

Sustainable WASH interventions as populations transition from relief to development

Haiti case study

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Context of the relief effort

The complexity of the operating environment following the earthquake in January 2010 cannot be overestimated. DINEPA, the National Directorate of Drinking Water and Sanitation (*Direction Nationale de l'Eau Potable et de l'Assainissement*) had only been recently established (March 2009) and its already stretched capacity was severely hampered by a significant loss of DINEPA's resources in terms of staff, infrastructure and records as a result of the earthquake. DINEPA not only sought to respond directly to effects of the earthquake on access to water and sanitation, but also to the following cholera outbreaks later in 2010 and in 2011. While this "distracted" DINEPA from implementing their long-term strategy, this strategy has since been revised to reflect learning gained during the emergency response process (DINEPA, *pers. comm.* 2012).

Adding complexity to the earthquake response were a range of other factors, such as; the multiplicity of NGOs already active in the country, the vast numbers of small NGOs who established a presence in response, pre-existing low coverage of water and sanitation services, environmental fragility, legal aspects (such as land rights affecting responses in urban areas), underlying poverty, and so on. There was also a general lack of management capacity, or a clear understanding of how to implement rapid, large-scale responses – particularly in relation to the urban context of Port au Prince (BRC, *pers. comm.* 2012). All of these factors and more contributed towards an extremely challenging environment in which to achieve a sense of coordination, alignment of policies, approaches and action across all WASH actors.

Context of transition

A year on from the Haiti earthquake in January 2010, Oxfam noted that the humanitarian response that followed had been "*one of the most complex ever*" (Oxfam, 2011:1). While recognising that much had been achieved in the year following the devastation brought to an already vulnerable country, the report also highlighted the lack of progress achieved in reconstruction. Many aid agencies were continuing to operate through systems parallel to local and national authorities, and needed to do much more in terms of increasing capacity and accountability of local and national institutions. The Haitian government was also urged to show stronger political leadership, address issues of corruption and improve accountability – with more attention given to decentralising power to local authorities (*ibid*, 2011:4).

Key recovery lessons from other similar disasters were highlighted in the report.

These included:

- Early attention to **livelihoods** is vital
- Relief **and recovery must be simultaneous** processes
- Local **participation and ownership** is essential to recovery
- Disaster **risk reduction** is an integral part of effective response (*ibid*, 2011:8).

Water supply

The Oxfam report recognises that the provision of free basic services to hundreds of thousands of vulnerable people, including health care and water, saved many lives in the initial humanitarian response. On-going provision of free water has however had a

negative effect on the local private providers (companies and individuals) whose livelihoods depend on providing these services. Agencies are urged to be more proactive in creating partnerships with the government, as well as work with the local private providers to enhance the potential for sustainable income-generation and livelihoods opportunities. Constraining to approach however is the inflexibility of donor funding towards supporting such initiatives (ibid, 2011:17).

Sanitation

In April 2011, the joint DINEPA/WASH Cluster report on a transition strategy for sanitation services identified that, while continuation of sanitation services in camps was a public health imperative – particularly in the context of cholera – the relief agencies need to withdraw from direct provision of water and sanitation services to temporary sites and camps. The process of transition requires strategies to align agency's action plans in relation to two components:

- transition and exit from the humanitarian response in camps, and
- up-scaling recovery efforts in return areas and relocation sites (DINEPA/WASH Cluster, 2011).

In considering the **transition and exit from camps**, the WASH Cluster identifies possible strategies for withdrawing from direct implementation of a range of services – such as cleaning, managing and desludging toilet facilities and monitoring the wider sanitary conditions in the camps. To implement the strategies would require various actions to take place, including:

- participation of camp committees and residents in planning the strategy,
- mentoring and support to camp committees,
- capacity building and monitoring by and for camp committees,
- removal, rehabilitation or replacement of emergency facilities – including mobile latrines – depending on the context, and
- the construction of more durable facilities.

A number of constraints have been identified, affecting the way in which strategies can be implemented. Those of relevance to this research include:

- technical: environmental and legal challenges affecting technical options (space, groundwater, land ownership)
- management: issues of ownership of facilities, affordability, social cohesion and dependency (on cash-for-work) affecting participation,
- desludging: reducing sources of external finance, limited availability and agreements around use of trucking equipment and disposal facilities,
- external factors: lack of trust between affected populations and local authorities, uncertainty about the future and no land ownership affecting willingness to invest.

Similarly, a number of strategic options for sanitation to **return areas (neighbourhoods) and relocation to transitional sites** have been identified, which aim to “*provide sustained access to safe, appropriate, hygienic sanitation facilities...protective of public health and the environment*” (ibid, 2011:7). These require much greater coordination between a range of actors – including national

government agencies, local mayors, landowners and beneficiaries – to identify the most suitable options in response to household and institutional needs.

Key constraints to realising the strategic options in this context include issues pertinent to the research. These are:

- social cohesion and coordination: limited social cohesion and interest in participation by returnees, as well as WASH facilities in transitional sites being designed by Shelter actors – with little account of social elements of sanitation planning,
- physical aspects: lack of good WASH assessments (by Shelter actors) prior to planning infrastructure, poor connectivity to services for emptying and sufficient water supply for some latrine design options,
- financial aspects: insufficient external funds and limited funding timelines to implement and support effective participatory approaches and WASH interventions, renters reluctant to invest in improvements and the affordability of options in problematic areas (high groundwater / flood-prone areas).

Despite these constraints, a number of agencies have been identified as implementing participatory approaches, including:

- CRS: using PHAST and CLTS with returnees – where land ownership, or security of tenure, had been addressed
- ACF: planning a sanitation programme using participatory approaches, offering a range of innovative technical designs
- CARE: implementing integrated Shelter-WASH solutions
- OXFAM Intermon: working with Bayakous (latrine emptiers) to improve the emptying, transport and disposal of excreta, increase their capacity and improve overall working conditions.

The adoption of clear strategies, approaches and actions to transition through stages of the relief to recovery continuum has also been affected by broader elements of the operating environment.

Governance and accountability

DINEPA demonstrated a level of capability and willingness towards taking a lead role in the recovery of WASH services, in coordination with the WASH Cluster. The highly centralised nature of government structures and newly formed structure of DINEPA itself resulted in a slow roll-out of institutional arrangements, accountability and capacity into the regions to oversee and support implementation of service delivery.

More recently, DINEPA's structure has been strengthening through establishing the role of OREPAs (Regional Offices of Water Supply and Sanitation), sub-regional offices and centres of technical expertise (CTEs) throughout the country. These offices will oversee the work a network of over 250 technicians, who have been receiving training prior to final deployment throughout Haiti. They will provide support in all 140 administrative Sections of the country to association-type community-level management structures, who will manage operation and maintenance of WASH services in a partnership agreement. For Water Point Committees (CPEs - Comités

de Point d'Eau) to become registered and officially recognized by DINEPA, they must adopt DINEPA's standards and allow DINEPA to monitor their performance and rates of collecting user fees. The process of monitoring is however recognized as being weak. While Performance Indicators for monitoring water and sanitation services have been developed (and being pilot-tested in mid-2012), they focus mostly on aspects of water supply services (primarily water quality), with little attention currently given to monitoring the outcomes of sanitation interventions (DINEPA, pers. comm., 2012).

For new projects, DINEPA will introduce willingness to pay studies as part of a feasibility study. The extent and level of water services to be provided will then be linked to the payment likely to be raised. This is a change to previous approaches, which did not require community contributions and it is taking time to achieve a change in community attitude towards paying for water services (ibid, 2012).

In relation to sanitation, there is a policy of no subsidy towards household level sanitation hardware – but support in the promotion of sanitation and sensitization within communities.

