate the extent to which the expected outcomes of the programme were achieved. These aimed at contributing to the achievement of the achievement of the Millennium Development Goals (MDGs)[5] and other international commitments, in close collaboration with national institutional partners involved in the WASH and Disaster Management sectors, namely: the Ministry of Local Government and Rural Development (MLGRD – Focal Ministry for the programme), the former Ministry of Water Resources, Works and Housing, Ministry of Gender and Social Protection (MGSP), National Disaster Management Organization (NADMO), Ghana Education Service/School Health Education Programme (GES/SHEP), Ghana Health Service (GHS).

Canada, through the Department of Foreign Affairs, Trade and Development (DFATD), now Global Affairs Canada (GAC) provided funding support of Can$ 19,915,904 for this joint UN WASH in DPC programme. It targeted 265 communities in 24 districts in the three regions of Northern Ghana (viz., Northern, Upper West and Upper East regions) and aimed to reduce

[4] Victor Lolig et al, 2014). 'Households' Coping Strategies' in Drought and Flood- prone Communities in Northern Ghana; Journal of Disaster Research vol.9 no.4, 2014.

[5] The MDGs have been superseded by the Sustainable Development Goals, a set of 17 integrated and indivisible goals that build on the achievements of the MDGs but are broader, deeper and far more ambitious in scope

disaster risk and build resilience in the WASH sector.

The programme's ultimate outcome was to reduce the burden of WASH-related diseases among men, women, boys and girls in disaster-prone communities in Northern Ghana.

The WASH in DPC programme was implemented over three (3) years, from 1st June 2014 to 31st May 2017. It reflected the spirit of the United Nations' to deliver as one, under the leadership and guidance of the United Nations Resident Coordinator.

This report summarizes the outcomes from the implementation of the WASH in Disaster-prone Communities programme (WASH in DPC) programme.

2 - PROJECT DESIGN - BASIC INFORMATION

The WASH in DPC Programme aimed at improving sustainable access to disaster-resilient WASH facilities in 265 communities of 24 Districts for the benefit of 200,000 people including 50,000 school children in Disaster Prone Communities in Upper East, Upper West and Northern regions of Ghana. The Programme was designed to provide improved and resilient WASH facilities and services in disaster-prone communities in the three regions. The Programme also provided a framework for DFATD to partner with the UN team (in line with UNDAF) and contributed to the national development policy framework (GSGDA, 2014 – 2017) and efforts towards implementation of the Ghana Plan of Action for Disaster Risk Reduction and Climate Change Adaptation.

The PUNOs provided technical assistance, facilitation and funds management support for the Programme. This was implemented with the Government of Ghana partners in the WASH sector as well as private sector and nongovernmental organizations to achieve the expected Programme outcomes.

The expected ultimate outcome of the Programme was to reduce the burden ncidenceof WASH-related diseases among men, women, boys and girls in disaster-prone communities in Northern Ghana.

The intermediate outcomes were:

- Increased equitable use of disaster-resilient improved sanitation and water facilities by people in disaster-prone communities in northern Ghana.
- Improved hygiene practices among women, men, girls and boys before, during and after disasters in disaster-prone communities in northern Ghana.
- Improved planning and implementation of WASH programs by local institutions.

15 key activities and their 8 products were identified to achieve the above outcomes.

2.1 Communities selection

As part of programme implementation, a joint community profiling was done at inception. This process aimed at identifying communities that qualify to benefit from the Programme's intervention in the 3 Northern Regions, viz., Northern, Upper East and Upper West. The joint community profiling was also to ensure a judicious selection of the 265 beneficiary communities and to involve the main stakeholders at national, regional and district levels. The initial questions that were posed to begin the process of selecting and ranking the communities are: (1) How often are floods expected to occur? (2) What type of flooding occurs (pooled floodwaters or shallower fast flowing waters); (3) How deep will the floodwaters be? (4) Which key infrastructure is at risk of flooding? (5) Which neighborhoods and/or agricultural areas are at risk of flooding?

The selection process was fully participatory and involved stakeholders with sound knowledge of the environment at district and community level. To that effect, three (3) different workshops were organized, one in each of the three (3) regions (viz., Upper East, Upper West and Northern region). Participants from the same district worked together and provided relevant information on the floods in their respective districts. They sorted their communities affected by flood in ascending order of severity, viz., from the community where WASH services were severely impacted to the less affected. The assessments provided the geographic information of the boundaries of the flood-prone areas. Additional criteria were

set to identify and select districts/communities to benefit from the interventions. These are: (a) Communities yet to benefit from proper WATSAN interventions; (b) Incidence of Poverty; (c) Health status of the district/community; (d) Female Headed Households; and (e) Households Headed by uneducated.

Subsequently all districts and communities' stakeholders jointly crosschecked the data availed by NADMO and confirmed the selection of the beneficiary communities following the criteria described above.

Table 1: Result of the identification and selection of communities

	General Information		WASH facilities affected by flood		Selected Districts/Communities		
	Districts	Total Population[6]	Districts	Communities	Districts	Communities	Population
Upper East	9	1,188,800	6	91	6	52	43,532
Upper West	9	792,535	9	137	9	100	73,554
Northern	23	2,858,793	9	218	9	113	206,330
TOTAL	41	4,840,128	24	446	**24**	**265[7]**	**323,416**

Through this process a total of 265 communities in 24 Districts in the three Northern Regions with a total population of 323,416[8] including 93,469 school children were selected for the Programme.

2.2 Baseline information

A baseline study was conducted to provide a reference baseline for an effective Monitoring and Evaluation (M&E) for the specific interventions. It was aligned on the agreed indicators of the Programme's Results and Logical Framework and at the appropriate scale (the district and sub-district levels). The baseline study focused on the key indicators in the beneficiary communities in order to establish the prevailing situation on the ground, identify potential constraints, assess preliminary elements for consideration to ensure introduction of appropriate resilient WASH systems for the context.

The baseline assessed community drinking water source, sanitation infrastructure or type, hand washing practices, WASH in schools, health implications in terms of WASH-related disease incidence and household or community participation in educational campaigns.

[6] Ghana Statistical Service – Projected Population by Region and sex, 2010-2016

[7] UNICEF further deliverered CLTS activities in 6 additional communities for a total of 271

[8] The selected communities' population size was reviewed and updated in 2016, during the implementation phase, resulting in a total population size of 323,416 in the 24 districts.

Water Supply

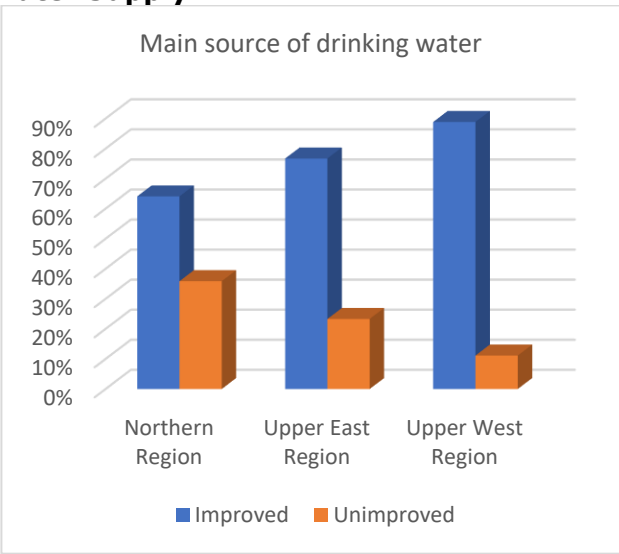


Figure 1: Main source of drinking water

The main drinking water sources in DPCs were grouped into 'improved' and 'unimproved' categories, based on the resilience of the water facility to disaster, and the quality of the water supplied. Comparative regional analysis depicts high levels of access to improved sources of potable water, mostly tubewells, public and household piped water systems and protected dugwells. However, notable intra-regional differences exist at the district level. The proportion of households in remote communities that drink from 'unimproved' sources, such as surface water and unprotected wells, exceeded the regional proportions recorded here. The need for improved water facilities may thus be higher in NR and UER

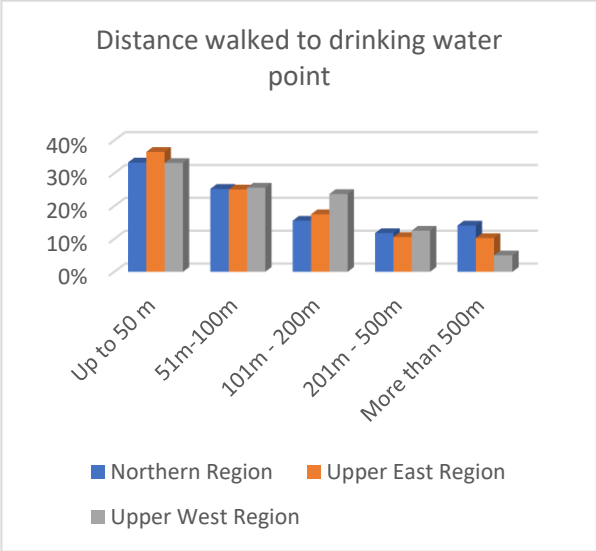
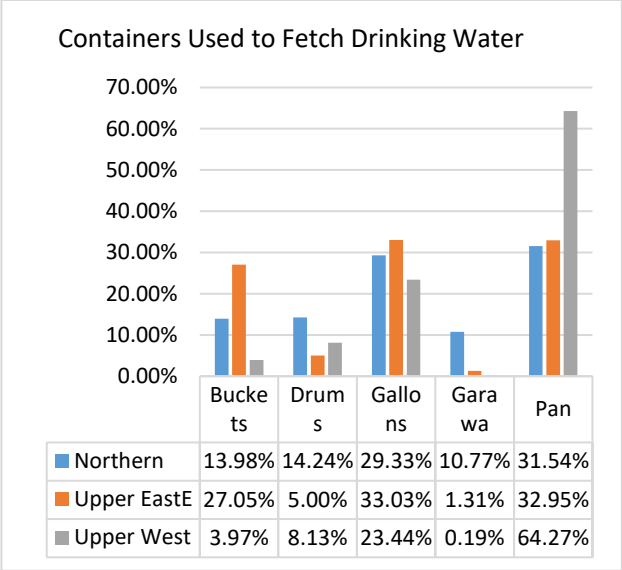


Figure 2: Distance walked to drinking water point

Proximity to water supply sources is often measured by the distance walked to and from water points, as well as the amount of time it takes to do so. While at least, two-thirds of households in the target DPCs could access potable water points within 50-100 metres walking distance, as depicted by the regional level data, at least, one in every ten households in NR and UER exceeded 500 metres in their quest for drinking water.



	Buckets	Drums	Gallons	Garawa	Pan
Northern	13.98%	14.24%	29.33%	10.77%	31.54%
Upper EastE	27.05%	5.00%	33.03%	1.31%	32.95%
Upper West	3.97%	8.13%	23.44%	0.19%	64.27%

Figure 3: Containers Used to Fetch Drinking Water

Water handling has health implications hence the need to assess the type of containers used to fetch water for household consumption. Households in Upper East Region (UER), fetch and transport water in gallons, pans and buckets; whereas households in Upper West Region (UWR) have a higher preference for pans and gallons as in Northern Region (NR). Gallons have narrower openings and provide more protection from contamination than pans. They are also preferred by men, who secure them on their motorbikes, whilst women tend to go for the pans, which are usually uncovered and carried on their heads. At least half of all households surveyed said they cover their containers for fetching water.

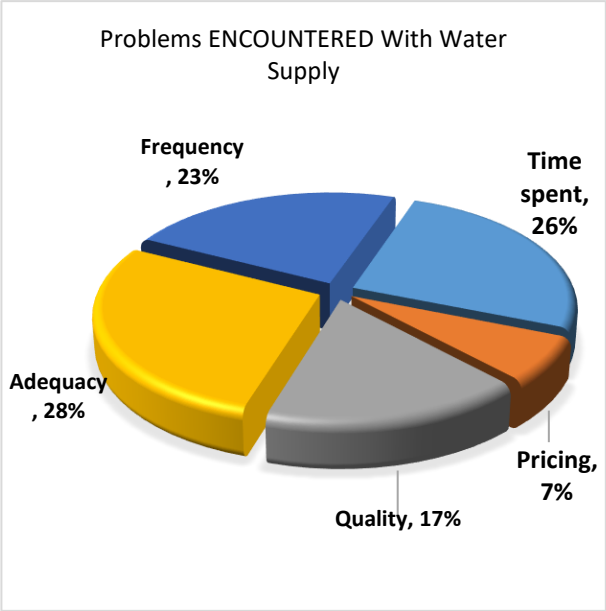


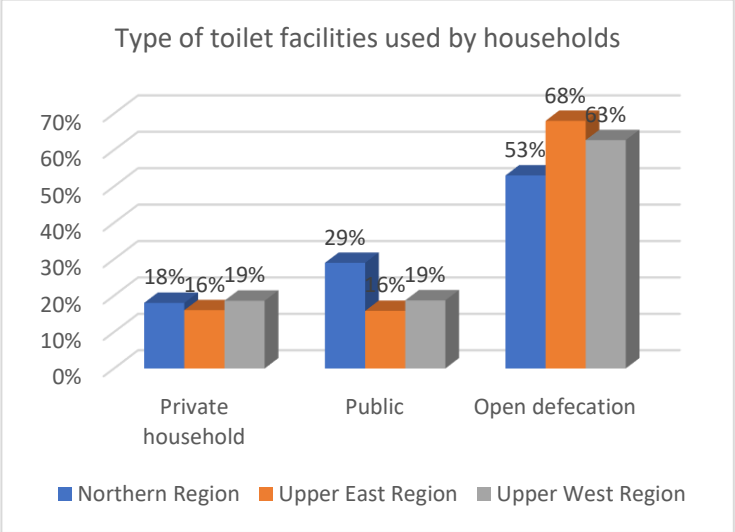
Figure 4: Problems encountered with water supply

We assessed five main variables with regard to challenges associated with water supply delivery namely:

a) *Frequency* or how often households were supplied with water.
b) *Adequacy* or whether the volume of water was enough to meet their daily requirements
c) *Quality* or whether the water had taste, smell, color or particles
d) *Time spent* or how long it took to fetch water and return
e) *Pricing* or whether water was affordable.

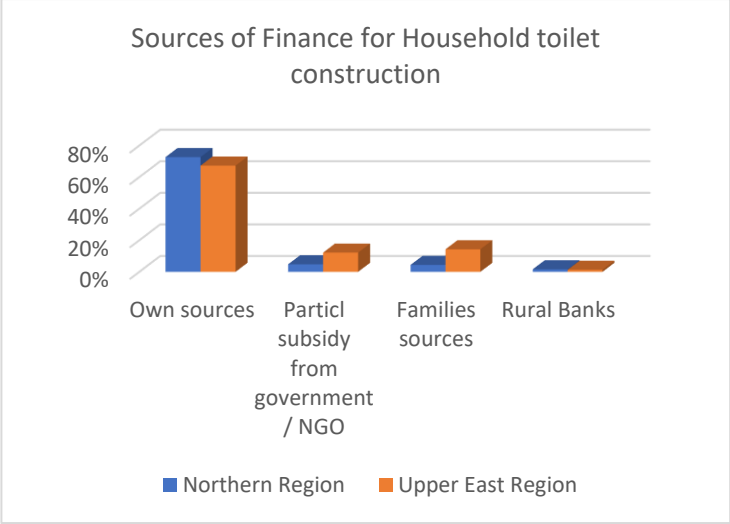
Adequacy, time spent and frequency of supply were the five topmost concerns respectively, while pricing seemed to be the least challenge, which is consistent with the large proportion of households that depend on surface water sources such as rivers, lakes, streams canals etc.

