This report is commissioned by Action Against Hunger | ACF International. The comments contained herein reflect the opinions of the Evaluator only.
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EXECUTIVE SUMMARY

As a consequence of a post-election conflict in neighbouring Ivory Coast, thousands of refugees started fleeing to border villages in Eastern Liberia from early December 2010. A camp was set up in Bahn, Nimba County to serve a proportion of these refugees. In January 2011, ACF was requested by UNHCR to provide WASH services in the camp. ACF accepted and ran a WASH project in Bahn Camp from February till December 2011.

In March 2012, this end-of-project evaluation was conducted. The project is evaluated against the DAC criteria: Impact, Sustainability, Coverage, Coherence, Relevance/Appropriateness/Timeliness, Effectiveness and Efficiency. The evaluation report starts with a timeline of the project throughout 2011. This is followed by a description of the evaluation’s methodology, the findings of the evaluation, conclusions and recommendations. In the three annexes there are the DAC-table (a synopsis of the findings), a description of the best practice (which is “the provision of appropriate WASH services for less- and disabled in Bahn Camp”) and a reflection on the way forward for GWEI.

Timeline
ACF started activities at the beginning of February and before the arrival of the first refugees in the camp, mid-February, had established sufficient facilities for these first arrivals. Water is trucked from a distance source to the camp where it is treated and distributed. This trucking exercise lasted till November. Additional boreholes are drilled, but since their respective yields are relatively limited, they are provided with handpumps. In May, one high-yielding borehole is developed, however no suitable submersible pump is available until October. Unfortunately, the construction of a water distribution system with water tower is delayed and only functional in December.

The project starts with construction of emergency latrine with a ratio of 1:50. As the pace of arrival of refugees remains relatively slow, the ratio is soon increased to 1:20. The design of the ventilated pit latrines is constantly improved: the diameter of the ventilation pipe is increased in time, the pipes are painted black for better ventilation and the base of the superstructure is reinforced at some point for better stability. It is also thanks to proper attention given by the project to cleaning and maintenance that the facilities remain in relatively good shape and cleanliness throughout the intervention.

Specially designed latrines are furthermore constructed for less- and disabled refugees. Unfortunately this is only done as of June with the arrival of a dedicated student for this. The project also provided bathing and laundry facilities as well as a well-functioning solid waste management system. All construction activities are constantly kept in pace with the population figure of the camp, assuring sufficient facilities at basically all times.

Thanks to the experience of ACF (-Liberia) with hygiene promotion and the existence of a network of experienced promoters, the project was able to deploy a large hygiene promotion team in the camp right from the start. This enabled the project to gather relevant information from the refugees (e.g. on existing hygiene practices, cultural and gender issues) as to provide the most appropriate facilities. At the same time, ‘general’ hygiene
promotion was done to inform and train the refugees in hygiene practices required in an
dense, emergency setting. In May, a three-day training is organised in which 100 refugees
are trained as community hygiene volunteer. Besides providing hygiene promotion, they
also care for the WASH facilities and assure proper use by the refugee population.

Impact
The overall (or project) objective is “to contribute towards the prevention of water-sanitation
and hygiene related diseases among Ivorian refugee hosted in Bahn Camp”. With the
absence of a control group it is impossible to indisputable conclude whether this objective
has been met. Considering however that nearly all specific objectives have been met, it is
reasonable to state that the intervention had a high impact in contributing towards the
prevention of water-sanitation and hygiene related diseases among Ivorian refugee hosted
in Bahn Camp.

The overall objective is contributed to by achieving the following specific objectives (SOs):

1. The refugee population has access to 15 litres of water/day suitable for drinking, cooking
   and personal and domestic hygiene.
   Through a combination of water trucking, boreholes with handpumps and (eventually) a
   motorised borehole with distribution network, the project managed to provide a minimum of
   15 litres of safe water per person per day.

2. Refugees have adequate supplies to collect, store and use sufficient quantities of water
   for drinking, cooking and personal hygiene, and to ensure that drinking water remains
   sufficiently safe until it is consumed.
   One hygiene kit per family was provided by the project. They include all that is required for
   sufficient and safe collection, storage and handling of water, potties (as relevant) and soap.
   Soap was distributed on a regular basis.

3. Refugees have sufficient numbers of toilets, sufficiently close to their dwellings to allow
   them rapid, safe and comfortable access at all times. The facilities are properly
   constructed and maintained in such a way as to be comfortable, hygienic and safe to use.
   The project provided one latrine (cubicle) per 20 people, gender-separated. In addition, 26
   specifically designed latrines were provided for less- and disabled. Due to camp planning
   and lay-out, latrines were constructed in sanitary corridors. As a result the distance between
   the latrine and refugees’ shelter was more than 50 meters (Sphere-standard). They were
   however at all times within reasonable distance and thus well accessible. They were well
   maintained by a team of (paid) cleaners, supported by a large number of community
   hygiene volunteers.

4. Water and hygiene areas are accessible and hygienic, free from floods, standing water
   and risk of water erosion.
   All facilities have been provided with adequate drainage and run-off provisions. Grease
   traps and soak-away pits have however not been provided in all cases. There are no
   reports however that this has had consequences.

5. Refugees have an environment that is acceptably free of solid waste contamination and
   have the means to dispose of their domestic waste conveniently and effectively.
   Sufficient numbers of waste pits and waste collection bins have been provided to the
   refugees by the project.
6. The affected population is aware and is capable to change, priority hygiene practices that prevent the greatest risk to health.

The project included an extensive hygiene promotion component. With a large team of hygiene promoters and a hundred trained community hygiene volunteers, the project established close proximity. As a result, effective, two-way communication was possible between the beneficiaries and the project (team). This meant that valuable information was easily accessible to the project, gaps were easily and quickly identified and addressed while at the same time the refugees were informed about and trained on correct and appropriate hygiene practices.

7. Refugees have adequate facilities in order to use sufficient quantities of water for personal hygiene.

The project provided approximately one bathing cubicle per 60 people; gender-separated. Furthermore, 23 laundry platforms have been constructed. These facilities have also been constructed in the sanitary corridors, meaning that they are within 100 metres from any shelter.

8. 15,000 refugees benefit of improved WASH facilities at the Bahn Camp.

This SO (from the ECHO logframe) is further detailed by four activities:

i. Construction of 1 elevated tank for increasing water pressure in the camp. The tank is expected to be connected to the UNHCR funded pipes network;

ii. Drilling of 2 boreholes providing potable water;

iii. Improvement of construction standards for ventilated improved latrines in the camp; and

iv. Construction of 10 latrines with special standards, in order to facilitate access to less-abled.

These four activities have all been implemented, except that only one borehole has been drilled instead of two because the number of refugees remained behind.

Sustainability

Due to the nature of the intervention, it has not been sustainable, in the sense that the provided services would continue functional without external assistance. And although the project started working on an exit strategy already in July, due to UNHCR unclear and unreliable policy the project eventually handed over to UNHCR in a hurry.

The motorised water distribution system is furthermore a non-sustainable option. With an expected camp population of 15,000 such a system was inevitable. However, once it became clear that the camp population would not grow beyond 7,000 people, other choices could have been made.

Coverage

Eventually, the project provided WASH services to approximately 6,000 refugees. Basically all minimum WASH requirements (Sphere and/or ACF) have been adhered to. This means that all beneficiaries received minimum 15 litres of safe water per day, that they had access to an appropriate latrine and bathing facilities and was informed about correct hygiene behaviour and practices.

Coherence

The project included water supply, sanitation (excreta disposal and environmental sanitation) and hygiene promotion. The different project components were coherent and reinforced one-another in addressing the immediate needs of the refugee population in Bahn Camp.
Collaboration with other implementing agencies in Bahn Camp went well, but due to the reluctance of UNHCR to formally agree the project proposal and budget, the relationship with UNHCR was not as good. As a result, the project has to resort to other funds, which eventually has an effect again on the coherence of the intervention, as this required double reporting and accountability. In a sense, the project was faced with the dilemma of sticking to one – unreliable and uncertain – donor or to tap into other resources, blurring the intervention and coherence. The project choose the latter.

Relevance/Appropriateness/Timeliness
The intervention as a whole is conceived highly relevant and appropriate. With few exceptions, all refugees’ needs have been addressed timely and appropriately. The exceptions include the relatively late response to the needs of less- and disabled, the construction of a concrete water tower and tank and the amount of water testing done.

Effectiveness
The project effectively managed to achieve all its objectives in terms of meeting the minimum requirements and thus addressing the WASH needs of the refugees. It seems fortunate that the anticipated target population of 15,000 has never been reached as in this case the project would have been faced with an immense challenge to provide the respective water needs.

Efficiency
Initially, it was anticipated that the camp would grow to a maximum of 18,000 refugees. This was soon reduced to 15,000, as the number of arrivals lacked behind. Eventually, the camp population only slowly grows to approximately 5,000 by June 2011 and 6,000 by August. Nonetheless, UNHCR maintains for a long time that the anticipated number is correct and will be met. The uncertainty of the population number makes it extremely hard for the project to properly – and efficiently - plan the intervention.

At the same time, the project struggles to secure the (verbally agreed) UNHCR funds. This further complicates – efficient – planning of the intervention. The fact that the project overall has been relatively inefficient is partly accounted for by the above.

The project has however also made a number of choices and decisions which further lowered the efficiency. Aside from certain technical choices, the amount of human resources employed for this (relatively small) intervention is the largest contributor to the project being less efficient. Both the size of the expat as of the hygiene promotion team could have been smaller without compromising the project results.

Recommendations
Further to the recommendations done throughout this report to improve implementation and outcome of future (similar) projects, the main recommendations are on improvement of project efficiency. These concern enhanced project management, project planning and risk management.
1.0 BACKGROUND INFORMATION

1.1 General background

ACF has been implementing humanitarian programs in Liberia since 1990. Over this time, ACF has adapted its activities to meet both emergency humanitarian needs during periods of conflict as well as long-term development in the post-conflict era. ACF has developed expertise in Liberia in prevention and treatment of malnutrition, food security and WASH.