The Disaster Response Unit (DRU) of DINEPA that was established in 2011 became operational in 2012. While it remains a very small unit, it has been able to demonstrate its ability to respond to an emergency without relying on external response agencies (OFDA, pers. comm. 2012).

Private sector providers

Many NGOs (humanitarian ones in particular) have a lack of experience and confidence in working alongside local private sector providers, which leads to a reluctance to engage with them (BRC, pers. comm. 2012). This has been the case in Haiti too – where the emergency response programme and approach as a whole has paid little, if any, attention to the potential from those who were providing significant levels of services in the WASH sector before the earthquake in 2010.

Oversight of private water kiosks and water vendors is the responsibility of the Public Health Department (within the MSPP), not DINEPA. The potential for private operators to play a role in the delivery of household water treatment options, in association with NGOs, is part of on-going discussion between DINEPA and the WASH community. This supports the development of over 60 household water treatment (HHWT) and storage programmes registered with DINEPA, in support of the HHTW Strategy that started in 2011 (DINEPA, pers. comm., 2012).

Transition and exit strategies

In April 2011, over a year after the earthquake, the WASH Cluster and DINEPA developed a sanitation transition strategy for temporary sites (camps), as well as for return and relocation areas. WASH actors were seen as already having shifted their general attention away from camps and towards a “neighbourhood approach” for return and relocation sites, although for many camps transition was still not possible

due to the number of people remaining in them. Transition and exit strategies were developed in the context of an on-going cholera response in many camps, which affected the extent to which the Cluster would need to ensure the continuation of effective WASH services to protect public health.

The strategy identifies two main areas of response as being necessary:

- transition and exit from a humanitarian response in temporary camps, and
- up-scaling early recovery responses in relocation camps and return areas (DINEPA/WASH Cluster, 2011).

The **transition and exit strategies for camps** pays attention to the minimum standards for sanitation principles and practices in the Strategic Operational Framework developed by the Haiti WASH Cluster during 2010. In addition they seek to ensure integration of key cholera response activities. They address practical arrangements that need to be considered within the range of existing actions – including cleaning, managing, repairing and maintaining toilets, addressing aspects of excreta storage and removal, as well as continuing to monitor the sanitary conditions in the camps.

The strategy identifies a range of “strategic orientations” – aspects to be addressed in support of a transition process. These include an understanding of the need for **participation** by the affected population and camp committees in planning and implementing the transition process. This in turn requires support to such committees managing sanitation, with the introduction of:

- coaching and supervision of committees – to ensure effective management skills and social cohesion within the committee to address problems experienced, and
- partnerships with local organizations who could take-over managerial and logistical back-stopping on behalf of the committees.

The transition process considers the need to address appropriate technical and management arrangements for the range of existing public and communal latrine facilities. Mobile facilities are to be phased-out, temporary emergency facilities replaced, rehabilitated or repaired and semi-permanent toilets constructed. The transfer of responsibility can then be to a multi-family arrangement for overseeing use and maintenance of designated toilet cubicles, or to CBOs acting on behalf of committees to operate private pay-per-use toilets on a more commercial basis.

Transition towards final exit of WASH actors from the camps will be influenced by whether or not there is an on-going presence of displaced people. If the population has left, facilities will be either closed (returning the land to its original condition as far as possible) or handed-over to land owners if requested. Where the population remains, the chosen transition strategy can be implemented – ensuring the population are aware of running costs to continue operation of the facilities.

The plan identifies that various **constraints** face adopting the transition and exit strategies. These include technical, management and support service challenges, as

well as aspects affecting the confidence between the affected population, local government and landowners (relating to lack of clear information concerning future plans, insecurity of settlement and risk of eviction).

To be in a position to implement transition and exit strategies effectively requires donors and government agencies to address key enabling factors. These can be summarised as:

- donor support to fund the replacement of emergency toilets with more durable structures, and
- government support to ensure:
 - o desludging trucks available to service latrines in the camps (DINEPA),
 - o future use of safe and effective disposal sites for transported sludge (DINEPA and SMCRS, the Department of Public Works' Solid Waste Collection Unit),
 - o internal monitoring of minimum health standards within the camps (DINEPA and MSPP, the Ministry of Public Health and Population)

At the time of writing, the strategy also acknowledged that in certain cases there had not yet been a viable transition solution, which resulted in on-going provision of free water trucking or mobile toilets.

The up-scaling of **early recovery responses in relocation camps and return areas** is based on a broader Inter-Cluster Coordination Strategy for Return and Relocation, which defines approaches towards developing *durable solutions*. It also identifies principles to be applied in all responses, addressing aspects of equity, quality, partnership, participation, cost-recovery and income generation, as well as minimum standards for provision of infrastructure.

The strategy again identifies a range of “strategic orientations”, including consideration of:

- the extent of **coordination and approvals** required between key actors – ranging through national and local government representatives, different WASH Cluster agencies, Shelter agencies, landowners and affected populations.
- planning and design aspects within the area of implementation – needing to ensure **participation of beneficiaries** throughout the planning and construction phase, household ownership of interventions, together with alignment between agencies working in the same area on expected levels of household contribution.

The “orientations” also identify more *technical* aspects considering:

- the inter-relation between sanitation provision and impacts on water source contamination,
- the extent to which the return “package” accounted for the pre-existing facilities as well as good practice, when identifying appropriate household, shared, community, public and institutional levels of latrine provision,

- appropriate supportive handwashing, hygiene promotion and maintenance information,
- the range of technical options suited towards immediate, medium and long-term responses in urban and rural areas,
- designs addressing cultural acceptance, security, accessibility and other social elements.

The plan again identifies key **constraints** in implementing sanitation in return and relocation areas. These relate to limitations in terms of social, physical and financial aspects:

Socially a lack of:

- social cohesion in the relocation sites,
- people's interest in either participating or contributing towards sanitation, and
- standardized consultation with local leaders and authorities.

Physically a lack of:

- accounting for social components of sanitation planning in sites managed by Shelter agencies,
- land available on which to construct sanitation facilities,
- effective emptying systems leading to illegal dumping of excreta, and
- water available to ensure functionality of some sanitation options.

Financially a lack of:

- commitment towards investing in housing improvements (enhanced sanitation) if this risked an increase in rent,
- affordability of technical options in high water table and flood-prone areas,
- time to implement participatory approaches, and
- funds allocated to return and relocation areas.

Beyond recovery and rehabilitation – donor funding and flexibility

A number of donors (ECHO, DEC, OFDA) are not mandated to fund demand-led approaches as (major) components of their relief programmes – which are primarily short term, supply-driven and focussed on targets (constructed infrastructure, service provision, lives saved, health indicators, etc.) rather than aspects of built capacity. Funding arrangements are often not sufficiently flexible to allow the transition through to livelihood based, demand-led approaches being implemented as part of relief programmes, at a time that may seem right to the implementing agency.

As the political environment moves towards the adoption and acceptance of only *permanent solutions*, donor agencies that target funds to relief-based interventions will not play a significant role in the future development of WASH services. However, they may continue to provide support to disaster preparedness plans (such as establishing pre-positioned NFIs (non-food items)) and in implementing disaster mitigation plans, such as in enabling infrastructure to secure the environment from future disasters such as landslides.

OFDA in Haiti (based on OFDA, pers. comm. 2012)

Since the context in Haiti is no longer an emergency, OFDA is now playing a role in monitoring activities and developing plans for disaster prevention, mitigation and

DRR. Developing these plans through consultation, information sharing and reaching agreements with the Government is a lengthy process (OFDA, pers. comm., 2012).

The criteria for choosing the timing and processes by which donors transition funds and support is not always clearly defined, as it needs to account for many external factors. These can include:

- the timing and nature of a call for assistance from the affected country,
- political stability in the affected country,
- the donor government's willingness to assist and wider budgetary constraints, and
- the comparative standard of living in the affected areas compared with the "normal" situation.