Sanitation facilities



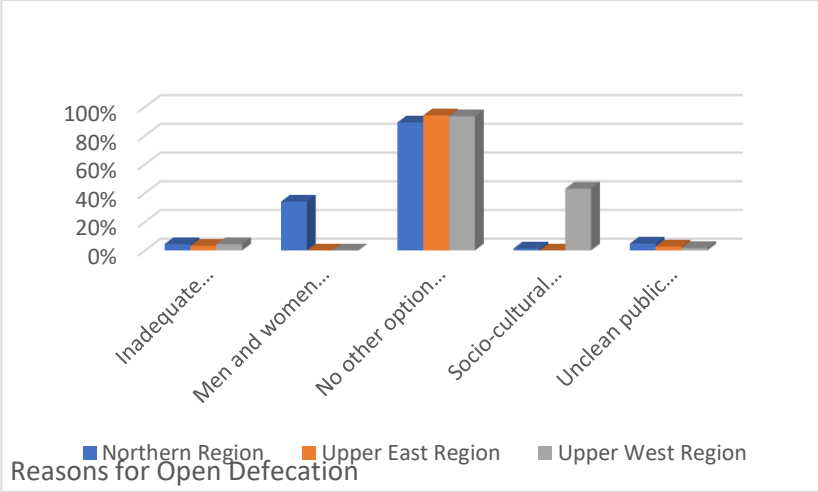
The baseline survey assessed the main type of toilet facility used by household members. In all the three regions, the proportion of households equipped with private toilets was less than 20%. More households in NR use public toilets than UER and UWR

Figure 5: Type of toilet facilities used by households



The majority of household heads across the three regions relied on personal funds as the main source of finance for household toilet construction. However access to external grants/subsidies was also cited by almost one-third of the respondents in UWR and UER.. Households in UER registered the highest level of acess to family support for toilet construction.

Figure 6: Sources of finance for household toilet construction



Respondents' reasons for practising open defecation (OD), were also assessed to guide and facilitate targeted behavioural change communication strategies for future interventions. Respondents who practice OD presumed that there was "no other option'. However, virtually all household heads would like to have their own toilet/latrine facilities; but they lack the resources to do so.

Figure 7: Reasons for Open Defecation

2.3 Performance Measurement Framework (PMF)

After the baseline, the '*gendered*" Performance Measurement Framework (PMF) was updated with the findings from the baseline survey to form the basic indicators for monitoring the programme (see in Annex 2). It provides information on progress made by the WASH in DPC programme and the main achievements, compared to the initial situation. Some of the indicators could not be updated. They depend on national surveys which have not yet been conducted since the conclusion of the programme in May 2017.

2.4 Project Implementation Manual

A Project Implementation Manual (PIM) was developed to serve as a basic tool for programme management. The PIM defined the responsibility of stakeholders through a stakeholders' analysis process. It also defined the hierarchy of levels and steps for the WASH in DPC programme management.

Most of the elements in the PIM were derived from the Standard Agreement Arrangement signed between UNDP and Canada (GAC), on behalf of the other three Partners UN Organization (viz., UN-Habitat, UNICEF and WHO). It includes: programme governance, the implementation process, gender mainstreaming, monitoring and evaluation, reporting, communication and information sharing, advocacy, sustainability and service delivery.

2.5 Project Governance

The Steering Committee (SC) was the highest decision-making body for the governance of the programme and was responsible for strategic guidance, fiduciary and management oversight and coordination.

The United Nations Resident Coordinator ensured the collaboration and strategic guidance of the four UN Agencies, in a "*Delivery as One*" spirit.

The Programme Technical Committee (PTC) served in an advisory role in relation to the SC. It oversaw program implementation and made technical/operational decisions required to support the programme.

The Project Management Team (PMT) was involved in the day-to-day management of the programme, in consultation with all stakeholders (PUNOs, GoG counterpart institutions at national, regional and district levels) as well as representatives of the selected participating communities.

3 - SUMMARY ACHIEVEMENTS AGAINST PLANNED RESULTS

The progress against planned results is aligned to the outcomes, outputs and activities in the WASH in DPC programme document and in the summary in Annex 1 and in the Performance Measurement Framework (PMF) in Annex 2.

OUTCOMES 1 - Increased equitable use of disaster-resilient improved sanitation and water facilities

The programme delivered a technological assessment of available WASH infrastructure and made recommendations for appropriate technology options for water supply and institutional and household sanitation infrastructure. The resulting comprehensive Disaster Risk Reduction (DRR) toolkit, a compendium of WASH facilities and technical guidelines did not only guide the implementation of this specific programme but provided a basis for a national sector framework for the delivery of WASH in flood-prone areas. The complete list of documentation of these deliverables is included in chapter 10, Information Distribution & Archive.

As highlighted under the intermediate outcomes and outputs below, the use of these foundational deliverables in the subsequent implementation activities were instrumental in the process to achieve the elements of this outcome 1.

INTERMEDIATE OUTCOME 1.1 - Increased access to gender-sensitive, child-friendly, disaster-resilient and improved sanitation and water facilities in schools and communities in DPCs

In general, the programme strengthened resilience in 265[9] communities reaching around 323,416 people through a mix of approaches that included construction of flood-resilient water supply in communities and institutional sanitation facilities in schools complemented by appropriate software activities. The approaches also involved community preparedness planning and actions including sanitation promotion to increase uptake of household latrines and ownership on water facilities.

The provision of services was accompanied with the promotion of measures to ensure resilience of the facilities to climate related disasters, as well as measures to promote behavioral change towards proper water, sanitation and hygiene practices.

Output 1.1.1 Improved child, gender-, disability-friendly and disaster- resilient latrines constructed in schools

To ensure flood resilient sanitation solutions across all 265 communities, additional schools were targeted under the programme, which exceeded the original programme target being exceeded. A number of communities did not achieve ODF status, and despite some households within those communities constructing toilets, it was deemed insufficient to ensure flood resilient sanitation for the whole community. As a result, more schools were targeted to ensure that all of the 265 communities had a range of options for sanitation access

[9] though the initial target was 265 communities, the actual implementation was in 271 as the CLTS was expanded to an additional 6 flood-prone communities in one district. This was to contribute to sustaining the ODF gains in the adjoining targeted communities.

during flooding events.

School latrines

Using flood-resilient designs for institutional sanitation facilities developed under this programme, sanitation facilities were constructed in in 202 (a total of 224 schools in the compounds including Kindergarten) (target 167) beneficiary schools, which would also serve as safe havens during flooding. These facilities provide 57,749 school children (29,550 boys, and 28,199 girls) with access to gender, child and disability friendly school sanitation facilities, exceeding the programme targets (see Table 2). The table shows the status of school latrine construction in the three regions.

Table 2 - Status of construction of latrine facilities in target schools of the 3 Northern Regions and the student beneficiaries from the completed latrines.

Region	Number of Districts	Number of Target schools	Schools with Completed facilities	Boys	Girls	Total School children
Northern	10	53	87	12,628	11,362	23,990
Upper East	6	38	50	6,199	6,367	12,566
Upper West	8	76	87	10,723	10,470	21,193
Total	**24**	**167**	**224**	**29,550**	**28,199**	**57,749**

Facility Management Plans (FMPs) were developed for a total of 364 schools (all schools within the targeted communities including ones that did not receive infrastructure support) through a collaborative process involving Metropolitan, Municipal and District Assemblies (MMDAs), school and Parent Teacher Association (PTA) representatives. This ensures that financial and other resource commitments are identified to ensure sustainable management of the school WASH facilities. These are endorsed by the MMDAs to ensure an agreed understanding of the respective roles and responsibilities (including financial) of the schools, the PTA and the MMDAs. This also ensures that all schools in the disaster-prone communities not only have capacity for sustainable management of the school WASH facilities but are also better positioned to serve as safe havens in the event of flooding emergencies.

Further to the construction of sanitation facilities in schools, an assessment of suitability of the latrines from the perspective of the girls themselves was completed. It showed that the majority of female pupils rated the facilities as satisfactory or highly satisfactory across a range of criteria, as shown in figure 8. Considering the facilities would be used during an emergency response, this is particularly important in the case of privacy, and safety and security.

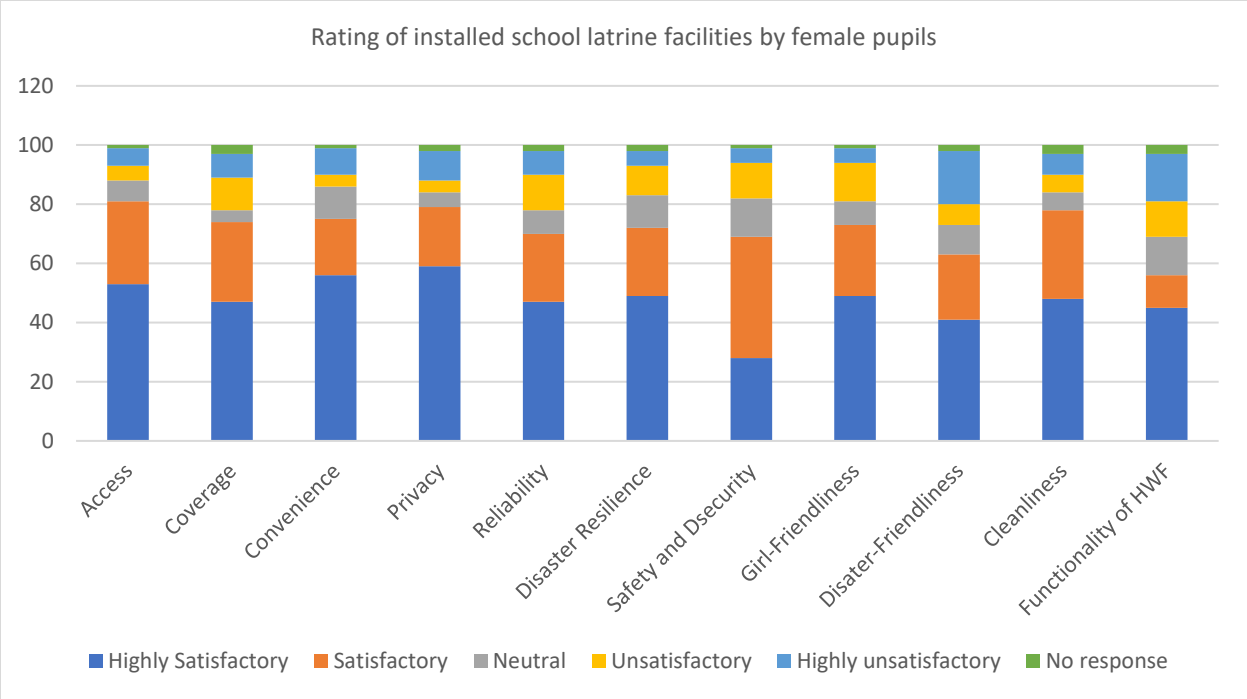


Figure 8 - Rating of installed school latrine facilities by female pupils

This survey interviewed 364 female pupils across 26 schools in the Upper East Region in the programme area. Interviewees and schools were all selected at random.

Output 1.1.2 Improved disaster- resilient household sanitation facilities constructed

Household Toilets

The choice of appropriate technology by households was facilitated using a Disaster Risk Reduction (DRR) tool kit and flood-resilient designs for household and institutional sanitation infrastructure. The DRR toolkit, which was a result of a technology assessment, is a simple flow-chart (Figure 9) which was employed to inform the decision on options for household toilet. Based on this and the cost of the various options, households decided on specific options to construct.

Demand for household toilets was generated in all 271 DPC communities (target 265) through the Community Led Total Sanitation (CLTS) process of triggering. A total of 160 communities of the 271 were certified as ODF. Table 3 below outlines the key data on the implementation of this component of the programme.

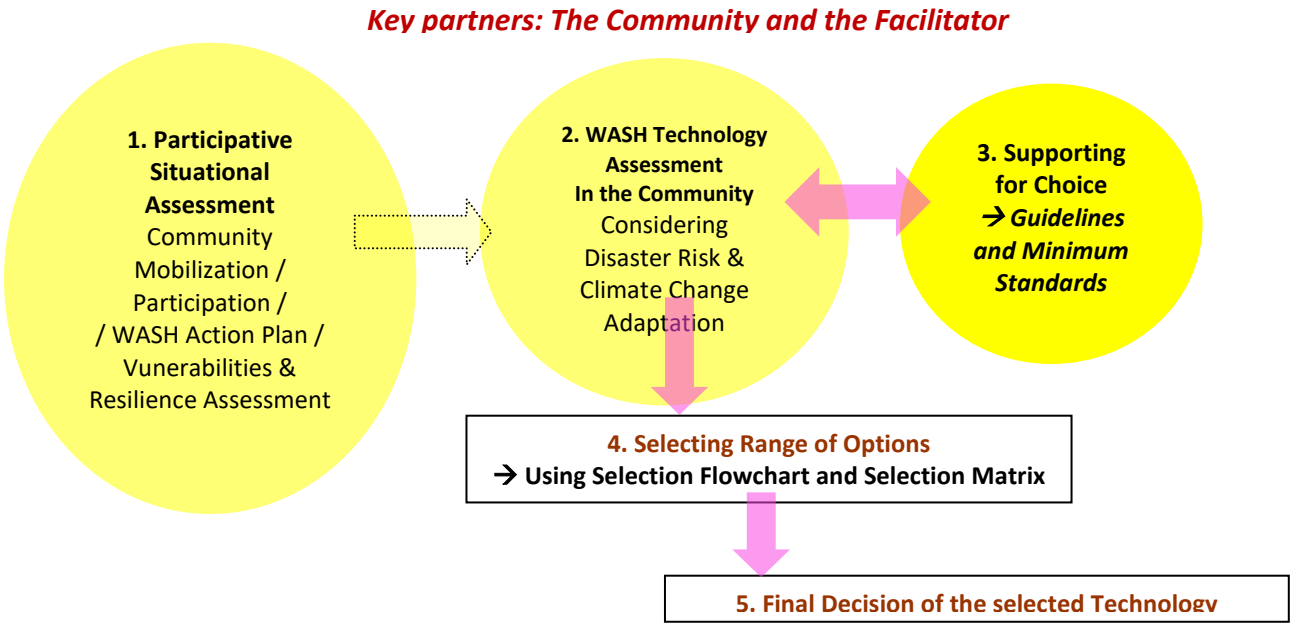


Figure 9: Methodology flowchart for the selection of sanitation technology options

Table 3 - CLTS Progress in targeted communities

Region	No. Districts	No. Communities	Number of Toilets Constructed	Population using Newly Built Toilets[10]	No. Communities ODF Certified
NR	9	113	4,267	37,177	69
UER	6	52	1,737	23,808	24
UWR	9	106	1,939	18,861	67
TOTAL	**24**	**271**	**7,943**	**79,846**	160

CLTS increased the demand for household toilets, a critical step in ensuring households committed to build more expensive flood-resilient toilets (approximately USD 150 for the cheapest options) than the traditional pit latrines (which often uses locally available materials and involve minimal financial costs).

As at the end of the programme, over 85,945 people live in 160 open defecation free communities. With a total of 7,943 new toilets constructed, that are being used by 79,846

[10] Note that this is the number of people using toilets constructed as a result of the programme, it does not include the number of people who used toilets prior to the intervention

people. In total, there are 10,592 toilets in use across target communities (including those that already existed) which are being used by over 117,000 people.

Household toilet construction in the targeted communities also considered appropriate technology options, resulting in the construction of 2,528 (target 2,000) flood-resilient household latrines. The flow chart below (Figure 10) provides a simple 'how to do' for district staff thus ensuring that households are appropriately guided when starting to construct flood resilient toilets.

The assessment and the resultant DRR toolkit, mentioned previously, are essential guidance documents that provide the national framework and direction broadly for interventions aimed at working in disaster prone communities. The flow chart in Figure 10 is a simple tool which the district staff can use at the community level to help households in flood-prone communities determine what latrine options to choose given their environmental circumstances. This is the tool to be employed in step 4 of the flowchart in Figure 9 above.