As a consequence of a post-election conflict in neighbouring Ivory Coast, thousands of refugees started fleeing to border villages in Eastern Liberia from early December 2010. With a host community already extremely vulnerable, the influx put a further pressure on already poor living conditions and scarce food, water and sanitation. To serve a proportion of the refugees and thus relieve pressure on the host communities, a camp was set up in Bahn. The site – allotted by the government - was poorly accessible and without any water source nearby. ACF was requested by UNHCR to provide WASH services in the camp.

Beginning of February 2011, ACF commenced its activities in Bahn Camp, prioritising water supply and emergency latrine construction for an anticipated 18,000 refugees. Within two weeks, and before the arrival of refugees in the camp, the project had set up water trucking and consequent treatment and distribution with a capacity of providing 5,000 refugees. In addition, and in anticipation of ceasing water trucking as soon as possible, ACF started drilling boreholes simultaneously. Soon after, bathing and laundry facilities, solid waste collection and hygiene promotion were also being catered for.

1.2 Timeline

Below, the evaluator provides an insight of the development of the intervention over time. This is not only helpful as a general overview, but also provides an insight in the process of the intervention as well as background information for certain decisions made and steps followed during the intervention.

January 2011
Early January the Liberian Refugee Relocation and Resettlement Commission (LRRRC) located a site to house an estimated 18,000 Ivorian Refugees. Mid-January ACF was requested to cater for the WASH services in this camp. The reason for this being that ACF had a relatively large stock of (emergency) WASH supplies in-country and could thus quickly respond. Only the Red Cross Movement (RCM) had comparable stocks, but they had decided to target areas where refugees were accommodated with Liberian host communities.

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1 The initial Letter of Mutual Understanding (LoMU) actually mentions Water Supply and (distribution of) Hygiene items.
2 The Red Cross Movement (RCM) consists International Committee of the Red Cross, the International Federation of Red Cross & Red Crescent Societies and the respective national society.
**February 2011**

ACF started working in the camp beginning of the month. Within two weeks, ACF had identified a water source, organised water trucking and set up a treatment plant providing 30,000 litres per day. In addition, two boreholes were completed, by GWEI (commissioned by ACF), providing an additional 16,000 litres per day. At the same time, ACF started with the construction of ventilated latrines; in this phase with a ratio of 1 latrine per 50 people. All well in time before the arrival of the first refugees mid-February.

As soon as refugees started arriving, hygiene promotion was included in the services. Specific cultural, gender or other aspects were assessed by an extensive hygiene promotion team through surveys and focus group discussions. This provided valuable information and led for example to the decision to combine female bathing facilities with laundry areas, to construct female latrines in such a way that they could not be seen entering and to the construction of specifically adapted latrines for less- and disabled.

**March 2011**

As more refugees arrived in the camp, the capacity of the water trucking exercise and treatment plant was doubled to 60,000 litres per day. Water from the source was sent for analysing to the Ministry of Health’s laboratory and was declared heavily contaminated. The project immediately decided to use an alternative source, more distant and more difficult to access. Due to the poor road conditions, one truck broke down and as a consequence water supply in the camp was disrupted for a few days. Eventually, the test results proved to be false, so the primary source could be used again.

An additional geophysical survey was commissioned by ACF to assist in locating ten potential drilling sites for the remaining seven planned boreholes.

Experience and capacity for hygiene promotion activities could be diverted from other ACF interventions, so hygiene promotion was also covered extremely quickly in the camp. Latrine construction continued in pace with the development of the camp as did the construction of bathing and laundry facilities. Solid waste was also managed by providing means for garbage collection and disposal at block level.

Following the LoMU, ACF submitted a full proposal to UNHCR covering the period January 26th to June 30th.

A field visit of the Paris-based WASH Advisor was conducted in the second half of March. Only few recommendations were provided in the report, indicating that the project was essentially on target and meeting the minimum WASH requirements (ACF and/or Sphere).

**April 2011**

The exact camp population figures proved hard to be established. However, in April it became clear that most refugees were (for various reasons) reluctant to move to the camp.

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3 Groundwater Exploration Incorporated

4 The evaluator specifically does not qualify the latrines as Ventilated Improved Pit (VIP) latrines, as the latter require a specific design and positioning. Adding a ventilation pipe (preferably black and of certain diameter) with fly screen will definitely assist in reducing smell and the number flies, the fact that more than one cubicle is constructed over one pit (or rather a trench), the latrines have doors and (in some cases) lids, reduces again the positive effects.
In April, the camp population was estimated at around 3,000. Yet, ACF submitted an additional proposal for funding to ECHO, in which included was the construction of an additional two boreholes and of an elevated water tank with distribution system.

In the same month, three more boreholes were completed. Hygiene promotion activities were intensified and further adapted to beneficiaries’ needs and sanitation construction activities kept pace with the development of the camp. A second expat WASH manager was added to the team, as was a Reporting & Data officer.

The proposal submitted to UNHCR is accepted and the agreement signed in April.

May 2011
The fifth borehole finally had a substantial yield so to fit it with a motorised (deepwell) pump instead of a handpump. Unfortunately, such a pump was not available, so a handpump was still installed initially.

Supply and transportation issues delayed construction activities and the provision of IEC materials. Still, hygiene promotion continues and 100 refugees received trained to become volunteer outreach workers.

June 2011
The influx of refugees remains far below as anticipated. The project’s construction activities have all been completed, achieving coverage at or well over Sphere standards. At the same time, UNHCR does not provide clear guidance and plans for camp extension go up and forth. On request of other agencies, ACF constructs sanitary facilities at the schools and health centre. By the end of the month however, basically all construction work has been finished. To reduce cost – also as UNHCR funding remains uncertain – the majority of labourers’ contracts are suspended.

A no cost extension for July of the sub-project agreement is requested by ACF but not accepted by UNHCR. With ECHO funding, a pipe network with elevated water tank will be laid. The design is prepared in June.

July 2011
Refugees remain seemingly resistant to moving to the camp. However, an unexpected influx of 300 refugees at the end of June, sparked again the need for the two extension sites identified earlier. UNHCR presents a plan to facilitate relocating 250 refugees per week to the camp from host communities closer to the border. In this respect, the camp should host 10,000 refugees by the end of the year. In reality, only once organised UNHCR such a relocation.

Since the sub-project extension has still not been signed by UNHCR, the project does not carry out planned improvements to the sanitary facilities, such as drainage and grease traps. As ECHO funding is secured, the project does start with laying the distribution network\(^5\). The start of the construction of the elevated water tank, which has been contracted out to GBARMIE is delayed due to poor logistics and management by the contractor. The water trucking continues, but is now being financed by ECHO funds.

\(^5\) I.e. digging trenches; pipes have been ordered.
IEC materials finally arrive and are distributed among the hygiene promoters and volunteers.

**August 2011**
As UNHCR still anticipates 10,000 refugees in the camp by the end of 2011, an collaborative assessment is done for two possible extension sites. ACF takes part in the assessment and is requested to conduct a geophysical survey as soon as possible. Before the end of the month, nothing further has been clarified nor communicated, so ACF responds to UNHCR that they will not do so until the sub-project agreement is signed and more clarification is provide.

Assisted by a PAT-Drill trainer and provided with a new drilling rig, the 6th borehole is drilled (on ECHO budget). ACF and GWEI staff receive training.

The hygiene promotion team is reduced from 15 to 10, due to the anticipated camp population figure of 10,000. Latrines are being improved and 26 latrines have been provided\(^6\) for less- and disabled people.

UNHCR agrees to a no-cost extension for three months (August, September and October) with a re-allocation of budget lines\(^7\).

**September 2011**
In September, the distribution network was completed, consisting approximately 2 km of G.I. and PVC piping and 72 taps. Since the water tower is far from completion, the system does not yet function. Instead, the submersible pump which came with the new drilling rig is installed so water can be trucked from the borehole instead. As a result, only one (smaller water truck is required to distribute water within the camp. Water trucking form the source is stopped.

KAP survey was carried out among the refugees which identified there were only few gaps in the WASH services provided. It also indicated that the beneficiaries had a relatively good understanding of hygiene practices and applied appropriate behaviour. About two-third of those interviewed is content with the available sanitary facilities. The other one-third claimed they did not use the latrines as they smell bad and/or are dirty.

**October 2011**
Another (ECHO funded) borehole was completed and provided with a handpump. An eighth borehole is also drilled in October in the anticipated extension. Latrine construction also commences in this cleared site. But as new arrivals continue to be absent, ACF does not complete the borehole\(^8\) and halts the latrine construction soon after.

The final submersible pump arrives and is installed in the high yielding borehole, ready to operate. However, as the water tower is still not complete, the network cannot function. The contract with GBARMIE was terminated due to negligence and the respective engineer and his team was hired directly by ACF to complete the work as soon as possible.

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\(^6\) Either upgraded from an existing latrine or newly constructed.

\(^7\) The overall budget remained the same.

\(^8\) I.e. does not install a handpump.
Due to weather and theft, latrines constantly need to be restored. Hand washing containers at the latrines are also being stolen. Global Handwashing Day (on October 15th) is taken as opportunity to respond to some of the results of last month’ KAP survey.

Despite several request from ACF, UNHCR provides no information with regards to funding the last two months of 2011. ACF therefore informs UNHCR of their plan to continue working in the camp until December 20th and requests UNHCR to guidance on who to hand-over to.

**November 2011**

The tank is completed, but failed testing due to leakage, most probably as a result of poor mixture and insufficient curing of the concrete. Water trucking had however stopped once the water tower had been connected. From this moment until the water tower was finally completed (in December), water was solely provided by eight hand pumps.

During November and December, the intervention was entirely funded through ACF internal funds.