Communication and coordination between the work of USAID's development assistance programme and OFDA for Disaster Assistance, is considered to be good. This enables opportunities for both "sides" to consider the extent to which they can play a role through the transition process. This influences both the extent to which earlier involvement of a development focus can be achieved, as well as how elements of disaster assistance (including DRR and so on) can be carried forward into development agendas. It is recognised that this process is hindered by the time it takes to longer to plan and mobilize development assistance – which operates to tighter accountability mechanisms.

Humanitarian funds allocated from OFDA can respond to a change in the operating environment faced by the implementing agencies. If NGOs sense that funds are considered to be better suited to capacity building initiatives and other interventions that are not directly infrastructure based, then the changes can be negotiated between the NGO and OFDA to identify the best way forward. Providing adequate justification can be given of the need to change approach and identifying initiatives that will clearly support longer-term aspects of the sector (such as establishing management of water points), it is not essential that budgets stay rigidly to earlier-developed project logframes and targets. Many NGOs however do not have the competence or willingness to adopt such an approach – and other donors may not be as willing as USAID to adopt it either.

Likely global priorities for supporting Haiti in the coming months are difficult to predict, as relief programmes withdraw and processes of transition towards longer-term reconstruction and development initiatives become more prominent. Discussions continue between Government, donor agencies and I/NGOs to identify appropriate approaches and priority aspects for WASH, with greater attention given to transition-related planning and action to enable reconstruction, rehabilitation and longer-term development initiatives, including building the capacity of national institutions.

Tearfund's WASH support

Tearfund's DMT programme mobilised shortly after the earthquake in January 2010, the response being assisted by Tearfund already working in Haiti through local partners. With the Tearfund regional office already operational in Port au Prince, it

was decided to establish the DMT response office in Léogâne to support affected communities in Haiti's *Ouest Department*, in which Port au Prince, Léogâne, Gressier and Tom Gato are situated. In Léogâne itself, the epicentre of the earthquake, almost 90% of houses were reported to be affected (collapsed or significantly damaged) while further damage occurred to other forms of infrastructure including water systems, latrines, medical services and food supplies, across extensive parts of this region.

In coordination and consultation with the WASH and Shelter clusters, Tearfund focused its response in the Léogâne and Gressier areas, giving particular attention to rural and mountainous areas where no other INGOs appeared to be active.

The DMT programme that mobilised in 2010 initially focussed on provision of shelter and WASH activities. The majority of the efforts were focused on the camps that set-up in Léogâne town, as well as villages around Léogâne (in the lower lying areas of the region) and Tom Gato (in the upland areas of the region). Once relevant skills of WASH project staff had been strengthened, the programme introduced activities to address issues of building capacity within the DMT response.

Funded through DFID, the activities focussed on the following interventions:

- training Water Point Committees (CPEs – Comités de Point d'Eau) to manage rehabilitated water supplies,
- partnering with a local organisation (Gadyen Dlo) to distribute, promote and market household water chlorination units,
- training artisans in the construction of latrine slabs (distributed to households through other projects) and to construct BioSand Filters for distribution to schools, and
- piloting CLTS in villages, with follow-up support in a few of the villages.

In addition, Tearfund sought to build capacity of local government and partner agency staff, strengthen relationships with national stakeholders and influence discussions within the international community (through the WASH Cluster) on issues of policy, accountability and advocacy for increased attention towards WASH needs.

The context within which a process of transition has been addressed in Haiti has been extremely complex and multi-layered. This has been particularly true for responses to WASH services in Port-au-Prince and surrounding peri-urban areas, but has also affected the adoption of demand-led approaches in other affected towns and villages.

Despite the scale of constraints present in the country as a whole, there has also been a relatively dynamic operating environment in the WASH sector. The lead government agency, DINEPA, has demonstrated a level of capability and willingness towards taking a lead role in the recovery of WASH services, in coordination with the WASH Cluster. In April 2011, the WASH Cluster and DINEPA developed a sanitation transition strategy for temporary sites (camps), as well as for return and relocation

areas. This has seen a number of demand-led and livelihood based approaches being introduced into WASH programmes in Haiti.

Tearfund has sought to engender a sense of self-help through introducing demand-led approaches into certain of its WASH interventions, as the context of the response has transitioned through stages of relief, early recovery and recovery towards reconstruction and rehabilitation. This is within a context of broader recovery across all sectors affected by the earthquake – which the UNDP recognises will take many years yet (UNDP, 2012).

Variation in the way a number of other NGOs have operated in their response and support to communities has influenced the environment within which Tearfund is attempting to promote livelihood based, demand-led approaches. Consistency between agency approaches has yet to be achieved – only after this will the operating environment be more conducive to changing the overall strategy and approach. Some notable agencies have been reported to install free infrastructure such as shelters and latrines, into communities that they are effectively withdrawing support from. This is considered to be in an attempt to expend surplus funds from humanitarian budgets, as they either transfer responsibility to their development programmes, or withdraw from Haiti altogether.

Even into early 2012 – two years after the earthquake, adopting approaches that clearly focus on capacity building, partnerships, livelihoods and demand-led interventions has stood in contrast to other agency approaches. A shift of emphasis is now becoming more widely seen as agencies align their response to national policies enforcing both an end to free provision of WASH infrastructure and the requirement for communities to take ownership and financial responsibility for service functionality.

Researched interventions

The research has considered elements of WASH interventions in five separate locations, to identify the extent of current or likely “success” where livelihood based, demand-led approaches have been adopted. The level of success is developed by considering the extent to which different elements of the operating environment provide either opportunities or constraints towards longer term sustainability and functionality of the WASH service considered.

The five locations were identified by Tearfund’s DMT staff as being where elements of livelihood based, demand-led WASH interventions had been applied during the early-recovery stages of humanitarian support following the earthquake in January 2010. In each case, the agency working in the communities had been implementing a range of responses supporting the provision of infrastructure and services – not only the intervention focused on for the purpose of the research.

The interventions can be summarised as in the following table:

Table 1: Demand-led interventions identified for the research, Haiti					Gender of respondents			
Community	Locality	Context	Intervention	Agency	Households	FGDs	Leader	Totals
Cormier	Jovin, Léogâne	Rural community	Community-led Total Sanitation (CLTS)	Tearfund	Female: 7 Male: 3	Female: 2 Male: 5	Female: 0 Male: 1	Female: 9 Male: 9
La Briette	Gros Morne, Léogâne	Rural community	Community-managed spring protection	Tearfund	Female: 5 Male: 5	Female: 14 Male: 13	Female: 0 Male: 1	Female: 19 Male: 19
Roche a Pierre	Fondwa, Tom Gato	Rural community	Household water treatment (HHWT)	Tearfund	Female: 6 Male: 4	Female: 14 Male: 9	Female: 0 Male: 1	Female: 20 Male: 14
Santo	Grande Rivière, Léogâne	Re-settled community (peri-urban)	Shared water points & household latrines	Habitat for Humanity	Female: 6 Male: 4	Female: 15 Male: 8	Female: 1 Male: 0	Female: 22 Male: 12
Coraille	Croix de Bouquet, Port-au-Prince	Resettlement camp (urban)	Community-managed water supply	Oxfam	Female: 5 Male: 5	Female: 16 Male: 9	Female: 1 Male: 0	Female: 22 Male: 14
Totals:					Female: 29 Male: 21	Female: 61 Male: 44	Female: 2 Male: 3	Female: 92 Male: 68

Due to the varied nature of the localities and the key demand-led intervention being considered, each will be reviewed separately to identify the key opportunities and constraints facing each community in relation to the use of the demand-led intervention. In this way, the influence of each community's context can be seen in relation to the outcomes of the response.

