



FREETOWN WASH CONSORTIUM FINAL PHASE I NARRATIVE REPORT



Children collecting water at Mamba Ridge, February 2012 (ACF)

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Glossary of Acronyms

ACF	Action Contre la Faim
BFV	Blue Flag Volunteer
CCU	Consortium Coordination Unit
CDMC	Community Disaster Management Committee
DDPC	Directorate of Disease Prevention and Control
DFID	Department for International Development
DHMT	District Health Management Team
DRR	Disaster Risk Response
EcoSan	Ecological Sanitation
FCC	Freetown City Council
FRC	Free Residual Chlorine
FWMC	Freetown Waste Management Company
GoSL	Government of Sierra Leone
GVWC	Guma Valley Water Company
HHWT	Household Water Treatment
HWTSK	Household Water Treatment and Sanitation Kits
INGO	International Non-Governmental Organisation
KAP	Knowledge Attitude and Practice
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MWR	Ministry of Water Resources
MOFED	Ministry of Finance and Economic Development
MoHS	Ministry of Health and Sanitation
ORS	Oral Rehydration Salt Solution
PHU	Peripheral Health Unit
UNICEF	United Nations Children Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation
WQM	Water Quality Monitoring



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1. Background

Despite significant improvement following the end of conflict (1991-2002), Sierra Leone shows some of the poorest developmental indicators in the world. Average life expectancy is 48 years and Sierra Leone ranks at 180 out of 187 countries on the 2011 UNDP Human Development Index report. Child mortality in Sierra Leone remains one of the highest in the world with 217 children under 5 dying per 1,000 live births¹. More than 14% of all children under 5 deaths are due to diarrhoea, the third leading cause of infant mortality in the country². Access to safe drinking water stands at 57%, and only 40% have access to adequate sanitation³ (up from 49% and 15% respectively in 2008). The Government faces enormous challenges to reach Poverty Reduction Strategy and Millennium Development Goals by 2015.

In Freetown there are large differences in access to water and sanitation between socio-economic groups. 60% of the population of Freetown are potentially living within areas served by the GVWC network but most do not have access due to major deficiencies in the system. These same deficiencies allow some of the better off to access water free of charge, while those less well off have to pay at kiosks or public standpipes, if they receive municipal water at all. Responsible government bodies and stakeholders such as the Freetown City Council (FCC) and the Guma Valley Water Company (GVWC) face funding, human resource, and capacity constraints to meet competing demands. The chronic lack of water and sanitation provision, an inadequate system of solid waste disposal, open defecation, and lack of hygiene practices contribute to significant public health risks.

A large proportion of the population of Freetown live to the east and north of the town, which include the so-called “slums”. These are mainly low lying areas near the shoreline that have been occupied by people escaping from the conflict and where there are few basic services. Many suffer from overcrowding, poor sanitary conditions, and flooding during the rains. This project aimed to assist these vulnerable communities in 30 city sections of Freetown including 15 slum communities with a population of 266,000, by improving access to water and sanitation services.

2. The Project

The British government, through, DFID supported the Freetown WASH Consortium to carry out a 3 year project from January 2010 to March 2013 in vulnerable areas of Freetown with a budget of £4 million pounds.

The Freetown WASH Consortium was set up in 2009 and consists of 5 international NGOs, OXFAM, CONCERN Worldwide, Save the Children International, GOAL Ireland, and Action Contre le Faim, supported by a Consortium Coordination Unit.

¹ [MICS 4](#), Dec 2011

² WHO, [Global Health Observatory](#), 2009

³ [MICS 4](#), Dec 2011



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The project has evolved along with the Consortium and although the outputs have remained the same various activities have changed. In October 2011, the log frame was revised and strengthened to improve the links between activities and outputs. A stronger focus was also given to advocacy activities. No baseline KAP survey was conducted and instead a midline survey was carried out in February 2012.

In 2012, a cholera epidemic affected the country and resulted in excess of 22700 cases (and 290 deaths) nationwide of which nearly half were in the Western District (including Freetown). This outbreak and the election of November 2012 disrupted the project which DFID agreed to extend by two months until 31 March 2013.

3. Expected outcomes

3.1 Project Goal - to contribute to a decrease in child mortality and morbidity and assist the Government of Sierra Leone to reach their millennium goals in 2015.

