

# Urban WASH Lessons Learned from Post-Earthquake Response in Haiti

**Large-scale urban WASH programming requires different approaches to those normally employed in Oxfam emergency response activities. This paper examines the lessons learned from the WASH response to the Haiti earthquake in January 2010. The paper also gives practical case studies of some of the success and failures from the WASH activities, undertaken in a very high-density urban/peri-urban context.**

## Introduction

At the height of the emergency response, Oxfam GB was supporting 149,613 people<sup>1</sup> with water, sanitation and hygiene promotion in more than 46 sites in the Port-au-Prince area. 18 Camps had populations greater than 1,000 people, while the largest camp, Petionville Golf Course, had a population in excess of 50,000 people. The smallest site, Santo 14-B had a population of 482.

Location	# Project Sites	Population
Delmas	14	67,425
Carrefour	14	38,718
Carrefour Feuilles	5	7,950
Croix de Bouquet	11	26,320
Corail	2	9,200

Many areas, such as Carrefour Feuilles, Carrefour and Delmas, lack any formal urban planning process and have high population densities. Access, particularly for vehicles is poor, due to narrow passageways. Many of the worst affected areas are also located on steep slopes, crossed by steep ravines, the only natural means of drainage. As such, ravines serve as discharges for wastewater (of all types), and for disposing of solid waste. Pre-earthquake, such areas were severely under served by basic services; water supply, excreta disposal, waste management, drainage and health care facilities included.



**Figure 1:** The Carrefour Feuilles area of the City, one year after the earthquake. (Photo: Tim Forster, OGB)

<sup>1</sup> Population served directly by OGB. Does not include those from neighbourhoods surrounding camps or served by partners.

## Oxfam's WASH response

The main WASH activities undertaken in the earthquake response in Port-au-Prince included:

- Water trucking & distribution
- Water system rehabilitation & community management
- On-site sanitation and excreta management
- Waste collection & removal
- Debris collection, removal and processing
- Community mobilisation
- Hygiene promotion & NFI Distributions
- Institutional support to the WASH sector

This has been achieved through a variety of approaches, including direct implementation through Oxfam teams, working through partners (both INGOs and national NGOs), and through direct support to the national WASH institutions and the WASH Cluster.

Oxfam has created a number of innovative relationships with a number of INGO's including:

1. Disaster Waste Recovery (DWR)
2. Sustainable Organic Integrated Livelihoods (SOIL)
3. Hydroconseil
4. GRET

Cooperation with Government, municipal and other national actors has also been strong, particularly through participation in the WASH Cluster at both a national and municipal level. Oxfam has also supported government to develop a national waste management policy. Direct support has been given to:

1. DINEPA<sup>2</sup>
2. Ministry of Public Works & Telecommunications
3. CTE of Port-au-Prince (ex CAMEP)
4. SMCRS
5. University of Quisqueya

Another strong component of the Oxfam WASH response has been mobilising communities, and providing support to communities to manage their own WASH services. Oxfam worked with existing local partners including PEJEFE, Friendship, APROSIFA, CRAD, COSPAM and MJS in the Carrefour Feuilles area of the City.

<sup>2</sup> Direction National de Eau Potable et Assainissement

## Implementing WASH Activities in the urban context

Early on, Cash-for-Work was widely used in camps of more than 800 families. The main livelihood objective was to quickly inject cash into the local economy, while a secondary objective was to clean up the camp environment. Having two differing objectives reduces the overall impact of the activities.

### *Cash-for-Work or Casual Daily Labourers?*

*CFW* is a livelihood tool designed to provide cash to specific groups quickly, but not necessarily to undertake a defined task.

*Daily Labourers* are used by organisation to accomplish a specific task, while providing some cash to a number of selected community members.

From a WASH perspective, camp clean ups are best achieved through using daily labourers under the management of the WASH Team rather than through pure CFW activities. In Haiti, there was often confusion about the two, resulting in many organisations achieving only partial results with clean – up campaigns.

### Clearing Drainage Channels in Cité Soleil

One of Oxfam's partners, DWR, undertook to clear a main drainage channel in the Cité Soleil area. The activity was undertaken to reduce the risk of flooding prior to the start of the hurricane season.

Typically, organisations use a mix of mechanised processes and CFW to undertake such activities. Results may however be short-lived, particularly when CFW is a major component of the work. In Cite Soleil, DWR privileged using daily labourers rather than CFW.

Firstly, a Drainage Clearance Committee was set up. Daily labourers were then identified by local community leaders, from 10 "micro-communities" bordering 1.5 mile long channel. Community leaders were effectively (rival) gang leaders brought together by DWR staff – their coming together and making collective decisions in the Committee was remarkable.



**Figure 2:** Clearing the main drainage channels in the Cité Soleil area of the City. (Photo: Nick Brooks, OGB)

Experience from Haiti showed communities throw waste into newly cleaned drainage channels, almost immediately. CFW is particularly associated with access to livelihoods, and clear thinking is required about "sustainability" before rushing into similar "for cash" clean-up campaigns.