In each community, 10 household questionnaires were completed as well as up to two Focus Group Discussions and an interview with the local leader (Casec). The questionnaires and FGDs sought to identify the extent to which the affected populations themselves felt they had been involved in the process of selecting, implementing and managing the WASH interventions introduced to their community. They also sought to identify any sense of longer-term responsibility and ownership that the intervention may have introduced to the community – to sense the extent to which households and communities identified future actions as necessary to ensure the benefits of WASH services would continue.

Cormier, Jovin locality: CLTS

Cormier is a fairly small, remote community on the outskirts of Léogâne. It comprises approximately 12 households representing at least three times the number of families. Cormier was affected by the earthquake, but members of the community who lost their homes have either been taking shelter with friends and relatives, or living in temporary shelters on their own plot. People did not relocate to camps from the community.

Prior to the earthquake, UNICEF had implemented a sanitation project that resulted in 85% of the community constructing latrines. UNICEF paid 80% of the latrine cost, while households contributed the remaining 20%. All of the latrines were destroyed during the earthquake – causing the community to resort back to open defecation. Tearfund began to support the community following the earthquake with shelter provision and ensuring access to safe water through provision of chlorine solution and improved water supplies in the area.

In 2011, Tearfund introduced CLTS as a demand-led approach to improve sanitation in the community (funded by DFID), piloting the approach as part of their broader WASH interventions in the region. Cormier locality has only received support from Tearfund since the earthquake, although JEN (Japanese Emergency NGOs) has supported provision of a handpump in a neighbouring locality of Jovin area.

In response to the “triggering” process of CLTS, the local leader (the *Casec*) first built a public latrine for all households to use. Eventually households have been building latrines as they can afford to, with households sharing latrines with neighbours in the meantime. This has resulted in an end to open defecation by all members of the community, achieved with no provision of materials from Tearfund or any other NGO.

- Of the 10 families questioned, 6 had constructed their own “permanent” latrine (having a concrete slab over the pit) in the last year and 7 families intended to construct a new latrine when the first one filled up. 9 households intended to change or improve their latrine – one indicating they would add a ventilation pipe and another that they would construct more permanent (block) walls. A significant constraint was access to funds to purchase the necessary materials.
- 6 families identified the training provided by Tearfund as bringing about positive change to sanitation facilities within the family, while only 2 households considered that support to improve or provide latrines would have been a better approach.

The community as a whole recognized that they have been – and continue to be – involved in ensuring safe sanitation in their homes, through families voluntarily constructing latrines within their financial means and ensuring an open defecation environment continues. Also, through continually applying the hygiene promotion knowledge and principles they have gained, the community senses that they know how to prevent disease outbreaks – notably cholera – to protect themselves.

The community identified key benefits from the support received as:

- people understand the need for a clean environment. While they “knew” about this before, they had overlooked the benefits to be gained from taking steps to change their situation.
- the community realises that they can make a difference by acting together without having to wait for external assistance.

The CLTS pilot community of Cormier, while small, appears to have responded in a way that is appropriate to their environment, with indications of commitment to ensuring the benefits continue. They are also telling neighbouring communities of the benefits to themselves and the wider environment. A WASH Committee in Cormier is actively monitoring progress with CLTS. Given the achievement of ODF status in Cormier and the gradual improvement of sanitation facilities in this small community, the actions of the WASH Committee – supported by a highly motivated Casec – appear to be effective.

Opportunities

The opportunities that enabled this approach to be carried out in Cormier were probably most strongly related to:

- the settled nature of the community and social cohesion that remained strong after the earthquake,
- the motivation of the local leader (Casec) to set an example and encourage support to the wider community,
- Tearfund being the only NGO working in the community – so no influence of conflicting agendas or approaches by other agencies continuing to deliver supply-driven approaches in other areas of support (*In other communities where Tearfund has piloted CLTS, uptake sanitation improvement has been strongly influenced by the action of other NGOs implementing predominantly supply-driven responses in the same community, which has negatively affected household attitudes to self-help*), and
- Tearfund’s approach enabling the community to identify for themselves (and respond to their own expressions of) demand for an improved sanitary environment – achieved through the CLTS triggering process.

Constraints

The community has clearly identified benefits from the process of achieving an open-defecation free environment, which has also raised aspirations within some families to have improved latrines in the future – as indicated above. These aspirations however are met by constraints in the actual capacity and resources available to families in the community, which will affect Cormier community’s ability to maintain and enhance sanitation provision in the future. These constraints relate to the resources available either from within the community or received from external sources. Households in the community have limited assets beyond their home and a few animals, or access to livelihoods beyond small agricultural production. Many are vulnerable to poverty.

- Of the 10 households interviewed, 2 indicated they had no source of household income. (An elderly woman heading up a household of 3 people did not provide a response.)

- None of the households interviewed identified having a business through which they generated income or livelihoods, while 1 household stated that their source of income had been destroyed.
- Half of the households interviewed had experience a death or injury in the family as a result of the earthquake.

The rural and isolated nature of Cormier means it has limited visibility to local government support structures, connectivity to other NGOs, or to markets for goods and services. Masons trained by Tearfund in a neighbouring locality (see below) were not aware of the activities taking place in Cormier, so there would be limited opportunity for households to be aware that local artisans could help with technical aspects of sanitation improvements to ensure appropriate infrastructure to meet technical standards of quality as well as affordability.

An indirect constraint to developing appropriate, sustainable sanitation services and achieve health benefits into the future is the unmet expectation within the community for improved water supplies. Assistance has been provided to neighbouring communities, but Cormier continues to rely on river water as its main source – with households chlorinating water for drinking.

Table 2: CLTS, Cormier		
Community context	Opportunities for success	Constraints to success
Needs and demand	Approach taken (CLTS) allowed community to identify and express their own needs (an open defecation free environment) and respond to internally-generated demand without relying on external support	
Participation: local	Motivation of local leader – both in setting an example and encouraging community participation. Time available through DFID-funded work to ensure gradual adoption of an appropriate response	
Capacity: local to national	Good skills developed in Tearfund's community mobilization staff for introducing CLTS – although this took time to establish	Limited skills, knowledge and awareness available to the community in technical options and upgrading to sustainable latrine designs. Remote community not well connected to support
Alliances and partnerships	Tearfund the only organization working in the community – limited interference from other approaches	With the exit of Tearfund from direct support, the community will be left with little support
Governance and accountability	Strong accountability created between Tearfund and the community – affecting quality of relationship and technical interventions	Not clear who (community, local government, NGO, etc.) will be responsible for ensuring quality and appropriateness of future sanitation interventions – to protect health and the wider environment
Livelihoods (linking to finance opportunities)		Limited access to opportunities for livelihoods within the community
Financial resources: Internal	"Success" of CLTS is not based on construction of (costly) latrines, but on bringing about an end to open defecation. Responses can be very low cost and adopted at household, shared, or community levels	Constrained household finances to make future improvements to latrines, with some families identifying no source of income
Economic and financial resources: External	CLTS seeks to mobilize responses from within resources already available to the community – reducing dependency on external resources	Longer-term sustainability of safe sanitation may require access to external resources, products and services (emptying facilities, etc.)
Conflict / Insecurity / Vulnerability (political, social, environmental)	Settled nature of community Social cohesion seems to be strong	Limited access to water, affects options for sanitation improvements as demand and expectations increase

La Briette, Gros Morne locality: community-managed water supply (captured spring)

La Briette, within the area of Gros Morne on the outskirts of Léogâne is located high above the river valley, which is used to access the community. Many homes were destroyed during the earthquake, but people remained in their community and made use of temporary shelters provided by agencies. In response to the cholera outbreak, Tearfund conducted an extensive hygiene promotion campaign. In response to this campaign, the community decided to protect the spring supply they were using as their source of drinking water. The community initiated a project to protect the spring source, but were not able to raise sufficient funds to find a suitably-trained mason, or complete the work of piping the water supply into the community.