**December 2011**

ACF replaces the malfunctioning concrete water tank with four polytanks and finishes the system just in time to hand-over the project. As UNHCR is not forthcoming with one or more hand-over partners, ACF informs them that they have identified two partners and have started hand-over preparations (i.e. briefing and training). On December the 16th, UNHCR informs ACF it has identified NCA as WASH implementing partner in Bahn Camp.

On 20 December ACF hands over its activities to UNCR with the plan for UNHCR to hand over the activities to NCA. ACF WASH staff who have been working in the camp are temporarily put under a contract with UNHCR to avoid interruption of services. NCA commences in Bahn on January 9th 2012, with part of the former ACF staff.
2.0 EVALUATION METHODOLOGY

2.1 Introduction

This evaluation has been conducted in line with the ACF Evaluation Policy & Guideline (EPG). The evaluation was commissioned by ACF-UK, on request of ACF Liberia. A Terms of Reference (ToR) was developed collaboratively between ACF-UK (Evaluations, Learning & Accountability (ELA) Unit), ACF-France (implementing HQ) and ACF-Liberia.

The EPG mentions various types of evaluations, yet the ToR did not specify the type that was intended for this evaluation. The evaluator believes the ‘Results’ type qualifies best, but still would have welcomed a more precise description of the scope of the evaluation in the ToR. WASH is namely an immensely vast domain and a WASH project evaluation can thus be approached from many different angles. Ranging from a rather abstract review of e.g. the funds seeking process to an extremely practical examination of, for example, the quality of the concrete the latrine slabs are made of.

Still, the evaluator is confident to have found an appropriate balance, appraising both abstract and practical issues.

2.2 Evaluation Methodology

The evaluation methodology consisted a combination of documents’ review, discussions, semi- and non-structured interviews, transect walks and structured observation.

The documents reviewed included Activity Progress Reports (APRs), project proposals, contracts, budgets, financial updates, drilling logs and transcripts of communication. Unfortunately, valuable information in the form of the complete electronic project file from the respective (field-based) WASH Managers only was presented to the evaluator halfway through the evaluation. As a result, the evaluation was conducted in a less efficient manner as it could have been. The documents’ review period before the field visit could have been more extensive and the field visit itself (thus) shorter.

Meetings, discussions and interviews (in person or by telephone or skype) were held with ACF’s Desk Manager, WASH Advisor. Head of Mission, WASH Coordinator, Logistics Coordinator, Financial Coordinator and Field Coordinator. Furthermore, meetings were held with representatives from UNHCR, UNICEF, GWEI, Norwegian Church Aid (NCA) and the Red Cross.

A half-day transect walk was undertaken in Bahn Camp, assessing the general situation, and the availability, accessibility and condition of WASH facilities more specifically. Several beneficiaries were interviewed in a semi-structured way, both at water points, sanitary facilities and in their living shelters.

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9 The available material initially only consisted of both UNHCR and ECHO proposal, amendments, mid-term and (draft) end reports.
2.3 Evaluation Schedule

The schedule of the evaluation was as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th># of days</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 – 22 March</td>
<td>2</td>
<td>Monrovia: documents’ review &amp; discussions</td>
</tr>
<tr>
<td>23 March</td>
<td></td>
<td>Travel Monrovia to Nimba</td>
</tr>
<tr>
<td>24 – 30 March</td>
<td>7</td>
<td>Nimba: field visits, discussions, documents’ review and report writing</td>
</tr>
<tr>
<td>31 March</td>
<td></td>
<td>Travel Nimba to Monrovia</td>
</tr>
<tr>
<td>1 – 3 April</td>
<td>3</td>
<td>Monrovia: documents’ review, discussions and report writing</td>
</tr>
</tbody>
</table>

Debriefings were held in Monrovia on April the 2\textsuperscript{nd} and in Paris on April the 4\textsuperscript{th}. The draft evaluation report was submitted on April the 5\textsuperscript{th}. After receiving comments, corrections and additions from ACF-Liberia, ACF-France and ACF-UK this report has been finalised and submitted mid-April.
3 FINDINGS

3.1 Introduction

The project has been evaluated against the seven DAC\textsuperscript{10} criteria, as required. The following paragraphs each describe one criteria. Duplication has been prevented as much as possible, however certain findings (or aspects) are described in two or more paragraphs. Recommendations are included in the paragraphs where appropriate. They are compiled in chapter 4.

3.2 Impact

The project is financed by two grant agreements\textsuperscript{11} from two separate donors; one being UNHCR, the other ECHO. As a result, the project is outlined in two separate Logical Frameworks (LF). The UNHCR sub-project LF fully covers the project; from the ECHO LF only one Result applies to the project\textsuperscript{12} (Result 3: “15,000 refugees benefit from improved WASH facilities at the Bahn Camp”).

The respective Overall (or Principal or Project)\textsuperscript{13} Objective of the ECHO LF is: “To meet emergency water needs and to prevent water borne diseases in refugees and host population in Liberia”. The UNHCR sub-project LF does not mention an Overall Objective, but assumingly reads: “To contribute towards the prevention of water-sanitation and hygiene related diseases among Ivorian refugee hosted in refugee camp”.

On the basis of merely the monthly incidence rate of diarrhoea in the camp, it is practically impossible to be conclusive. However, despite the absence of referral data and thus an epidemic threshold, it is safe to say that the available morbidity data (as limited as it is) does not indicate an alarming WASH situation, or the risk of an epidemic throughout the duration of the intervention. It can be concluded that the project “contributed towards preventing WASH-related diseases”.

The Overall Objective is furthermore contributed to by achieving the Specific Objectives (or Results). They are listed below, followed by a discussion on the achievements towards them.

\textsuperscript{10} Development Assistance Committee (Organisation for Economic Co-operation and Development)
\textsuperscript{11} The project is actually financed from three sources, being ECHO, UNHCR and ACF internal funds.
\textsuperscript{12} This agreement and LF describe an Action for 15,000 beneficiaries (host community and refugees) in the border area and for 15,000 refugees in Bahn Camp.
\textsuperscript{13} The terminology used in logframes Is not universal. If Overall Objective refers to the ultimate objective, the project merely contributes to, the overall objective of the project is referred to as Project Objective. In other cases, the project objective is considered Overall Objective. In this case, the impact is measured in regards to meeting the Overall (or Project) Objective.
Expected Result 1: The refugee population has access to 15 litres of water/day suitable for drinking, cooking and personal and domestic hygiene.

At the arrival of the refugees to the camp, mid-February, the project was able to provide 46,000 litres per day through a combination of trucking and two boreholes with handpump. Based on the daily consumption of 15 litres, this could cater for over 3,000 refugees. Within a month, both water being trucked as well as the number of boreholes went up to such an extent that in August, when the camp population figure had reached its maximum of approximately 6,000 refugees, the project was providing 11,000 litres per day.

With few temporary exceptions, all refugees had access to a water point within 500 metres. The number of water points were such that there were not more than 500 users per handpump and not more than 250 users per tap. Accessibility therefore also met minimum requirements (Sphere and/or ACF).

Water trucked from the distance source was being treated through, coagulation/flocculation, sedimentation and disinfection. Water was tested regularly on a variety of parameters, both at intake, treatment plant and collection points. All parameters were meeting the requirements, except for a too high Aluminium concentration as a result of a too high dose of coagulant. Corrective measures were taken immediately after observation.

Overall, it can be concluded that this Expected Result has been achieved throughout the intervention.

Expected Result 2: Refugees have adequate supplies to collect, store and use sufficient quantities of water for drinking, cooking and personal hygiene, and to ensure that drinking water remains sufficiently safe until it is consumed.

Family hygiene kits were distributed to all refugees. This kit included one jerry can and two buckets with lid. Since the project was in close proximity to the refugees through their extensive hygiene promotion (outreach) network, gaps in NFI’s (on household level as well as more fundamental) were quickly detected and addressed. From this information, it can be concluded that this Expected Result has been achieved. Further observations and interviews by the evaluator (after the intervention) confirms this conclusion.

Expected Result 3: Refugees have sufficient numbers of toilets, sufficiently close to their dwellings to allow them rapid, safe and comfortable access at all times. The facilities are properly constructed and maintained in such a way as to be comfortable, hygienic and safe to use.

At the onset of the intervention, ventilated pit latrines were constructed at the ratio of one latrine (cubicle) per 50 people. Very soon after, the ratio went up to 1 per 20 and separated by gender. Around female latrine blocks, protective screens have been placed to improve privacy and locks inside the doors for safety and comfort. Throughout the intervention, latrines were improved, upgraded, repaired and replaced as and when required. After an in-depth survey to locate and assess specific needs for less- and disabled refugees, 26 appropriately-designed latrines have been provided.
Every latrine block has been provided with a handwashing stand, which was refilled regularly with soapy water by the community hygiene volunteers (refer to Expected Result 6). Although it was observed by the evaluator (after the intervention) that most, if not all hand washing facilities were missing, it is believed that during the intervention they were present and functional.

In the coordinated camp development, centralised sanitary corridors were identified for each block (of shelters). As a result, it was not possible to adhere to the (Sphere and ACF) requirement of having the facilities within a distance of 50 meters from any shelter. In effect, the facilities were within 100 meters from any shelter.

Besides motivating the beneficiaries through IEC (refer to Expected Result 6) to properly use and maintain the facilities, a respective group of refugees was hired and paid by the project to regularly clean the facilities. As part of the intervention’s exit strategy, this stopped in December, after informing, explaining and motivating the refugees to self-arrange this from then on.

From a KAP survey, conducted in September, it is understood that two-thirds of the respondents were satisfied with the facilities with regard to comfort, hygiene and safety. This implies that one-third was dissatisfied, representing some 2,000 refugees. This is a large proportion. This could be justified by the timing of the survey; September has the highest precipitation, and around that time there were some complaints of maggots’ invested latrine pits.

Through observations (after the intervention) the evaluator is of the opinion that the facilities appeared relatively clean and well cared for. Again, the conclusion is that this Expected Result has been achieved.