Table 1 – Indicators for project goal, mortality and morbidity for children under 5

Indicators (for target population)	Midline survey (February 2012)	Endline result (April 2013)
% of households reporting a case of diarrhoea in a child under 5 in the last 2 weeks	5.3%	1.8%
% of households reporting a death due to diarrhoea in a child under 5 in the last 2 weeks	1.0%	0.3%

In table 1 the mid line survey conducted by Nestbuilders in January and February 2012 showed a rate of 5.3% of **households reporting a case of diarrhoea in a child under 5 in the last 2 weeks** against a rate 1.8% in the final KAP survey in April 2013. This appears to show a threefold reduction in the rate of diarrhoea in children under 5 since the beginning of 2012.

In trying to explain this change it should be mentioned that between the two surveys the area experienced a cholera epidemic and the population may have increased positive hygiene behaviours as a result of the extensive hygiene promotion during the epidemic (hand washing, drinking treated water etc) which then resulted in fewer cases of diarrhoea. Results from the next phase will give a better guide to longer term trends in diarrhoea for children under 5.

It was originally intended that to use data from diarrhoea cases at the PHUs in the targeted areas and compare it with data for Freetown, but it was found not to be not accurate enough and were not used.

In the second phase of the project it is planned to improve the indicators and additional information will be collected in order to have a more complete assessment and a better understanding of diarrhoeal trends including seasonal changes.



3.2 Principal objective - to improve water and sanitation services, hygiene behaviour, and disaster preparedness in vulnerable Freetown communities.

The final numbers of those assisted by the project are in Table 2. The figures are very close to the project targets and the project can therefore be considered to have achieved its objective.

Table 2 – Numbers of people served in the project

	Project target	Project actual
Population served with safe water	147,000	144,400
Population with access to improved sanitation	29,000	33,770
Population enabled through awareness raising about improved hygiene behaviour	408,000	383,000

4. Outputs

4.1 Output 1 - Men, women and children in the target population have increased access to, and make optimal use of, safe and appropriate water and sanitation facilities, and take action to protect themselves against threats to public health

The majority of project activities are included in this output and one of the key elements is increasing access to potable water for the target communities. Table 3 shows the number of water points planned and achieved. 6 **gravity systems** were planned and 1 built. In addition 14 **wells/boreholes** were planned and 20 were constructed (with an additional 4500 beneficiaries). It was also planned to extend the GVMC network at various points and fit 89 new tap stands but only 40 were done.

Table 3 – Indicators for Output 1 (water)

Indicators (for target population)	Project target	Project actual
No. of improved wells/boreholes constructed	14	18
No. of gravity systems constructed	6	1
Additional taps from extensions to GVWC network	89	40
No. of households who received the household water treatment kits	12,920	13,521
No. of households utilising the household water treatment kits		498

The differences between the targeted figures and the actual figures can be explained by priorities changing for technical reasons. It became apparent that there were not enough springs with sufficient yield and water quality to supply the target area. In addition, GVWC were not able to supply enough water at sufficient pressure for many of the target city sections. It was therefore decided to increase the numbers of wells and boreholes and decrease the numbers of gravity systems, taps and extension systems. One of the gravity systems (Mamba Ridge) was able to supply a large number of people (over 20,000) and it was therefore decided to invest in this system rather than smaller gravity systems.



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The project faced technical difficulties in the construction of Mamba Ridge gravity system and in the construction of boreholes. Some of the target communities are in places where groundwater supplies are poor and yields, although sometimes sufficient, need to be well managed. For the second phase of the project additional technical support will be sought to reduce the risk in the exploitation of groundwater in these areas.

Over 13,500 household **water treatment kits** were distributed to households who did not have sufficient access to potable sources particularly during the cholera outbreak between July and October 2012. They included buckets and jerry cans.

Water quality monitoring has been carried out on the GVWC network and project water systems to support and build quality control capacity. About 60% of samples were found to have acceptable levels of chlorine consistently throughout the project. Through the monitoring process it has become clear that the GVWC chlorination process is insufficient to ensure that adequate levels of chlorine are present throughout the network, and as the network has enlarged it has become even more difficult. A major element of the next phase of the project will be to boost the level of chlorine so that water taken at all water points consistently shows adequate levels. This will be achieved by setting up booster chlorination systems within the network.