Tearfund was approached by the community for financial and technical support to help complete the scheme and supervise the activities. Unfortunately construction of the spring catchment system had already started, but had not been carried out with a good understanding of how to optimize the spring source. As a result, the capture system only provides water to the collection point (taps) following periods of heavy rain and at other times the system does not provide water.

A Water Point Committee (CPE) has been established for management of the spring-fed water supply, with the Committee being responsible for maintenance of the captured spring and the communal tap stand. The CPE was yet to be officially registered, required before people can be formally charged a fee for water to support operation and maintenance needs.

**Protected spring collection point,
La Briette**



Note: There was no evidence of water available at the taps, or the source being used, at the time of the visit

JEN had installed a handpump in the community and was working with the same water committee to manage and maintain this. All 10 households questioned identified that they fetched water from the handpump, with 2 also indicating that they fetch water from a “shared tap” (i.e. from the spring capture). The well is regularly chlorinated – although 5 households questioned stated that they add chlorine solution or tablets to their water (4 households to all water, 1 to drinking water only) before using it.

- When asked to identify benefits from the change to the community water supply, 8 households identified health benefits, with the remaining 2 households highlighting that the water supply is nearer to collect.
- 8 households indicated that they were involved in constructing or providing materials for the spring capture water supply. All 10 households were pleased with the water supply, but 8 indicated that they would be willing to “contribute” (predominantly in the form of labour) towards having a supply located closer to their homes and therefore more convenient (6), or towards having a more

reliable supply (2). Community responses to the FGDs also indicated a willingness to contribute towards having a more convenient and reliable supply – again through in-kind contributions rather than specifically monetary contributions.

- 6 of the 8 households who reported having gained new skills for treating water also indicated they are practicing these skills to protect their family's health. A further 2 households commented that they are sharing their new skills with others. The community leader indicated that "almost 70% of knowledge is being practiced" and during FGDs with the community, benefits were similarly noted as related to improved health and better water source that people can trust in terms of its safety for drinking.

The initial community-driven initiative to improve the water supply has required significant external support to ensure a protected spring source introduced into the community. This in itself has not ensured a sustainable supply and it is only through the active functioning of the CPE that the system is likely to remain functioning and used into the future. During community-based discussions, there was no reference to the community paying for water, or this being seen as a way in which the community ensures a supply of safe water in the community.

As well as providing support in protecting the spring supply, Tearfund also carried out CLTS-triggering and promoted the use of household water treatment using the Gadyen Dlo chlorination system. There has been no specific follow-up provided to the CLTS triggering and it is left to each household to develop their own solution to improving sanitation.

Opportunities

In this case, the community initiated the intervention and called on Tearfund to facilitate carrying out a demand-led initiative. The opportunities within the operating environment that supported such an approach included:

- the community's pre-existing demand and willingness to participate in the intervention – clearly expressed through their having initiated work to improve the water supply,
- the complementarity of the intervention with Tearfund's broader support to the community in aspects of WASH,
- the relatively stable nature of the community as people remained following the earthquake,
- the role-out of CPE registration that enables more formalised management and payment arrangements to support sustainability of the water supply (although the extent to which financial sustainability of the scheme can be achieved is yet to be realised).

Constraints

Acting against these opportunities are conditions that may threaten the longer-term outcomes of the intervention. Most notable is the way in which JEN is working with the community to address management of the handpump provided to the community. Tearfund and JEN work with the same water committees, but with no common

approach or activities in training the committee members or sharing of experience between the two agencies. While this did not appear to have caused any issues to date, as either or both agency exits from the community, this may cause tensions with the remaining agency or the community as a whole unless the CPE gains further support and recognition by another body – ideally the local government agency, or an NGO offering support to longer-term development objectives.

The quality of construction has resulted in availability of water at the taps being unpredictable. With other (potentially more reliable) groundwater sources available, such as the handpump, this may limit people's interest in ensuring the spring source is maintained in the future.

While attention has been given to the CPE in aspects of financial management, operation and maintenance of the scheme – the extent to which people are willing and able to pay for the water scheme is not clearly identified. Households questioned in the research had limited access to assets or sources of household income: while most households (8) kept animals, only 4 identified having agricultural produce, as an asset. Only 1 household (a female heading-up a household of 7 people, who was also blind) identified having a business – although this did not lead to reporting a particularly high monthly household income.

Table 3: Community-managed spring supply, La Briette		
Community context	Opportunities for success	Constraints to success
Needs and demand	Clear expression of demand prior to intervention Benefits identified through improved water supply	Alternative water sources to the spring may prove to be more reliable and able to meet continuing demands
Participation: local	Clear expression of willingness to participate in the intervention	Conflicting approaches to management arrangements between NGOs (Tearfund and JEN) may influence level of participation (which may influence payments for water)
Capacity: local to national	CPE trained in elements of management for the scheme	Training in operation and maintenance of the scheme may not be adequate to ensure functionality
Alliances and partnerships	Complementarity of the intervention with Tearfund's broader support to the community in aspects of WASH	Remote community – not closely linked to local government structures
Governance and Accountability	CPE registration will give the Water Committee recognised status within the government structure to charge for water	CPE registration taking time and connectivity to local government support not clearly demonstrated
Livelihoods (linking to finance opportunities)		Limited opportunity for livelihoods identified in the community
Financial resources: Internal	Gravity-fed water schemes are more cost effective than pumped schemes, or those involving water treatment	Level of community payments likely to be generated by the CPE, to support the scheme, is not clear
Economic and financial resources: External	Gravity-fed water schemes is more suited to being managed and maintained at community level than pumped schemes, or those involving water treatment	
Conflict / Insecurity / Vulnerability (political, social, environmental)	Settled nature of the community Strong social cohesion demonstrated in the community taking action prior to receiving external assistance from an NGO	Community located in steep-sided valley, with spring source a significant distance. Environment vulnerable to erosion. Damage to spring capture infrastructure will be physically and logistically challenging to address.

Roche a Pierre, Fondwa locality: Household water treatment (HHWT)

Tom Gato is a trading centre in the upland region of Léogâne. Being only 10kms from Léogâne, many homes in the district were destroyed as a result of the earthquake. Affected families have been provided with transitional shelters on their own land, with little movement away from the community itself. A number of communities in localities close to Tom Gato have received support in aspects of WASH from a range of NGOs, including household level rainwater harvesting systems provided by Oxfam and latrines provided with transitional shelters by the Red Cross.

In the community of Roche a Pierre, Tearfund focussed support on improving the consumption of safe water within the home and general hygiene promotion. The element of a livelihood-based, demand-led approach in this response has been the promotion, marketing and distribution of household water chlorination, in partnership with Gadyen Dlo. A small organisation supported by Deep Springs International (DSI) in the USA (it is effectively a DSI project), Gadyen Dlo has been making plastic buckets fitted with a tap and producing bottles of chlorine solution from its site in Léogâne for a number of years. Tearfund has promoted the use of Gadyen Dlo in all of its WASH project communities, with the “package” (bucket, chlorine solution and hygiene promotion) driven by promotional campaigns and marketing by Gadyen Dlo’s local Health Agents. Many households in communities where this approach has been taken have a dedicated container for treating drinking water. The bucket provides a convenient and safe means to store and draw water from a tap without risk of further contamination. Chlorine solution can be purchased locally and does not rely on being imported.

Using point-of-use water treatment products was already a widely known and practiced form of household-level water treatment before the earthquake. A number of agencies, including Deep Springs International, were already promoting and distributing HHTW products – focussing mainly on communities around Léogâne town. Many such products became available on the market, while boiling water was not widely promoted due to the extensive deforestation in Haiti (Latagne and Clasen, 2010).