**Expected Result 4: Water and hygiene areas are accessible and hygienic, free from floods, standing water and risk of water erosion.**

As the evaluator only visited the camp in March, he relies on verbal and written information to obtain an impression of the situation in the rainy season. Observation (after the intervention) confirms that all WASH facilities have provisions for water run-off and flood prevention, however soak away pits or other infiltration provisions seemed inadequate. It is also reported that (due to uncertainties surrounding UNHCR funding) some of these provisions were required and considered but not constructed.

On the basis of the above, the evaluator concludes that this Expected Result has not been achieved completely.

**Expected Result 5: Refugees have an environment that is acceptably free of solid waste contamination and have the means to dispose of their domestic waste conveniently and effectively.**

In every block, several (covered) waste pits were dug. In addition, waste collection bins were placed throughout the camps, such that every household had one bin or pit within 50 meters from its shelter. Observation by the evaluator (after the intervention) revealed that

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14 As compared to numerous other camps visited by the evaluator in similar contexts.
many bins were still available and in use and every block had (at least) one pit available. Unfortunately, pit covers were not present anymore. Overall, the camp looked clean and free from litter. In conclusion, it can be stated that this Expected Result has been achieved.

**Expected Result 6:** The affected population is aware and is capable to change, priority hygiene practices that prevent the greatest risk to health.

ACF has been providing food, health and hygiene education (or promotion)\(^{15}\) for many years and as a result has extensive experience and capacity in this field. This resulted in a rapid incorporation of a sound hygiene promotion component in the project. A good combination of both collecting and providing relevant information on hygiene knowledge, attitudes and practices was applied from the start of the arrival of refugees in the camp. In this respect, the IEC was very quickly specific, adapted and appropriate to the context and had a major coverage.

Besides an extensive ACF team of hygiene promoters, 100 community hygiene volunteers received training, took care of the basic maintenance\(^{16}\) of WASH facilities and conducted household-visits, focus group discussions and other outreach activities. Unfortunately, due to logistical constraints, the team experienced delay in receiving the appropriate IEC material.

From the same KAP survey as mentioned under Expected Result 3, the overall conclusion is “that the refugees have good hygiene standards”. However, domestic water handling and storage and hand washing after handling children’s faeces require further improvement. This was addressed immediately by specifically targeting these specific practices hereafter.

Furthermore, the survey identified two more areas identified that required improvement and/or research: 1) menstrual hygiene and 2) mosquito nets. With regards to 1), please refer to § 3.6. With regards to mosquito nets, the following. Whether malaria control, or at least vector control, falls under the WASH domain (or environmental health) or under (public) health is subject to debate. The evaluator advocates it should preferably be addressed in a holistic manner (i.e. malaria control, rather than prevention, and prevention rather than vector control), and by the most suited actor (i.e. the most experienced and/or with the required capacity and resources). In this case, to the opinion of the evaluator ACF was not the most suited actor for this. In addition, none of the LF’s specifically mentions malaria or vector control (other than in reference to stagnant water). As a result, the evaluator did not consider nor review the respective activity.

**Recommendation 3.1**

Malaria control should preferably be addressed in a holistic manner by the most suited actor. When mosquito nets (LLITNs\(^{17}\)) are being distributed, relevant and appropriate IEC should also be provided.

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\(^{15}\) Though not entirely similar, the terms ‘promotion’, ‘education’ and IEC are all used by the evaluator in the same meaning.

\(^{16}\) The community hygiene volunteers kept the WASH facilities clean from litter and dirt. In addition, paid cleaners properly cleaned the latrines and showers.

\(^{17}\) Long-lasting Insecticide Treated Nets
On the basis of verbal and written information, the evaluator concludes that Expected Result 6 has been achieved.

**Expected Result 7**: Refugees have adequate facilities in order to use sufficient quantities of water for personal hygiene.

Though clearly included in the sub-project description, this Expected Result does not appear as such in the respective (UNHCR) LF. Both in the LF as in various reports this Expected Result gets somewhat diffused over the previous six. The coinciding activities are a mixture of construction of bathing and laundry facilities (and even water collection points) and of organizing maintenance of the facilities plus distribution of the materials required to do so. As the latter has already been discussed under Expected Results 3 and 6, here only the availability of (adequate) bathing and laundry facilities is considered.

A total of 105 bathing cubicles, separated for men and women, have been constructed throughout the camp. With a maximum camp population of 6,000, this adds up to 1 bathing cubicle per 57 people; well beyond the target ratio of 1 per 100. A further 23 laundry platforms have been constructed, thus maximum serving (on average) 260 people. This also is well over the target ratio of 1 per 1,500. As the facilities were evenly spread throughout the camp and situated in the allocated sanitary corridors, they were within 100 meter from any shelter.

Expected Result 7 has thus been achieved.

**Expected Result 8 (ECHO LF Result 3)**: 15,000 refugees benefit of improved WASH facilities at the Bahn Camp.

This Expected Result further identifies four Activities:

1. Construction of 1 elevated tank for increasing water pressure in the camp. The tank is expected to be connected to the UNHCR funded pipes network;
2. Drilling of 2 boreholes providing potable water;
3. Improvement of construction standards for ventilated improved latrines in the camp; and
4. Construction of 10 latrines with special standards, in order to facilitate access to less-abled.

Although the project faced terrible delays in the construction of the elevated tank, by the end of the intervention, it was completed and operational. However, instead of the planned 27 m$^3$ concrete tank, four plastic polytanks with a total volume of 22,7 m$^3$ were installed eventually. The tower is made out of concrete.

One borehole was drilled (in addition to the seven included in the UNHCR LF). As the number of refugees did not reach over 6,000 the total volume of water produced by the existing boreholes was sufficient. As a result, the second borehole was cancelled. Improvements, upgrades, repairs and replacement of latrines was constantly done throughout the intervention, as described under Expected Result 3.

Research has been conducted by an international student on the issue of providing appropriate sanitary facilities to less- and disabled refugees. The research targeted
handicapped, elderly and pregnant women, and started identifying the target population and establishing the respective numbers. Hereafter, a highly participative process followed of assessing specific needs and defining solutions and designs. Eventually 10 specially designed latrines have been constructed and another 16 latrines have been modified to facilitate less- and disabled refugees.

Although with adjustments to the original plans, it can be concluded that Expected Result 8 has been achieved.

As discussed at the introduction of this paragraph, through this evaluation it is only feasible to provide a conclusive judgement of the direct (immediate) impact of the intervention. And even so, this is principally done by the assessment of Expected Results being achieved. As nearly all Expected Results have been achieved, it can be concluded that the intervention had a strong impact on contributing to the prevention of WASH-related diseases among the Ivorian refugees hosted in Bahn Camp.

3.3 Sustainability

The evaluator is of the opinion that evaluating the sustainability of a humanitarian (emergency) intervention should be in accordance with the duration of the intervention. In this respect, the evaluator strictly assessed the sustainability of ACF’s WASH intervention during implementation and at the time of departure (of ACF from Bahn Camp).

The location of the camp had been selected on other grounds than water availability. It was therefore inevitable that water had to be trucked in initially. This was acknowledged by both donor (UNHCR) and implementing actor (ACF) and the required funds were made available without much debate. At the same time, it was a common understanding that water trucking was no sustainable, nor efficient option. Therefore, additional boreholes were to be drilled that would gradually replace the trucking. With an anticipated 18,000 refugees, would imply a need for 34 boreholes if they would all be fitted with a handpump. It was therefore anticipated (and hoped for) that one or more boreholes would produce a considerable yield, so it could be fitted with a submersible pump and connected to a distribution system.

The latter is obviously less (financially) sustainable than covering the water demand solely by Afridev hand pumps which qualify as VLOM. In light with the expected population figures and corresponding water demand, it is however justifiable that the project opted for the lesser sustainable solution of the motorised water system. The evaluator is however of the opinion that at certain moments in time during the intervention, the project could (and should) have reconsidered the plan. When refugee numbers remained much lower than foreseen (initially around April, May and June), the project could well have amended the plan and go for additional boreholes with handpumps. The camp population at that time was

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18 In this case, the intervention stands for the inter-agency intervention from the onset of the emergency until the end, i.e when entering the recovery or rehabilitation phase and/or all refugees have repatriated. The (ACF) intervention evaluated herein is just one part (though a very important one) of the entire intervention.

19 The initial number anticipated. By March, this number was adjusted to 15,000.

20 Village Level Operation and Maintenance.
around 5,000, so the water demand could be fulfilled by 10 boreholes. By April, five boreholes had already been completed, so 10 could be completed relatively soon after.

This however did not happen, assumingly because a further influx of refugees into the camp was still envisaged. In June\(^{21}\), UNHCR presented plans to relocate 250 refugees per week to the camp during the second half of the year. In this case, the camp population would reach 10,000 by the end of the year. Potential extension sites for this were even assessed in July. Again, it is understandable why the project stuck to the initial plan.

By the time it became clear that UNHCR did not comply with its relocation plan, and the camp population had only increased to approximately 6,000 (in August), construction of the water tower and distribution system was underway and a submersible pump was on order. Therefore, the project completed the water distribution system, stopped trucking and dismantled the water treatment plant. The water distribution system was handed over to UNHCR at the end of the project together with the other boreholes.

In principle, the sustainability of a motorised water distribution system versus handpumps is less, not just because of the fuel consumption, but also since such a system requires specialised operation and maintenance. The Afridev hand pumps obviously do not require fuel and require only basic (since VLOM) operation and maintenance. The reality in the camp was however such that because of the relatively high pressure\(^{22}\) on the handpumps, they still required a lot of maintenance and repair.

With a ratio of one latrine for 20 people, pits obviously don’t fill up as fast as with a ratio of 1 to 50. Still, they will need to be replaced at some point and space should be available to do so. From observations of the sanitary corridors, there appears to be sufficient space to replace all latrines ones or twice. Although it is unknown for how long the refugees will be staying, the sanitary situation from that perspective is sustainable for the foreseen future.