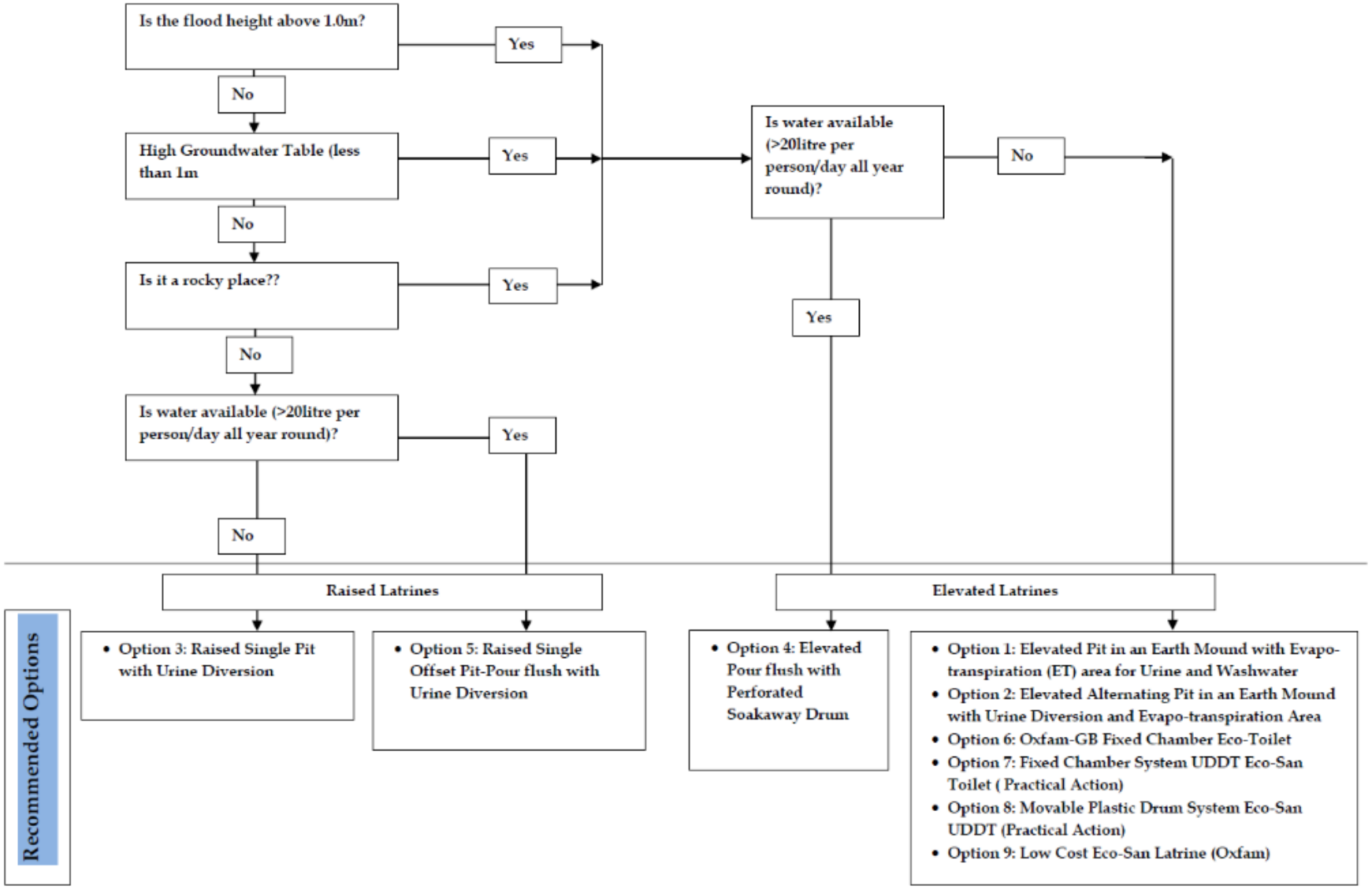


Figure 10: Selection Flow Chart to be used in selection of household toilet facility type in flood prone areas

Output 1.1.3 Water systems constructed in communities and schools

Water supply to communities

Under the resilient water supply component, all the 265 communities have 100% access to sustainable and safe drinking water sources, through 659 interventions (see detail in figure 11) done on 169 new water points and 396 existing facilities which were rehabilitated. The total number of direct beneficiaries is appraised to 269,727 people (target of 200,000) with 137,561 women and 132,166 men.

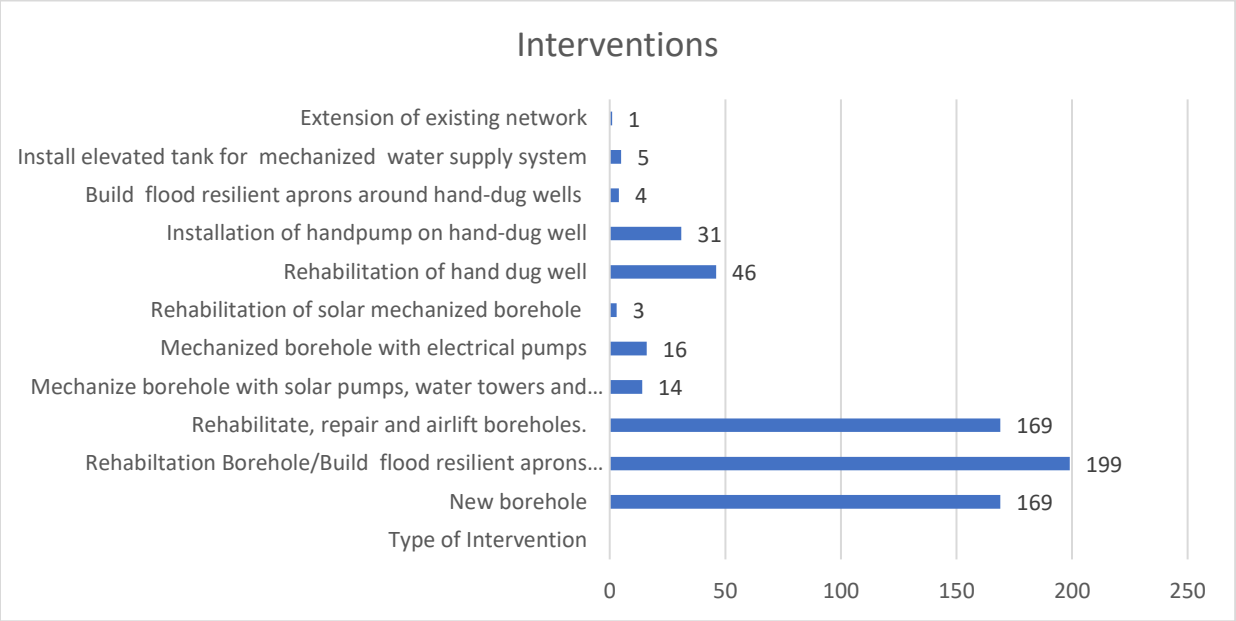


Figure 11: Types of interventions for resilient water supply facilities

The infrastructures are compliant with the flood-prone design adopted through a national, regional and district consultation process, in line with the CWSA recommendations for rural and semi-rural areas. The innovative elements in the design and development of the resilient water supply infrastructure is being considered for mainstreaming into the national standard for water supply.

The technology applied was developed in three phases. The initial design of the facilities is a result of experiences in Asia and Latin America (elevation of the platform). This initial design was further modified to fit the local context of Ghana, particularly the sanitary sealing, the protection against erosion and side infiltrations. In the final version, convenience and local water fetching habits were included (platform dimensions, ramp and stairs location, stone pitch around the facility, drainage of excess water from the animal drinking trough).

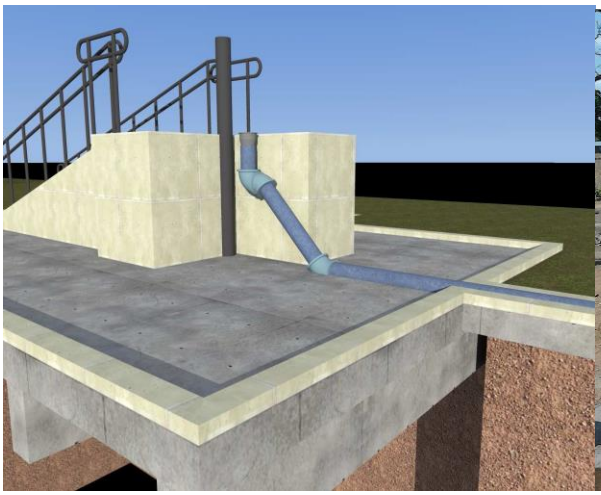


Photo 1 – Sketch of an elevated platform

Photo 2 – Construction of an elevated platform

All the implementing partners have been trained on the job. They received a checklist which defines the standards to follow before, during and after the development of a facility. The elements of the checklist are monitored closely by UN-Habitat in collaboration with the district engineer and CWSA representative to ensure the quality of the infrastructures and their sustainability, beyond the programme lifespan.

The sustainability and the ownership of the facilities provided was ensured with the formation and training of 265 Water and Sanitation Management Teams (WSMTs), as part of the community entry strategy. A total of 1891 people (850 Females and 1041 Males) were trained in the 265 communities, for the daily operation and maintenance of the water points, including the sanitation aspects around them. One or two members of the WSMT are selected to be the caretakers, when previously no caretaker exists in the community. Alongside with the handing over of the facilities, the WSMTs received a refresher course which reaffirmed their effectiveness, in about 92% of the cases.

Water supply to schools and safe havens

Water facilities were developed in about 112 schools, 37 of which are used as safe havens during floods (safe water storage facilities provided).

An assessment[11] done in selected communities in 2016 and 2017 suggests that, before the programme was concluded, it was already impacting on the availability of water for schools. From a 23% rate of water availability on school compounds in 2014, it had already improved to 65% at the time of the assessment.

[11] Perception-based impact assessment - Resilience to floods of the infrastructure and services provided, August 2017

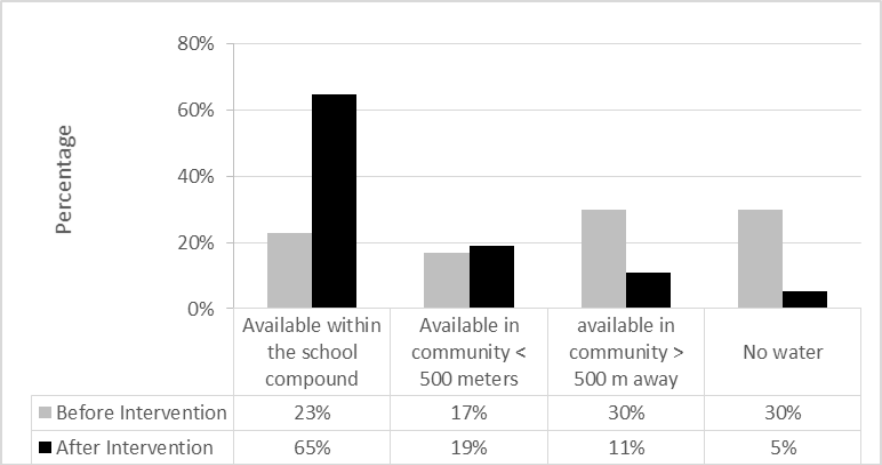


Figure 12: Availability of water for schools

All the newly constructed boreholes in schools were reported to be flood resilient and water is of good quality as no problems were encountered while using them during the rainy/flooding season after their development.

81% of beneficiary schools have access to resilient water facilities within an acceptable distance to the school. This has improved punctuality of children and at the same time improved the performance of children in the respective schools. The remaining 19% of the schools already depend on existing facilities at a reasonable distance from them.

Output 1.1.4 Households provided with micro credit for construction of disaster resilient sanitation facilities

Sanitation marketing

A comprehensive sanitation marketing (Sanmark) programme was rolled out during implementation to complement CLTS and enable the uptake of flood-resilient household latrines.

Photo 3 - Local lining option using timber built by CTV

As part of this rollout, district Sanmark teams were established and trained in 16 of the targeted districts to coordinate sanitation supply chain activities. Business Development Partners (BDPs) were engaged and assigned to implementing districts to support development and roll out of latrine supply chain activities. The BDPs were responsible for identifying, developing, mentoring and strengthening sanitation entrepreneurs in the districts. The BDPs also supported the mobilization of community groups to save towards latrine acquisition.

In the remaining eight districts, relevant sanitation marketing activities were implemented such as training of latrine artisans, and Community Technical Volunteers (CTVs).

A total of 558 latrine artisans acquired knowledge and skills in the construction of safe and flood-resilient household latrines (Photo 3 and 4) while 2,284 CTVs acquired skills to support household latrine construction. The support of the CTVs is vital in reducing costs particularly in areas where latrines do not require highly advanced technology considerations to meet minimum standards of sustainability (Photo 5, 6 and 7). These groups have contributed to the construction of 7,943 toilets achieved under the programme. The artisans were linked to the communities during CLTS follow-up activities, and the support given to them from BDPs increased their skills to market their services.

Equipping community volunteers with skills for supporting household latrines is one of the approaches geared towards reducing cost of flood-resilient household latrines and facilitating upscale of sustainable household sanitation facilities.

Photo 5 - Local lining option using bricks built by CTV

To support the financing for the uptake of resilient and sustainable household sanitation facilities, 274 Village Savings and Loans Associations (target 265) were established. Additionally, 62 VSLAs which existed in targeted communities, prior to the WASH in DPC interventions, were mobilized to include savings towards sanitation as part of their savings commitments.

Photo 4 - Completed household toilet built by a community technical volunteer

An integrated approach to implementation also ensured the linkage between trained artisans and VSLAs to ensure that members of VSLAs get the requisite technical support to construct sustainable latrines. This was achieved via introduction of artisans to community members as potential service providers to construct toilets, at which points the artisans discussed potential technical options with households and VSLA groups.

A second component of sanitation financing involved a pilot roll out of the sanitation social fund as part of implementing the national sanitation financing guidelines (RUFLINIT, 2016).

The sanitation social fund is employed as one of the means of sanitation financing for sustainable household sanitation facilities. The social fund is a pro-poor approach that uses the government Livelihood Empowerment Against Poverty (LEAP) targeting mechanisms to identify and support poor and vulnerable households to own sustainable (which includes being flood resilient in flood prone communities) toilets. The pilot rollout was carried out in ODF communities to ensure that all households have access to flood-resilient latrines, which are not affordable to the very poor. 500 of the poorest households (including households with LEAP beneficiaries) in the selected ODF communities received support, through a cashless approach to own latrines. Benefitting households identified through a credible and participatory process, are given coupons (Figure 13) certified by the District Environmental Health Units. Pre-identified and trained artisans used these coupons to procure materials and support the households construct the latrines (Photo 7).

Monitoring report of the beneficiary selection process by Rufinlit (Social Fund Beneficiary Selection Field Monitoring Report, 2017) indicated that there was overwhelming support for the selected beneficiaries by the communities. This was due to the fact that generally, the beneficiary selection process was done in a participatory manner.

The pilot has generated learning for the entire sanitation subsector in the country on how to implement the sanitation social fund (Box 1).

The development of the flood-resilient latrines ensures that not only do the communities remain sustainably ODF but that resilience of the entire community is also strengthened.

Photo 6- A flood resilient household toilet (showing installed

Photo 7 - A LEAP beneficiary stands beside her flood-resilient toilet in Naburi Community of Nadowli District, Upper West Region

Box 1 - The importance of the sanitation social fund

There is a broad consensus within the sanitation sector in Ghana that there is a requirement to provide financial support to the poorest households, either to enable them to get onto the sanitation ladder, or to move up to more resilient forms on toilet once they already have a basic latrine. This is clearly denoted in the Sanitation Financing Guidelines, and also a primary consideration of the draft Guidelines for Targeting and Providing Access to Basic Sanitation Services for the Vulnerable and Poor in Ghana that are being developed by the Ministry of Sanitation and Water Resources. There is further consensus in the sector that those living in communities that are prone to flooding, or where loose soils predominate, are also targets for financial support.

The pilot of the social fund under the WASH in DPC was the first of its kind in Ghana. Past subsidy approaches have not specifically targeted poor households. Therefore, learning gathered from the implementation of this pilot will be critical in the successful replication and scale-up of the approach across the country. Whilst some results are likely to be measured in the long term, short term gains have already been observed with the benefits of poor households being able to have flood resilient toilets, and that selection criteria were judged to be fair by communities and households involved in the process.

One of the greatest challenges for the sector in applying the social fund nationally is to understand the best way to apply a social fund. In this case the LEAP mechanism was a primary starting point, with communities also involved in the verification of the household selection. In some cases, additional households (who were not already LEAP beneficiaries) were also identified within the community using the same selection criteria, improving the transparency and fairness of the process. Households were also only selected from communities that were already ODF, which requires a minimum of 80 per cent of households to have toilets. A preliminary evaluation of these approaches has been positive, and the programme will be a key influencer in future.

Output 1.1.5 Awareness building workshops, open forums etc. conducted re: use of improved sanitation and water facilities

Over 323000 people were reached with messages on use of improved sanitation facilities through at least 271 sensitization meetings in communities and 364 sensitization fora in schools (see PMF in Annex 2).

INTERMEDIATE OUTCOME 1.2 Improved capacity of community members and schools to maintain disaster resilient and improved water and sanitation facilities

As part of plans to sustain the interventions, the WASH in DPC programme implemented activities such as modular training for Community Based Organizations (CBOs), creation of platforms for monitoring of water facilities and Provisioning of maintenance tool kits have all been completed with the expectation of strengthening community capacity for sustainability of interventions.