## 1. Community Mobilisation

A number of mechanisms have been used to build a strong working relationship with affected camp communities, these include:

- Camp Management Committees
- PH Community Mobilisers
- Community PH Volunteers
- Peer Educators

The entry point, for Oxfam's work in the camps, were the camp management committees. Committees were responsible for identifying potential Community Mobilisers, and then assisting to set up the PHP structure. Community Mobilisers were appointed from the camp residents, based on clear selection criteria and thorough selection interviews. CMs were paid Oxfam staff, employed at a ratio of one person per 1,000 people, with an equal split between men and women. A group of ten volunteers were then selected to work directly with each CM. To supplement this structure, Peer Educators were selected to represent specific groups, such as mothers, the disabled, children and men.

### *PHP Approach*

The main approach to PHP in the camps consisted of:

1. Training for CMs & PH Volunteers in participatory approaches
2. Household support visits (1 PH Volunteer per 20 families)
3. Monthly thematic campaigns (e.g. hand washing, malaria, etc.)
4. Monitoring of PH activities
5. Setting up & supporting Water Committees

Trainings were conducted in the camp, or close by in the surrounding community. Deciding on the most appropriate PHP approach for particular camps depended on camp size, camp location (high density urban vs peri-urban), and community expectations. Deciding the most appropriate way forward requires dialogue and analysis with the community themselves. Opportunities to build on existing community structures and civil society organisations should also be seized upon.

### *Hygiene Promotion*

PHP teams used a number of techniques to promote better hygiene in the camps, including:

- Posters & Leaflets
- Campaigns
- Household visits
- Clubs
- NFIs
- Communal hand washing facilities

### *Communal Hand Washing Facilities*

One major problem with communal hand washing facilities was lack of community follow up to keep the stations filled. There was also theft and/or vandalism of the units, due to the lack of water. This is particularly true where rainwater-harvesting systems were set up for filling purposes. Due to delays in implementation, many of the later were only completed as the dry season began.

### Clubs, Camp Residents & Radio Broadcasts

In Delmas, Oxfam's PHP Teams set up Mother's & Children's Clubs at most of the Oxfam supported camps.

*Mother's Clubs* were tasked with monthly promotional activities, and with managing materials/resources for HP activities. During the cholera outbreak, "Caravans", using megaphones were organised to demonstrate hand washing, give cholera messages and distribute soap. ORS sachets were also given to Mother's Club leaders.

*Children's Clubs* were also set up by the camp Community Mobilisers. Activities included being taught about recycling and playing other hygiene related games, particularly during the school holiday period.

#### Going on Air

Camp children participated in a weekly radio show on Radio Kiskay FM, a popular radio station in Port-au-Prince. A theatre group helped to write sketches for radio transmission, camp children then presented the sketches live on the radio. The broadcasts, about life in the camp, were interspersed with HP messages, and were widely listened to in Port-au-Prince.



**Figure 3:** Children from camps in the Delmas area of the City participating in a radio broadcast. (Photo: OGB)

#### Working with Children in Schools

"Handmade kites are very popular with Haitian kids". PHP staff in Carrefour observed this in the camps. They worked with local community mobilisers to provide materials for the kids to make kites with hygiene messages, as part of children's health activities.



**Figure 4:** A child's kite with PH messaging. (Photo: Oxfam GB)

Other examples include work done at Golf Course, where local artists worked with children in a dedicated tent, to specifically make toys from recycled waste products.

### NFI Distributions

NFI distributions were a major component of the Oxfam response in Delmas & Carrefour areas. Two main approaches were used to identify and target NFI needs:

1. Blanket distributions of simple hygiene kits in specific camps early on the response.
2. Use of a NFI voucher system based on the use of local shops located in the camp proximity.

The use of blanket distributions is felt particularly appropriate early in the response. This not only caters for immediate NFI needs, but also provides the space to identify: specific NFI needs, vulnerable groups, and local suppliers (shops), if planning a voucher system. Blanket distributions may be more of a security risk though.

Voucher systems are more flexible; it reduces security risks associated with mass distributions in high-density urban areas, and allows beneficiaries more choice in satisfying their personal hygiene needs. It removes the need for Oxfam to; purchase, package, store and distribute NFI items.

### NFI Vouchers

In Delmas, Oxfam's PHP Teams used vouchers to distribute NFI items to vulnerable groups. The voucher system was chosen as it was considered; safer; easier to manage; and more valued by beneficiaries.

Firstly, vulnerable people were identified by Community Mobilisers; they were then interviewed by PHP staff to establish their eligibility. The NFI items required by each person was also listed a guide. If eligible, people were registered, and at a later date, issued with a voucher, listing name, ID number and the quantity of items to be collected.



**Figure 5:** A range of NFI items that were distributed using the voucher system. (Photo: Kateryna Perus, OGB)

Parallel to this, storeowners were identified in Petionville. The quantity & quality of items, availability, mechanisms for distribution and willingness to participate were verified. Following this, participating storeowners signed a contract, and were given 30% of the contract price up front. The remaining 70% being paid after the NFI kits have been delivered.

To obtain kits, selected beneficiaries travelled from Delmas to Petionville using local transport. Each person was given a travel allowance, with one Community Mobiliser accompanying 20 people. In Petionville, people were issued with a kit in return for his or her voucher. Children's kits were also distributed, one parent being responsible for collecting the kit. 658 kits were distributed through vouchers.