The superstructures were made from poles and plastic sheeting, which in itself is not very sustainable\(^{23}\). Not only does the material degrade relatively fast, the tarpaulin is also in high demand and often being removed (i.e. stolen).

**Recommendation 3.2**

> When using tarpaulin for sanitary facilities, puncturing it with (small) holes will reduce its value as alternative building material (e.g. for shelters) use and thus reduce the change of getting stolen.

The project put a lot of emphasis on and resources in hygiene promotion. Right from the start of the project, refugees participated in the planning and implementation of the project’s activities. Community hygiene volunteers were also involved in maintenance of the WASH facilities and mobilised all refugees to do the same, to use the facilities correctly and not soil them. Towards the end of the intervention, paid cleaners were laid-off and refugees were informed and encouraged to clean the facilities voluntarily from then on. To further facilitate this, additional cleaning materials were provided.

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\(^{21}\) The official plan was presented in July, yet it as already discussed (also at field level) in June.

\(^{22}\) I.e. many people using them.

\(^{23}\) In the sense of expected lifetime.
As of August, ACF started working on an exit strategy. Two local NGO’s were identified and agreed upon by the Technical Working Group that would take over the project as of December. Training them in the management of WASH in the camp had started, when one week before ACF’s departure from the camp, they were informed by UNHCR that “services provided by ACF will not be required beyond 31st December 2011” and that they (UNHCR) were planning to reduce the number of Implementing Partners in WASH. NCA had been chosen as UNHCR’s new WASH partner for Bahn Camp in, yet they would only “be starting implementation beginning next year”, meaning that there was no chance for a decent hand-over. However, although ACF stopped working in the camp on 20th December, the Saclepea base remained functional. ACF staff was put under temporary contracts with UNHCR and later – when NCA started working on January 9th 2012 – taken on by NCA.

Given the context and considering the ‘software’ component being well addressed, the intervention is moderately sustainable.

3.4 Coverage

As concluded earlier, basically all WASH minimum requirements (Sphere and/or ACF standards) were met, indicating that the project covered the entire camp population. The anticipated camp population figure of 18,000 was never reached, the maximum number is approximately 6,000. This obviously made it easier to meet the requirements and reach full coverage. Would the camp have grown to 18,000 or 15,000 people, it would have been a major challenge to provide sufficient water even with the boreholes, the distribution network and trucking.

Already early in the project, cultural and gender specific needs were assessed, considered and addressed wherever possible. Men and women bathing facilities for example were initially constructed back-to-back, but soon adjusted to apart facilities for male and female. Potties were distributed for the smallest.

It was however not until the arrival of a dedicated student in the project in July that the needs of less- and disabled were assessed and addressed. Since, eventually 26 structures were provided for this group of 170, one could conclude that these 170 people were not served accordingly for at least the first six months of the intervention. Further to the 170, some 700 children (aged 5 to 10) were identified, but were left out of the study. The evaluator has no information that their specific needs were addressed at all, other than at the schools.

Recommendation 3.3

Addressing the sanitary needs of children (aged 5 to 10) by providing sufficient and appropriate children latrines.

24 Which is peculiar since ACF’s departure date was 20th December 2011.
25 This age-group is often overlooked in terms of specific needs regarding sanitation. They are too old for potties, but are possibly reluctant to use a latrine because they are dark and scary and/or the drophole is (perceived) too large and they are afraid to fall in. Children latrines were constructed at the schools, but to the evaluator’s knowledge not further in the camp.
3.5 Coherence

The evaluator is of the opinion that the different project components – Water Supply, Sanitation (Excreta Disposal and Environmental Sanitation) and Hygiene (Promotion) – were coherent and reinforced one another in addressing the immediate needs of the refugee population in Bahn Camp. As mentioned before, especially the extensive outreach component obtained a wealth of information that assisted the project to addressing the needs as effective and appropriate as possible.

In the camp and on project level (in Saclepea), collaboration and coordination with other actors was considered positive, and relationships were good. However, overall coordination (by UNHCR and LRRRC) was considered extremely poor by the project. Camp population figures and prognoses were very unreliable which made WASH activity planning extremely difficult. On top of this, the uncertainty surrounding funding agreements made it even harder for the management of the project. It appears that, as a result the project decided to set its own course and somewhat detach itself from the coordination mechanism. At the same time, the relationship at capital level between ACF and UNHCR hardened as much effort was put into securing funding.

The above should however not be dramatized, in the sense that (as mentioned before) at field level inter-agency collaboration remained generally constructive. ACF participated in all (weekly) camp coordination meetings as well as the County Health Team WASH Group and reports were circulated to UNHCR, UNICEF and NRC. Additional meetings were held, as and when relevant, with the UNHCR Site Planner, Save the Children (for the design and location of latrines and water points in the schools) and MSF (for design and location of latrines in the temporary health centre). In addition, ACF contributed to all meetings of the WASH Technical Working Group in Monrovia.

In April, a Reporting and Data officer was added to the project team, who had to liaise between ACF, other implementing agencies and the donors as well as manage communication within the camp. The evaluator could find no evidence that this had a (positive) impact on the situation, however the HoM is convinced that this officer did have an added value as s/he took over a lot of duties from the rest of the team especially with regards to reporting. Whether an expat was required for this position remains nonetheless debatable.

Recommendation 3.4

When considering a Reporting & Data officer (or in principle any position), to assess the capacity of locally available staff (already on contract or to be recruited).

One could argue that having a coordinating body (UNHCR) as donor could lead to disagreement and a disturbed relationship. The project clearly suggests that this has indeed been the case in this situation. As the project progressed, UNHCR constantly amended the figures and plans. Assessments were carried out for camp extensions, which were withdrawn only months later, plans were presented to resettle refugees to the camp which never happened and (as a result) ACF continuously had to extend its activities in the camp while funding remained undecided.

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And to certain degree at FieldCo level.
However, on the other hand, it could also be argued that ACF initially had a target of providing services for 15,000 refugees with a corresponding budget. The fact that the refugees didn’t arrive as supposed (in time nor numbers), should – to the opinion of the evaluator – not be of such concern. As long as the project was working towards that target while UNHCR did not formally amend this, the evaluator sees no problems. Even the fact that a borehole was drilled and latrines constructed in areas in the camp that eventually never saw any refugees should not be a problem. As long as it is within the agreement and justifiable, it is merely a waste (for the donor). It is the opinion of the evaluator that ACF had an assignment (and agreement) and should purely focus on the implementation of this assignment and realizing the objectives, unless (formally) told otherwise by the donor.

The evaluator realises that the reality is often not so clear-cut, however stresses that the point being made here, is that even when donor and leading agency is one and the same, the project should (try to) maintain distinctive lines (of communication) for each aspect. One finance-related and one activities-related.

**Recommendation 3.5**

In case of donor and (field) coordinating body being one and the same, two distinct lines of interaction should be respected. One finance-related (at capital level) and one activities-related (at field level).

The fact that another donor was required to finance additional water points, completion of the water distribution system and upgrading and adapting the latrines did also not benefit coherence. On top of that, additional internal ACF funding was required to complete the intervention. Besides complicating reporting and accounting, it appears it also distorted the ACF-UNHCR partnership and potentially gave UNHCR the (false) impression that their funds were of lesser significance.

From ACF’s viewpoint it goes without saying that securing additional funds was essential and justified for the undeniable reason that the UNHCR funding remained uncertain and was under constant threat of being reduced. The evaluator believes however that the initial proposal and budget could have been better, should cover the whole intervention and/or should have been better negotiated. In this case, additional funding would not have been required.

**Recommendation 3.6**

Projects should – as much as possible - be financed by a single donor. In case, co-financing is required (or mandatory), this should be done from internal ACF funds whenever feasible.

The HoM nuances the above, as he believes that (i) there was no other option and (ii) having ECHO present in the camp put further pressure on UNHCR to improve their coordination and communication performance.

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27 Here, the evaluator uses ‘partnership’ in the sense of customer - supplier, instead of referring to the (more general) relationship.

28 Reference is made to § 3.8, where the evaluator further questions the need for additional funding.
3.6 Relevance/Appropriateness/Timeliness

In the previous paragraphs, conclusive remarks have already been made about the relevance, appropriateness and timeliness of the services/facilities provided for the beneficiaries. As the project immediately acknowledged the importance of outreach activities, it was capable to quickly and appropriately respond to the refugees’ needs. Except for the relatively late response to specific needs of the less- and disabled and the absence of children latrines, no gaps remained unfilled.

The evaluator could however not find any additional information about one aspect that was assessed as part of the KAP survey conducted in September. One of the recommendations form that survey reads: “More research is required on menstruation practices. This includes assessing the impact on adolescents, the need for menstrual kit distributions and the current handling and disposal of sanitary items”.

It remains unclear whether this recommendations has been followed up, other than that it was brought up to the camp management. The evaluator could not find information about IEC messages being adjusted or specifically developed to respond to this. The evaluator therefore believes that the issue has not been addressed enough by the project.

Recommendation 3.7

Menstrual hygiene needs should be appraised and addressed appropriately.

The appropriateness of specific components (or activities) of the intervention is discussed below:

Motorised water distribution system
The argumentation and line of thinking with regards to constructing a motorised water distribution with elevated tank has already been outlined in § 3.3. Though retrospectively this might not prove to be the most appropriate solution, it was at the time.

Concrete water tower and tank
For a reason not known to the evaluator, the water tower was not planned nor budgeted for in the UNHCR LF, whereas the distribution network (i.e.pipes) were. As a result, the water tower was included in the ECHO LF. There had been some discussion within the project on the design (and material) to use for the water tower. However, partly as a result of LRRRC’s preference and partly for the argument of sustainability, it was soon decided that the tower and tank were to be constructed in concrete. It is the opinion of the evaluator that more discussion should have happened and that several potential designs should have been assessed and compared through a multi-criteria analysis, considering cost, practicality, time of construction and durability.

\[29\] Nota that sustainability is often – incorrectly – used where durability is meant (as is the case here). They are however not similar. E.g. concrete is durable, but not necessarily sustainable in terms of being environmental friendly.

\[30\] Other potential designs include plastic poly-, fast- and (Oxfam) T-tanks; combined with welded metal tower, scaffolding tower and elevated embankment.
Recommendation 3.8

When designing WASH constructions, objectively appraise all potential solutions and choose the most appropriate one with regards to cost, practicality, time of construction, durability and any other relevant aspect.