Output 1.2.1 Community members trained to operate and maintain WASH facilities

As part of the ownership transfer, the water supply facilities were handed over to the communities and the District Assemblies. The role of DA and WSMTs were specified in the agreement documents signed between the community representative, the DA and the Implementing partner (on behalf of the contractor). During the handing over ceremony, a quick refresher training for the WSMT member was conducted. The DA received a 24-point checklist to assist with the regular Operation and Maintenance of the water facilities. This transfer also empowers local authorities to take full responsibilities for the sustainability of the facilities.

Photo 8 - WSMT training in Saboba District

Output 1.2.2 Schools trained to maintain and manage WASH facilities

Facility Management Plans (FMPs) were developed for a total of 364 schools (all schools within the targeted communities including ones that did not receive infrastructure support) through a collaborative process involving Metropolitan, Municipal and District Assemblies (MMDAs), school and Parent Teacher Association (PTA) representatives. This ensures that financial and other resource commitments are identified to ensure sustainable management of the school WASH facilities. These are endorsed by the MMDAs to ensure an agreed understanding of the respective roles and responsibilities (including financial) of the schools, the PTA and the MMDAs. This also ensures that all schools in the disaster-prone communities not only have capacity for sustainable management of the school WASH facilities but are also better

positioned to serve as safe havens in the event of flooding emergencies.

Output 1.2.3 Community Water and Sanitation Management teams formed and functional with WSMT capacity strengthened in planning and implementation of WASH projects

A total of 1891 individuals (1041 men, 850 women) from 265 communities in 24 districts have been trained as Water and Sanitation Management Teams (WSMTs) to manage the 565 resilient water supply systems. Where adequate human resources were available three (3) persons from each beneficiary community were trained as Pump Maintenance Volunteers (PMV) with maintenance tools provided to each team to enable them function. The capacities of the WSMTs and PMV have been built in the areas of revenue mobilization, Operations and Maintenance (corrective, preventive and routine maintenance) as part of strengthening communities.

Capacities of 235 community leaders, mostly WSMT members, have also been built on the usage of mobile phone monitoring application tool developed by the Skyfox[12]. The purpose of this intervention is to ensure continuous functioning of boreholes in all beneficiary communities by helping reduce system downtime.

Sensitization and stakeholder engagement activities were also organized in the beneficiary communities' prior to and after the implementation of water and sanitation interventions. Among those targeted were staff of: District Works Departments (DWD), Planning Units, Environmental Health Departments, NADMO and Administrative Departments, Chiefs and elders, Assembly men and women and among other leaders.

INTERMEDIATE OUTCOME 1.3 Increased knowledge and capacity of youth in DPCs in northern Ghana to construct and maintain disaster resilient and improved sanitation and water facilities in communities and schools.

Maintenance tool kits for hand pump repairs have been procured and distributed to districts where World Vision and Plan Ghana provided hand pumps. The tools are to be used by caretakers and maintenance volunteers to ensure continuous functionality of water facilities. It is important to note that these tools are distributed at Area mechanics level so that 3 communities can share one tool kit.

As part of sustainability measures to build capacity of programme communities in income generation opportunities, the Savings Group (SG) concept (similar to the VSLA) has been promoted through community education. This has led to the formation of eighty-five (85) Savings Groups. The groups have been trained in Savings Groups processes to operate effectively and have also been provided with starter tool kits (savings box, passbooks, stationery, key and padlocks). This empowers communities to contribute to the maintenance of water facilities.

[12] SkyFox is a Ghanaian firm which provides innovative technical and social solutions to challenges in Water and Sanitation

Photo 9 - Saving Group training at Ul Gozo Community

Photo 10 - Caretakers On-the-job training

OUTCOMES 2 - Improved hygiene practices among women, men, girls and boys before, during and after disasters in DPCs in Northern Ghana

INTERMEDIATE OUTCOME 2.1 - Increased ability of community members and schools to treat water and adopt safe water storage practices before, during and after emergency situations

Output 2.1.1 Safe water storage facilities provided in schools and households

Water Quality Assessment and Monitoring

The capacity of Eighty-six (86) regional and district staff from Upper East, Upper West and Northern regions was improved on Water Quality Assessment and Monitoring, with a particular focus on flood conditions.

Household water treatment and safe storage, based on the WHO Guidelines for Drinking Water, the National Drinking Water Quality Management Framework and the Ghana National Drinking Water Guidelines helped participants to upgrade their knowledge.

Orientation on Water Safety Planning (WSP) Template and Field Testing

A step by step approach to the development of WSP template and its application to small towns and rural water systems was also conducted for thirty-one (31) RTTs and DTTs members, followed by a practical field exercise at a community water point. Further to the training, the WSP process has been piloted in 12 districts to review the WSP in practice.

At the end of the session, participants had the opportunity to have hands on experience on how to develop and conduct the whole process of piloting a WSP at the community level.

Photo 11 - Participants of training workshop on Water Quality Assessment and Monitoring

Some Impact

For communities and households, the WSP activities resulted in raising awareness with regards to the risks associated with water sources management and water conservation from source to the consumption point, particularly before, during and after floods and how to mitigate those risks.

Photo 12 - Improvement of water sites, Atuba Mognori

Photo 13 - Improvement of water sites, Azum Sapeliga

An impact analysis[13] assessed the impact of WASH interventions on reported WASH-related diseases has shown that diarrhea, dysentery, intestinal worms (i.e. helminths) and typhoid diseases were the common diseases reported. They were used as the main indicators to determine impact of WASH interventions on disease burden in the communities. The data on reported cases of WASH-related diseases are from the Consulting Room Register for patients

[13] GoG and WHO teams conducted monitoing in selected communities to identify the inmediate impacts of the WSP implementation, in March and July 2017

at the health facilities the WASH in DPC beneficiary communities are affiliated to. Key informant interviews and a household questionnaire were also used to crosscheck those data. The results are illustrated in the figure bellow.

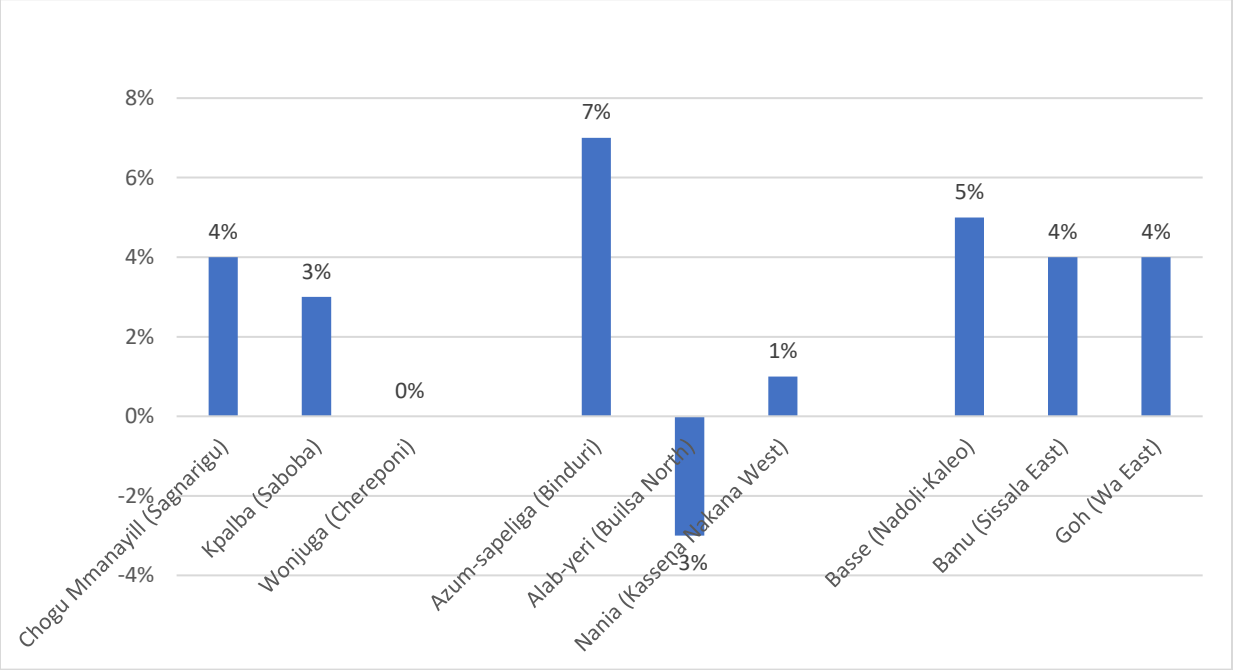


Figure 14: Reduction in diarrhea prevalence in WASH intervention communities

Results from the assessment also showed 82% of all reported diseases were cases of diarrhea. Further to this, health officers acknowledged the relationship between availability and use of improved WASH facilities and diarrhea outcome.

In all, there was an overall reduction of diarrhea prevalence as a result of the WASH in DPC interventions. Though the figures vary across the different intervention communities, reductions ranged from 0 to 7%. The low levels of reductions in diarrhea prevalence could partly be due to the fact that diarrhea has many causes for which improved water, sanitation and hygiene only constitute one of them.

Output 2.1.2 School health and hygiene promotion clubs formed and functional

Hygiene promotion in schools was implemented jointly by UNICEF and UN-Habitat. The existing materials for school hygiene promotion were revised to incorporate value-based education by UN-Habitat and used by UNICEF in the formation and training of School Health Clubs. This was to enhance training of school-based clubs on issues related to flood-resilience, in addition to the awareness on basic hygiene.

Over 93,000 school children were reached with hygiene messages and 670 school teachers equipped with the knowledge and skills to support activities of School Health Clubs (SHCs) and hygiene promotion in the schools. A total of 333 (target 167) SHCs were trained to facilitate uptake of hygiene behaviors amongst school children, and to further strengthen the capacity of children in these schools to work as change agents for WASH behaviors.

Behavior Change Communication (BCC) materials were also developed (10,000 posters on HWWS and safe excreta disposal, 75 roll-up banners) and 200 hand washing facilities were

also distributed for use by school health clubs and communities. They are means of promoting behavior change and improving personal hygiene.

Materials developed for schools includes a video animation series, a comic book, an activity book, posters and six story books. School exercise books were also branded with artwork depicting sanitation messages (Figure 15).

The increased target of schools was to ensure uniformity in all of the schools within the community, the software activities also included discussions around the disaster risk reduction mechanisms to be established across the whole community and so was important for collective community resilience to floods.

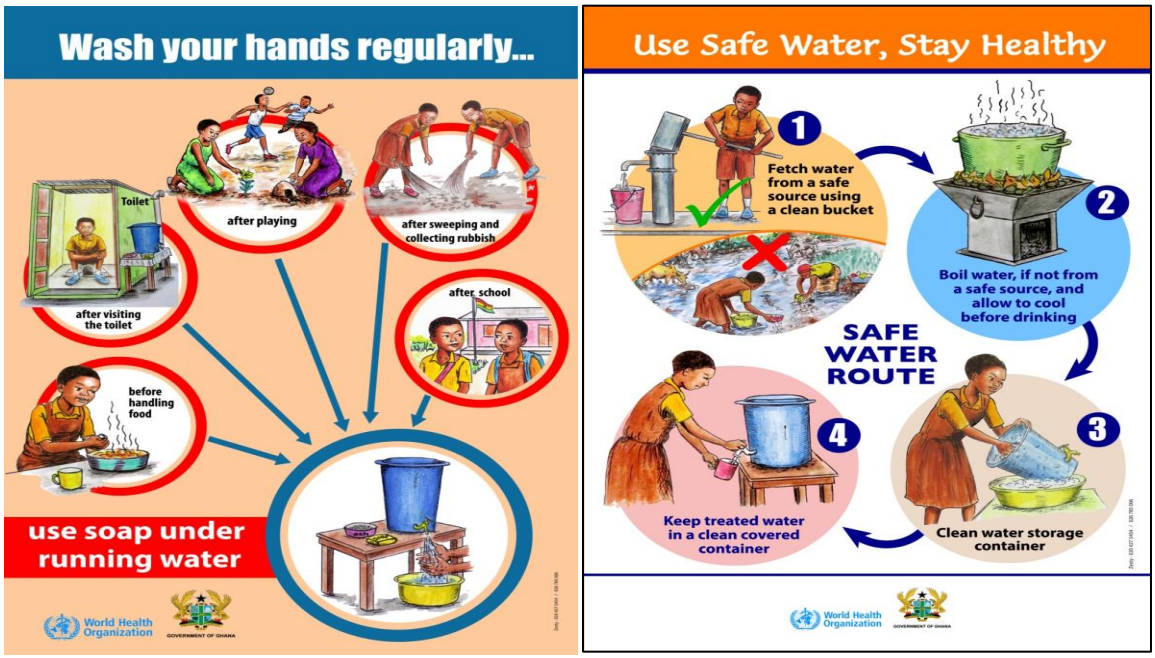


Figure 15: Behavior Change Communication (BCC) materials for use in Schools

Support to school health clubs was also provided to improve school environment and reduce the disease burden among school children. To that effect a Healthy School Environment Competition was organized in May 2017 by SHEP. Twenty-seven (27) schools in the three Northern Regions participated in the competition. First position schools in each region were awarded with certificates and plaques by Regional and District Directors of Education. The competition was a major motivation to the schools who participated.

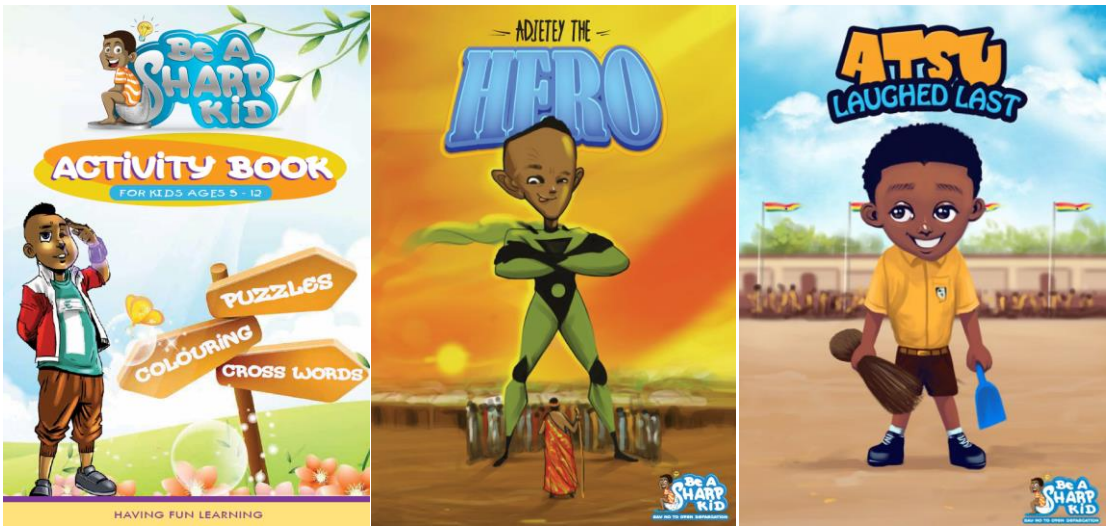


Figure 16: Artwork for book covers including sanitation messages

Hygiene promotion in communities

In communities, hygiene promotion was implemented as an integrated package with CLTS.

Additionally, district level capacity was enhanced for promotion of integrated Hand Washing With Soap (HWWS) and Household Water Treatment and safe Storage (HWTS) in beneficiary communities. Appropriate handwashing practices[14] have been confirmed in the 160 ODF communities as part of the ODF verification process.

Behavior change materials were developed as part of the End Open Defecation campaign, with joint funding from other projects, and included:

- posters, television and radio commercials for the mass media campaign;
- a toolkit for promotion of toilets by trained artisans; and
- a community animation series of four episodes with an accompanying poster series.

INTERMEDIATE OUTCOME 2.2 Enhance capacity of WSMTs and communities to enforce Open- Defecation Free (ODF) by-laws in DPCs

Inherent in the CLTS approach to sanitation promotion is community ownership and leadership. The approach ensures that appropriate sanitation solutions are facilitated rather than prescribed to community members. The process of facilitating choice of appropriate technologies for households ensures that households develop sanitation technologies or options that are acceptable and affordable to the individual households.