Table 4 – Indicators for Output 1, water (con)

Indicator (target population)	KAP (Feb 2012)	KAP (Apr 2013)
Average amount of water taken from protected sources	20.7 l/person/day	33.6 l/person/day
% of households accessing water from improved sources	93.7%	88.3%
% of households accessing water from improved sources within 30 min walk	74.6%	59.6%
% of households with access to improved sanitation facilities	74.7%	81.0%

In table 4 the midline KAP survey shows 93.7% of **households in targeted city sections are accessing water from improved sources** and the final KAP survey shows only 88.3%. In addition, the **number of households accessing water from improved sources within a 30 min walk** has also reduced. Since the project has constructed and improved many new working water points it is disappointing that the survey does not reflect their use. This is contradicted by the **average amount of water consumed by the population from protected sources**. The reason that the figures do not reflect the results of project achievements may be due to problems with the GVWC supply. If it was more difficult to obtain water from GVWC it would be understandable for water collection from improved sources to go down (as people sought water from other sources). In addition one would expect that the population would walk further to get water from improved sources. It does not however explain the increased quantity of water consumed from the improved water sources.

For the next phase it is planned to measure key indicators on a more regular basis to improve the ability to measure impact and our understanding of WASH trends over the course of the project.

GVWC presently supplies about 60% of the water for Freetown. The supply and network was designed several decades ago for a fraction of the population. In the intervening years the network has become dilapidated and inefficient so there is not only insufficient water but much of the water produced is lost through leakage. Changes in pressure in the system tend to affect the target population more than others as they live in places which were not designed to be served by the network. Therefore extensions to the target population have in some cases provided some water but this has rarely been sufficient, and is sometimes only available at antisocial hours. Weaknesses in the GVWC network therefore affect access to water by the target population. These are often difficult for the project to influence.



Pump caretaker training, Robis, Freetown, January 2013 (OXFAM)



Table 5 – Indicators for Output 1 (sanitation and health education)

Number	Project target	Project actual
No. of single latrines	0	0
No. of shared household latrines constructed	140	280
No. of communal latrines	10	11
No. of ECOSAN latrines constructed	125	75
No. hand washing units constructed at latrines (all types)	152	321
Number of water containers (bucket, jerry-can, etc) with lids distributed	N/A	175
Number of people participating in hygiene promotion events/sessions	57,000	248500
No. of children under 5 at <u>Health Centres</u> who received ORS/extra fluids sachets	N/A	64551
No. of children under 5 who received ORS sachets from <u>Blue Flag Volunteers</u> (60% since Mar 2012)	N/A	38944
No. of NEW Blue Flag Volunteers Trained	520	694
No. of Blue Flag Volunteers that participated in a REFRESHER training	920	2799

Table 5 show indicators related to sanitation and the support to Blue Flag Volunteers. Since the targeted areas have little outside space for constructing latrines it was decided not to construct individual latrines but to focus on **shared and communal latrines**. **Household hand washing stations** were not supported for the same reason. **EcoSan latrines** were a type of shared latrine that was piloted. Buckets and jerry cans were distributed in the household water treatment kits. This indicator is not therefore relevant to the outcome of this project. The communal and shared household latrines have been very popular although it has been a challenge for the WASH Committees to collect sufficient revenue to manage their upkeep. In the next phase of the project additional support will be given to management to make the latrines more sustainable and changes will be made to the tariff systems for communal latrines to make them more affordable.

Improvements in the management of faecal sludge are an important element of the programme that was reflected in the indicators. The project has been working with groups of pit emptiers to improve their conditions by introducing simple technologies for emptying latrine pits. In addition 2 faecal sludge transfer stations have been constructed. This work, although it does not appear directly as helping the targeted population in waste management, is vital for the improvement and sustainability of the faecal waste management system.



An important element of the project was the development of Blue Flag Volunteers as a community hygiene mobiliser and the first point of contact for giving ORS in the case of diarrhoea. The Blue Flag Volunteers performed a vital role in treating people particularly around the cholera outbreak, and reducing the pressure on the PHUs. This is reflected in the numbers of ORS sachets that were distributed.