## 2. Sanitation

The main challenges for the Oxfam teams were excreta disposal and poor solid waste management practices. In Haiti, pre-earthquake, only 29 % of urban dwellers used improved sanitation (JMP 2008), with open defecation and flying toilets being common in high-density urban areas. Waste collection services, and drainage were virtually non-existent in many areas of the city.

### *Excreta Collection & Disposal*

*Communal & Shared Family Trench/Pit Latrines* were the technical solutions most commonly used by Oxfam during the emergency programme. Options were selected based on site characteristics, availability of space, and being granted permission to install latrines by landowners. In many cases landowners refused to allow latrines to be installed on their land. Latrines were installed in phases:

- *Phase I* – Emergency latrines using squatting slabs and plastic sheeting superstructures.
- *Phase II* – Stabilised trench latrines, squatting slabs, and rigid emergency superstructures
- *Phase III* – Lined, high volume pits, seats or squatting slabs, and plywood superstructures.

Further details of the “phased” approach can be found in the Petionville Golf Course case study text box.

*Chemical Toilets*, hired from private companies, were used in some camps very early on in the emergency. However, given the limited size of the storage capacity and high maintenance cost (over \$20/day) for emptying/cleaning, their use was quickly discontinued.

Later on, new unused Portaloo units were used as showers in Corail. Toilet tanks were removed, and the superstructures were installed on concrete foundations to become shower cubicles.



**Figure 6:** Toilets into shower cubicles: An innovative use of Portaloo toilets at Corail Camp. (Photo: Kateryna Perus, OGB)

An Oxfam partner, SOIL, also converted units into dry composting toilets, by substituting the toilet tank with a bucket and a urine diversion seat.

*Raised toilet units*, fitted above plastic water tanks were used at sites where: space was limited, it was impossible to dig, or landowners refused permission to dig. Raised latrine units require regular desludging by vacuum tankers. Oxfam had lower O & M costs than other organisations opting for Portalooos. The best configuration was to have 3 or 4 cubicles discharging into one larger “water” tank.



**Figure 7:** Raised toilet unit in Delmas area of the City. Tank is desludged twice monthly. (Photo: Tim Forster, OGB)

*PooBags*, including PeePoo, biodegradable and simple plastic bags were piloted at two camps where it was impossible to install latrines quickly. Although there were limitations, it did build on people’s existing practices. The elderly, less physically able and women particularly appreciated PeePoo bags, as these could be used at night in their tents. Use of an organised bag collection system also prevented “bags” being discarded indiscriminately into drainage channels and ravines.

Peepoo bags were particularly liked because of their ability to reduce smells, especially when used inside tents. Unfortunately, after the initial pilot, bag use was discontinued and an opportunity to provide vulnerable individuals with a “safe” night toilet option was lost.

Further details of the Poo Bag experience can be found in a separate Technical Briefing Note: **Oxfam TBN #19**

*UD Toilets*, Oxfam’s partner SOIL piloted UD toilets at 32 sites, 194 units being installed. Two community-composting sites were also set up. The pilot worked well due to the partner’s high motivation and community mobilisation work. 12-months on, many of the units are still in operation. Paid toilet attendants, on daily labour rates, is one factor ensuring high user satisfaction with the units.



**Figure 8:** Raised UD toilet units installed and operated by Oxfam’s partner SOIL. (Photo: SOIL)

Further details about SOIL toilets can be found in the section on partnership.

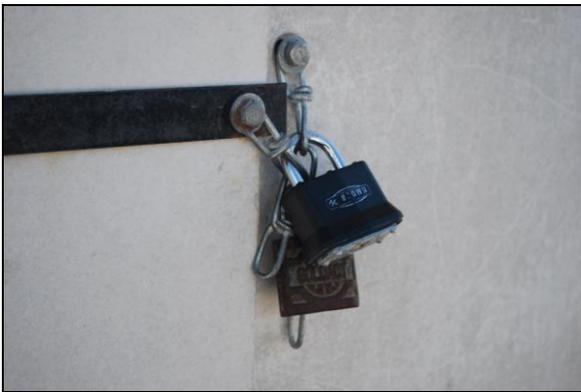
## Latrine Management

Three main management models were used for the sanitation facilities implemented by Oxfam:

- Communal toilets, maintained by volunteers
- Communal toilet, maintained by paid attendants
- Shared family latrines, maintained by 4 – 5 families on a voluntary basis

Initially, the best management model was to pay toilet attendants using daily labour rates. The use of CFW was found to be less successful. Oxfam also provided cleaning materials regularly to ensure good hygiene & cleanliness.

At a later stage, in order to develop stronger ownership, the shared family latrine management model was introduced. Families were provided with padlocks and keys, along with the necessary cleaning materials. Results were however mixed, depending on the homogeneity of the communities involved.



**Figure 9:** Padlocks issued by PHP teams encouraged better O & M of shared family units. (Photo: Kateryna Perus, OGB)

## Excreta Management & Desludging

Oxfam procured two vacuum suction trucks to assist with faecal sludge management in Haiti, with the trucks were donated to DINEPA. Oxfam also contracted their DWR to assist DINEPA set up a Vacuum Truck Fleet management unit. The project was then handed over to UN OPS. One constraint with this activity were very long delays experienced with customs for the release of the vehicles, which has greatly hampered the implementation of the Fleet Management Project.