Following the earthquake, many communities were provided with significant amounts of commercially produced water chlorination products for free, including Clorox bleach, Aquatab purification tablets and sachets of PUR. Eventually, as the supplies began to reduce, communities such as Roche a Pierre were left with limited options for water treatment and many resorted to drinking untreated water from rivers and unprotected springs. Tearfund began a broader programme to support community mobilization and marketing of locally manufactured alternatives to imported products in the more remote affected areas, working in partnership with Gadyen Dlo.

In Roche a Pierre and other more remote rural areas, supplies of imported water treatment and chlorination products quickly became unavailable once free distribution stopped. Tearfund undertook an intervention to improve access to more sustainable household water chlorination products, initially supporting vulnerable families with a free Gadyen Dlo bucket and “start-up” bottles of the chlorine solution.

In addition, Tearfund carried out an extensive community-wide marketing campaign to promote Gadyen Dlo to all households, working in partnership with Gadyen Dlo to establish sales agents (Health Agents) who would mobilize access to the products for responsive households. This approach was recognised as a relief-to-recovery strategy, where access to safe water was initially supported through the distribution of supplies, to continue through the availability of local market-based supplies accompanied by on-going sensitization, training and household visits to encourage sustained use (Latagne and Clasen, 2010).

Since the intervention, almost 50% of households in the locality are reported to have adopted regular use of Gadyen Dlo to chlorinate drinking water in the home. Gadyen Dlo health agents, who provide outreach to the community from a local hospital, carry out random monthly checks of residual chlorine levels in household drinking water and interview community members to determine the extent of understanding and practice around correct water treatment, and knowledge of where to buy new supplies of chlorine solution.

All households responding to questionnaires demonstrated knowledge and appreciation of the Gadyen Dlo system as a way to ensure safe drinking water.

- All 10 households stated that they chlorinate water collected from unprotected sources (river or springs), 9 stating that they treat all water and 1 household that they treat drinking water only. All 10 households recognize health benefits gained through having learned skills in treating water, while 6 households identified that they are practicing skills in treating and storing water safely and a further 2 households stated that they are sharing this knowledge with others.
- 9 of the households identified that they have had a handwashing facility during the last 2 years, 8 recognising that they use the handwashing facility to protect the health of their family or the wider community. 8 of these households identified the handwashing facility as a bucket (Gadyen Dlo or similar), which 4 households stated they had purchased for themselves while 5 households had the bucket provided free (by an NGO or government agency).

Gadyen Dlo bucket, Roche a Pierre



- During community-level discussions, the local leader noted that the number of people affected by cholera has reduced since hygiene improvements were made. Community members identified that maintaining hygiene practices is an important role for them, which could be supported by establishing a WASH committee to oversee this.

Promoting the use of HHWT, with adequate support to the supply and marketing of locally-manufactured equipment and disinfectant, appears to be an appropriate and effective way to encourage sustained use of safe drinking water. Given the context of cholera outbreaks in Haiti and the on-going mobilisation and sensitisation through community-level Health Agents, people are very aware of the importance of treating water before drinking it, either using the Gadyen Dlo system, alternative disinfectants or other treatment methods.

Opportunities

Certain aspects of the operating environment have supported this intervention, providing the opportunity for a successful outcome – both from the livelihood-based provision and marketing of Gadyen Dlo, as well as responding to demand expressed in the community as a result of the marketing. These opportunities include:

- the settled nature of the community, who were not displaced as a result of the earthquake,
- high levels of awareness of the importance of drinking safe water through the extensive information campaigns around the cholera outbreaks in 2010 and 2011,
- the locality of Roche a Pierre and other communities in the upland areas of Tom Gato. Due to their remoteness, such communities do not have good access to alternative supplies of safe, treated water – for example from water sold by private vendors, through sales of sachet water, or access to available and affordable household-level treatment products (other than in the event of cholera outbreaks), that are more available in other parts of Haiti, and
- the connectivity generated between the demand for services (from households), supply of services and information exchange (through the Sales and Health Agents associated with Gadyen Dlo).

Constraints

Working against this intervention however are ways in which the market potential for Gadyen Dlo's products are affected by competition and wider responses made to the cholera outbreaks. These can be summarised as:

- the availability of cheaper chlorination products on the market. While the cheaper products are considered to have a shorter effectiveness time for sustained chlorine residual, their presence affects people's willingness to pay for a more expensive product,
- the distribution of free water treatment and chlorination products during cholera outbreaks. This has distorted people's expectations of market price for Gadyen Dlo, which has not been distributed for free, and

- Gadyen Dlo needs to develop a longer-term business strategy, that ensures they can continue to produce and market their products to stay in business, while responding to the needs and capacities of communities to ensure sustainable practice of safe household water consumption.

In addition, different NGOs providing WASH support in the community are likely to have adopted a range of approaches and strategies through the relief-recovery-exit stages of their support. As well as Tearfund's interventions, Save the Children, Oxfam GB and World Vision were reported to have provided support in aspects of hygiene, while Irish Red Cross, BRAC and a local NGO provided latrines to certain affected households.

Table 4: Household water treatment using Gadyen Dlo, Roche a Pierre		
Community context	Opportunities for success	Constraints to success
Needs and demand	High level of awareness of need for and benefits from safe water – especially during cholera outbreaks Alternative sources of safe water, or water treatment products, are limited in the area	
Participation: local	Participation is focused at household level, not relying on a community-based initiative. Tearfund's work at community-level on aspects of WASH links household action in safe drinking water to wider health benefits	Approaches taken by a range of NGOs working in the community – some requiring greater degree of community-driven participation and action than others
Capacity: local to national	Gadyen Dlo is a Haiti-based company, with Health Agents available to provide follow-up support directly at household level (ensuring correct use and awareness of benefits of the product)	Gadyen Dlo needs to develop a secure business model to cope in a changing economic and political environment
Alliances and partnerships	Gadyen Dlo's Sales Agents are available to the community – and can respond to future demand generated for products and services	Number of NGOs working in the community influences the expectations within households and the community of where support should be generated in the future Alternative providers of water services (private sector or government) are reported as not active in the community
Governance and Accountability	Gadyen Dlo monitors levels of effective use of their HHWT system and supports this through on-going community sensitisation, awareness raising and information campaigns. Households and communities may have a stronger position to influence prices charged by Gadyen Dlo, as they operate on a commercial basis DINEPA has adopted a HHWT strategy, in support of the prevention and eradication of cholera	
Livelihoods (linking to finance opportunities)		
Financial resources: Internal		Availability of free water treatment products during cholera outbreaks has, up to now, distorted levels of willingness-to-pay for water chlorination products

Table 4: Household water treatment using Gadyen Dlo, Roche a Pierre		
Community context	Opportunities for success	Constraints to success
Economic and financial resources: External		Gadyen Dlo needs to develop a secure business model that identifies appropriate pricing of their products in the face of competition
Conflict / Insecurity / Vulnerability (political, social, environmental)	Settled nature of the community	Free hand-outs of water supplies or treatment products from external agencies have largely stopped in rural areas. Future cholera outbreaks, or other disasters affecting water supplies, may see a reintroduction of this – which would affect people's willingness to pay for Gadyen Dlo in the long term

Santo, Grande- Rivière: community-maintained water and household-maintained sanitation facilities

Santo is being developed to form a permanent community for families who were initially accommodated in a temporary camp in Léogâne following the earthquake. By early 2012, Habitat for Humanity in collaboration with the office of the Mayor of Léogâne, had constructed permanent shelters to accommodate 150 families relocated from the camp.

