Kabrit ki gen twòp mèt: understanding gaps in WASH services in Haiti’s IDP camps

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Despite the enormous infusion of post-quake aid to Haiti, cholera had killed more than 8,000 people by January 2013. Based on two mixed-method studies of a random sample of 108 internally displaced person (IDP) camps and 168 interviews with agency representatives and recipients, this article examines the prevalence of factors that have proven most relevant to the rapid spread of cholera, particularly the provision of water and sanitation services in IDP camps. The study reveals that 30% of IDP camps had no toilets and 40% had no access to water before the outbreak, with only minimal progress after three months. Using bivariate and multivariate statistical analyses, this article explores patterns in the gaps of services with a range of variables such as NGO camp management, municipality and landowners. It offers several theoretical and policy explanations for low level of services, concluding with a series of recommendations for better coordination and management.

Keywords: aid policy, camp management, cholera, coordination, Haiti, humanitarian aid, Haiti earthquake, internally displaced persons, non-governmental organisations

Introduction

On 12 January 2010, an earthquake struck Haiti, killing 316,000 people according to the Haitian government (Reuters, 2011). At the height of the crisis, 1.5 million internally displaced persons (IDPs) lived in 1,300 camps across the country (USAID, n.d.). In October 2010, the situation of IDPs deteriorated even further when an outbreak of cholera struck Haiti, the first in the country in more than a century, killing more than 4,000 people by January 2011 (AFP, 2011); by January 2012 it had claimed 7,025 lives (MSPP, 2012).

The international community responded to the event with a generous outpouring of aid. According to the Chronicle of Philanthropy (2010), private US citizens contributed $1.3 billion to non-governmental organisations (NGOs) within six months and $1 billion by 1 March 2010. Furthermore, at a 31 March 2010 UN conference, donors pledged $5.6 billion for the following 18 months. Former US president Bill Clinton, named UN Special Envoy in 2009, marshalled foreign aid, co-chairing Haiti’s reconstruction.

Through direct observation, interview and survey data collected in Haiti since the earthquake, this article examines the provision of water, sanitation and hygiene (WASH) services in IDP camps. This article offers several theoretical and policy
explanations for the low level of services, despite the efforts and good intentions of many humanitarian actors. It concludes with a series of recommendations to improve disaster response and coordination.

Patterns in WASH services in IDP camps distil lessons about coordination and about proper roles for public and private actors following disasters. A Haitian proverb explains: \textit{kabrit ki gen twòp mét mouri nan solèy} (literally, ‘the goat with too many caretakers dies in the sun’). With too many helpers, no one takes responsibility for the goat, ensuring it has food and water. In the social science literature on disasters, this is known as the ‘bystander effect’ (Darley and Latané, 1968; Fischer et al., 2011). This proverb offers a useful mechanism to examine the strengths, limitations and supporting policy environment of the humanitarian response to cholera in post-earthquake Haiti.

\section*{Background}

\subsection*{Humanitarian principles}

The UN’s Guiding Principles on Internal Displacement and the Sphere Project’s Minimum Standards and Humanitarian Charter offer minimum guidelines and establish a rights-based framework for life-saving emergency services (OCHA, 2001; Sphere Project, 2004). On 28 July 2010, the UN General Assembly explicitly acknowledged water and sanitation through Resolution 64/292, building off of the Universal Declaration of Human Rights and its corollaries and ratifying General Comment 15 from the Committee on Economic, Social and Cultural Rights in 2002. Despite this resolution, passed after Haiti’s earthquake, progress in providing water and sanitation was minimal following the outbreak of cholera, which spread by water contaminated by human fecal matter (Ivers et al., 2010).

For this reason, this article focuses on water, sanitation and clinics as primary indicators. The minimal progress on WASH services suggests a structural failure to protect IDPs and other Haitian people. Consult Annexe 1 for specific statistics on WASH services.

\subsection*{Humanitarian actors and standards}

The Guiding Principles place the onus of the responsibility to protect IDPs’ rights to water and sanitation with states. However, in the decades before the earthquake, Haiti’s government was weakened by donor policies and financial flows that supported NGOs (Buss, 2006; OSE, 2011). In addition to the fact that the Haitian government only received 1\% of international humanitarian funds (Katz, 2010; OSE, 2011), its capacity was limited by the physical damage sustained by its offices in the city centre, where many employees were killed. Meanwhile, NGOs—which have served as implementing agencies for emergency relief and the majority of reconstruction—received almost all the humanitarian aid; given their central roles, they are included in the present analysis. NGOs have been called upon to solve all the problems
within both humanitarian and development fields, yet some scholars question donors’ belief in NGOs as the ‘magic bullet’ (Edwards and Hulme, 1996a, p. 6). Notably, NGOs have begun playing governance roles typically reserved for states (Jackson, 2005; Sharma, 2008).

Complicating the relief effort, both the Guiding Principles and the Minimum Standards envision rural settings, where finding suitable land for resettling IDPs with stable tenure presents fewer logistical or political challenges. In addition to these problems within the capital city, Haiti’s traditional class divisions—quite palpable and leading to prolonged conflict (Dupuy, 1989; Trouillot, 1990)—pitted the poor majority who were in desperate need of temporary shelter against elite groups that claimed rights to the land. IDP camps also differed according to whether they were on private or public land and based on their location and their municipality.

**Methodology**

The authors collected data for this article in two research missions to Haiti. The first took six weeks in July–August 2010. With more specific information sought on only two indicators—water and toilets—the second study following the cholera outbreak lasted three weeks in January 2011.