ODF By-laws in communities are part of the indicators for verification and certification of communities ODF. The by-laws are instituted and enforced by respective communities themselves. These by-laws have been confirmed in at least 160 ODF communities

[14] In this case practice is measured via a proxy indicator on the availability of a HWWS facility with soap and water, as per the national ODF protocol

INTERMEDIATE OUTCOME 2.3 Increased knowledge of hygiene, public health and environmental WASH issues amongst the population, particularly children, youth and women in DPCs

Aside flood management, health emergency preparedness capacity building and training workshops for frontline health staff, were equipped with the relevant knowledge and skills to prepare and respond adequately to health effects of perennial floods, and to introduce existing monitoring tools to measure health outcomes of WASH in DPC interventions using Health data and information This training targeted at 158 participants made up of District Directors of Health Services, Physician Assistants at the Health Facility Level, and 3 other District Officers namely, Diseases Surveillance, Health Information and Environmental Health.

The training package covered an overview of WASH in DPC programme, introduction to Integrated Disease Surveillance and Response (IDSR), principles and practices of preparedness and response to public health emergencies as well as data analysis with emphasis on the District Health Information Management System (DHIMS). At the end of the session, participants had the opportunity to have hands on experience on data analysis of their respective districts on water and sanitation related diseases. The training however revealed some gaps such as the need to re-validate data entered into DHIMS 2 and to analyze data locally at the facility level to detect disease outbreaks was recommended among others such as a comprehensive support supervision, data management at the facility level and a comprehensive IDRS training targeting clinicians and staff at health facility were recommended. Most Districts procured health kits prepositioned for emergency health management and response.

Photo 14 - Participants of training workshop on Emergency Preparedness and Response.

OUTCOMES 3 - Improved planning and implementation of WASH programs by local institutions

INTERMEDIATE OUTCOME 3.1 Strengthened capacity of local officials in planning, implementation, monitoring and evaluation of gender-sensitive and disaster-resilient WASH programs

Output 3.1.1 Local officials trained in planning, implementation and management of disaster-resilient WASH projects

The aim of this component of the programme was to plan strategic actions to ensure adequate flood disaster emergency preparedness for each of the 24 disaster prone districts where the WASH in DPC is being implemented. Accordingly, three training workshops were conducted for 110 regional, district level personnel in the WASH in DPC districts with the aim of training participants on the principles of disaster preparedness planning for the management and response of disasters in the programme districts and ultimately developing district disaster preparedness and response plans.

The capacity of the following Institutions was enhanced: (**a**) at national level, MLGRD, MWRWH and NADMO; (**b**) at regional level, Regional Environmental Health, Community Development, NADMO, School Education Programme (SHEP), Community Water and Sanitation Agency (CWSA) and the Red Cross; and (**c**) at district level, Environmental Health Officers, Disease Control Officers, Planning Officers, NADMO and Community WASH.

<u>District level planning</u>

The twenty-Four (24) WASH in DPC districts were supported to develop Flood Preparedness and Response Plans (FPRPs). These action plans detail out key coordination mechanisms, existing resources and needs of the communities, as well as points of contacts, (including community Leaders) to ensure the involvement of the whole of society in response to floods and WASH emergencies.

The plan detailed out: key safe havens, periods of flood triggers, relevant stakeholders and their responsibilities, coordinating mechanisms, a flood risk analysis, mitigation plan to reduce or avoid potential losses and how to achieve rapid and durable recovery during floods. It also includes a district preparedness capacity mapping with an analysis of human resources needed for disaster management, the required capacity, available capacity and outstanding capacity needs.

In line with the National Rural Sanitation Model and Strategy (Bibby, et al., 2011), following the implementation of CLTS in the 265 selected communities, a district-wide CLTS approach was rolled out in all the participating 24 districts with the development of district-wide ODF plans. The plans were linked to District Medium Term Development Plans to facilitate budgeting and resource allocation for relevant sanitation activities at the district levels. This ensures that the programme fits within and is mainstreamed into the broader sanitation promotion programme and increasing sanitation coverages in the regions.

<u>Community level preparedness planning</u>

Awareness of flood disaster preparedness was increased in forty-eight (48) flood prone communities identified in the 3 Northern regions were sensitized through community durbars. The sensitization programme targeted entire community members with special focus on flood prevention, preparedness and water and sanitation hygiene practices. This activity achieved its objective of increasing knowledge on the "Dos" and "Don'ts" before, during and after floods with the view of increasing resilience at the household and community levels.

A total of about 22,000 community members, including 5,000 students in basic schools were reached in all the three regions through the sensitization programmes.
Resilience of 265 communities was strengthened through sensitization and development of community level preparedness plans, a process that is further discussed in Box 2. The community preparedness plans which were prepared through a participatory process covered aspects related to:

- types of WASH facilities that need protection during floods;
- what needs to be done;
- responsible persons;
- resources required; and
- timeframes.

Of importance is the fact that the plans also included commitments to share flood-resilient household facilities in the communities during the temporary recovery periods, should there be the need following flood events.

This not only ensures that ODF status continue to be sustained but also ensures collective community resilience. There was also the need to ensure institutional toilets were present in communities to maximize the community resilience, and with some communities not achieving ODF status it was determined that the presence of either resilient school toilets, or a sufficient number of household resilient toilets was needed for a community to be judged flood resilient in terms of sanitation. Ultimately, it was the development of community prepared plans, subsequently signed by key community leaders, which will be a key aspect in ensuring everyone has access to improved sanitation facilities when flooding events occur.

Box 2 - Community DRR Plans

The community DRR plans were facilitated by staff of the District Environmental Health and Sanitation Units and Department of Community Development, using a simple guide that was developed. This one-page guide for facilitators is presented in the archive section of the report. The plans are developed by the community and signed onto by relevant community representatives.

The approach involved three community visits. The first involved participatory situational assessments with community members, with one particularly focused on floods. The second visit then engaged with communities on what are the key features of a flood resilient community, specifically in terms of WASH, and went into depth on what the current resilience level was, including counting the number of flood resilient toilets available within the community. A final third visit then focused on action planning to enable the community to become flood resilient in terms of sanitation.

INTERMEDIATE OUTCOME 3.2 Strengthened capacity of local institutions to deliver disaster resilient WASH services in DPCs in Northern Ghana.

The capacities of relevant WASH National institutions and community structures were strengthened to create an environment for better planning, delivery and sustainability of WASH services, and assure the full benefit to the beneficiary communities of the interventions. Key results were:

Fifty-four (54) District Officers of NADMO and Environmental Health Department were identified and trained on the educational materials and how to facilitate and support community-based discussions on flood preparedness, communal and personal hygiene practices to minimize the impact of floods on a sustainable basis.
Knowledge gained through this training ensured that existing national systems were used to enhance the sustainability of the programme. It also enabled these personnel in the institutions improve upon their ability to deliver on their mandate related to flood preparedness and WASH in these communities.

4,000 copies of educational materials with illustrations suitable for community-based education and sensitization on floods were developed and distributed among key individuals and community groups to ensure sustained education among community members.
The material gave community members, a step by step guidance on what to do before, during and after floods to ensure that lives and properties are protected. The flood safety tips developed under this programme has been used by NADMO in other parts of the country.

A full-scale flood simulation exercise was implemented in Bunkpurugu-Yunyoo District (Northern region) on May 2016 to strengthen disaster preparedness and response capacity of relevant stakeholders. It involved 30 key participating stakeholders from Ministry of Local Government and Rural Development (Environmental Health Service Division), Ministry of Agriculture, Regional Coordinating Council, NADMO (District Office), District Assembly, Ghana Army (6th Infantry Battalion), Ghana Air Force, Ghana Police Service, Ghana Health Service, Ghana Fire Service, National Ambulance Service.
At the end, participants sharpened their understanding, roles and responsibilities in a flood crisis, and reinforce coordination and synergy building among government and non-government agencies whose mandates involve humanitarian response to emergencies. The session provided a platform for facilitators to give feedback based on observations made in relation to the objectives of the exercise.

4 - JOINT IMPLEMENTATION MEETINGS, REPORTS AND SEMINARS

Joint meetings among PUNos and GoG partners were organized to assess coordination and strategic issues as well as ongoing activities so that corrective measures could be undertaken to mitigate potential perceived risks and challenges.

- Six (6) Steering committee meetings took place on semi-annual basis.
- Strategic stakeholders' meetings at the inception of the programme in June, September and November 2014 to discuss programme take-off issues. In March 2015 and July 2016, two strategic meetings also took place to discuss coordination of activities and plan monitoring of field activities.

As part of the WASH in DPC team coordination, monthly stakeholders Skype meetings were convened on regular basis, from March 2015 up to the end of the official closure of the programme. During those meetings, each partner provides updates on its activities and inform on plans for the following month.

Monthly short reports were compiled by the Programme Management Team and discussed during the monthly meetings of PUNOs.

Every Six months or when either appropriate, each Participating UN Organization prepared statements and reports for the Donor and the Steering Committee in accordance with the accounting and reporting procedures, as set forth in the Joint Programme Document. These included:

Annual consolidated narrative progress reports were also developed and submitted regularly, by the end of the third month of the calendar year (31 March). They were based on annual narrative progress reports received from Participating UN Organizations.

Annual consolidated financial reports were also delivered, based on annual financial statements, covering the period from January to December of the same year. They provided information on the use of funds disbursed from the Joint Programme Account.

The SC contributed immensely to enhancing clarification and understanding of the roles of all partners. In line with its mandate to provide strategic direction for the implementation of the programme, the role of the SC was vital to the implementation of the programme. In addition to the above, the SC has shown commitment by the regular review of project status and progress.

5 - ACHIEVEMENT OF THE PROJECT PURPOSE

5.1 Monitoring and Evaluation

In order to ensure that the outcomes of the programme were followed up efficiently, a monitoring and evaluation component of the programme was inbuilt as part of a broader framework at the inception phase. A baseline study and a gender analysis were also undertaken at the onset of the program to establish the status of the prevailing disaster related WASH situation as well as the state of communities' disasters preparedness.

Due to the size of the area covered by the programme and the difficult access to quite a number of communities, the programme engaged with the District Technical Teams (DTTs) to monitor monthly implementation progress. They reported to the Regional Technical Teams (RTTs) and the programme coordination team.

During the initial communities' assessment phase, focal persons were identified in the communities to facilitate communication between the communities, RTTs and DAs as well as the programme coordination team.

Joint weekly and monthly review meetings were held through Skype and/or media platforms. Around 77 Joint field monitoring missions (GoG, Implementing Partners and PUNOs) were conducted to oversee the implementation of programme components.

Prior-to Steering Committee meetings every six (6) months, joint field monitoring visits were organized in collaboration with GoG, MMDAs, and PUNOs.

A monthly progress report was also developed to track progress against a benchmark with milestones. The benchmark was updated as frequently as required.

Photo 15 - Joint Monitoring and Evaluation at the community setting.

A Mid-term Evaluation of the program was conducted. It involved using traditional evaluation criteria (relevance, efficiency, effectiveness, impact and sustainability) with an emphasis on

results and the joint programming process. Data from the monitoring activities were used to feed mid-term review of the Programme in November 2016.

An independent final evaluation was scheduled at the completion of the programme. It assessed the rate of physical progress and provided a general assessment of results in terms of efficiency, effectiveness and sustainability. Some excerpts are in Chapter 9.

5.2 General Program Sustainability

Sustainability mechanisms were built into the programme delivery strategy in order to ensure that gains achieved can be sustained beyond the programme life cycle.

The WASH in DPC Programme was implemented in line with the Community Ownership and Management (COM) Initiative set up by the CWSA. Under this initiative responsibility is given to the District Technical Teams (DTTs) and Communities to mobilize resources for water and sanitation programmes and to manage the services in a sustainable manner.
The Water and Sanitation Management Teams / District Work Department (DWD) and the Community based operators ensured the maintenance of the facilities. They are supported by the District Water and Sanitation teams and the district-based Area mechanics.
In addition, community mobilization, through the District Technical Teams (DTTs), was paramount for ownership and management of the services. To that effect, community Operations and Maintenance plans were developed. They will help with the maintenance of the facilities installed, in conformity to the CWSA Community Ownership and Management Initiative.

Financial sustainability

Financial sustainability issues touched on community participatory viz the appointment of focal person in the community, the responsibility provided to DAs and the local WSMTs as well as the setup of VLSAs and Saving Groups in the community empowered local stakeholders, women and men, in planning, decision-making and local management. It also related to promoting the payment of the agreed tariffs by the community members to facilitate the management of the installed facilities, as detailed out in the NCWSSP. Water and Sanitation Committees and Hand pump caretakers were also formed, trained, equipped and supported by District Water and Sanitation Management Teams (DWSMTs) and Area Mechanics to provide maintenance services.

Environmental sustainability

The Environmental and Social Management Framework (ESMF) developed for the WASH in DPC programme, confirmed that no significant adverse impacts were observed on the physical environment from the construction of the resilient water supply infrastructures as well as local latrines. Particularly for the latrines, these are mostly shallow pits and have minimal interaction with groundwater. There are no serious threats envisaged on the physical environment during the construction and use of these flood-prone WASH facilities.

6 - MANAGEMENT EFFECTIVENESS

6.1 Scope

The scope of work and deliverables expected of respective agencies was discussed and agreed upon following the approval of the project proposal. The agreed targets were fed into a Performance Measurement Framework (PMF).

The UNICEF scope of work covered sanitation delivery in the targeted 265 communities including implementing Community Led Total Sanitation (CLTS) to generate demand for sanitation services, including flood resilient sanitation, complemented by sanitation marketing activities. It also included capacity development of national and local level WASH officers, WASH in Schools. As mentioned previously, the scope of the WASH in Schools component of the programme was adjusted to ensure that all target communities could be declared flood resilient in terms of sanitation, particularly for those communities that were not declared ODF.

The UN-Habitat scope of work included the provision of sustainable and resilient water supply schemes to the 265 selected communities and in safe havens. As part of the sustainability of this component, the capacity of the national and local level stakeholders' capacity was enhanced as well as a behavioral attitude changed in schools and communities through a WASH oriented Values-Based education, in collaboration with UNICEF. This scope remained unchanged throughout the project lifecycle.

A Water Safety Plan development complemented the water quality monitoring process. The incidence of floods on health was also tracked. Those elements have enhanced the impact and the sustainability of the programme.

UNDP liaised with the National Disaster Management Organization (NADMO) and other partners to assist with the sensitization of communities for disaster preparedness as it relates to the WASH sector. Key outputs were to build the capacity of the 24 Districts under the programme to develop disaster preparedness plans and support in the implementation of some components of the plans. Increasing awareness of flood disasters and safety tips in the 265 DPCs through community durbars and development and dissemination of educational materials were part of the scope of UNDP work.

6.2 Schedule

As a result of time taken to complete inception activities, the programme suffered significant initial delays. The first year of the programme focused on groundwork and the development of basic management tools for smooth implementation and delivery of the planned results. A fast track approach (Incremental Management Model) was adopted to ensure the delivery of programme results. In general, the approach prioritized an implementation in 4 phases, each phase involving a batch of controllable number of communities. Lessons learnt from a phase is reverted into the following. The objective was to reduce risks due to the flood-prone innovation in the design, control and management of the infrastructures delivered. Particularly for the CLTS, an initial set of 53 communities was promoted and followed up towards ODF achievement.

The fast track approach was monitored using a benchmark document developed to cover six-month periods, with a delivery plan. The implementation was tracked on a monthly basis. All the components of the programme were tracked against the plan. The major tracker for

UNICEF was the delivery of ODF communities and completion of resilient school sanitation infrastructure, while UN-Habitat focused more on the resilient water supply schemes and the related training and capacity building activities. Alongside the monitoring of ODF attainment, construction of household latrines was also tracked, with particular attention to flood-resilient household latrines.

The schedule was updated as practically as possible, based on the implementation trend, making sure all the infrastructures were delivered during the agreed implementation period, by May 2017.

6.3 Budget

In accordance with the Paris Declaration on efficient use of resources and the commitment of UN agencies to deliver focused on a "value for money" orientated basis, the programme costs were managed broadly within the original costs.
The approved total project budget was Can$19,815,000, equivalent to $US17,122,483. The total amount expended is $US16,675,098.36, equivalent to 97.39% of the approved budget. The variance is +$US447,384.64.

The variance in the cost of school sanitation facilities enabled the programme to expand to more schools and increase flood resilience of community sanitation and hygiene services, without affecting the overall budget, with all changes managed from within the contractual service budget line.