Water testing

The project decided to have all water regularly analysed on bacteriological, chemical and physical parameters. Initially, this was done through independent laboratories, but in July a field testing kit was purchased for this. Since through a basic assessment it could have been established that it was unlikely that the water at the source would have (too) high concentrations of chemical or physical elements, the evaluator does not see any added value in having it analysed by a laboratory at the start or during the period it was being used. As the water was thoroughly treated, any bacteriological contamination would not be present anymore when distributing. The free residual chlorine, further prevented the water from recontamination during collection and storage. Hence, bacteriological testing is also - to the opinion of the evaluator - unnecessary.

With regards to the boreholes, the evaluator again sees no reason to test as there appear to be no indications of abnormalities of the ground water. When boreholes are shock-chlorinated before being put to use (as the project was doing), the risk of bacteriological pollution is also not there. Only in case there is suspicion of recontamination of this water due to handling (collection, transport, storage and use), bacteriological testing should be undertaken either through a laboratory or a field testing kit.

Recommendation 3.9

Bacteriological, chemical and physical analysis should be kept to a minimum in an emergency context. The following monitoring is recommended:

- Source/intake: basic (sanitary) assessment, e.g. monthly;
- Treatment plant (water in): turbidity and pH, e.g. weekly;
- Treatment plant (water out): turbidity, pH, FRC and Al., e.g. weekly;
- Water point (tapstand): FRC, e.g. weekly
- Handpump: basic (sanitary) assessment, e.g. monthly.

Latrines’ design

The latrine design is such that four cubicles in line are placed over one pit (trench). The superstructure is made from wooden poles and plastic sheeting. The latter was provided for by UNHCR. They are fitted with a door (also a wooden frame with plastic sheeting) with a fly-screen ‘window’ above it. Two cubicles share one vent pipe with a fly-screen cover, making two pipes per pit.

Initially, plastic (emergency) slabs were used, later being replaced with concrete slabs. The dimensions of the slabs seem rather large, however this is required for strength and to properly cover the pits. The plastic slabs were provided with squat-hole cover, the concrete ones were not. One can discuss the appropriateness (or effect) of covers in this specific case. A VIP latrine should in principle not have one as they hinder the required airflow. In

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31 This could also be assessed without laboratory tests. For more info, refer to Emergency Water Sources (WEDC) and ACF’s own “Alimentation en eau des populations menacées”.

32 Usually DelAqua, but also e.g. Hagtech.
this case, the airflow is already hindered by the fact that more than one cubicle is placed over one pit, doors are installed\textsuperscript{33} and there are two pipes per pit. The evaluator therefore would advise to provide each latrine with a squat-hole cover.

### Recommendation 3.10

**To provide squat-hole covers to latrines (even when constructing simple ventilated pit latrines (non-VIP)).**

As mentioned earlier, the evaluator does not consider the design used to be a VIP latrine. The design does however assist in the prevention of smell and flies. The latrines (and other sanitary facilities) appeared well-maintained and clean (from observation after the intervention). The design is considered appropriate.

With few exceptions, all refugees’ needs have been addressed timely and appropriately. The intervention as a whole is conceived highly relevant and appropriate.

### 3.7 Effectiveness

As clearly demonstrated in § 3.2, the project effectively managed to achieve all its objectives in terms of meeting the minimum requirements. In the process of the intervention, the target population steadily decreased. Starting with 18,000, this soon became 15,000 and later on 10,000. Eventually, the project effectively responded to the needs of some 6,000 refugees; one-third of the original number. Would the anticipated number of 18,000 or even 15,000 refugees have been reached, the evaluator is convinced that it would have been an immense challenge to meet the respective water demands. Sanitary facilities’ construction would probably keep up with the pace of new arrivals in the camp.

### 3.8 Efficiency

As it took the evaluator quite some time to get an understanding of intervention in time, due to the multitude of reports that have been produced, one can imagine that it took the project even a lot more time and effort to produce all this paper. According to the evaluator, the main reasons of having such an colossal reporting structure is the fact that the project was financed by two different donors who both required its own frequency and format of periodic reporting. On top of this, the activities that were funded by ECHO were only part of a larger project\textsuperscript{34}. This demanded a lot from both the field\textsuperscript{35} and capital\textsuperscript{36} team in terms of reporting.

This varied donor reporting is also reflected in the monthly APRs as here as well duplication appeared. The APRs describing the UNHCR-funded activities regularly mention: “\textit{Funded under ECHO details in ECHO APR}” and vice-versa.

\textsuperscript{33} With regards to the required airflow, this is (partly) compensated by the fly-screen window, however this again lets light enter which again hinders correct VIP-functioning.

\textsuperscript{34} The ECHO funded Action (intervention), principally consists two sub-projects, one being the activities in Bahn Camp, the other in the border villages.

\textsuperscript{35} WASH Managers and Field Coordinator.

\textsuperscript{36} WASH Coordinator, Finance Coordinator and Head of Mission.
The above had a similar effect on the roles and responsibilities of the individual team members of the project. For the greater part of the intervention, two ACF (expat) WASH Managers were available. On top of this, a Reporting and Data Officer was brought in for three months to assist the team with data collection, analysis and reporting, while the capital team was reinforced with an Emergency Coordinator, also for three months. The evaluator could not find concrete evidence of the added value of the latter two positions. It is more likely that the number and roles of (expat) staff involved led to a further blurring of an already complex situation. In effect, basically everyone involved spent (too) much time in meetings and on reporting.

**Recommendation 3.11**

**There should be a clear and consistent definition of a ‘project’ (as well as of a ‘program’ and of ‘sub- or field-office’).**

A well-defined project should preferably have one single donor, one single reporting structure and one single coordinator (or manager). In case, a situation requires additional human resources (e.g. two WASH Managers and/or an Emergency Coordinator) their respective role, responsibilities and hierarchical and functional lines have to be clear and agreed upon in advance.

The overall cost of the project has been in the range of $1,750,000, not considering internal ACF funds. With a (maximum) refugee population of 6,000 and an 11 months’ intervention, this adds up to spending $26,50 per beneficiary per month. When considering an average camp population of 5,000 during the intervention, this figures even goes over 30 dollar per person per day. Though the evaluator has no exact comparative data such per capita cost are considered very high by the evaluator. Analysis of the financial reports further subscribes this. Comparing the final expenditure with the budget, shows under spending on the direct program cost and over spending on personnel cost and (other) support cost. Considering direct program cost to primarily be cost for construction (of the water and sanitation structures) and water trucking, these should have been about one-third of those budgeted, considering the eventual number of beneficiaries as compared the anticipated target population. The over spending of personnel and support cost can be explained from the extended length of the intervention as compared to initially budgeted for.

The conclusion from the above could of course also be that the project has been poorly budgeted. This – partly – also seems the case. Though the (UNHCR sub-project) agreement mentions the uncertainty of water availability and the need to further assess this, a relatively small amount is budgeted for water supply beyond four months water trucking.

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37 One from February till July, one from April till January 2012 and one (trainee) from June till September.

38 Regarding the emergency context and the confusing and unsecured funding arrangements.

39 UNHCR budget ($1,264,638) plus ECHO budget (Result (Bahn Camp): $497,933 (€383,026). As additional internal ACF funds were required, the evaluator assumes both UNHCR and ECHO budgets have been totally spent.

40 The evaluator had financial reports available from both UNHCR and ECHO agreements, including total (monthly) expenditure and budget. Unfortunately, the ECHO (expenditure) data was not down to Result level, so could not be further analysed.

41 Personnel cost is further differentiated into programme and support. Both were over spent. Other support cost include transport, office equipment etc.
and drilling nine boreholes. It seems that already at that point in time, it was anticipated that the water distribution system would partly be financed through other means. Budget for the water tower was not included and had to be financed by ECHO.

From the above, one could also say that at least the water trucking has been (extremely) cost-effective, since the project managed to truck water for nearly eleven months within a budget for four months. But this is obviously not the case, since water trucking is hardly ever cost-effective and should be stopped as soon as an alternative becomes available. In that respect it is the evaluator’s opinion that a delivery time of approximately five months (May-September) for an appropriate submersible pump is too long.

In March, ACF commissioned a second geophysical survey at a cost of $3,500 which resulted in a recommended drilling schedule (or top 10 of potential drilling spots) in the camp. The first (top) five have been explored and unfortunately only one actually provided the expected high yield. However, would the survey not have been executed, the success rate would probably have been even less.

The needlessness for the scale of water testing has already been discussed in §3.6. Not only did this obviously cost in itself, it had further consequences. As the initial test at the water source (for trucking) showed (too) high levels of physical and chemical elements, the project hurriedly had to look for another source. When little later the test results proved to be false, unnecessary cost had been spent and time lost.

Being conclusive about the cost-effectiveness of the latrine provision, is also complicated. What is clear, is that the actual cost per latrine is far higher than budgeted. In the budget, 750 latrines are included for $191 apiece. The actual cost is approximately $350. If however this is due to poor budgeting or because of inefficiency is hard to tell and open to debate. The evaluator however perceives the actual cost extremely high again.

As shown before, personnel costs appeared to be relatively high. Although for most part justifiable since a lot of physical labour was required\(^{42}\), and for a longer period than budgeted, the evaluator questions the hygiene promotion approach. Given the target population of 6,000, the evaluator is of the opinion that 15 hygiene promoters, two team leaders and one supervisor is excessive. On top of these paid staff, 100 community hygiene volunteers were trained in mobilisation and sensitisation; they received no payment. The evaluator believes it would have been more cost-effective, to have less (paid) staff, less volunteers and provide the volunteers a small income. For example, the project could select and train five (semi-) volunteers and have one (paid) hygiene promoter per (shelter) block.