With funding from the IDB (Inter-American Development Bank) and many other donors and support from the Carter Work Project, Habitat has been overseeing the construction of homes and installation of water and sanitation facilities. With no mandate for ensuring on-going operation and maintenance of the WATSAN facilities, these have been handed over to the community (for water supply) and individual families (for latrines) to take responsibility for their management, operation and maintenance. Provision of water and sanitation facilities became part of a “master plan” for Santo community, with each shelter having its own associated latrine / shower block and sharing a water point (handpump) between 10 families.

Water supply

Santo has been constructed on a “greenfield” site, in an area that has a relatively high water table at approximately 16m below ground level (Habitat, *pers. comm.*, 2012). Donors supporting shelter provision are often reluctant to fund significant levels of infrastructure for services such as water supplies (often only up to 7% of programme budgets are allocated for this – *ibid*, 2012). Given these factors, provision of shallow wells with handpumps was considered a viable option for supplying the community in Santo – enabling a level of service that could eventually be managed and maintained by the community themselves. Shallow wells with handpumps were installed throughout the community, allocating one handpump to each block of 10 shelters. Community governance structures were established to take over

- 9 of the 10 households consulted were satisfied with the water supply. All families recognised that the water supply has brought benefits to the community: 8 families associating this with health benefits and 3 that they have an improved and more convenient (closer) supply.
- 5 families indicated that they would be prepared to “contribute” (in labour) towards having better quality water, while of 3 families wanting a supply closer to their home, 2 indicated that they would “contribute” towards that. Community consultations reiterated the same issues, as well as expressing a sense that the community would contribute towards ensuring a more reliable supply.
- There was no indication that people are paying for water. The community consultations and interview with the local leader identified that community-level groups are in place to oversee the water supply, based around families sharing a water point in “blocks” of shelters. The community group reports any problems with the facility to the local leader.
- Community groups recognise the importance of protecting the water supply through maintaining a clean environment and ensuring no open defecation

occurs within the community – notably close to the water sources. The local leader expressed the concern that no one in the community has the competence to repair the handpump if it breaks.

Sanitation

In the process of developing the plans for Santo, families living in the temporary camp were consulted on design options for shelters and latrines. Habitat for Humanity, accounting for concerns around the potential for groundwater contamination from traditional pit latrines, adopted the solution of dry latrine with above-ground storage.

Each latrine consists of an elevated seat above a chamber holding two containers. These are intended to be used in rotation, allowing the excreta in one container to dry out and decompose as the second container is used. The structure incorporates a ventilation pipe and black metal access plate angled over the containers. This increases the rate at which the excreta dries and accelerates pathogen die-off from raising the temperature. The plate provides relatively easy access to the containers in the chamber.

Dry latrine and bathing structure, Santo



Courtesy of Habitat for Humanity: YouTube
<http://www.youtube.com/watch?v=l-r03bxSNzI>

While a representative from Habitat for Humanity acknowledges that this system is not necessarily an ideal option for this community, it may be one of the few options suited to protecting the groundwater from contamination and has the potential to be managed and maintained within the community itself (Habitat, *pers. comm.*, 2012).

Individuals living in Santo, a local leader and groups of community members consulted during the research, collectively gave a strong sense of dissatisfaction around the latrines provided. People felt they had not been involved in the process of choosing the latrine option and that in reality the design had been imported from outside Haiti (most likely the Dominican Republic), causing a “huge danger for this community because it does not fit Haiti’s environment and us”.

- 6 families acknowledged that the latrines bring benefits from preventing open defecation as the facilities are closer to the home, with 2 families identifying health benefits as a result. However, all 10 families felt that the support should have provided a better design of latrine than they have received.
- When asked about improvements to the latrines, 7 families identified that they would like the latrine to have a deeper pit to allow for longer storage and be easier to manage. 8 families indicated that they plan to change the latrine design, by constructing a pit to replace the container system (4 families) or installing a “modern toilet” (although without explaining how this would function).

The community groups and local leader noted that the latrines are not working (being used) as intended; faeces are not drying out well, resulting in bad odours. In general, people are not happy with the way the latrines were built and are asking that they be changed by Habitat for Humanity. If this does not happen the sense is that people will abandon, adapt or remove the latrines provided and construct their own pit latrines. The implications of this on groundwater contamination and potential health risks do not appear to be a strong consideration. Each family is responsible for managing their own latrine (including emptying the containers), but there was no sense that a system of safe excreta disposal or reuse had been adopted, or its importance even understood.

Hygiene

Each latrine was provided with a drum for storing water inside, connected to rainwater catchment from the roofs of the shelter and the latrine / bathing structure. 8 of the families questioned stated that they had a drum inside the latrine which they are satisfied with and used water for handwashing.

There is little evidence that hygiene promotion or awareness-raising activities have been effectively incorporated into the provision of water and sanitation facilities associated with the shelter programme. The local leader identified that hygiene training had been provided (by CARE and Terre des Homme) but in consultation with a community group it was stated that people either did not receive training in hygiene, or did not understand much of what was taught. The community felt it important for people to continually apply hygiene practices, but that these were primarily traditional habits that were already known.

Opportunities

Components of the intervention and the operating environment that provided opportunities to introduce more demand-led approaches in this instance include:

- engagement with local authorities, enabling agreements to be reached over developing a permanent community,
- people can view the community as a permanent settlement and therefore consider investing in longer-term solutions as well as taking more responsibility for maintaining the area,
- community-based governance structures becoming increasingly viable as the community becomes more settled – although even in the case of Santo it needed more time to clearly identify the opportunities from this (Habitat, pers. comm. 2012).

Constraints

The programme also faced a variety of significant constraints in providing appropriate water and sanitation facilities to suit the physical environment, while accounting for longer term management and maintenance needs. These include;

- limited cross-sectoral coordination, thinking or sharing of expertise between the WASH and Shelter Clusters. The WASH Cluster – predominantly focused on addressing needs in the camps – does not place significant emphasis on

programmes developing more permanent shelter, while Shelter Cluster agencies like Habitat for Humanity see sanitation facilities as integral to providing a more permanent home,

- with no mandate to ensure functionality of water and sanitation services, shelter agencies have to hand-over responsibility to community-based groups (in the absence of an alternative long-term service provided). This threatens the extent of functionality and sustainability of services as a result of: limited resources (skills, finances, materials, tools, etc.), a lack of regulation and accountability structures operating within the community, limited knowledge of impacts of poorly managed water and sanitation facilities, etc.,
- programme timeframes and budget allocations did not allow sufficient time to ensure community-based governance structures for maintaining water and sanitation facilities would work, or any on-going monitoring of outcomes of the water and sanitation interventions,
- with no pre-existing waste disposal or sewerage system in the area, and given the financial constraints, a form of on-plot sanitation was going to be the most likely option. This is not always meeting people's raised expectations for better service levels, given the extent to which their intention may now be towards securing more permanent solutions.