With the water facilities, the initial cost of infrastructures was reduced through the combination of measures such as:

- extension of Ghana Water Company Limited (GWCL) network to serve flood prone peri urban areas instead of providing new mechanized systems;
- rehabilitation/airlifting of existing boreholes when the initial assessment was to deliver a new water point;
- extension of existing small-scale water supply schemes to serve neighbor communities instead of creating new facilities and associated networks;
- optimization of the flood resilient borehole design and avoiding the soak-away which are usually poorly maintained, causing serious sanitation problems around the water point;
- the use of community participation to save cost on the protection of the platform (stone pitch);
- the on-the-job training of community Water and sanitation Management teams (WSMTs)

Those measures induced some savings on contractual service budget lines.

6.4 Implementation and Transition

The monthly progress reports submitted by all the PUNOs gave the status of programme implementation as well as the delivery trend. The reports were discussed with GAC and recommendations formulated for the next reporting period. Very decisive efforts were made to progressively get the programme back on track after initial delays at the beginning of the interventions. Keeping the programme on track was however continued to be fragile as there were potential risks, such as the onset of floods that could set back progress. The field monitoring and quality control activities were intensified during the last 8 months of the

programme (November 2016 to May 2017), and involved GoG partners, Implementing Partners (contractors) and PUNOs.

With the adverse hydrogeological conditions, a significant number of instances of marginal and dry boreholes and following the analysis of the flood occurrences in some communities with relatively large population (over 1000 inhabitants), the initial plans to provide boreholes for such communities were modified. The modification included the extension of existing small water supply schemes from neighboring communities and/or the connection of the communities to the Ghana Water Company Limited network, where possible. Such communities included the areas around Tamale Metropolis and Bunkpurugu/Nynyoo. These alternatives resulted in substantial savings.

Whilst CLTS was rolled out in a total of 271communities, the difficulty in reaching the 265 ODF communities target was verbally communicated to Global Affairs Canada. The programme took place during the period when the incremental approach to CLTS was developed and implemented, this resulted in significant progress in terms of achieved ODF communities in comparison to other years. Whilst the results have been significant, there was still not a 100 per cent conversion rate, which would have been required to achieve the original target of 265 ODF communities. In reality, the conversion rate has been improved across the entire GoG-UNICEF WASH programme to roughly 60 per cent (from a pre-2016 rate of approximately 10 per cent). This improved conversion rate of 60 per cent is in line with the 60 per cent conversion rate achieved as part of the WASH in DPC programme. Furthermore, as communities were selected due to their susceptibility to flooding, some of the communities were large in size, or in fact small sections of even larger communities, and whilst the CLTS approach to small towns (developed under a separate grant) did bring about improvements, it is well known that CLTS does not work exceptionally well in large communities. Furthermore, if only a section of large community was deemed flood prone, it might be possible to declare the section as ODF, but this would not apply to the whole community.

6.5 Quality Control

During the field joint monitoring activities, quality control was conducted as frequently as possible to oversee the implementation of programme components, particularly at district level by all participating institutions.

All implementation was closely monitored by the respective PUNOs as well as the WASH in DPC programme management team, through regular monitoring visits. PUNOs prioritized effective programme management and monitoring of key indicators which were tracked in a monthly progress report. Throughout, the programme supported review systems for regular and timely feedback into the programme and informed adjustments where necessary, in collaboration with GAC and GoG partners.

By policy, the Community Water and Sanitation Agency (CWSA) is the agency responsible for the quality of WASH infrastructure delivery in rural and semi-rural areas. At that point, most of the WASH in DPC communities falls under their supervision. Moreover, the CWSA has representatives in all the regions and was also involved in the design of the resilient boreholes and protected hand-dug wells. UN-Habitat entered into an agreement with CWSA to undertake quality control of the water supply schemes. A checklist was further developed to guide contractors on the specific standards to follow during the construction and operation phases. Those points were monitored and reported on regularly through field missions. The 24 DTTs and RTTs were also tasked to support CWSA and report any anomaly observed before an infrastructure is handed over.

With regard to the CLTS process, a weekly planning and monitoring programme was instigated

with MMDAs to drive delivery of results. This was done together with other programmatic and financial management support mechanisms also put in place to ensure that community and household sanitation facility targets were met. A number of implementation and quality control mechanisms were put in place, these included the positioning of staff at critical points of implementation, including:

- **Regional Consultants**: Deployed into participating regions, with co-funding from other grants, to support district monitoring, capacity building and to provide technical backstopping to Regional Environment Health teams; they also ensured continuous follow-ups with communities were being completed by district assembly staff.
- **District Resource Persons (DRPs):** Deployed in 16 MMDAs (one per MMDA) via partnerships between UNICEF and Civil Society Organizations (CSO), they provided direct technical support to each district, building their capacity to implement, ensure adequate programme monitoring and to work directly with natural leader networks in terms of CLTS.
- **UNICEF WASH Programme Officers**: Recruited to ensure adequate management arrangements between regional consultants, DRP/CSOs and government agencies at both the regional and district level; the nature of these relationships are shown in Figure 1
- **Resilient Sanitation Consultant**: Engaged to provide technical support to the trained artisans for increased uptake of their services as well as improved monitoring of safe and resilient household latrines construction.

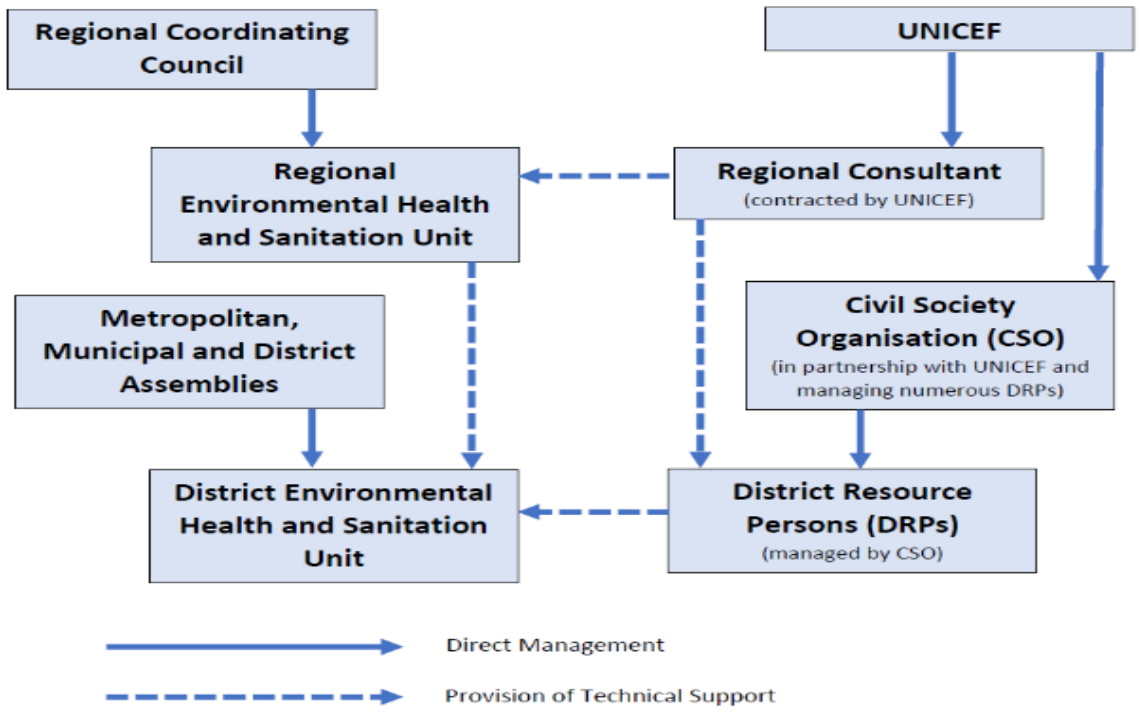


Figure 17 - Schematic on CSO/DRP institutional (reporting) arrangement

In the construction of school sanitation facilities, quality control was managed by UNICEF through several layers of technical supervision and monitoring. At the district level, clerks of works provided direct supervision to contractors, with spot check monitoring carried out by Community Water and Sanitation Agency (CWSA). Hardware consultants were contracted in the three regions to quality assure all constructions and provide technical support to CWSA as well as contractors. Reports from the hardware consultants helped to triangulate the data

reported from the district and CWSA.

6.6 Risk

The WASH in DPC is tailored to intervene in flood prone communities which are, in most of the cases, located in remote areas with difficulties of access. The greatest risk was at the planning stage when the exact locations of the beneficiary communities were not known. The implementation plans assessed that risk as high but resulted to be very high when the community selection was completed. The initial planning was done on the basis of 21 districts. At the conclusion of the community selection process, the programme has to be extended to 24 Districts with 265 communities. During implementation, and with the rainy seasons starting earlier than expected in June, a situation arose where communities could effectively be accessed only after October-November, resulting in a net field implementation period of 8 months a year, whereas the initial planning was 9 to 10 months, based on previous rainy period trends. As a consequence, the implementation schedule had to be adapted several times, with the approval of the Steering Committee and management plans readjusted accordingly (i.e. adoption of the Incremental management model) to comply with the field context.

Another greatest risk to the programme was that the target of achieving 100 per cent ODF communities was assessed to be very unlikely given the experiences from late-2015 to late-2016. This risk was communicated to the donors during bi-lateral meetings between UNICEF and GAC.

Aside of the above, the overall achievement of the WASH in DPC programme was mostly in line with expectations.

6.7 Communication and Stakeholder Management

UN-Habitat, UNICEF, UNDP and WHO are the four UN agencies who implemented this joint programme. They also worked in partnership with a range of other organizations including national, regional and district level Government partners as well as NGOs and CSOs.

MLGRD (Environmental Health and Sanitation Directorate - EHSD)- As the GoG focal Ministry for the WASH in DPC programme, played the lead role in coordination and harmonization in close collaboration with the UN team. They provided technical direction and guidance for the implementation of the programme. EHSD supported also the implementation of the environmental sanitation components of the programme as well as the formation and coordination of WASH in DPC Technical Working Group (Co-Chair with MWRWH).

CWSA – Provided insurance that deliverables are up to standards set for the resilient and flood-prone WASH infrastructures developed (quality control). They also supported the quality control of construction and components of capacity building for institutional WASH infrastructure.

School Health Education Programme (SHEP) of the Ghana Education Service – They Implemented the WASH in school's component of the programme

NADMO – As the national agency for disaster, they were key for the Disaster preparedness of the communities before, during and after disaster event

Metropolitan, Municipal and District Assemblies (MMDAs) – They had the responsibility for programme implementation at community levels and district level coordination

Care International, World Vision, Plan Ghana- They played a role as Implementing Partners to deliver WASH activities in close collaboration with RTTs and DTTs and the Community stakeholders.

The Civil Society Organizations (CSO) working in WASH in the northern regions were engaged to provide technical backstopping to the MMDAs.

The PIM provides sound information about the relationship between these stakeholders. This document should also have addressed the communication linkages between all the players to facilitate communication amongst the stakeholders' and within the management teams. Such analysis was weak and too optimistic. It has impacted on the team building phase and the effective take-off of the programme. However, with the coordination through the RC office, most of these identified issues in the communication management were addressed.

6.8 Human Resources

The different agencies provided human resource capacity for the programme implementation based on their respective mandates. The initial staff structure, from the project document, was slightly modified to accommodate respective agencies staff policy and regulations.

The programme supported the agencies with logistics to carry out programme-related activities. Further support from CSOs, consultants and government partners ensured successful programme implementation.

7 – CHALLENGES, LESSONS LEARNED AND RECOMMENDATIONS

The programme itself was a learning process for the WASH sector as a whole, given that it was the first of its kind in the WASH sector in Ghana. During the implementation, several lessons were learned which also shaped the mode of delivery of the results.

7.1 Challenges

Slow progress in CLTS uptake in some communities due to subsidies being applied in adjoining communities by other implementing agencies. That required the engagement of all RICCS members on respecting the national protocol and encouraging them to make presentations of their programmes for endorsement by the region.

Weak supportive monitoring, supervision and follow up to ensure household level latrine construction is properly done after triggering in each community. To that effect, systems were put in place at the district level, that place the districts relatively good position to carry out requisite follow up monitoring and accelerate results delivery. This included technical backstopping through District Resource Persons provided by CSOs.

Latrines collapse due to flooding in some communities and weak supportive monitoring, supervision and follow up to ensure household level latrine construction was properly done, after triggering in each community. To overcome some of those gaps, there was a focus and support for the development of flood-resilient household latrines using the SanMark approach which included equipping latrine artisans with requisite skills and supporting household sanitation financing to own flood-resilient latrines

Weak capacity of decentralized government for Operation and Management. The several training and refresher courses were organized to assist the regional and District stakeholders on disaster preparedness and programme outcomes follow up to ensure participation of all beneficiaries, including women and children, in the sustainability of the resilient WASH services delivered

Weak decentralized government ownership of the programme especially for CLTS implementation. As a remedy, Price Waterhouse Coopers were procured as Consultants to engage with districts on capacity building around financial management, and this in turn strengthened CLTS implementation by ensuring smoother transmission of funds. The CSO/DRP concept and rollout was also a strategy to improve accountability at the lowest levels of governance.

Beyond the direct WASH in DPC programme delivery, the support from PWC for district financial capacity is also expected to improve district performance and results achievement in the ongoing results –based financing approach.

MMDAs have limited resources and are in need of especially hardware such as transport, communication means and materials such as fuel.

As a consequence, there was a need to advocate with Regional and District Management helped to increase ownership at the district level. Furthermore, support for planning helped to mainstream district ODF plans into the Medium-Term Development Plans. Also, official handing over ceremonies of the Water facilities were organized to reaffirm ownership transfer to Communities and DAs. An agreement document is co-signed by the DAs jointly with a

representative of the community, under the supervision of UN-Habitat and the Implementing partner. A checklist for O&M is attached to the official document as well as the role of the parties for easy reference.

With respect to health indicator monitoring, some of the variables of interest for health impact assessment were not aligned with the variables in the DHIMS 2 data base and therefore, making extraction of information for health assessment difficult. Also, the realignment of the sanitation sector in early 2017 to another Ministry delayed the execution of some key activities related to WASH.

7.2 Lessons learnt

- Communities are ingenious and resourceful. When empowered, they often have the capacity to develop and implement solutions themselves.
- CLTS motivates both beneficiaries and facilitators. The districts are motivated to continue and expand CLTS activities though in need of resources to do so, while other parties are starting to copy the CLTS and also the VSLA approach.
- The programme was implemented in phases. Lessons from previous phases were incorporated into the next phase. This practice enhanced ideation and learning.
- The commitment of the UN Resident Coordinator was incremental for the success of the programme. It increased participation and commitment at the steering committee meetings by stakeholders, brought in accountability, ensured that corrective action was taken when needed and sped up the implementation process
- The GES/SHEP highly recommended the Values based WASH education concept for implementation in schools.
- The work of drilling and other companies was successfully and strongly monitored which contributed to the relatively high quality of these facilities. It shows the importance of good monitoring.
- A governmental donor and implementation by PUNOs gave political weight and therewith contributed to the motivation and active involvement of and uptake of lessons, methods and good practices by the Government of Ghana and contributed to the speed and successes of the programme.
- The Water safety plans developed in 18 communities was a useful lesson.
- The PUNO partnership was a novelty harnessing several capacities for WASH implementation.
- The best practices and designs of the programme positively results in other agencies adapting and learning.
- The programme developed a 14-checklist handing over document for joint stakeholder commitment at handing over, a good step in gathering stakeholder commitment to own and sustain programme goods and services assuming they follow through.
- Guidance documents such as technical guidelines and standards needed to be developed to guide the development of WASH infrastructure. This was necessary to establish the necessary guidelines and national standards for flood-resilient institutional WASH infrastructure development.
- Roll out of the sanitation marketing approach including the implementation of the financing guidelines is critical to sanitation delivery and particularly for flood-prone

communities on three fronts:
    - To ensure sustainability of ODF status and building household and community resilience.
    - To increase sanitation coverage whilst expanding local businesses.
    - It is a necessary step to addressing equity gaps in sanitation.
- Joint UN programmes involving UN Agencies with different and complementary capacities in the theme areas requires substantial conceptualization and planning to deliver on expected results.
- The workshops/trainings were essential in enhancing the capacity of DTTs and RTTs to prepare, implement and monitor the activities and to ensure the health and quality of life of the poor and vulnerable are improved through sustainable access to safe water, sanitation and hygiene.
- Training to improve the knowledge and understanding of the links between improved hygiene and sanitation practices and better health can lead to a sustainable WASH behaviour, especially for women, the aged and children.
- Several issues were identified which were also addressed with the implementation of the sanitation behavior change programming. Key among the issues identified are:
    - Weak decentralized government ownership of the programme especially for CLTS implementation.
    - Funds disbursement at the district level to facilitating teams to implement CLTS was impeded by low technical and financial capacity.
- At the design stage, the programme attempted to leverage on earlier initiatives from ongoing and past programme and took into consideration what other partners are supporting. It was also an attempt by the UN participating agencies to deliver as one. That helped to reduce duplication of resources and enhanced coordination of development work in the northern part of Ghana.
- With regard to the scope, the timeframe was overambitious (too short) looking at the seemingly national focus and technical nature of the programme. The results were overly ambitious considering the programme life span. Also, the coverage was too vast working in 265 communities and in 24 Districts of a dispersed settlement. This made it difficult to consolidate gains and effectiveness.