A number of hand operated sludge pumps were also purchased to assist in de-sludging latrine pits. The pumps were trialled at Golf Course, but were found to be ineffective due to the high volume of solid waste thrown into the pits. The waste effectively blocked the pump diaphragm; as a result, Oxfam employed "Bayacoo" to manually desludge.

## Final Disposal

Final disposal of faecal matter proved one of the most contentious issues in Haiti, as only one major dumpsite (Truitier) exists. The site is unsuitable environmentally, and poorly managed. However organisations were forced to discharge faecal sludge at Truitier, as there were no viable alternatives. One year after, in spite of strong lobbying from the international community, no alternative facilities have been created due to the lack of land. Inaction by agencies has also been a factor.

## Petionville Golf Course – A phased approach

The Golf Course is the largest camp in Port-au-Prince with a population of 50,000 at the height of the crisis. Given the difficulty of the terrain (limited access for trucks, steep slopes and rocky ground), a phased approach to excreta disposal was implemented over a yearlong period. Latrines are manually desludged on a periodic basis.

*Phase I* – Emergency latrines built over trenches, using self-supporting slabs, wooden frames and plastic sheeting. In total, 472-drop holes were installed (approx 1:100), with dedicated cubicles for children and the less physically able.

*Phase II* – Latrines built over deep trenches stabilised by GI sheets. Self-supporting slabs and rigid superstructures were used. 472-drop holes were maintained (including cubicles for children and less physically able). Camp members painted the latrines to stimulate better hygiene practices amongst users.

*Phase III* – Latrines were upgraded by building over high volume 50m<sup>3</sup> pits (blocks, reinforcing bar & concrete). Sit-down seats replaced squatting slabs, and superstructures were made from plywood. 307-drop holes were fitted to high volume pits (including cubicles for children and the less physically able), and again painted by camp members.



**Figure 10:** HP messaging on the walls to prevent theft and promote better hygiene practices. (Photo: OGB)

## Manual Desludging

Due to high usage, and limited vehicular access, latrines were desludged manually by the "Bayacoo" (a traditional group working only at night). Oxfam provided equipment: buckets & rope. Safety equipment; boots, overalls, gloves & facemasks. Cleaning materials: soap & chlorine solution. A dedicated "Bayacoo" only shower unit was also built. Prior to undertaking the desludging, "Bayacoo" throw a mix of chlorine solution, disinfectant and diesel fuel into the pit to "sterilise" the contents (this is a traditional practice and probably has limited effect).

The plastic buckets were removed from the site by pick-up truck and taken to the only major dumpsite (Truitier) in Haiti for disposal. Plastic buckets with screw lids are recommended to maximise transport and facilitate handling.

### 3. Water

During the response, the majority of water supplied to Oxfam supported sites was delivered through water tankers. Other sources included CAMEP network, water vendors (kiosks) and hand pumps. Rainwater harvesting and surface water collection was minimal. Site access and proximity to existing infrastructure were determinant factors in choosing the means of water delivery.

Oxfam conducted two water user surveys in Haiti, one looking at water consumption practices in camps, and one looking at water market. Although the water consumption survey was used to identify camp exit strategies, the water market survey was not widely used within Oxfam. The water market survey proved popular with DINEPA and other agencies.

#### *Water kiosks and urban water supply*

CAMEP is responsible for urban water supply in Port-au-Prince. Although in theory many areas are covered by a network; services are irregular; and water pressures very low. Water is commercialised through water kiosks, managed by existing water committees or associations, who purchase bulk water from the CAMEP. This is then sold on to general public by the bucket.

As part of the exit strategy for water supply in camps, Oxfam assisted existing committees to either rehabilitate existing kiosks or to build new ones. Given the irregular service and low network pressures in some project areas, new branch lines were discussed & designed with CAMEP engineers, with work being undertaken by contractors.



**Figure 11:** A rehabilitated water kiosk in the Delmas area of the City managed by OSJD. (Photo: Tim Forster, OGB)

#### *Inadequate urban water supply networks*

In some areas, working with the CAMEP did not yield good results, as technical solutions from the network were not possible. Unfortunately, the technical limitations of working with CAMEP were discovered late in the day. In such cases, Oxfam negotiated with the community to set up water committees, and to buy bulk water from private water tanker operators. Due to the late start, there was limited time to create water committees, train them and to handover responsibilities.

#### *Water quality*

A separate water quality project was set-up with Quisqueya University and DINEPA. Oxfam provided resources to rehabilitate a water quality laboratory at the University. Resources were also made available to employ 28 students to take daily water samples from Oxfam supported camps for a period of 6-months. However, due to poor information sharing and poor coordination, Oxfam field teams & DINEPA were unaware of the services being offered by the university.

#### **Organisation Soleil Justice pour le Développement**

Founded in 1991, OSJD works on water management and sanitation in Bas Delmas. A local organization of 11 members and 5-committee members dedicated to water management in Cité Jérémie, Cité Sclair, Cité aux Cayes, and soon Delmas 3, with help from Oxfam.