Table 5: Community-maintained water and household-maintained sanitation, Santo		
Community context	Opportunities for success	Constraints to success
Needs and demand	WASH infrastructure introduced as part of a larger Master Plan of a new type of community.	People's expectations of services in a settled community are higher than those able to be delivered within the mandate, time and financial capacity of the agency. Families generally accepting of water supply services but feel that their views have not been accounted for in provision of sanitation facilities
Participation: local	People view the settlement as more permanent – with greater willingness to invest towards sustaining longer-term options	No sign of actual community or household participation in development of the options for water and sanitation services
Capacity: local to national	Habitat's interventions are intended to be manageable within the community itself – given appropriate technical and management training	Limited inter-sectoral coordination WASH / Shelter – affecting extent of expertise in social aspects of WASH interventions
Alliances and partnerships	Local government has engaged in the process and enabled development of longer-term infrastructure	Shelter agency handed-over the mandate for operation and maintenance of WASH facilities to the community – with little, if any, accountability towards outcomes, or to support matters beyond the capacity of community structures
Governance and accountability		No clear mandate of who will monitor longer-term outcomes of the WASH facilities and services – to ensure they achieve intended objectives
Livelihoods (linking to finance opportunities)		
Financial resources: Internal		
Economic and financial resources: External		
Conflict / Insecurity / Vulnerability (political, social, environmental)	Community-based management options increasingly viable and situation settles	May need more time to identify full extent of social cohesion and community stability as the settlement establishes itself

Training local masons to enhance livelihood opportunities

Tearfund's work in capacity building, as part of the adoption of livelihood based and demand-led responses in their WASH programme, included training local masons (skilled in house construction) to construct latrine slabs, biosand filters (BSFs) and to a lesser extent ferrocement rainwater harvesting (RWH) jars. Latrine slabs were made and provided as part of a household sanitation programme, while biosand filters were constructed and given to schools to treat water for drinking. The schools were also trained in how to operate and maintain the BSFs, which the masons would monitor on a regular basis to ensure correct procedures were being followed.

Opportunities

Opportunities from this intervention were primarily associated with offering households greater choice to improve their own water and sanitation facilities, as and when the situation enabled them to invest in more permanent solutions. By training-up masons in both construction and marketing techniques of the component parts, this has the potential to improve:

- levels of awareness of available options,
- understanding of the benefits to be gained from buying the necessary components, combined with correct use and maintenance,
- access for households to suppliers responding to levels of demand raised for the components,
- the livelihood of the trained masons, beyond that of house building.

Constraints

However, for householders to be in a position to act in response to their raised awareness and demand for the components requires other elements to be in place, such as:

- security of location and land use encouraging a willingness to invest in longer-term solutions,
- both the willingness and ability to pay for the components available,
- options being available to suit, or adapt to, a range of preferences.

In this case, certain of these elements were not being addressed to the extent required to secure a livelihood for the masons beyond the time of Tearfund providing direct support. These include:

- each item (latrine slab and BSF) was standardised to one product only. Latrine slabs being made were a single-hole rectangular slab. Unfortunately these slabs are very heavy – requiring a vehicle to transport them any distance – and don't match the cultural norm for many households in Haiti of having a 2-hole slab,
- the masons are limited to a one-size option, limiting their market base and potential to expand their skills,
- the components were considered – by the masons themselves – to be unaffordable to most families and communities in the area they are from and are working in (villages around Léogâne), and

- the masons are not linked to a longer-term partner organisation that could help them establish and improve their marketing skills and potential customer base.

Alternative products (latrine slabs, plastic buckets for water collection and storage, water treatment sachets and chlorination tablets) have been provided for free to a greater or lesser extent since the earthquake, especially during the cholera outbreaks in 2010 and 2011. For sustainable livelihoods to be achieved, the longer-term approach needs to realistically identify and respond to the potential market-base for the goods, skills and services that local masons and other entrepreneurs can offer, so as to avoid failure once direct project support is withdrawn in the face of competition.

In the absence of such supportive elements it is likely that the skills developed, while they will not be lost to the individuals concerned, will have much less opportunity to be applied at any scale within the affected communities, or to neighbouring communities wanting to improve on their water and sanitation infrastructure.

Table 6: Mason training, Léogâne area		
Community context	Opportunities for success	Constraints to success
Needs and demand	Provides a means through which to increase awareness of available options to meet demand within communities	Limited range of options available – not sufficient to meet variation in social and cultural preferences, affordability, technical contexts (e.g. high groundwater), etc.
Participation: local	Households can identify benefits from buying WASH components	Products are not easy to transport. If made off-site, this is likely to affect the level of uptake, if the household is not prepared to provide, or pay for, transport
Capacity: local to national	Households can gain knowledge in correct use and maintenance of components, as well as their cost (including purchase, operation, maintenance and replacement)	
Alliances and partnerships	Links households with a more local supplier of a range of components, which could respond more quickly to level and range of demand generated	Masons not linked to longer-term support mechanisms to help establish marketing skills and business potential
Governance and accountability		
Livelihoods (linking to finance opportunities)	Livelihood potential of masons is increased beyond that of existing	Market potential of masons restricted through limited knowledge of a range of technical options of appropriate quality and application
Financial resources: Internal	Availability of more options would influence market price – hopefully driving costs downwards to match household ability and willingness to pay for items	Cost of products not matching levels of affordability (willingness and ability to pay) for WASH components within affected households
Economic and financial resources: External		
Conflict / Insecurity / Vulnerability (political, social, environmental)	Having more locally built and replaceable components available increases resilience to future disasters (natural or otherwise)	Community sense of security in location and land-use rights affects willingness to invest in infrastructure

Redressing dependency

Many NGOs responded to the Haiti earthquake bringing with them too much in the way of their own funds and pre-determined plans. Working to their own plans, they failed to align to the operating standards of donors, the global clusters (WASH and Shelter), or responsible government ministry. This resulted in significant levels of supply-driven interventions that did not account for the needs being expressed within the communities themselves and in many cases entrenched a sense of dependency that had not existed before the earthquake. Affected populations were often asking for support that would enable them to return to work and develop pre-existing forms of livelihoods and access to finances (BRC, pers. comm., 2012).

Tearfund's opportunity from securing specific DFID funds focused on capacity building, has enabled the introduction of demand-led approaches as an additional "value-added" component of their relief response. The demand-led approaches introduced by Tearfund into affected villages and peri-urban areas around Léogâne, Gressier and Tom Gato, have sought to redress the sense of dependency that other supply-driven approaches created. The signs are that individual families and communities are taking greater collective responsibility for their actions, and helping to ensure the benefits will be sustained into the future. Despite an up-hill battle to implement livelihood based, demand-led approaches within the context of the scale of response in Haiti and other NGOs providing free infrastructure and materials, the interventions researched are clearly going some way to support communities in achieved safe and reliable water supplies and improved sanitation facilities.

References

- BRC, 2012, Interview with Head of Delegation, British Red Cross, July 2012, Port-au-Prince, Haiti
- BURT, M., 2011, *Evaluation of a Demand Led Biosand Filter Programme in the Complex Emergency Context of Afghanistan*, MSc research project, Water, Engineering and Development Centre (WEDC), Loughborough University, UK
- DINEPA, 2012, Interview with Deputy Head of Rural Office, DINEPA, July 2012, Port-au-Prince, Haiti
- DINEPA/WASH CLUSTER, 2011, *WASH Cluster Sanitation Transition Strategy: Temporary Sites (Camps) & Return/Relocation Areas*, 23 April 2011, version 1.0, DINEPA, Government of Haiti, Port-au-Prince. Available from www.dinepa.gouv.ht/wash_cluster (November 2012)
- HABITAT FOR HUMANITY, 2012, Interview with Director of Program Services, Habitat for Humanity, July 2012, Port-au-Prince, Haiti
- LATAGNE, D. and CLASEN, T., 2010, *Assessing the Sustained Uptake Of Selected Point-of-Use Water Treatment Methods (PoUWT) In Emergency Settings*, Project Report, Draft for UNICEF: December 31, 2010, London School of Hygiene and Tropical Medicine, London, UK
- OFDA, 2012, Interview with key member of staff, Office of US Foreign Disaster Assistance, USAID, Port-au-Prince, Haiti
- OXFAM, 2011, *From Relief to Recovery: Supporting good governance in post-earthquake Haiti*, Oxfam Briefing Paper, January 2011, Oxfam International, Oxford
- UNDP, 2012, *Rebuilding Haiti*. United Nations Development Programme website. Available from http://www.undp.org/content/undp/en/home/ourwork/crisispreventionandrecovery/projects_initiatives/crisis_in_haiti/ (Nov 2012)