**Sampling**

Camps were randomly selected for analysis from the International Organization for Migration (IOM) Displacement Tracking Matrix (DTM). On 3 May 2010, the IOM Cluster for Camp Coordination and Management (CCCM) database listed 1,282 sites overall and 841 within the Port-au-Prince metropolitan area. Every eighth camp was selected for inclusion. As a purely random sample, it bears significant resemblance to the overall list. In addition to the percentage of communes, the sample is similar in many other aspects to the overall DTM (see Annexe 2). Significantly, 42 camps were closed by 3 May and an additional 19 camps were closed by 7 July, when the DTM was updated. To make up for the loss of 27 camps in the sample, the authors added every 32nd camp from the 7 July DTM. In case of duplication, the following camp in the DTM list was used. The higher number of NGO-managed camps in the sample can be explained by camp closures; none of the camps that closed had an NGO camp management agency.

One of the authors also conducted 57 in-person semi-structured interviews with staff from IOM, the Haitian government and international NGOs from July 2010 to August 2012 in English, French and Haitian Creole. Given the enormous population of agency employees, the method of selection was based on attendance at CCCM and WASH cluster meetings and a purposive sample based on working in the camps studied. The author attempted to interview an additional nine that were unavailable or did not respond to requests for interviews.
Methods
Qualified and trained assistants from the Ethnology Department of the State University of Haiti went to the field with a three-part survey in July 2010. The first part of the survey investigated the conditions and services; the second asked four IDPs their level of knowledge and involvement in the committees; and the third involved interviewing committees. For this article, only observable, confirmable data from the first portion of the survey was used. Researchers conducted observation visits to count the number of toilets and to look for evidence of water distribution. Data about the frequency of water distribution and toilet clean-up was verified by at least two people. If verifiable information could not be obtained and corroborated, the researcher was instructed to leave this item blank. For quality control purposes, a second assistant conducted a follow-up visit to the same camp, and one of the authors conducted at least one site visit per assistant for a total of 49 camps. Assistants visited a total of 113 camps. Data was then verified for accuracy against the original data. Because some camps no longer existed and could not be found as of July 2010, when the research commenced, a total of 99 camps are included in these analyses.

Prepared questions with agency representatives included how and why a given agency chose to work in a given camp, specific services offered, major constraints or challenges faced, and measures of success. Interviews were analysed using the qualitative data management software N-Vivo, including nodes for constraints in delivering aid and humanitarian decision-making and policy. All quotes in the text are from these interviews, which are representative of the range of qualitative perspectives shared with this author.

Analysis
The authors conducted simple descriptive and correlation analyses with SPSS. The main four outcome variables analysed in this study relate to the right to water, sanitation and health:

- availability of water in the camp;
- availability of toilets in the camp;
- how often those toilets were cleaned; and
- the presence of a clinic in the camp.

Camp residents were asked whether water was provided in the camp (gen dlo nan kan). The yes or no answer was confirmed by researchers’ observations; researchers also counted the number of toilets. To assess the number of people who shared a toilet, this observable number was divided into the official DTM population figure. As a large number of camps did not have any toilets at all, the authors chose to analyse this as a dichotomous variable, asking, ‘Are there any toilets in the camp?’ Responses to the question concerning how often toilets were cleaned (chak kilè li netwayne) that fell into the categories ‘cleaned every day’ and ‘cleaned every other day’ were collapsed into one value for ‘cleaned every 1–2 days’ because toilets shared to such an extent need to be cleaned every day or two in order to combat the spread of
disease. All other categories were collapsed into ‘cleaned every three days or more’. The final measure comes from a yes/no question asked of camp residents and committee members: ‘Is there a clinic in the camp (Gen sant sante nan kan)?’

In the data analysis, the authors designated three variables as independent in order to explore patterns in the gaps within services: NGO-managed, municipality, and public or private ownership of land. Whether the camp had an NGO management agency was taken from the DTM: ‘Is there an NGO camp management agency (Gen ONG kap dirije kan)?’ If the answer was no, camps were defined as having no management agency. The result shows that 33 of the 99 or 33% of camps were managed by NGOs. A variable for camp location was created from seven municipalities listed in the DTM and then recoded into three regions: central (Port-au-Prince, Delmas, Pétion-Ville, Tabarre); Cité Soleil; and peripheral (Carrefour, Croix-des-Bouquets). The authors created a simple dichotomous public/private landowner variable from the question ‘Mèt tè a’ (type of landowner) with the categories private, school, church and government. Because the number of camps in schools or churches was too small to analyse separately, the authors created a dichotomous variable public/private, with designation depending on whether the school was public or private (all camps in churches were designated as private). To test for statistical significance, chi-squares were run on simple two-way and three-way crosstabs.

Though the literature noted above suggests that large camps may receive services due to greater visibility and payoff, the number of families in a camp (fanmi), measured by observation or records is not significantly associated with any of the four outcomes using independent sample t-tests. Recoding camp size into large and small camps, defined by interviews with IOM as more than vs. fewer than 100 families, similarly did not yield significant results. However, it is important to note that only 18/95 (18.9%) of the camps contained fewer than 100 families. Dividing camp size into relatively equal categories shows a significant relationship, but not until the division approaches more than 250 families, and only for the outcome of clinic on site. The daily necessities of water and sanitation are more important indicators for basic human rights, and the Sphere standards clearly set a limit of 20 people to share a toilet.