Before 12<sup>th</sup> January 2010, OSJD sold water from 4-kiosks (12 m<sup>3</sup>/d each) at a very competitive price of 1 gourde/bucket (20 litres). Water from a private company/vendor may cost 25 times this. The water is also treated with chlorine; while many private points sell reverse osmosis water, which can easily become contaminated again. The earthquake destroyed two OSJD kiosks and damaged the office, but this didn't stop OSJD from helping the population. Water was turned on as quickly as possible, for no charge, thanks to DINEPA's help. However, it has been a challenge to supply 20,000 people and more with quality water.

A partnership with Oxfam started in October 2010. Two kiosks were rehabilitated and the office repaired. Water is also supplied to the IDPs' in camps, as well as the community. Now, OSJD is ready to restart selling water at their usual advantageous price. With the four kiosks, the big challenge will be to get the kiosk tanks filled in time by CAMEP (3-times/week minimum). Water is pumped in La Plaine, transferred to Tabarre, sent to a filling station in Delmas 75, before being delivered by truck to OSJD, an expensive & complicated process. Oxfam is working on a new solution is to get water from the Airport network. This doesn't need pumping and is available 24 hours a day; unfortunately, not all kiosks are well placed enough to be linked to Airport network.

OSJD is learning more everyday from the Oxfam partnership, especially about the importance of hygiene promotion -- even if this isn't a new idea. OSJD are doing community mobilization through tent-to-tent and door-to-door visits, doing sessions about hand washing, focus groups, training water committees and other leaders in the community. They have even prepared and presented an educational radio show on hygiene promotion and cholera prevention in collaboration with the Oxfam hygiene promotion team.

Oxfam will transfer responsibility for all water management and hygiene promotion activities in Bas Delmas to OSJD. After 5-months of collaboration with Oxfam, OSJD is ready to take the lead. They now feel "mature enough" for the challenge. Knowing Oxfam's team will be "by our side" to guide and provide technical support when needed. OSJD plans to cover the whole Bas Delmas area including camps, districts, and schools. The aim is to alert people to the "consequences of their bad behaviour" -- both for the environment and for their own health. OSJD plans to fight to change those with bad behaviours into good citizens, and improve the public health situation in their neighbourhood.

Waste management is also a big issue, as people throw trash all over the neighbourhood, and even fill the ravines with rubbish. Now, more than ever, OSJD understands the enormity of the mission. But one thing is sure "our motivation to continue this fight, which we started a decade ago, is even bigger".

## 4. Mainstreaming

### WASH Accountability

Accountability in Haiti focussed on 3-key dimensions: participation; transparency and feedback. Nationally, there was one accountability advisor and 4-field officers (Delmas, Croix de Bouquets, Carrefour & Carrefour Feuilles). Field officers also look at gender and protection issues, and were available to support field teams. Field teams were responsible for including accountability in their ways of working. Key activities included:

- Field Officer support visits to camps (observation)
- Focus Group Discussions with communities
- Information boards with 400 Toll free number

Technical aspects of Tollfree "400" number took 2-weeks to set up. An Accountability Assistant, who received 100+ calls on average per week, managed the calls. Calls were mixed, including: information requests, positive feedback on Oxfam activities, complaints about Oxfam services, and complaints about staff behaviour. A complaints mechanism was also set-up, and feedback was given to the complainant.

Difficulties included; existing levels of accountability knowledge amongst staff, particularly at a field level. Accountability training proved difficult due to the exponential growth of the programme early on. The lack of a framework at a senior management level also slowed uptake within the programme. The Field Officer support visits were sometimes perceived as "policing", rather than an opportunity to increase participation and promote feedback from the target communities.

#### # 400 Signboard

Signboards, with details of Toll free 400 Number, were installed at 47 sites supported by Oxfam.



**Figure 12:** An information Board with details of the Toll Free 400 Number. (Photo: Tim Forster, OGB)

#### Réunion de Feedback Communautaire

In Corail, the PH team also set up community meetings twice monthly in each camp sector as a means of seeking feedback on accountability issues.

### Protection Issues

The earthquake response took place in a context of "insecurity", and in a culture where sexual violence is commonplace. In general, little official information was available about people's rights, and resources available were limited in relation to the magnitude of the response. Key issues were identified in relation to protection were:

- Possible exploitation & abuse of power by camp committees
- Sexual violence, particularly at Oxfam facilities
- Forced evictions (private landowners)

The main concerns for Oxfam were risks of exploitation and abuse of power by Camp Committees. Committees were often "self-appointed", and Oxfam PH staff had little or no control over them. Oxfam teams evaluated possible exploitation risks, and mitigated against them accordingly.

The main constraint was the teams existing knowledge on protection issues. The mainstreaming team also collected feedback on protection issues through community feedback sessions.

#### Community Feedback

FGDs were under conducted in a number of camps on a regular basis. Although no cases of exploitation or abuse were detected directly in relation to Oxfam facilities, there were numerous reports of Committees abusing their power. The selection of CFW participants and daily labourers was particularly problematic. As a result, different strategies were employed by Oxfam to mitigate the risk, including the use of a "Lottery".