Table 6 – Indicators for Output 1 (health education)

Indicator (target population)	Midline (2012)	Endline survey
% of households reporting giving ORS/extra fluids to a child U5 with diarrhoea in the last 2 weeks	ORS Male = 80.0% ORS Female = 72.7% Total ORS= 78.3%	ORS Male = 62.5% ORS Female =61.5% Total ORS=62.1%
% of households that report taking a child under 5 with diarrhoea to the clinic for treatment in the last two weeks	Male child 40.0% Female child = 54.5% Total = 47.6%	Male child= 50.0% Female child =46.2% Total = 48.3%
% of households in targeted city sections having a hand washing facility	2.5%	15%
% of households who report washing their hands with soap at least 3 key times during the day	3%	30.1%
% of households safely storing drinking water in a clean and covered container	52.5%	43.1%

Table 6 shows outputs related to health education. Since **the numbers of cases of diarrhoea for children under 5** in the endline KAP survey are less than for the midline survey it is to be expected that there would be fewer ORS distributions. Perhaps households take children more often to the clinic if there are fewer cases of diarrhoea (it becomes an sickness that is “special”).

The **numbers of households with a hand washing facility** has increased dramatically (from a very low base). Likewise the **number of people who reported washing hands 3 key times a day** has increased. The fact that both have increased is consistent with the large effort in hygiene education during the latter part of 2012. However, the dramatic change in hygiene behaviour is not reflected in the storage of water, which shows a small decrease.

4.2 Output 2 - Improved capacity of community members in target city sections and of relevant GoSL stakeholders to prepare and respond to localised disasters and disease outbreaks such as cholera

There were 1407 **reported cases of cholera in the targeted areas in the epidemic** between April and October 2012 (the rainy season) and 128 cases from November to March 2013. In the Western Area the number of cases between June and December 2012 was 11,798 (with 97 deaths). **The cholera rate for the whole Western Area was about 1 case in 100 persons. The rate for the project targeted areas was about 1 case in 200 persons.**



In 6 city sections, those that were most at risk from disaster groups were trained in Disaster Response and Preparedness, mainly for cholera and disease outbreak but also flooding in certain city sections. The city sections most at risk are Greybush, Mabella, Susan's Bay, Kroobay, Rokupa, Kuntoloh.

6 out of 30 city sections where the project is working have a Disaster Response and Preparedness plan and are using it.

It was planned for the Consortium to train 70 staff in relevant GoSL institutions on disaster preparedness and response. Over the course of the project 151 staff were trained.

It was not possible to measure **the number of communities reporting an improved government response** since the emergency occurred last year and it could not be readily compared with other disasters.

4.3 Output 3 Strengthen capacities of, and influence relevant stakeholders to plan and coordinate delivery of WASH activities in an accountable and timely manner within wider urban planning

WASH committees have been an important focus during the project. They provide the link between the service suppliers and the community, and their standing in the community and their relationship with government institutions is crucial in ensuring that services are maintained. **Over the course of the project it was planned to form 30 WASH Committees trained but by the end 27 had been formed and received training.** This training included technical, financial and managerial elements.

The target of the number of water management structures (WASH committees) in target city sections that are collecting revenue was 26 and this was achieved.

However some of these structures are not sufficiently profitable to pay for maintenance and other expenses and so only 16 were found to be earning enough to operate sustainably, against a project target of 26. The main reasons for this shortfall are problems with water supply from the GVWC network leading to refusal by members of the community to pay for water. In addition there have been isolated cases of management difficulties due to community tensions that have led to the mismanagement of funds. The Consortium is working closely with these communities to build their capacity to resolve local problems and enabling them through training to lobby FCC and GVWC themselves for improvements to their water supplies.

An initial target of the project was the production of a community led water management manual. This was intended to be taken up by GoSL and used by them and other partners.

It was planned to register at least 20 WASH committees as Community Based Organisations and the project achieved the registration of 19. As a CBO a WASH Committee has a legal status which gives them more influence within the community and the opportunity to better manage and borrow funds. Unfortunately there have been various difficulties including resistance by the FCC and individual councillors to allow some WASH Committees to become CBOs. The Consortium is presently advocating with the key local government agencies to resolve this problem.