The authors were unable to test the significance of socioeconomic status of families or neighbourhoods due to a lack of available data. Since socioeconomic data collected by agencies such as the Haitian Institute of Statistics and Informatics (Institut Haitien de Statistique et Informatique) before the earthquake was neither detailed nor precise enough to test for correlations within neighbourhoods, Cité Soleil, by far the poorest community in the metropolitan area, is used as a proxy. That said, suburbs such as Delmas and Pétion-Ville have their share of poor neighbourhoods and shantytowns, suggesting future areas for research with a longitudinal approach.

Results

The following indicators represent the most important services provided after disasters: water, toilets and health clinics. Bivariate and multivariate analysis correlates these factors with independent variables, including NGO management, municipality and land ownership.
Water

The provision and availability of safe, clean water is perhaps the most serious measure of camp conditions, particularly since the cholera outbreak. Despite UN reports highlighting the successful distribution of water to 1.2 million people by agencies and NGOs (UNSC, 2010), there were large gaps in water distribution to IDP camps seven months after the earthquake. For example, 2,775 residents living in a ravine called Bobin, outside of Pétion-Ville, still lacked water as of August 2010, as verified by a visit by two research assistants, a colleague and one article author. A single PVC pipe that had cracked offered some people a couple of buckets whenever the government turned on the tap for paying clients. Because of this lack of water, many people used rainwater in the trash-filled ravine. Several other camps, particularly in Cité Soleil and Carrefour, were without water when the research team investigated. Said Olga Ulysse, a camp leader in a hill above the main road in Carrefour:

"Carrefour is blessed with many little springs. But the problem is that they are running under the destroyed houses and the decomposing bodies. It’s very unhealthy, yes. But we don’t have any choice at all."

The other choice was to walk downhill to the adjacent camp, pay for a bucket of water and carry it back up the hill.

Of the 71 camps about which assistants could obtain reliable information, 30 (42.3%) did not have a water supply (see Table 1); three others (4.1%) had a nearby PVC pipe that was tapped outside the camp. According to the WASH cluster database dated 1 November 2010, only 24.7% of the population had access to water.

Toilets

Like access to water, there were large gaps in sanitation conditions across IDP camps. Many people staying at or near their houses and not inside one of the 800 camps within the capital did not have to contend with the problems associated with sharing a bathroom with neighbours. TAs noted above, the Sphere Project’s Minimum Standards are clear about how many people should share a toilet: no more than 20. Even within well-managed camps, this standard was not met. In March 2010, the UN Resident Humanitarian Coordinator stated that because of the urban constraints,

Table 1. Camp conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water is provided in the camp</td>
<td>42.3% (30)</td>
<td>57.7% (41)</td>
</tr>
<tr>
<td>There are toilets in the camp</td>
<td>29.2% (26)</td>
<td>70.8% (63)</td>
</tr>
<tr>
<td>Toilets are cleaned every 1–2 days</td>
<td>32.0% (16)</td>
<td>68.0% (34)</td>
</tr>
<tr>
<td>There is a clinic in the camp</td>
<td>80.0% (76)</td>
<td>20.0% (19)</td>
</tr>
</tbody>
</table>

Source: authors.
the goal should be 100 people per toilet. In many cases, even the new target was not met. For example, in Place de la Paix (Peace Plaza), in the Delmas 2 neighbourhood, a row of toilets was adjacent to the trash receptacles, which bordered on the water distribution area and the mobile clinic site. Strikingly, there were only 30 toilets for 30,400 people. In a small camp in Carrefour, to go to the bathroom people had to ask a neighbour whose house was still standing. Camp leader Carlène explains, ‘It’s embarrassing. And even though they are neighbours, it’s starting to strain our relationship.’

According to the July 2010 DTM, 6,820 people lived in the soccer field outside of the rectory in Solino. Despite this density, residents had to wait for almost five months for the first toilets to arrive. When asked in early April how people defecate, a resident held up a small plastic bag usually used to sell half cups of sugar or penny candy, saying: ‘We throw it in the ravine across the street.’ In one camp, housing almost 2,500 people in a far-off neighbourhood in Carrefour, there were no toilets—neither portable ones nor latrines—when the cholera outbreak struck, despite advocacy on the part of one of the authors. As of December 2012, almost three years after the earthquake, no agency had installed toilets.

These cases were not isolated. According to even the most conservative estimates and using the official IDP population from IOM, the average number of people sharing a toilet in the Port-au-Prince metropolitan area was 273 people. Indeed, 26 of 89 camps (29%) with verified information did not have any toilets at all (see Table 1). Only a small minority of camps (2, or 2.6%) had flush toilets. For the camps with toilets, the most common were latrines and pit toilets with a hole dug in the ground (35, or 62.5%), followed by plastic portable toilets (19, or 34.0%). A recent investigation yielded similar results, namely that 27% of families had to defecate in a plastic container or in an open area (LAMP for Haiti Foundation et al., 2010). According to the WASH cluster database, 41.1% of people lived in a camp that had an NGO actor responsible for toilets.

Residents’ needs do not stop with the installation of toilets; many were not cleaned on a regular basis, which represented potential public health risks. Among camps with toilets, 34 (68%) reported that their toilets were cleaned every day or every two days, mostly those with portable toilets (see Table 1); however, 16 camps (32%) reported that they were cleaned every three days or less often. Toilets in 26% of camps had not been cleaned at all.