In conclusion, the efficiency of the intervention is appraised as relatively poor. This was partly due to (non-influential) circumstances, but also partly as a result of several choices made. Choices with regards to project funding, as well as more practical-technical choices.

\(^{42}\) Digging of pits and trenches, construction activities, pumps and water treatment operation etc.
4 CONCLUSIONS

The overall conclusion to be drawn from this evaluation is that this project has been successful in the sense that it achieved all its goals. It addressed the immediate WASH needs of some 6,000 Ivorian refugees over a period of approximately eleven months. In doing so, the intervention contributed to the prevention of water-sanitation and hygiene related diseases and thus had a positive impact in the health status of the Ivorian refugee population hosted in Bahn Camp.

The project adhered to minimum WASH requirements and covered the WASH needs in an effective, appropriate and timely manner. Thanks to the project’s vast network of hygiene promoters and community hygiene volunteers the project established close proximity to the beneficiaries and was therefore able to identify and appropriately address specific needs and possible gaps.

The intervention is appraised positively on its impact and relevance/appropriateness/timeliness. On coverage, coherence and effectiveness, the intervention scored ‘average’ or ‘neutral’. The main reason why the project did not score better than this is the fact that the project eventually ‘only’ targeted 6,000 refugees whereas it was designed to target 15,000. The high coherence of the project internally (i.e. with regards to the project’s components water supply, sanitation and hygiene promotion) and in relation to other implementing agencies in Bahn Camp is compensated by the disturbed relationship with UNHCR.

Being an emergency humanitarian intervention, sustainability is not an objective in itself. Still, the project tried hard to ensure continuation of the activities after its departure. An exit-strategy was developed and hand-over partners were identified in time. Unfortunately, UNHCR only just before the actual hand-over chose another implementing partner (NCA), which made the exit strategy rather futile. Nonetheless, ACF provided assistance and a form of hand-over to NCA early 2012. In conclusion, the intervention is appraised as moderately sustainable. The ‘hardware’ aspects of the intervention are very unsustainable, the ‘software’ aspects possibly moderate sustainable in the sense that refugees’ improved hygiene behaviour and practices are possibly permanent.

For various reasons, the project has been relatively inefficient. This is partly due to external factors, which are beyond the sphere of influence. The fact that refugee numbers remained well below those anticipated was one of those. The inconsistent and unreliable information from UNHCR on the population numbers added to this. Furthermore, uncertainty of funds also hampered proper project planning and thus negatively affected the efficiency of the intervention.

There were however also a number of internal factors tantamount to the relatively poor efficiency. These include several technical choices made by the project and sub-optimal project management, project planning and risk management.
5  RECOMMENDATIONS

Below, all recommendations that are included throughout this report are listed in sequence. As already indicated in § 2.1, they are on a variety of ‘levels’ or aspect; from very practical-technical to more operational and organisational. Since the evaluator identified several issues with regards to general project management, contract management and risk management that signalled a pattern, they are discussed more in-depth in the next paragraph.

5.1  Recommendations from the Findings

<table>
<thead>
<tr>
<th>Recommendation 3.1</th>
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<tbody>
<tr>
<td>Malaria control should preferably be addressed in a holistic manner by the most suited actor. When mosquito nets (LLITNs) are being distributed, relevant and appropriate IEC should also be provided.</td>
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<thead>
<tr>
<th>Recommendation 3.2</th>
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<tr>
<td>When using tarpaulin for sanitary facilities, puncturing it with (small) holes will reduce its value as alternative building material (e.g. for shelters) use and thus reduce the chance of getting stolen.</td>
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<thead>
<tr>
<th>Recommendation 3.3</th>
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<tr>
<td>Addressing the sanitary needs of children (aged 5 to 10) by providing sufficient and appropriate children latrines.</td>
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<th>Recommendation 3.4</th>
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<tr>
<td>When considering a Reporting &amp; Data officer (or in principle any position), to assess the capacity of locally available staff (already on contract or to be recruited).</td>
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<th>Recommendation 3.5</th>
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<tr>
<td>In case of donor and (field) coordinating body being one and the same, two distinct lines of interaction should be respected. One finance-related (at capital level) and one activities-related (at field level).</td>
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<th>Recommendation 3.6</th>
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<tr>
<td>Projects should – as much as possible - be financed by a single donor. In case, co-financing is required (or mandatory), this should be done from internal ACF funds whenever feasible.</td>
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<th>Recommendation 3.7</th>
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<tr>
<td>Menstrual hygiene needs should be appraised and addressed appropriately.</td>
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</table>
Recommendation 3.8
When designing WASH constructions, objectively appraise all potential solutions and choose the most appropriate one with regards to cost, practicality, time of construction, durability and any other relevant aspect.

Recommendation 3.9
Bacteriological, chemical and physical analysis should be kept to a minimum in an emergency context. The following monitoring is recommended:
- Source/intake: basic (sanitary) assessment, e.g. monthly;
- Treatment plant (water in): turbidity and pH, e.g. weekly;
- Treatment plant (water out): turbidity, pH, FRC and Al., e.g. weekly;
- Water point (tapstand): FRC, e.g. weekly
- Handpump: basic (sanitary) assessment, e.g. monthly.

Recommendation 3.10
To provide squat-hole covers to latrines (even when constructing simple ventilated latrines (non-VIP)).

Recommendation 3.11
There should be a clear and consistent definition of a ‘project’ (as well as of a ‘program’ and of ‘sub- or field-office’).

A well-defined project should preferably have one single donor, one single reporting structure and one single coordinator (or manager). In case, a situation requires additional human resources (e.g. two WASH Managers and/or an Emergency Coordinator) their respective role, responsibilities and hierarchical and functional lines have to be clear and agreed upon in advance.

5.2 Recommendations to improve project efficiency

The evaluation performed relatively poor on the aspect of efficiency. For a large part this was due to contextual circumstances which the project nor the organisation had any control over. They include the fact that a camp site had been selected that did have no water easily accessible and that the camp population figures remained a constant guess.

Several choices and decision have been made however by the project itself, that also had an effect on the efficiency of the intervention. Efficiency in this case refers to both cost-effectiveness and time-effectiveness. The evaluator has identified a number of issues that seem recurring and principally all come done to the same denominator: risk management.

The evaluator is convinced that well integrated risk management in all aspects of project management and in every phase of the project cycle, has a large positive impact on the outcome and efficiency of any project. In this case it could have prevent some of the flaws that negatively impacted the efficiency of the project.
Project Design
A (simple) project cycle consists analysis, definition, implementation and evaluation. The analysis is often done on the outcome of an assessment of the situation the agency wants to design a response (intervention) for.

In an instable environment – such as Liberia – contingency (or emergency preparedness) planning (EPP) is often required, meaning that designs are pre-prepared for anticipated interventions. EPP starts with a general context analysis and the identification of possible (or likely) humanitarian crises within that context. The agency then decides which crises and/or needs it will plan to potentially respond to. Next, the specific response scenarios are designed (and possibly stocks prepositioned, staff informed and trained etc.)

In both of the above cases, a logical framework or logframe is considered the best tool for the design. It goes without saying that for this tool to be most efficient, it requires proper attention and should be prepared in a correct, logic and comprehensive manner. In the UNHCR agreement this was unfortunately not the case. The sub-project description the agreement was based on did in fact not have a logframe as such. It did not define an overall objective, but was merely made up of seven Results. Only two (rather non-specific) assumptions and no preconditions were cited in the description.

There is a Framework for Planned Results included which vaguely resembles a logframe, but – to the opinion of the evaluator – is far from ‘logic’. Unfortunately this framework format was a prerequisite by the UNHCR.

Recommendation 5.1
To recruit (one at HQ, one per desk/cell/portfolio, one per mission or one as required (i.e. on consultancy-basis) a proposal writer who can assist the mission(s) in project definition and design and preparing donor appeals, including framework, budget, planning and/or work plan (all in the required formats of the respective donors).

The evaluator believes that especially the absence of assumptions and preconditions in the sub-project description and agreement had a major effect on the struggle the mission had in managing this agreement and consequently in the deteriorating relation with the UNHCR. As implementing partner, maintaining longer-term relations with donors is obviously also of importance, but this should not result in a position in which the agency basically has to swallow everything from a donor. As implementing partner one is after all ‘partner’. By having a clear agreement, i.e. contract, in which preconditions are clearly and specifically included, both parties (or partners) should have an equal position. In this case, the evaluator believes that if for example “the provision of clear, concise and correct information by the donor” was include as precondition, the project would have good reasons and moreover a better position to (re-)negotiate the agreement.

Another aspect that has not been made completely clear to the evaluator is how the project has been budgeted. Again, if a logframe would have been used in a correct manner, the budget would logically follow from the logframe and workplan. The chance of errors

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The latter is placed between brackets as it is less relevant in respect to the evaluator’s recommendation.
remains, but this is entirely due to unit price estimates, not because activities or items are overlooked. In this case, the need for a motorised water distribution system was identified from the start\textsuperscript{44}, yet there seems to be no budget for submersible pumps nor an elevated water tank.

There also seems to have been no accounting in the budget for the materials taken from the mission’s (emergency) stock. Neither consumables or re-useable items such as bladders appear in the budget. The evaluator recommends to include these, either completely (for consumables or items that do not get returned after use) or partly (for items that return after use). It is absolutely justifiable to budget this as it indirectly finances the intervention. The budget is used for replenishment of the (emergency stock).

**Recommendation 5.2**

To budget for materials used for the intervention taken from the (emergency) stock.

**Risk Management**

The evaluator identifies a number of issues negatively effecting (the efficiency of) the project that could potentially have been prevented or dealt with more appropriately if risk management would have received more attention throughout the intervention. They include the disturbed relation with the UNHCR, the lagging of the number of refugees arriving, the delay of the completion of the water tower and upset volunteers expecting payment (despite having been told they weren’t).