#### Petionville Golf Course – a "lottery" approach to select daily labourers

The Golf Course is the largest camp in Port-au-Prince with a population of 50,000 at the height of the crisis. A series of WASH activities were undertaken in the camp using paid labourers to clean and maintain community latrines, and to collect and dispose of solid waste in the camp.

Initially, paid CMs were selected by the camp committees and established in 5 sectors, 5 people per sector. Early on, 20 people were employed in each camp sector. People were employed for a period of two weeks and then rotated. However, given the social structure of the camp, there was dissatisfaction with the selection process for both CM and waste management staff.

This led to complaints and in some cases protests and threats against Oxfam. As a result, social events were organised on a regular basis with music, dance and other activities. A "lottery" of camp resident names took place during the event, with people being selected randomly. Events not only acted as a psychological support for camp residents, but were successful in reducing tensions amongst the camp population as well.



**Figure 13:** A social event at Golf Course (Photo: Oxfam GB)

One key point to consider is the cost/benefit of putting such a system in place. Events work out more expensive than traditional CM selection techniques, but increase Oxfam's overall acceptance.

### Solar Street Lighting

Oxfam lobbied for the inclusion of better lighting at or near WASH facilities through the Protection Cluster. As a result, a number of solar streetlights were installed by ESF (Electricité Sans Frontières) and UNFPA, to improve security for users, in particular women and children. Little is known about the impact of providing such lighting.



**Figure 14:** ESF installed solar light in Carrefour. Public lighting improves safety at night. (Photo: Tim Forster, OGB)

### Gender and Diversity Issues

Key issues highlighted to the mainstreaming team in FGD sessions with women included concerns about.

- The use of squatting slabs, as women felt the “hot air” from the pit would lead to them contracting diseases.
- Safety issues related to the siting of sanitation facilities, and using those facilities at night.



**Figure 15:** A community feedback session with camp residents. (Photo: Oxfam GB)

In spite of women being included in many community feedback sessions, there is little evidence that the consultations led to women being included decision-making process about where to site sanitation facilities and their ultimate design.

### Access for the Disabled

A large number of people in Haiti were left physically handicapped by the earthquake. In Phase I of the intervention, commodes were provided for disabled people, as part of the work done around the use of poo bags.

In Phase III, the PH teams designed sanitation facilities with better access for wheel chair users.



**Figure 16:** A latrine with access for wheelchair users. (Photo: Oxfam GB)

### WASH & Livelihood Integration

There were few opportunities for direct integration between the Oxfam PH and EFSL teams. In general, WASH activities were undertaken inside camps and the majority of livelihood activities were undertaken outside camps in adjoining neighbourhoods.

Examples of integrated PH and EFSL activities include:

- Hygiene and hand washing and being integrated successfully into the community canteen projects.
- The Water Market study undertaken by the livelihood team.

A number of small business grants were also provided to camp residents to re-start businesses, including civil engineering contractors and plumbing businesses. Where possible, camp residents with the required skills were integrated into infrastructure projects within their camps through competitive tendering processes.

#### The Use of “Camp” Contractors

In phase two of the response, contractors undertook much of the construction work in camps. The normal process for identifying a contractor is to open a bid, and to identify the contractor best suited to the task.

Contractors from the camps themselves were encouraged to participate in bids. Oxfam supported with training on how to prepare a bid. In the selection process, camp contractors were given a higher rating on some selection criteria. As a result, a number of “camp” contractors ultimately won some of the bids.

The “camp” contractors hired daily labour for many of the construction activities. This was beneficial in reducing tensions amongst the camp population, while at the same time benefiting entrepreneurs financially.

## Coordination with National Structures

The main Government partner in Haiti was DINEPA, who were considered to be both pro-active and well resourced partner. DINEPA also led the WASH Cluster and hosted the Cluster Information Management. This was considered a strong advantage in planning the response.

### *WASH Cluster*

Oxfam has been an active participant in the National WASH Cluster since its inception in January 2010. Oxfam was also a member of the Strategic Advisory Group (SAG). Oxfam was also instrumental in setting up Municipal (Baby) WASH Clusters early on.

### *Municipal (Baby) WASH Clusters*

Originally an Oxfam initiative in Carrefour, this was later adopted more widely by DINEPA & UNICEF. Oxfam staff identified several advantages of municipal coordination, including; discussions taking place at a local level; zones of intervention identified with other actors; local authorities present (DPC – Mayor's office); civil society actors present; and meetings in French/Creole. DINEPA also appointed local WASH staff to support the municipalities. Oxfam teams found these counterparts useful, though they were not used to their full potential by the coordination structure.

Difficulties encountered included: participation from local officials dropping off after a time, lack of a meeting structure and lack of strategic direction. Also, National WASH Cluster discussions did not filter down to the municipal level.

## WASH Programming through Partners

### *Disaster Waste Recovery (DWR)*

DWR is a UK based NGO specialised in solid waste management (refuse, debris, recycling, etc.) in a disaster setting. DWR has worked globally with Oxfam since 2005. DWR's main areas of intervention in Haiti include:

1. A waste management service for 50,000 people at Petionville Golf Course, and 2-major camps in Carrefour. They also set up a community waste management scheme in Carrefour Feuilles.
2. Institutional support to DINEPA, including assisting to develop a national WM policy and supporting the start up of a fleet management structure for desludging trucks.
3. Earthquake debris collection and treatment in Carrefour Feuilles in support of livelihoods and shelter activities.
4. Drainage channel clearance in Cité Soleil as a means of reducing vulnerability from floods at the on-set of the hurricane season.