Health clinics

Given the very poor state of the health care sector before the earthquake, this sector overall has improved following the efforts of donors and NGOs coordinating with the Haitian government. In September 2010, ground was broken on a new, large-capacity teaching hospital in Mirebalais, in partnership with Partners in Health/Zanmi Lasante and the Haitian government, and approved by the Haiti Reconstruction Fund in its second meeting in August (Charles, 2010).
However, there were gaps in health care facilities inside the IDP camps. Only one camp in five had any sort of clinic facility on site (see Table 1). This number does not reflect the quality or availability of services. For example, in Carradeux, a tent provided by UNICEF that resembled a clinic was completely empty by July 2010: no medicines, first aid supplies or nurse practitioners were present on the researchers’ 13 visits to this camp, in addition to five weeks of daily research in June–July 2011. Despite numerous attempts to contact representatives from these agencies, the research team was not able to find anyone who would speak about this situation, perhaps because the contracts had already ended, as could be assumed based on the lack of on-the-ground services.

If residents’ health care needs could easily have been met just outside the camps, there would have been less of a need for clinics in the camps. However, this was not the case. According to residents of the IDP camps in the survey, the median walking distance to the nearest clinic was 20 minutes, with a mean of 27 minutes. Given the state of Haiti’s labyrinthine roads and ‘corridors’—strewn with rubble and structurally unsound buildings—this measure is more culturally relevant than the physical distance measured by Google Earth or by GPS. Five camps were so isolated that residents told researchers that it took 90 minutes to reach the nearest clinic.

The same can be said of pharmacies. While in the earthquake’s immediate aftermath medications were given to residents free of charge, this practice stopped early on in most camps and neighbourhoods. Nine out of 85 camps (10.6%) that responded had some form of a pharmacy on-site. The mean time to walk to the nearest pharmacy was 25 minutes, with the farthest being two hours.

Patterns in service gaps
If the situation for the remaining IDPs is to improve, and if lessons are to be learnt for future disasters, it is imperative to investigate patterns regarding who was not being served and why. Some camps were much better managed and served than others, and these gaps in services need to be addressed. Correlations in the data were explored with a range of variables, yielding three statistically significant relationships with one or more of the four possible outcomes:

- the presence of NGO camp management agencies;
- the municipality; and
- ownership of the land on which the camps sit.

Camp management is the most obvious indicator of camp conditions. Data shows that camps with NGO managers were far better serviced than camps without managers, as would be expected. Indeed, the primary role of camp managers is to assure and supervise service delivery. That said, as of the 7 July DTM, only 20.8% of camps (171 of 822 listed in the metropolitan area) had an NGO management agency. NGO-managed camps are more represented in the random sample of this study, at 33%.
While the overall percentage of camps with water provided was 57.7%, the percentage is more than double (88.5%) in camps with an NGO management agency than those without (40.0%), as shown in Table 2. This gap is statistically significant, $\chi^2(1, N=71)=15.86, p=0.000$. NGO-managed camps were significantly more likely to have toilets, $\chi^2(1, N=88)=9.08, p=0.002$. Overall, 29.2% of camps did not have any toilets; this figure is 9.7% for NGO-managed camps and 40.4% for non-NGO managed camps. NGO-managed camps were only slightly more likely to have toilets cleaned every 1–2 days, 73.9% compared to 63.0%, although this gap is not statistically significant. NGO-managed camps were more than three times more likely to have access to health care than non-NGO-managed camps. Whereas one in five camps overall had an on-site clinic, 37.5% of NGO-managed camps had on-site clinics, compared to 11.1% of non-managed camps, $\chi^2(1, N=71)=9.24, p=0.003$.

Many testimonies reveal the conviction that people in non-centrally located camps were relatively neglected. As ‘Ti Georges’, camp committee leader in Pivoine, said:

> Maybe it’s because we’re hidden away inside that the NGOs have forgotten us, but we’re the area that is most affected! This area, Fort-National and Pivoine, doesn’t have a big road so the NGO trucks just don’t see us.

The first words from Carrefour camp leader Olga Ulysse were gratitude that researchers even showed up: ‘People make appointments and they don’t come. I don’t know if it’s too far or if people are afraid of the mountain.’ Her colleague Madame Odrigue, who is an elected member of the community council, the official local government, had another theory: ‘It’s because the donors don’t get credit for giving us water, unlike down the hill next to the Route National.’ This perspective was explicitly acknowledged by many NGO staff members, who felt increasing pressure to show results, especially following the cholera outbreak. One veteran humanitarian aid worker noted:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Non-NGO</th>
<th>NGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water is provided in the camp*</td>
<td>No</td>
<td>60.0% (27/45)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>40.0% (18/45)</td>
</tr>
<tr>
<td>There are toilets in the camp*</td>
<td>No</td>
<td>40.4% (23/57)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>59.6% (34/57)</td>
</tr>
<tr>
<td>Toilets are cleaned every 1–2 days</td>
<td>No</td>
<td>37.0% (10/27)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>63.0% (17/27)</td>
</tr>
<tr>
<td>There is a clinic in the camp*</td>
<td>No</td>
<td>88.9% (56/63)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>11.1% (7/63)</td>
</tr>
</tbody>
</table>

Notes: * p<0.01; ** p<0.001.
Source: authors.
We know we’re under the microscope, and we should be. But it has this perverse effect where we go for the ‘big wins’ and ignore others. Is it right? I don’t know. But our resources are limited.