It is absolutely not said that some or all of the above could have been completely prevented through risk management, but by identifying and anticipating to unwanted events, the consequences could have been reduced.

Risk management should be an integral part of project management that starts with assessing risks as part of the project design. Risks of all kinds\textsuperscript{45} should be identified and determined\textsuperscript{46}. Then, measures to reduce the risks are identified, preferably with an ‘owner’ and a deadline. Risks that cannot be (completely) reduced by the project (alone) are noted as (killer) assumptions or preconditions. Throughout the project cycle, the list of identified risks and reduction measures should then be regularly verified and updated.

Beyond overall project risk management, it is also recommended to apply risk management for significant activities such as the construction and contracting of the water tower.

**Recommendation 5.3**

To incorporate risk management in overall project management as well as in the implementation of significant activities.

\textsuperscript{44} Though the sub-project description mentions that the composition of the final water supply needs to be further determined, it is however at that stage already obvious that the system requires motorisation of some sort.

\textsuperscript{45} Including contextual, organisational, financial and technical. The identification is therefore best done by a group of people with a variety of interest, e.g. the complete capital and project team.

\textsuperscript{46} I.e. signify or rate the expected likelihood and consequences (in time, money and quality/other) of the potential event.
### ANNEX 1 DAC-TABLE

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rating</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Impact</td>
<td>X</td>
<td>Except for ensuring adequate drainage at all WASH facilities, all Expected Results have been achieved. It can consequently be assumed that the intervention had a strong positive impact on contributing to the prevention of WASH-related diseases among the Ivorian refugees hosted in Bahn Camp.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>X</td>
<td>Emergency humanitarian interventions are inevitable less sustainable than regular development programs. Sustainability is however not an objective in itself in such context. Improving the quality of life, prevention and control of disease and preserving human dignity are basically the main objectives of a WASH intervention in such context. Given this context and considering the ‘software’ component being well addressed, the intervention is moderately sustainable.</td>
</tr>
<tr>
<td>Coverage</td>
<td>X</td>
<td>The project met all WASH minimum requirements. Due to the project’s proximity to the community through its vast network of hygiene promoters and community hygiene volunteers, services’ gaps were quickly detected and addressed. Nonetheless, certain gaps were only addressed late in the intervention (specific needs for less- and disabled), or not at all (children latrines).</td>
</tr>
<tr>
<td>Coherence</td>
<td>X</td>
<td>The internal coherence of the project was high. The project was well linked and at high proximity with the beneficiaries. The project was furthermore well connected and integrated with other implementing partners. The relationship with UNHCR was unfortunately not so good.</td>
</tr>
<tr>
<td>Relevance/Appropriateness/Timeliness</td>
<td>X</td>
<td>Overall, the needs of the refugees were addressed very appropriately and timely. Only few choices made by the project on technical aspects resulted in some less-appropriate solutions, such as the design of the latrines.</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>X</td>
<td>The project effectively addressed the needs of the refugees. Nearly all project objectives (expected results) have been met; most minimum WASH requirements (SPHERE and/or ACF) have been adhered to. The intervention was however designed for a target population of 15,000 while eventually only some 6,000 were targeted.</td>
</tr>
<tr>
<td>Efficiency</td>
<td>X</td>
<td>The efficiency of the intervention has been relatively poor. This is partly because of poor coordination and communication from UNHCR and the fact that refugees were reluctant to settle in the camp, which made adequate project planning extremely challenging. The evaluator also believes however that the relatively weak project management, project planning and especially risk management by the project also contributed to the disappointing efficiency of the intervention.</td>
</tr>
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## ANNEX 2  BEST PRACTICE

<table>
<thead>
<tr>
<th>Title of Best Practice</th>
<th>The provision of appropriate WASH services for less- and disabled in Bahn Camp.</th>
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</table>
| **Key Characteristics and Innovative Features** | In comparable interventions, the specific needs of less- and disabled are often overlooked. Whilst in given context they should be given extra attention; the proportion of less- and disabled in a refugee population is namely often higher than in a 'normal' situation. Strong and healthy men and women are more likely to stay behind to fight, look after their properties and/or tend their crops.  
  
  The evaluator therefore compliments the project on the impressive amounts of time and money invested in this issue.  
  
  In June a dedicated student was appointed to primarily work on the subject. He did this in a highly participative manner. Combined with an extensive team of outreach workers - ensuring proximity - he managed to quickly identify and assess the number of beneficiaries. Through focus group discussions and individual meetings beneficiaries’ specific needs were then assessed and potential design solutions discussed. During construction, beneficiaries are also involved as they need to further detail the designs and test the (preliminary) results\(^{47}\). After completion, the participative process continues as the usage and state of the facilities are being monitored and feedback received regarding their appropriateness. Where required, further adjustments are made.  
  
  As a result, the project was able to provide highly appropriate and appreciated facilities; not only latrines, but also bathing facilities and water collection points. The project identified the provision of appropriate WASH services for less- and disabled as an important aspect in this context and addressed it in a highly participative manner. |
| **Practical/Specific Recommendations for Roll-Out** | The specific needs for less- and disabled should be addressed in any humanitarian context and response. It should be incorporated in every phase of the project cycle, as to be able to address the needs in time and as complete, relevant and appropriate as possible.  
  
  Pregnant women, children, elderly and PLWA\(^{48}\) should (also) be considered less-abled. |

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\(^{47}\) E.g. to establish appropriate dimensions of the defecation seat and the height of the handrails.  

\(^{48}\) People Living With HIV/AIDS
ANNEX 3  GWEI

In the ToR, the evaluator was requested to also review the partnership ACF has with GWEI. For this, the evaluator visited GWEI’s office/workshop in Monrovia and held discussion with GWEI key staff in Monrovia and Saclepea. In March 2011, during her visits, the ACF WASH Advisor also had a meeting with GWEI. Below the main points discussed at that time and some recommendations are presented.

Abstract from WASH Advisor field visit report (March 2011)

Meeting with GWEI in Monrovia:
Present: Patrick (director); Varsay (technical); Rose (HR); James (log) - as well as lassana (ACF) and Lisa (ACF)
Main points mentioned by GWEI:
- Lack of formal partnership agreement so that roles of ACF and GWEI are not always well defined
- Neither organisation can be independent
- Drilling equipment is outdated and in need of repair
- Contracts with other organisations are difficult to negotiate, meaning that often the price per borehole is under that ‘real’ cost of a borehole (ie does not provide for M&O of drilling equipment & purchasing of spare parts)
- There have been some difficulties in working with ACF logistics

Recommendations:
- Lassana to work with GWEI on the framework agreement, and try to look for funds for entering into a longer term partnership agreement
- Repair drilling rig & compressors or at least have someone from PAT drill to come and evaluate the cost of repairs and decide whether feasible.

The recommendations have thus far not been followed up, but ACF and GWEI have extensively worked together in various projects, including Bahn Camp. Currently, GWEI is still working for ACF on groundwater exploration in Nimba.

In the past, ACF has donated two drilling rigs to GWEI. One (from 1998) is in working order, the other (from 2004) is mounted on a truck of which the engine needs overhauling. The drilling rig itself is in working order. Both are completed with the required pumps, compressor etc. Although ACF is their major client, they also works for other humanitarian actors, such as UNICEF, Concern and NRC.

Contrary to the WASH advisor’s recommendation of entering a longer-term partnership, the evaluator believes that GWEI should within a reasonable time become independent form ACF. ACF and GWEI should start working on an ‘exit strategy’ as it is unforeseen how much longer ACF will continue operating in Liberia, whereas GWEI should be able to be completely self-supporting at some point in time. The evaluator believes the exit strategy includes three components: i) GWEI to start charging ‘real’ cost, ii) ACF to invest once more to renovate GWEI’s drilling equipment, and iii) to complement GWEI’s services with geophysical survey. Further study is required to assess the details and feasibility of this.
The evaluator recommends to assign a business consultant to assist ACF and GWEI in the exit strategy, to investigate the local market, competition and exact investment requirements.

As already mentioned in the above field visit report, GWEI’s major challenge is negotiating fair prices which include cost for O&M and depreciation. This seems somewhat doubtful to the evaluator as there appears to be hardly any competition in Liberia. The only other rigs available in-country (as far as known by the evaluator) are from the Ministry of Public Works (MoPW) and a few INGO’s. However, they may have the equipment, they generally lack an experienced operating team. This is one of the unique selling points (USPs) of GWEI.

As both ACF as GWEI indicate they prefer a sustainable solution whereby eventually GWEI becomes a self-supporting service provider, the evaluator tends to advice a more commercial approach. Instead of (only) operating as an NGO, GWEI should offer its services in such a way that the revenues will enable sustainability. If GWEI continues to provide services below market price, they will never become a viable organisation. The evaluator is confident that (non-profit) clients will understand the rationale for this and will be willing to pay. After all, GWEI already provides the best quality.

For GWEI to become independent, its equipment has to be in good working order at the start. This requires additional investments to repair and/or replace GWEI’s two drilling machines. Since GWEI does not have access to (extra) financial resources, these additional funds will have to come from ACF.

Another potential USP the evaluator signals is the demand for geophysical surveys. This market seems to be completely absent in Liberia. With the proper tools and possibly some additional training, GWEI could become the single player on the market for this in Liberia. Again, this requires investments that will need to be done by ACF.

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<tr>
<th>Recommendation re. GWEI</th>
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<tbody>
<tr>
<td><strong>ACF to support GWEI with:</strong></td>
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<tr>
<td>1. Providing a business consultant to do market research, assess investment requirements and prepare a business plan;</td>
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<tr>
<td>2. Donating (in cash or kind) the required resources to repair and/or replace GWEI’s drilling equipment (once more); and</td>
</tr>
<tr>
<td>3. Donating surveying equipment (and training) to complement the services GWEI can offer.</td>
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