7.3 Recommendations

1. GoG counterpart should Introduce a follow up programme for the WASH in DPC communities that continues and expands CLTS and VSLA to cover all programme communities fully (and ideally also all other communities in the target districts) and introduces and sustains a preventive maintenance scheme for water points and possibly also school latrines.
2. There should be a different approach for similar future programmes, under the leadership of GoG. The core of it is to cover all people in selected areas (e.g. districts) instead of single communities (leave no one behind), increase participation, involvement and decision-making of the lowest levels (district and community levels, but also local contractors), continue programmes and programme activities over

longer periods of time, ensure long-term sustainability of outputs, outcomes and impacts (and throw out programme activities that will not lead to sustainable outputs, outcomes and impacts), and increase the quality and suitability of programme facilities and services.

3. Introduce structural integrated systems to be able to 'deliver as one'. Setting up integration and integrated systems per programme requires huge efforts each time, hence it is much better to build a structured framework of systems and tools that are used in all programmes and activities.
4. Employ core expertise with regard to the programmes and other activities the PUNOs execute and/or are responsible for, and not (only) on a programme or temporary contract basis. As much as possible such staff should be located where the activities are implemented.
5. Create stronger coordination mechanisms to prevent delays, overlaps and gaps, and frustrations in all activities of the UN organizations in Ghana. It is then recommended that the role of the UN Resident Coordinator's Office is reinforced further in collaborative UN programmes and activities.
6. There must be follow-up and further support to the WASH in DPCs programme implementers (DTTs and RTTs particularly) to enable them to successfully apply the knowledge and capacity they gained. A regular monitoring program should be put in place to ensure long term sustainability of the capacity building element at the community level.
7. The DTTs and RTTs should be adequately encouraged and resourced to develop strong relationships with disaster prone communities, to ensure sustainability of the facilities provided. They should also support the training of Pump mecahnics in selected communities to undertake minor repairs and maintenance.
8. Where defects were noted on the water and sanitation facilities provided, take immediate corrective actions, in collaboration with the WSMTs and DTTs.
9. Strengthening of District Health Information Management capacity to align DHIMS2 database with health outcomes of WASH-related diseases
10. Success stories and lessons from this programme should be shared among the key WASH stakeholders for possible replication. Development of knowledge management products should be developed to that effect.
11. The combination of infrastructure provision and BCC component of this programme as well as community empowerment may ensure some level of sustainability.
12. For future actions, all potential stakeholders and partners should be actively involved in the design, primary information from surveys and institutional appraisals and resource/capacity gap analysis should be employed and expected theory of change baselines would inform a clearer timeline. This will enhance the project's ability to deliver its results whiles meeting the specific development needs of the target communities.
13. It is essential to ensure all key stakeholders delivering different outputs work together and constantly communicate to measure the progress being made in the overall delivery. This will also reduce the risks of duplicating activities.
14. The development of a detailed M&E framework during the design of project is needed to ensure that relevant information is gathered to monitor project progress during implementation. This will allow different actors to learn from each other's experiences,

building on expertise and knowledge and ensure the timely delivery of key milestones. This framework is also needed to ensure transparency and accountability in the delivery of outputs and provides an avenue for gathering relevant data including challenges, results and lessons learnt during the implementation of projects.

15. It is also recommended that national institutions are empowered and expected to lead in the conceptualization, design and implementation of projects to ensure that ideas and plans are nationally owned to ensure sustainability. It is also essential to encourage the use of existing national systems to enhance the retainment of knowledge gained through project implementation in national institutions. This will further improve their capacity to sustain the gains made by the project after its lifespan.

8 - RESULTS OF THE TERMINAL EVALUATION STUDIES

The programme achieved much of its planned objective, outcomes and outputs.

Community hardware is in most cases functional, nearby, easily accessible and properly used, while beneficiaries indicate to be satisfied with the facilities. The capacity and to some extent the motivation for O&M is limited. They lack the funds to pay for larger repairs.

Community software scores well on issues such as coverage of beneficiaries and utilization of the raised awareness, although people still need more sensitization so that they practice effectively what they learnt (e.g., hand washing and water treatment).

Effectiveness of capacities realized in the districts would need follow up with further training and guidance.

Most hardware is suitable for use by handicapped persons, attempts were made to be ready for floods (that may increase due to climate change), while human rights and gender were also important issues in the designs and software.

A major achievement has been the initially cumbersome but finally successful coordination and exchange between UN parties, NGOs, companies and the different institutes of the Government of Ghana. The steering committee was particularly important in providing strategic decisions and ensuring accountability while the UN Resident Coordinator fulfilled an important role in improving the coordination and collaboration of all programme level stakeholders. Yet some effort to improve the cohesion of PUNOs' focal persons is commended.

The programme set up and approach was partly dictated by the desire to 'deliver-as-one'. This had the advantage of exchange of expertise and infrastructures, contacts and collaboration with the GoG and putting weight to the programme, enhancing also the GoGs motivation and commitment for the programme and its results. It also incorporated challenges of a complex programme structure, the need to integrate activities and many parties involved that all needed to be coordinated, at a cost.

The programme set up DTTs and RTTs at the district and regional levels respectively. They however, did not function optimally in terms of their ability to monitor but were pivotal in the implementation of the CLTS component. Still, communication from the top to regions and districts was difficult to maintain and may have affected the coordination of some field activities and their full commitment.

Sustainability of the programme impacts, outcomes and outputs should be looked at with due support to communities and the district level structures to operate and maintain (and repair) the realized flood prone facilities are insufficiently developed in terms of financial resources, expertise, materials, tools and equipment. PUNOs should have developed a more consistent exit strategy for a longer-term sustainability.

9 - ADMINISTRATIVE CLOSURE

9.1 Operational closure

Institutional sanitation facilities were handed over to respective schools upon completion of the facilities. The software activities, including the facilities management plan, vested ownership of school sanitation facilities on schools, together with the responsibility for operation and management.

As part of the ownership transfer, the water supply facilities were handed over to the communities and the District Assemblies. This transfer also empowers local authorities to take full responsibilities for the sustainability of the facilities.

Added to this was an assessment that was conducted in two of the three targeted regions to assess the satisfaction of school girls with the sanitation infrastructures. The girls generally rated the facilities as highly satisfactory as indicated earlier in the report.

The database of the water facilities provided under the programme have been shared with CWSA. The information will be incorporated into the national database for water and sanitation, in compliance with GoG policies.

9.2 Contract Closure

All contract agreements entered into between PUNOs and institutional service providers, including individuals, for the sole purpose of implementing the WASH in DPC programme have been closed, in accordance with the MPTF requirements and the clauses of the MOU between the UN partners.

10 - INFORMATION DISTRIBUTION & ARCHIVE

List of archived information (surveys, manual and guidelines, status reports and checklists) includes the following:

1. Project document
2. Community selection report
3. Baseline study report
4. List of communities for the WASH in DPC programme
5. List of schools for the WASH in DPC programme
6. Scope of work and achievement per community
7. Steering committee meeting report – No1
8. Steering committee meeting report – No2
9. Steering committee meeting report – No3
10. Steering committee meeting report – No4
11. Steering committee meeting report – No5
12. WASH in DPC Annual repport – 2014
13. WASH in DPC Annual repport – 2015
14. WASH in DPC Annual repport – 2016
15. WASH in DPC Annual repport – 2017
16. Programme Implementation Manual. March 2015
17. Environmental and Social Management Framework (ESMF) report
18. WASH Technology Assessment and Development of a WASH Disaster Reduction Toolkit
19. Guidelines for Constructing Flood Resilient WATSAN Facilities
20. Compendium Of Water And Sanitation Disaster Resilient Technology Options
21. Sanitation Options – Compendium (Drawings)
22. Disaster Risk Reduction Toolkit
23. Guidelines And Minimum Standards For Resilient Wash Facilities In Disaster (Flood) Prone Communities
24. Water and sanitation technology options. Design drawings and Bill of Quantities
25. Checklist for resilient water supply development
26. Checklist for Operation and Maintenance of resilient water supply infrastructure
27. Checklist for WASH in Schools
28. WASH Sanitary inspection checklist & indicators
29. Sample handing over document of resilient water supply infrastructures
30. Technical characteristics of water supply infrastructures
31. Perception-based assessment report
32. Water Safety Plan Template
33. A database with the technical specifications of the water facilities provided (CWSA), July 2018
34. End of Project Evaluation Water, Sanitation and Hygiene in Disaster Prone Communities programme in Northern Ghana, June 2014 to May 2017
35. Perception-based impact assessment, WASH in DPC, August 2017

36. Overview of the Water Safety Plan Steps.
37. Preliminary Findings on Assessment of Wash Interventions in Disaster Prone Communities in 3. Northern Regions, Ghana. 2017.

38. Water Quality Assessment and Monitoring Plans "Wash in Disaster Prone Communities in the 3 Northern Regions. May 30, 2016
39. Water Safety Plan Template Training Small (rural) water supplies Tamale, Ghana, 26-29 September 2016.
40. Water, Sanitation and Hygiene in Disaster Prone Communities in Northern Ghana. Semi-annual Progress Report. Period from April 2016 to November 2016. Global Affairs Canada (GAC)
41. Water, Sanitation and Hygiene in Disaster Prone Communities in Northern Ghana. Programme Implementation Manual Final Draft. March 2015.

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45.

Annex 1 – Summary of achievements

EXPECTED RESULTS	INDICATORS	Achievements
Intermediate Results		
1100 Increased equitable use of disaster-resilient improved sanitation and water facilities by people in DPCs in Northern Ghana	Percentage of population with access to improved disaster resilient sanitation facilities in the 3 northern regions	- 6.68% of the total population in the three (3) northern regions have access to improved disaster resilient sanitation facilities (323,416 out of 4,840,128) through the construction of institutional flood-resilient sanitation facilities in schools and household sanitation facilities.
	Percentage of population with access to safe drinking water sources in the 3 northern regions	- 5.57% additional population (269,727 out of 4,840,128). 5.12% are from the rural area - now the access rate to sustainable and safe drinking water source is 100% of the population of the 265 communities (CWSA standards for rural and semi-rural)
	Percentage of rural population with sustainable access to safe drinking water sources in the 3 northern regions	
	Number (out of 200,000) of women, men, boys and girls with access to improved disaster resilient sanitation facilities in DPCs	More than 82,000 people are living in 160 Open Defecation Free (ODF) communities
	Number (out of 200,000) of women, men, boys and girls with access to safe water in DPCs	A total of 269,727 people (137,561 men and 1323,166 women). This includes community members, schools used as safe havens and some health centers.
	Girls' assessment of suitability of improved disaster resilient sanitation facilities in DPCs by region - Rating scale: 1, Highly unsatisfactory, 2. Unsatisfactory, 3 Neither satisfactory or unsatisfactory, 4. Satisfactory, 5. Highly satisfactory	An assessment involving school girls from two of the three targeted regions showed a rating of highly satisfactory. The assessment was conducted by administering a simple questionnaire to 760 girls randomly selected form 62 schools.
1200 Improved hygiene practices among women, men, girls and boys before and after disasters in DPCs in Northern Ghana	Number and Percentage of population (m/f) practicing hand washing with soap in DPCs	81,731 additional people are practicing handwashing (using household handwashing facilities as proxy)
	Number of school children (m/f) practicing hand washing with soap in DPCs	93,469 school children (47553 boys, and 45916 girls).
	Number of school children (m/f) having access to improved disaster resilient sanitation facilities in target DPCs	57,749 school children (29,550 boys, and 28,199 girls).

EXPECTED RESULTS	INDICATORS	Achievements
	Number communities in DPCs with access to disaster resilient sanitation facilities (3 northern regions)	265 target communities supported to access flood-resilient sanitation facilities,
	Number of communities practicing household water treatment and safe storage in DPCs (3 northern regions)	150 Communities are practicing HWWS (using availability of handwashing facilities as proxy)
	Number of people (m/f) using household water treatment and safe storage systems	0ver 82,000 additional people;
1300 Improved planning and implementation of WASH programs by local institutions	Number of districts with roll-out implementation programs of WASH in DPCs	24
	Effectiveness of district WASH implementation program; Rating scale: 1, Highly unsatisfactory, 2. Unsatisfactory, 3 Neither satisfactory or unsatisfactory, 4. Satisfactory, 5. Highly satisfactory	An assessment of schools' girls' satisfaction in two of the three regions showed a rating of satisfactory and highly satisfactory
	Number of targeted districts with functional NADMO offices	24
1110 Increased access to gender-sensitive, child-friendly, disaster-resilient and improved sanitation and water facilities in schools and communities in DPCs	Number and Percentage of population (m/f) aware of the 3 behaviors for improved hygiene practices (- hand washing with soap, safe excreta disposal and household water treatment and safe storage-) in DPCs in 3 northern regions	over 86,700 additional
	Number (out of total) of basic schools in DPCs with gender and disability friendly latrines	202 (224 schools in the compounds including kindergartens)
1120 Improved capacity of community members and schools to maintain disaster resilient and improved water and sanitation facilities	Number of women and men trained to construct and maintain disaster resilient and improved sanitation and water facilities in DPCs (3 northern regions)	558 artisans, 363 community facilitators (110 women, 253 men).
	# of schools trained to maintain disaster resilient and improved sanitation and water facilities in DPCs (3 northern regions)	364
1130 Increased knowledge and capacity of youth in DPCs in northern Ghana to construct and maintain disaster resilient and improved sanitation and water facilities in communities and schools.	# of communities with youth trained to construct and maintain disaster resilient and improved sanitation and water facilities in schools and communities in DPCs in northern Ghana	271
	# of youth (male/female) trained to construct and maintain WASH facilities in DPCs	558 artisans, 363 community facilitators (110 women, 253 men)
1210 Increased ability of community members and schools to treat water and adopt safe water storage practices before, during and after emergency situations	Number of Water and Sanitation Management Teams (WSMTs) (out of total) provided training in household water treatment and safe storage systems in DPCs in the 3 northern regions	265
	% schools provided training in household water treatment and safe storage systems in DPCs in the 3 northern regions	100%
1220 Enhance capacity of WSMTs and communities to enforce Open- Defecation Free (ODF) by-laws in DPCs	% of WSMTs trained in WASH management, advocacy and related issues	100%
	# of WSMT members (m/f) trained in WASH management, advocacy and related issues	1082 (603/479)

EXPECTED RESULTS	INDICATORS	Achievements
	% of WSMTs trained to enforce ODF bye laws in DPCs	100%
	# of women WSMT members (out of total) trained in ODF	479
1230 Increased knowledge of hygiene, public health and environmental WASH issues amongst the population, particularly children, youth and women in DPCs	# of DPCs that have received disaster resilient hygiene, public health and environmental education	271
1310 Strengthened capacity of local officials in planning, implementation, monitoring and evaluation of gender-sensitive and disaster-resilient WASH programs	# of local officials (m/f) trained in disaster resilient WASH service delivery, RBM and gender equality (3 northern regions)	162 - on CLTS 159 - on O&M (Male= 112; Female= 47 320 - on establishment and management of VSLAs
1320 Strengthened capacity of local institutions to deliver disaster resilient WASH services in DPCs in Northern Ghana.	# of local institutions (DAs/NADMO) that have received disaster resilient WASH training in the 3 northern regions.	72 (from NADMO, EHSD and DAs)

Annex 2 – Performance Measurement Framework (PMF)