When asked whether these resources were further limited by the higher-cost option of providing trucked water, owned by one of three families, including the wife of the Haitian president, this NGO employee sighed and said:

Well, yes. You can’t take a picture of us playing a backup role helping the guy who used to sell water to reopen his business. You can take pictures of the truck, the fancy installation and especially the long lines. Like it or not, there it is.

The quantitative data supports this perception of geographical differences in services offered. For example, 83% of the camps in the municipality of Delmas, one of the central areas, had water, whereas only 29% of the camps in Croix-des-Bouquets and 25% in Carrefour had water. It is possible that Carrefour residents had better access to the public water facilities or the natural springs. Yet this finding is consistent with the trend of the cycle of greater media attention encouraging ‘big wins’, so that camps farther away from central areas were offered fewer services.

A cross-municipality analysis confirms that the percentage of camps with water was greater in the central cities (73.9%), compared to 50.0% of camps in Cité Soleil and 26.1% of camps in the peripheral locations (see Table 3). Although the figure for

**Table 3. Camp location**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Central (Port-au-Prince, Delmas, Pétion-Ville, Tabarre)</th>
<th>Cité Soleil</th>
<th>Peripheral (Carrefour, Croix-des-Bouquets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water is provided in the camp***</td>
<td>No</td>
<td>26.1% (12/46)</td>
<td>50.0% (1/2)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>73.9% (34/46)</td>
<td>50.0% (1/2)</td>
</tr>
<tr>
<td>There are toilets in the camp**</td>
<td>No</td>
<td>18.2% (10/55)</td>
<td>28.6% (2/7)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>81.8% (45/55)</td>
<td>71.4% (5/7)</td>
</tr>
<tr>
<td>Toilets are cleaned every 1–2 days*</td>
<td>No</td>
<td>36.1% (13/36)</td>
<td>75.0% (3/4)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>63.9% (23/36)</td>
<td>25.0% (1/4)</td>
</tr>
<tr>
<td>There is a clinic in the camp</td>
<td>No</td>
<td>80.3% (49/61)</td>
<td>85.7% (6/7)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>19.7% (12/61)</td>
<td>14.3% (1/7)</td>
</tr>
</tbody>
</table>

Notes: * p<0.05; ** p<0.01; *** p<0.001.
Source: authors.
Cité Soleil represented only two camps, the overall relationship between municipality and provision of water is statistically significant, $c^2(2, N=71)=14.43, p=0.001$. The municipality of the camp was also associated with significant differences in sanitation. The farther a camp was from the central cities, the less likely it was to have toilets. Among the camps in central areas, 18.2% were without toilets, compared to 28.6% of camps in Cité Soleil and 53.8% of camps in distant locations, $c^2(2, N=88)=10.79, p=0.005$ (see Table 3). Interestingly, among camps with toilets, camps in farther locations were more likely to clean their toilets every 1–2 days. All ten camps in the far-away locations of Carrefour and Croix-des-Bouquets had toilets cleaned every 1–2 days, compared to 25.0% of camps in Cité Soleil and 63.9% in Delmas, Port-au-Prince, Péition-Ville and Tabarre, $c^2(2, N=88)=8.38, p=0.015$. Of the four outcomes, only the existence of a clinic in camp was not statistically significant across municipalities.

Because the earthquake destroyed walls that protected private property, camps sat on private land such as the Péition-Ville Club, a private golf club that became home to 30,100 people as of July 2010. At of the time of this study, 71.0% of camps were located on private land. With people desperately seeking shelter, this posed a fundamental conflict of interest: landowners’ rights to their property and residents’ rights to decent temporary shelter and living conditions.

On the belief that people are living in the camps because of the services provided, some private owners cut off life-saving services in order to get people to leave the camps willingly. In March 2010, before a relocation of more than half of the camp residents, the administration of the Saint-Louis de Gonzague School refused NGO access to distribute food and water. Camp leader Elvire Constant, who lived there at the time, recalled: ‘The priest told the Americans not to overcrowd the grounds! He said there were too many tents in the compound, that the space was saturated.’ Explaining their stopping the aid, an NGO official said, ‘We cannot interfere when

<table>
<thead>
<tr>
<th>Condition</th>
<th>Public</th>
<th>Private</th>
</tr>
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<tbody>
<tr>
<td>Water is provided in the camp</td>
<td>No 25.0% (3/12)</td>
<td>48.2% (27/56)</td>
</tr>
<tr>
<td></td>
<td>Yes 75.0% (9/12)</td>
<td>51.8% (29/56)</td>
</tr>
<tr>
<td>There are toilets in the camp</td>
<td>No 25.0% (5/20)</td>
<td>32.3% (21/65)</td>
</tr>
<tr>
<td></td>
<td>Yes 75.0% (15/20)</td>
<td>67.7% (44/65)</td>
</tr>
<tr>
<td>Toilets are cleaned every 1–2 days</td>
<td>No 35.7% (5/14)</td>
<td>30.3% (10/33)</td>
</tr>
<tr>
<td></td>
<td>Yes 64.3% (9/14)</td>
<td>69.7% (23/33)</td>
</tr>
<tr>
<td>There is a clinic in the camp*</td>
<td>No 60.9% (14/23)</td>
<td>87.1% (61/70)</td>
</tr>
<tr>
<td></td>
<td>Yes 39.1% (9/23)</td>
<td>12.9% (9/70)</td>
</tr>
</tbody>
</table>

Notes: * p<0.01.
Source: authors.
the owner does not want us there.’ According to several neighbourhood leaders, the school director kept the Red Cross and Médecins Sans Frontières from providing services. International Action Ties documented several purported cases of landowners cutting off life-saving services in an attempt to force IDPs to leave (International Action Ties, 2010a; 2010b).