Regular 2 monthly meetings are held between the Consortium the FCC, GVWC, other government stakeholders, the Consortium, NGOs, UN agencies, and civil society, with the Consortium taking a lead in the process. Relations between the GVWC and FCC have considerably improved and the meetings have allowed WASH issues to be debated and problems resolved affecting disadvantaged communities of Freetown. In addition there have been increased numbers of field visits to discuss technical issues such as the siting of tap stands, community management, and other issues.

As part of its support to government stakeholders the Consortium assisted the FCC with finalising, publicising and distributing its 2013 Development Plan.



Councillor Maxwell Lebbie of Grey Bush taking part in community advocacy training, February 2013 (Concern)



4.4 Output 4 - Influence WASH sector financing and policy in Sierra Leone through direct lobbying and support to develop a sustainable campaign movement around the right to water and sanitation

The Consortium advocacy strategy was established to influence sector policy making and to uphold the right of citizens to quality water and sanitation services. It has been working together with WASH-Net, a consortium of 87 local NGOs that has become the citizen's voice for WASH matters. WASH-Net with the support of the Consortium has provided civil society attendance at key policy processes and in a 'right to influence WASH' campaign to create greater space for effective participation in WASH policy processes policy and financing. Advocacy opportunities included Hand washing day, World Water Day, radio and TV debates.

During the elections the Consortium and WASH-Net with other organisations took advantage of the election process to advocate for improved WASH services with a successful "I'm voting for safe water and sanitation" campaign.

The project has been actively involved with tracking the GoSL budget. Policy responses were given on the Rural Water Supply Strategy and direct lobbying was made to influence the sanitation budget through 2 policy briefs. Although it is accepted that sanitation situation in the country is poor the GoSL are contributing very little in investment. It has been established that the proportion of national budget allocated to sanitation in 2012 was 0.018%, a decrease of 30% since 2010. Recently GoSL has promised to devote 1% of its budget to sanitation by 2015 rising in increments with 0.3% for 2013 and 0.5% in 2014. The mechanisms are now in place for the Consortium (amongst other agencies) to monitor and lobby the government regularly to deliver its promises. Work is ongoing to track the proportion of national budget allocated to water and hygiene, and to track cumulative donor contributions to WASH in Sierra Leone for 2013.

Some training was carried out by the Consortium to enable WASH Management committees to lobby duty bearers for increased services however there was not enough time to measure the number of committees actually lobbying duty bearers before the end of the project.

5. Conclusion

The project was completed on time and within the budget, and the target population served by water and sanitation and which had increased positive hygiene behaviour, was largely reached. Although there were various changes in technical approach during the project appropriate WASH structures were put in place that were appreciated and owned by the target population. Challenges remain to ensure the sustainability of communal facilities by improving collection and disbursement of revenues. The support of WASH committees and their development as CBOs to enable them to engage with service providers should strengthen this process.



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Disaster Preparedness was tested by the cholera outbreak in 2012 and although the cholera response was slower than planned the systems put in place responded reasonably well. The project area developed disaster preparedness plans in 6 vulnerable city sections.

Considerable effort had been made by the Consortium to work with government agencies in partnership with other initiatives supported by other organisations (such as Adam Smith International) to bring together WASH and local government stakeholders for Freetown. This approach has shown particular success in connecting the GVWC and FCC. This relationship improved further in early 2013 following an internal review by the GVWC, which then became more open to discuss problems with the management of water supplies with other stakeholders. Important decisions and discussions about the WASH sector in Freetown have since been carried out and developed.

The advocacy output started late in the project but achieved a great deal in the last 2 years with a number of influential media events and an important role in the budget tracking initiative to hold the GoSL to account for promises in WASH investment. In addition project support to WASH-Net has raised the profile of civil society within the WASH sector and their “right to WASH”. This is enabling communities to lobby service providers and demand better services.

Great efforts were made to ensure that the project worked through local community structures and was as sustainable as possible. However there remain challenges to ensuring that income from all water and sanitation facilities is adequate to ensure their longevity. In addition it should be added that the project was relatively limited in scope and higher levels of investment are needed in urban planning, waste management, and water supply to sustain major improvements in WASH services.

The work has in general has been managed at a small scale and community level, and the impact on the environment has generally been seen to be positive. Particular areas of improvement include local drainage systems, improved management of faecal sludge, and small scale solid waste management.