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
ULTIMATE OUTCOME								
1000 Reduced burden of water, sanitation and hygiene (WASH) related diseases among men, women, boys and girls in Disaster Prone Communities (DPCs) in Northern Ghana	U5 mortality rates by region (3 northern regions- Northern, Upper West & Upper East)	National= 60 (per 1,000 live births); NR=111; UE= 72; UW=92	53 per 1000 live births (MDG target for Ghana)	There has been no national survey after the GDHS 2014 to inform any update.	GDHS 2014 /MICS	Survey	Every 2 years	GSS
	Prevalence of diarrhoea in the 3 northern regions	National=11.7%; NR=16%; UE=12.0%; UW=15.2%	N/A	There has been no national survey after the GDHS 2014 to inform any update.	GDHS 2014 /MICS	Survey	Every 2 years	GSS
INTERMEDIATE OUTCOMES								
1100 Increased equitable use of disaster-resilient improved sanitation and water facilities by people in	Percentage of population with access to improved disaster resilient sanitation facilities in the 3 northern regions	National=15.0 %; NR=3.3% UE=4.1%; UW=4.9%	52% (MDG Target) NR=7.7%; UE=5.5%; UW= 7.7%	Latest data as of DHS 2014. There has been no survey since	GDHS 2014 /MICS	Survey	Every 2 years	GSS

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
DPCs in Northern Ghana	Percentage of population with access to safe drinking water sources in the 3 northern regions	NR=64.1%	NR=70.9%;	Latest data as of DHS 2014. There has been no survey since	Baseline report GDHS/MICS	Survey	Every 2 years	GSS
		UE=76.69%	UE=80.8%;					
		UW=77.6%	UW=88.6%					
	Percentage of rural population with sustainable access to safe drinking water sources in the 3 northern regions			Latest data as of DHS 2014. There has been no survey since	CWSA 2013 Annual Progress Report.	Report	Annually	UNDP/UN-Habitat/NDPC
		NR=62.96% (2013)	NR=70.9%;					
		UER=60.73% (2013)	UE=80.8%;					
		UWR=76.21% (2013)	UW=88.6%					
	Number (out of 200,000) of women, men, boys and girls with access to improved disaster resilient sanitation facilities in DPCs	Total =7800	Total = 13933	82,007 people are living in 160 ODF communities	Project Completion Report	Report / evaluation	3 years	UNICEF/UN-Habitat
		Women=3978	Women=7106					
		Men =3822	Men =6827					
	Number (out of 200,000) of women, men, boys and girls with access to safe water in DPCs	Total =145553	Total = 200,000	269,727				
		Women=74232	Women=102000	137,561				
		Men =71321	Men =98000	132,166				

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	Girls' assessment of suitability of improved disaster resilient sanitation facilities in DPCs by region - Rating scale: 1, Highly unsatisfactory, 2. Unsatisfactory, 3 Neither satisfactory or unsatisfactory, 4. Satisfactory, 5. Highly satisfactory	1	4	An assessment of girls in a sample of 62 schools randomly selected showed a rating of highly satisfactory	Baseline report; progress reports	Report	Baseline/midterm and end line studies	UNICEF/UN-Habitat
1200 Improved hygiene practices among women, men, girls and boys before and after disasters in DPCs in Northern Ghana	Number and Percentage of population (m/f) practicing hand washing with soap in DPCs	50,000 (25%)	200,000	81,731 additional people are practicing handwashing (using availability of household handwashing facilities as proxy)	Baseline report; progress report	Report	Annually	UNICEF / WHO
	Number of school children (m/f) practicing hand washing with soap in DPCs	31500 (63%)	50,000	57,749 school children (29,550 boys, and 28,199 girls) were provided access to safe handwashing facilities complemented by				

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
				handwashing promotion.				
	Number of school children (m/f) having access to improved disaster resilient sanitation facilities in target DPCs	19400 (38.8%)	50,000	57,749 school children (29,550 boys, and 28,199 girls) were provided access to safe sanitation facilities.	Baseline report; progress reports; EMIS for WASH in schools	Report	Annually	UNICEF

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
	Number communities in DPCs with access to disaster resilient sanitation facilities (3 northern regions)	0	265	265 target communities supported to access flood-resilient sanitation facilities, through a mix of approaches including emergency facilities in safe haven schools, household sanitation facilities and emergency preparedness planning.	Baseline report; progress report	Report	Annually	UNICEF/UN-Habitat
	Number of communities practicing household water treatment and safe storage in DPCs (3 northern regions)	140 (53%)	265	160 Communities are practicing HWWS (using availability of handwashing facilities as proxy)	Baseline report; progress reports;	Report	Annually	UNICEF/UN-Habitat
	Number of people (m/f) using household water treatment and safe storage systems	106,000	200,000	0ver 82,000 additional people;	Baseline report; progress reports; Annual	Report	Annually	UNDP/UN-Habitat/WHO

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
					project reports			
1300 Improved planning and implementation of WASH programs by local institutions	Number of districts with roll-out implementation programs of WASH in DPCs	24	24	24	Baseline report; progress reports	Report	Annually	UNDP/UN-Habitat
	Effectiveness of district WASH implementation program; Rating scale: 1, Highly unsatisfactory, 2. Unsatisfactory, 3 Neither satisfactory or unsatisfactory, 4. Satisfactory, 5. Highly satisfactory	3	4	An assessment of school girls' satisfaction showed a rating of highly satisfactory	Baseline report; progress reports	Field visits, Report	Annually	UNDP/UN-Habitat
	Number of targeted districts with functional NADMO offices	24	24	24	Baseline report; progress reports	Field visits, Report	Annually	UNDP/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1110 Increased access to gender-sensitive, child-friendly, disaster-resilient and improved sanitation and water facilities in schools and communities in DPCs	Number and Percentage of population (m/f) aware of the 3 behaviors for improved hygiene practices (- hand washing with soap, safe excreta disposal and household water treatment and safe storage-) in DPCs in 3 northern regions	106,000 (53%)	200000 (100%)	over 82,000 additional	Baseline report; Annual project reports; project completion reports	Report	Annually	UNICEF/UNDP/UN-Habitat/WHO
	Number (out of total) of basic schools in DPCs with gender and disability friendly latrines	48	167	224	Baseline report; Annual project reports; project completion reports	Report	Annually	UNICEF

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1120 Improved capacity of community members and schools to maintain disaster resilient and improved water and sanitation facilities	Number of women and men trained to construct and maintain disaster resilient and improved sanitation and water facilities in DPCs (3 northern regions)	0	400	558 artisans, 363 community facilitators (110 women, 253 men).	Training and Capacity building reports	Report	Annually	UNICEF/UN-Habitat
	# of schools trained to maintain disaster resilient and improved sanitation and water facilities in DPCs (3 northern regions)	0	167	364	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1130 Increased knowledge and capacity of youth in DPCs in northern Ghana to construct and maintain disaster resilient and improved sanitation and water facilities in communities and schools.	# of communities with youth trained to construct and maintain disaster resilient and improved sanitation and water facilities in schools and communities in DPCs in northern Ghana	0	265	271	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF/UN-Habitat
	# of youth (male/female) trained to construct and maintain WASH facilities in DPCs	0	400	558 artisans, 363 community facilitators (110 women, 253 men)	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF/UN-Habitat/WHO

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1210 Increased ability of community members and schools to treat water and adopt safe water storage practices before, during and after emergency situations	Number of Water and Sanitation Management Teams (WSMTs) (out of total) provided training in household water treatment and safe storage systems in DPCs in the 3 northern regions	0	265	265	Baseline report; Annual project reports	Report	Annually	UNDP/UN-Habitat
	% schools provided training in household water treatment and safe storage systems in DPCs in the 3 northern regions	79.70%	100%	100%	Baseline report; Training and Capacity building reports	Report	Annually	UN-Habitat/WHO
1220 Enhance capacity of WSMTs and communities to enforce Open-	% of WSMTs trained in WASH management, advocacy and related issues	0	100%	100%	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
Defecation Free (ODF) by-laws in DPCs	# of WSMT members (m/f) trained in WASH management, advocacy and related issues	0	1855	1891 (1041/850)	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
	% of WSMTs trained to enforce ODF bye laws in DPCs	0	100%	100%	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
	# of women WSMT members (out of total) trained in ODF	0	927	850	Training report	Report	Annually	UNICEF /UN-Habitat
1230 Increased knowledge of hygiene, public health and environmental WASH issues amongst the population, particularly children, youth	# of DPCs that have received disaster resilient hygiene, public health and environmental education	0	265	271	Baseline report; Training and Capacity building reports; Annual project reports	Report	Annually	WHO/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
and women in DPCs								
1310 Strengthened capacity of local officials in planning, implementation, monitoring and evaluation of gender-sensitive and disaster-resilient WASH programs	# of local officials (m/f) trained in disaster resilient WASH service delivery, RBM and gender equality (3 northern regions)	Total = 0 Male = 0 Female = 0	Total = 117 Male = 60 Female = 57	162 - on CLTS 159 - on O&M (O&M) Male= 112 Female= 47 320 - on establishment and management of VSLAs	Baseline report; Training and Capacity building reports; Annual project reports	Report	Annually	UNDP/UN-Habitat
1320 Strengthened capacity of local institutions to deliver disaster resilient WASH services in DPCs in Northern Ghana.	# of local institutions (DAs/NADMO) that have received disaster resilient WASH training in the 3 northern regions.	0	24	72	Baseline report; Training and Capacity building reports; Annual project reports; NADMO	Report	Annually	UNDP/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
					disaster reports.			
OUTPUTS								
1111 Improved child, gender-, disability-friendly and disaster-resilient latrines constructed in schools	Number of child/girl, disability friendly and disaster-resilient improved school latrines constructed/rehabilitated	0	167	224	Baseline report; Annual project reports	Report	Annually	UNICEF /UN-Habitat
1112 Improved disaster-resilient household sanitation facilities constructed	Number of disaster – resilient household improved sanitation facilities constructed/or rehabilitated	0	2000	2,528	Baseline report; Annual project reports	Report, end line survey	Annually	UNICEF

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1113 Water systems constructed in communities and schools	Number of communities with functional disaster-resilient water systems in place	0	265	265	Baseline report; Annual project reports	Report, end line survey	Annually	UNDP/UN-Habitat
	Number of schools with functional disaster-resilient water systems in place.	0	18	112	Baseline report; Annual project reports	Report	Annually	UNDP/UN-Habitat
1114 Households provided with micro credit for construction of disaster resilient sanitation facilities	# of established and functional microfinance for household sanitation facilities.	0	24	274. The financing mechanism is through the VSLA and the sanitation social fund that supported 500 households to own flood-resilient toilets	Microfinance establishment/ agreements; project reports	Report, Field visits	Annually	UNDP/UN-Habitat
	Number of women households (out of total) who have accessed microcredit to construct latrines	0	2650	At least 4,384 women are part of the VSLA set up to finance household latrines.	Baseline report; Annual Progress reports	Report	Annually	UNDP/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1115 Awareness building workshops, open forums etc. conducted re: use of improved sanitation and water facilities conducted	Number of awareness and sensitization meetings/fora held in schools and communities	0			Baseline report; Annual Progress reports	Reports	Annually	UN-Habitat /UNICEF/ UNDP
	Total			635				
	-Schools	0	167	364				
	-Communities	0	265	271				
1121 Community members trained to operate and maintain WASH facilities	Number of WSMT members (M/F) trained to operate and maintain WASH facilities	0	1855	1891 (M=1041; F=850)	Baseline report, Annual Progress Report, Training report	Report	Annually	UNICEF /UN-Habitat
1122 Schools trained to maintain and manage WASH facilities.	Number of schools trained to maintain and manage WASH facilities	0	167	364	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
1123 Community Water & Sanitation Management teams formed and functional	Number of community water & sanitation management teams formed and functional	0	265	241	Baseline report; Training and Capacity building reports; Annual	Report	Annually	UNICEF /UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
					progress report			
1124 Strengthened capacity WSMT in planning and implementation of WASH projects	Number of WSMT members(M/F) trained in planning and implementation of WASH projects	0	1855	1082 (603/479)	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
1131 Rural Sanitation Model and Strategy rolled out in DPC districts.	Number of districts where Rural Sanitation Model and Strategy rolled out	0	24	24	Annual report	Report	Annually	UNICEF /UN-Habitat
1132 Youth in DPCs trained in construction of disaster-resilient facilities	Number of youth (M/F) in DPCs trained in construction of disaster- resilient facilities (3 northern regions)	0	400	558 artisans, 363 community facilitators (110 women, 253 men).	Baseline report; Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1133 Youth equipped with resources/tools to construct and maintain disaster resilient facilities	Number of youth (M/F) equipped with resources/tools to construct and maintain disaster-resilient facilities	0	400	558 artisans are supported to carry out construction as a business for which they get paid instead of receiving tools from the project	Baseline report; Training and Capacity building reports; Annual project reports	Report	Annually	UNICEF /UN-Habitat
1211 Safe water storage facilities provided in schools and households	Number of schools provided with safe water storage facilities for disaster preparedness	0	18	14	Annual project reports; project completion report	Report	Annually	UNDP/UN-Habitat
1212 School health and hygiene promotion clubs formed and functional	Number of school health clubs established to promote health and hygiene in schools	29	167	364	Baseline report; Annual reports	Report	Annually	WHO/ UNICEF
1221 Community members trained to	Number of community WSMTs trained to formulate/establish ODF by-laws	0	265	271	Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
formulate ODF by-laws	Number of DPCs that are ODF	0	265	160	Baseline report; Annual Progress reports	Report	Annually	UNICEF /UN-Habitat
1231 Educational campaigns delivered for school children, men and women on the benefits of hand washing with soap	Number of hand washing sensitization meetings/forums held with schools and communities				Baseline report; Annual Progress reports	Report	Annually	UNICEF/ WHO/ UN-Habitat
	-Total	0	167	635				
	-Schools	0	167	364				
	-Communities		265	271				
1232 Communities and school children trained in safe excreta disposal	Number of WSMTs trained in safe excreta disposal	0	265	265	Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
	Number of schools trained in safe excreta disposal	0	167	364	Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
1233 Communities and school children provided training in water treatment and storage	Number of communities trained in water treatment and storage	0	265	271	Training and Capacity building reports	Report	Annually	UNDP/UN-Habitat
	Number of schools in DPCs trained in water treatment and storage	0	167	364	Training and Capacity building reports	Report	Annually	UNDP/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
1234 Awareness-building workshop, open forums etc. in relation to hygiene, hand washing and open defecation for community members and school health committees held	Number of ODF sensitization forums held for DPCs (3 northern region)	0	265	271	Baseline report; Annual Progress reports	Report	Annually	UNICEF /UN-Habitat
	Number of beneficiaries (M/F) of WASH sensitization forums in DPCs	0	200,000	323,416	Baseline and Annual Progress reports	Report	Annually	UNDP/UN-Habitat
	Number of ODF sensitization forums held for schools	0	167	364	Training and Capacity building reports	Report	Annually	UNICEF /UN-Habitat
	Number of beneficiaries (girls/boys) of ODF sensitization forums in DPC schools	0	50000	57,749 school children (29,550 boys, and 28,199 girls) were provided access to safe sanitation facilities.	Training and Capacity building reports	Report	Annually	UNICEF/ UN Habitat
1311 Local officials trained in planning, implementation and	Number of regional officials trained to plan, implement and manage WASH in DPC projects	0	12	176	Training and Capacity building reports	Report	Annually	UNDP/UN-Habitat

EXPECTED RESULTS	INDICATORS	BASELINE DATA	TARGETS	Final Achievement (July 2018)	DATA SOURCES	DATA COLLECTION METHODS	FREQUENCY	RESPONSIBILITY
management of disaster-resilient WASH projects	Number of district officials (M/F) trained to plan, implement and manage WASH in DPC projects	0	72	162 - on CLTS 159 - on O&M (Male= 112 Female= 47) 320 - on establishment and management of VSLAs	Annual Progress reports; Training and Capacity building reports	Report	Annually	UNDP/UN-Habitat
1321 Financial and logistical support for strengthening of WASH systems in DPCs provided	Number of regional offices provided with logistics to manage WASH in DPCs	0	3	3	Progress reports	Report	Annually	UNDP/UN-Habitat
	Number of district offices provided with logistics to manage WASH in DPCs	0	24	24	Progress report	Report	Annually	UNDP/UN-Habitat
	Number of district officials trained and supported to establish SanMark in DPCs	0	72	320	Baseline report; Annual Progress report; Training and Capacity building reports	Report	Annually	UNDP/UN-Habitat