Camps on public land were more likely to have water (75.0%) than those on private land (51.8%), although this gap is not statistically significant (see Table 4). Similarly, whether camp is on public or private land is not associated with the provision of toilets or the frequency with which toilets are cleaned. However, the differences in health provision are dramatic; 39.1% of camps on state land had a clinic, whereas only 12.9% of camps on private land did, a significant gap in services: $\chi^2(1, N=93)=7.66, p=0.009$.

### Relationships between management, location and land ownership

Results discussed above confirm that camps in central areas were much more likely to offer important services such as water and clean toilets. Perhaps not coincidentally, this is also where the NGOs and the UN are headquartered. NGOs were significantly more likely to manage camps in central municipalities (45.3%) than in peripheral municipalities (14.3%), $\chi^2(1, N=92)=8.15, p=0.004$. NGOs were also more likely to manage camps on public land—47.8%, compared to 27.4% of camps on private land—although this difference is only significant at $p<0.10$: $\chi^2(1, N=96)=3.34, p=0.068$. Though camp size was not significantly associated with the four outcomes, NGOs were more likely to manage large camps; 87.5% of camps managed by NGOs contained more than 100 families, though the relationship was not statistically significant. Of the four small camps managed by NGOs, all were located in Delmas, close to NGO headquarters.

The next several analyses examine the relationship between camp management and location or land ownership for selected conditions. First, the authors ask whether NGO-management can mitigate the negative impacts of being in an otherwise underserved municipality. Results reveal that while camps farther from the city centre were less likely to have water and toilets, they were much better off if they were managed by NGOs (see Table 5). Although the number of NGO-managed camps in the peripheral municipalities of Carrefour and Croix-des-Bouquets was small, all camps had access to water (100%), compared to 19.0% of camps in remote locations without NGO management. In fact, having NGO management means that camps in distant locations were better off than centrally located camps without NGO management, of which only 59.1% had access to water.

Non-centrally located camps were also much less likely to have access to toilets than centrally located camps. Again, although the number of cases is small, all four (100%) NGO-managed camps in distant locations had access to toilets, compared to 36.4% of non-NGO-managed camps in remote municipalities (see Table 5). Having NGO management makes geographical distance from central areas less detrimental in terms of access to services.
Table 5. Selected camp conditions by NGO and locality*

<table>
<thead>
<tr>
<th>Location</th>
<th>Central (Port-au-Prince, Delmas, Pétion-Ville, Tabarre)</th>
<th>Peripheral (Carrefour, Croix-des-Bouquets)</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGO camp management?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Water is provided in the camp</td>
<td>No</td>
<td>40.9% (9/22)</td>
<td>12.5% (3/24)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>59.1% (13/22)</td>
<td>87.5% (21/24)</td>
</tr>
<tr>
<td>There are toilets in the camp</td>
<td>No</td>
<td>25.0% (7/28)</td>
<td>11.1% (3/27)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>75.0% (21/28)</td>
<td>88.9% (24/27)</td>
</tr>
</tbody>
</table>

Note: * Due to the small number of camps, Cité Soleil has been removed from this analysis.
Source: authors.

Table 6. Selected camp conditions by NGO and land ownership

<table>
<thead>
<tr>
<th>Landowner</th>
<th>Public</th>
<th>Private</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGO camp management?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>There is a clinic in the camp</td>
<td>No</td>
<td>91.7% (11/12)</td>
<td>27.3% (3/11)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>8.3% (1/12)</td>
<td>72.7% (8/11)</td>
</tr>
</tbody>
</table>

Source: authors.

The final analysis examined the relationship between land ownership and camp management for the likelihood of having a clinic in the camp (see Table 6). Camps on private land were about one-third less likely to have an on-site clinic. However, it appears that NGO-management did not make much of a difference on private land; among NGO-managed camps on private land, only 15.0% had clinics, compared to 12.0% of non-managed camps on private land. The effect of NGO management is dramatic for camps on public land; among NGO-managed camps, 72.7% had clinics, compared to only 1 in 12 (8.3%) of non-managed camps on public land. While NGOs were fairly successful in getting clinics in camps on public land, it seems they were unable to do the same for camps on private land, possibly for reasons discussed above.

Changes since the cholera outbreak

According to the follow-up research conducted in January 2011, 38.6% of camps (32/83) were without water, down slightly from 42.3%. Camps without toilets declined somewhat, from 29% in August 2010 to 25.5% (24/94) in January 2011. In both cases, the progress overall was minimal, around 4%. According to residents, eight camps
in the original sample had closed because of the continued lack of services following the cholera epidemic. In one camp in Carrefour, eight cases of cholera were registered one day in November. The next day, all 546 people fled the camp. Church leaders, the owners of the land, had been pressuring residents to leave.

The limited progress was concentrated in Cité Soleil. Following a concerted effort led by Haiti’s National Directorate for Water Supply and Sanitation in the Ministry of Public Works (an agency known as DINEPA) and collaboration with the local government, the UN and NGOs, the WASH cluster made full coverage in Cité Soleil a priority. When DINEPA worked with local government officials and NGOs to set a goal of full coverage in Cité Soleil, it worked. NGOs still implemented the bulk of the WASH services, but they worked together under the coordination of a functioning government agency. By 2011, all camps in Cité Soleil (100%) reported having water. Of the seven camps in Cité Soleil, only one (14.3%) did not have toilets, compared to the previous 50%. In terms of the provision of water and toilets in camps, the other municipalities changed very little from July 2010 to January 2011.