DWR brings specific WM skill sets to an urban programme (i.e. desludging fleet manager role), which may not be available within Oxfam.

Overall, the partnership worked well, though opportunities existed for closer field level collaboration, particularly on community mobilisation & mainstreaming. More commitment, from both parties, is also required to ensure activities such as drainage channel clearance are more sustainable in the longer-term.

## Community Debris Removal in Carrefour Feuilles

DWR is implementing a debris collection and processing project in two neighbourhoods of Carrefour Feuilles, assisting to process an estimated 160,000 m<sup>3</sup> of earthquake debris. The project was managed at community level, through 2-neighbourhood committees (11 members), selected from over 200-civil society groups in CF. A Town Hall representative was also present on committee. All the committee members were paid daily rates, as there is considerable work involved in organising the communities and getting agreement.

DWR, in collaboration with the committees, identified buildings to be demolished/removed. A MoU was signed with building owner and authorities, legally permitting the buildings removal. Demolition then takes place, either using an excavator or manually depending on access. Debris is then transported to the treatment site, where it is passed through a crusher and then a grader. The processed aggregates are suitable for foundations (roads & buildings), and for block making. Several NGOs and other organisations established agreements to collect aggregates free of charge.



**Figure 17:** Oxfam excavator demolishing buildings in C. Feuilles under DWR supervision. (Photo: Kateryna Perus, OGB)

DWR had 4-full time employees, as well as a number of daily labourers (male & female) for demolition and for manual solid waste screening. Daily labourers are rotated every 15-days, in collaboration with the committees. Oxfam owned the mechanical equipment (grader, crusher & excavators) used in the project.



**Figure 18:** Building debris being crushed and screened for re-use in construction projects. (Photo: Tim Forster, OGB)

Difficulties involved in setting up the project included: long delays in getting equipment through customs, resulting in high costs for equipment hire; Access problems due to narrowness of roads – as many of the building types being removed are best suited to mechanical rather than manual demolition (although smaller, mobile equipment was procured where possible). Demolition activities also cause traffic chaos, so requires close coordination with relevant authorities.

### *Hydroconseil*

Hydroconseil is a French based engineering firm specialised in water and sanitation programs for low-income residents, as well as public services management. Hydroconseil has considerable experience in Haiti working on reform of the WASH sector. Hydroconseil's main area of intervention in the Haiti earthquake response with Oxfam was an engineering study for the extension of the water supply network in Croix-de-Bouquet.

The tasks given to Hydroconseil were considered well within their competences. Hydroconseil brought a specific set of skills on urban water supply and management issues. They also brought knowledge of the key Haitian institutions involved (DINEPA & Municipalities).

Overall, the relationship was not fully optimised in Haiti, but there is potential to develop this partnership in future emergencies, especially those in an urban context.

### *GRET*

GRET is a French based NGO specialising in community water management. GRET has over 15 years of experience working in Port-au-Prince with CAMEP on management systems for low-income urban/peri-urban users. The main interaction between GRET and Oxfam for the earthquake response included:

1. Building on existing water management structures through local community based NGOs
2. Mainstreaming hygiene promotion activities into community based NGO ways of working

Rehabilitation & improvement of water kiosks in earthquake affected parts of the city, with a view to developing a longer-term solution to community water supply in the vicinity of urban/peri-urban camps.

### *Sustainable Organic Integrated Livelihoods (SOIL)*

SOIL is a US based NGO specialised in community based ecological sanitation. SOIL has been working with Oxfam in Haiti (Cap Haitian) since 2008. SOIL's main interventions in the earthquake response include:

1. The construction of 194 raised (or semi-interred) communal UD toilets at 32 sites.
2. Provision of managed communal sanitation for 22,000 people at 32 sites (8 schools & 24 camps), at the height of the response.
3. Creation of a site for human waste composting and the setting up a human waste collection system.
4. Coordination with DINEPA and WASH Cluster partners on excreta management issues.

The tasks delegated to SOIL were considered to be well within their competences. SOIL brings specific skill sets related to ecological sanitation (community mobilisation and engineering) in an urban/peri-urban context, which are not common within Oxfam.

Overall, the partnership worked well, though more attention is required as to how UD toilets can be made more sustainable for the longer-term. A simple cost benefit analysis for producing and selling compost to potential users, and a strategy for developing a compost market would be critical elements for future interventions where UD toilets are to be used.

### **Provision of Emergency UD Toilets in Camps**

Initial sites were selected by SOIL staff based on field visits to earthquake-affected areas in Delmas, Tabbare, and Cite Soleil. Camp committees were then approached to present SOIL's approach to sanitation, and demonstrate the range of UD toilets available.

Following this, when a clear request for support is established, communities were involved in selecting & siting the most appropriate design. Toilet units were often raised, UD seats fitting tightly above 50-litre plastic drums (old HTH drums) with screw lids. Variations were developed by modifying un-used Portaloo's. One of the challenges was to design a urine outlet that doesn't block easily.