Discussion

The data confirms that seven months after the earthquake, minimum standards were not universally met for the provision of clean drinking water, toilets or clinics. More than 42% of camps were without water, and other reports suggest much of the water may have been unsuitable for drinking; 29% of the camps were without toilets. Despite the tremendous need for health services following the cholera outbreak, only 20% of camps had a clinic.

The minimal progress on WASH services suggests a structural failure to serve IDPs and other Haitian people after the earthquake. Unfortunately, the population’s access to WASH services was limited even before the earthquake. Indeed, 70% of the Haitian people did not have regular access to treated water before the earthquake—and this number was higher in the provinces—in large part because of blocked Inter-American Development Bank loans (CHRGJ et al., 2008), which Partners in Health termed ‘a straight line to cholera’ (Panchang, 2012). Clearly, NGOs that responded to the earthquake are not responsible for pre-quake conditions. As noted above, at the peak of the crisis, the UN reported that NGOs provided emergency water services to 1.2 million people (UNSC, 2010). However, the coverage remained uneven; following the earthquake but before the cholera outbreak, an official database showed that only one-third of the camps had access to water.

There is hope in this study’s finding that NGO management agencies make a difference in services provided to the residents: NGO-managed camps were significantly more likely to provide water, toilets and clinics to residents. NGO-managed camps were also particularly effective at improving camp conditions when they were present in the distant municipalities of Carrefour and Croix-des-Bouquets. These findings confirm the importance and effectiveness of management agencies, which became
widely used in the mid-1990s, following experiences in Rwandan refugee camps (Minear, 2005). However, the question remains as to why the vast majority of camps—four out of five—did not have a management agency, and why NGOs are particularly underrepresented in far worse-hit areas. Although this data is descriptive, it suggests the problems with coordination and accountability discussed in the literature on development and disaster response (Easterly, 2006; Farmer, 2011). Correlate hypotheses centre around the lack of coordination, and NGOs’ status as private, mostly foreign agencies.

**Institutional support through NGOs**

A consequence of international trends that saw a global increase in funds directed toward NGOs is that funds to governments are diminished. Following shifts in aid funding, the number of NGOs that worked in more than one country doubled in the decade before 1996, to 38,000 (Scholte and Schnabel, 2002, p. 250). Structuring this rise in the number of NGOs is an increase in funding. Globally, in 2005, NGOs channelled an estimated $3.7 to $7.8 billion of humanitarian assistance and $24 billion in overall development funding (Development Initiatives, 2006, p. 47; Riddell, 2007, p. 259). Given the global recession, humanitarian funding is receiving a greater proportion of total aid (Development Initiatives, 2013).

The situation in Haiti is no exception. Increased funds to NGOs reflect not only the ascendency of neoliberalism but also geopolitical struggles, such as in Haiti in 1995. Republicans in the US Congress forbade the United States Agency for International Development—within the executive branch, under the State Department—to fund then president Jean-Bertrand Aristide. NGOs were the beneficiaries, and their budgets exploded. Following the earthquake, 1% of emergency aid went to Haiti’s government (Katz, 2010; OSE, 2011).

**No structural responsibility**

Even though the IOM played a coordinating role in camp management and, as the data in this article clearly shows, one of the most statistically significant predictors of WASH services in camps was management by NGOs, there was no structure in place to ensure full coverage. As pointed out by an IOM official, there was a ‘carrot’ approach:

*We have some limited funds to encourage NGOs to act as CMAs [camp management agencies]. But what we can offer is paltry compared to NGOs’ other sources of funds. And being a CMA is a big responsibility.*

But no agency—be it the Haitian government, IOM or the UN—was able to compel NGOs to work in underserved areas, since these institutions’ accountability structures focus on foreign donors, individual and institutional. As many scholars have long noted, accountability ‘from above’ is far more powerful than from below (Edwards and Hulme, 1996b; Fisher, 1997).
Socio-geographical considerations

As geographers have noted, vulnerability and risk to disasters is uneven; marginalized groups such as people with low socio-economic status are more vulnerable but receive less aid (Bankoff, Frerks and Hilhorst, 2004; Colten, 2006). This article suggests that geography does play a role in receipt of aid. Cité Soleil, Port-au-Prince’s largest and poorest shantytown, is a case in point. According to NGO, Haitian government and international agency staff interviewed for this study, Cité Soleil was especially underserved because NGOs were afraid of, prevented from or averse to working there. Given the lack of precision in socioeconomic data, the differences in services in Cité Soleil are the only indicator of this general trend within humanitarian assistance, suggesting a further area of inquiry.

Cité Soleil and other shantytowns that are subsumed in larger communes, such as Carrefour Feuilles and Delmas 2, were declared ‘red zones’ in the violent period following Aristide’s forced ouster in 2004. This formal designation established serious travel restrictions, such as explicit no-entry rules for aid workers, with rental agencies refusing to cover cars travelling in the affected areas. This reluctance to work in Cité Soleil was countered by a Haitian government decree. It is important to note that it was NGOs that provided the increase in WASH services in Cité Soleil camps following the cholera outbreak, but under the mandate of and fulfilling priorities set by a functional branch of the Haitian government, DINEPA.