Hygiene promotion sessions were held with the whole community, to highlight the importance of safe excreta disposal, and to demonstrate the UD toilet unit. Use of a desiccating material (e.g. sawdust or sugar cane bagasse), was also demonstrated.



**Figure 19:** UD toilet seat developed by SOIL and manufactured locally in Port-au-Prince. (Photo: SOIL)

### *O & M of Communal Toilet Units*

Toilet attendants were paid to: clean, manage, and remove drums when full. They also ensured desiccating material (preferably bagasse) was available inside units at all times. Use of a desiccating material not only prevents flies but also prevents smell, making the toilets nonular with users.

### **WASH Standards and Indicators?**

Early on in the response, many PH staff were focussing on 15 l/p/d indicator for water delivery in camps. Overall, experience at Golf showed that proxy indicators, such as queuing time at a water point, would be more suitable, especially where multiple water sources are available in urban setting. Finally, only 7 l/p/d were actually delivered in Golf at tap stands. Queuing time was observed to be short and FGD with the community did not reveal concerns about lack of water.

Early on in the response, DINEPA and the WASH cluster produced a set of minimum standards for the response in Port-au-Prince. Although these minimum standards were felt useful, especially for smaller less experienced organisations, they were based on quantitative indicators (e.g. 1 latrine per 100 people). Others options, particularly based on qualitative or proxy indicators would be more useful (e.g. queuing time at a latrine).

**“Consider new indicators, don't just change ratios”**

## Lesson Learned from Haiti

- Good internal communication, about internal Oxfam PH activities and partnerships, is a prerequisite in such a big emergency operation. This not only avoids duplication, but also stimulates team ideas and promotes more effective use of resources.
- PH activities involving the use of labour intensive activities need to have clearly defined objectives and adequate levels of supervision in order to achieve the desired results. Such activities may be best achieved through targeted casual daily labour rather than CFW activities.
- Careful consideration is required on how to make activities more sustainable in the long-term. This is particularly true when undertaking clean up campaigns. In certain instances, 2<sup>nd</sup> phase follow up programmes will be necessary to capitalise on initial gains.
- Effective community mobilisation at many of the Oxfam supported sites was the key to successful interventions. Establishing good working relationships with the beneficiary community allowed innovative PHP activities to be identified, and also permitted accountability, protection and gender to be mainstreamed through the programme.
- Security issues for blanket NFI distributions need to be taken seriously, particularly when there is pressure to distribute to large numbers of people. Good practice includes: (a) always work with camp committees to check and double check registration lists and organise security. (b) be flexible in the distribution approach – be innovative in dealing with specific security issues.
- A range of excreta disposal options, based on site context, proved more effective than one unique solution. Weak coordination between the WASH Cluster and donors resulted in large numbers of chemical toilets being imported with little consultation taking place implementing agencies. Although innovative ways of using the units were found, valuable resources were ultimately wasted.
- The O & M of communal latrines/toilets is best achieved using paid daily labourers. Adequate supervision of staff is also required. Voluntary labour should be encouraged when latrines/toilets become shared family or individual family units.
- Provision should be made not only for O & M of latrines, but also hand washing stations, particularly when they are communal. As with communal latrines, attendants should be paid to ensure water and soap is readily available and stations are clean and maintained.
- Provide support to specific groups such as “Bayacoos”, not only to make latrine emptying activities more dignified, but also to raise awareness on environmental issues such as:

dumping latrine waste randomly and impact of pouring environmentally unfriendly products (i.e. diesel fuel) into latrine pits.

- When defining an exit strategy for water supply activities, multiple approaches should be considered rather than assuming the local water authority will be able to make a simple network connection. Municipal water companies are notoriously complex, and opportunities for small quick fixes can be quickly obstructed at higher levels. Developing a plan B is always useful.
- A number of innovative partnerships were established with both existing and new partners, producing a number of positive outputs including safe excreta disposal (SOIL), rubble collection & processing (DWR), and the development of a national policy for waste management (DWR). Other initiatives, though partly successful, would have benefited from clearer oversight and better internal communication about the aims of the partnerships.

### Further Information

Oxfam International (2011)

*Haiti Progress Report 2010*

<http://www.oxfam.org/en/policy/haiti-progress-report-2010>

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*From Relief to Recovery: Supporting good governance in post-earthquake Haiti. – Oxfam Briefing Paper 142*

<http://www.oxfam.org/en/policy/relief-recovery>

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*Elaboration de la Politique Stratégique de gestion des déchets solides pour la région métropolitaine de Port-au-Prince.*

Patel, D; Brooks, N; Bastable, A. (Jan 2011)

*Excreta disposal in emergencies: Bag and Peepoo trials with internally displaced people in Port-au-Prince. Waterlines*, Vol. 30, No. 1, Jan. 2011, pp. 61-77 (Practical Action Publishing)

Oxfam GB (June 2010)

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*WATER CONSUMPTION PRACTICES IN HAITI - A report on a water users survey conducted in Port au Prince communes, in Haiti.*

UNICEF & WHO (2008)

*Progress on drinking water and sanitation: Special focus on sanitation – Joint Monitoring Programme (JMP).*

<http://www.wssinfo.org/documents-links/documents/>