Geography also plays a role, given that camps in the central municipalities received more assistance than those in the periphery. This aspect may be linked to media coverage and visibility, or to a tendency among NGOs to choose locations closer to their own headquarters in Pétion-Ville, Port-au-Prince or Delmas. Following the earthquake, Haiti’s municipal governments became more visible as they were responsible for coordinating emergency services; they also organized the Civil Protection Divisions, which are responsible for disaster preparedness and response.

However, the socio-geographic factors of size or formality of camps did not affect the level of services. It was not the case that NGOs only managed large camps; indeed, four camps were comprised of fewer than 100 families. Yet all four were located in Delmas, close to the respective NGO offices, providing even more evidence of location being a factor. Some observers suggest that NGOs worked only in formal camps to control access, thus maximising security of aid workers and reducing benefit capture. However, this distinction is not statistically significant nor is it borne out by the physical landscape, as camps filled most available land at the time. The difference between a ‘formal’ and an ‘informal’ settlement was often the existence of official support.

Lack of coordination

Explanations for the gaps in services in IDP camps in Haiti must take into account pre-existing structural factors such as the lack of public oversight of NGOs and related accountability and coordination problems. Even before the earthquake, donors’ reward structure worked against collaboration, coordination, communication and
participation, especially following increasingly powerful ‘performance’ contracting with official donors (Agg, 2006; Schuller, 2012). According to IOM staff, despite information diligently collected about services or the lack thereof, NGOs cannot be required to offer services in a particular camp or to become camp management agencies. An NGO that is among the most visible and hardworking in Cité Soleil bristled at being listed as camp manager for fear of the communication of public responsibility that this designation connoted. As the NGO’s Cité Soleil manager noted: ‘We are happy to step up. But putting us on a database implies legal liability and permanence that we can’t commit to.’

A lack of coordination can lead to a reduction in accountability, as suggested by the case of Bobin, a Pétion-Ville shantytown where duplication resulted in both involved NGOs withdrawing support, each considering the other responsible for the camp. Given donors’ ever-powerful reporting and management models, there is little incentive for NGOs to work together. From a structural perspective, NGOs compete not only among themselves but even with the Haitian government. According to a staff member at the Ministry of Planning and Foreign Cooperation, only 10–20% of NGOs gave their reports to the government. Donor policies may actually encourage NGOs to disregard the authority of the state. NGOs often pay employees three times as much as the equivalent government ministry, a practice World Bank researcher Alice Morton has termed ‘raiding’ (Morton, 1997, p. 25).

Responsibility diffused

As the data shows, NGOs did not choose to work in underserved areas and no one could require them to do so since they were private, voluntary initiatives. As a result, individual NGOs could be recognised as successful although close to 40% of the camps still lacked water a year after the earthquake. Given the existing reward structure, no individual agency was obligated to provide needed services in the camps—or to go to underserved areas—and thus no single agency could be blamed for the general lack of progress. The one agency that could be blamed—the Haitian government (both national and local)—was still under-resourced despite the billions in aid sent to Haiti. With very little capacity to play an adequate oversight role, the Haitian government has little ability to help.

As noted above, one theory that explains this general situation is called the ‘by-stander effect’. It holds that in post-disaster settings where there are many actors but no clear responsibility, individuals—in this case, individual NGOs—believe other people will take action and therefore they do not (Darley and Latané, 1968; Fischer et al., 2011). With reference to the provision of WASH services to IDP camps, this tendency may explain the consistent gaps in service. With thousands of private, independent aid agencies operating in Haiti, no individual NGO could be expected to be responsible for camps that did not receive services. Outside of Cité Soleil, in areas where the government decreed full coverage, only 1% of additional camps had WASH services following the cholera outbreak.
Conclusion

Humanitarianism has gone through many transformations, with humanitarian actors struggling to maintain autonomy with respect to their actions and their principles of neutrality, impartiality and independence. Dunantists, followers of Red Cross founder Henry Dunant’s vision and above-mentioned principles, defend what some see as a diminishing ‘humanitarian space’, particularly against encroachment of political agendas and manipulation (Donini, 2012). However, Ian Smillie (2012) argues this that this manipulation is hardly new and that it can be a two-way street. For instance, humanitarian actors have sought to wield influence through the media (Olsen, Carstensen and Hoyen, 2003). Yet this is a double-edged sword, as the imperative to provide for others in a way that is visible—to represent success in ‘doing something’, the ‘big win’ noted above—can eclipse other considerations such as greatest need or cost-effectiveness.

These factors together lead to diminished outcomes, as pointed out by journalist Jonathan Katz in his account of systematic failures within the international response (Katz, 2013). At this writing, WASH activities in the camps had all but stopped. By government decree, trucking water to IDP camps ended in November 2011, not least because it was several times more expensive than public options. A report from August 2011 states that WASH services only existed in 6% of IDP camps. Nevertheless, the cholera epidemic continued to exist and increase into the third rainy season following the earthquake. By the time this research was completed, hundreds of new cases of cholera had broken out daily during every rainy season.

Careful statistical analysis is essential to identify best practices. Why, given information on the lack of WASH services, was more prevention work not undertaken? Why did gaps in coverage persist despite the figures put out by NGOs and the international community about service delivery? The lack of water and sanitation, ten months after the earthquake and despite the start of the cholera outbreak, also challenged the persistent narrative that people swelled the camps or were ‘faking it’—meaning that they just used the camps during the daytime, primarily in search of services. In fact, two studies, including one by one of the authors, conducted in 2011 show that 92% and 94% of IDPs preferred to leave the camps (ACTED and IOM, 2011; Schuller, forthcoming).

Case studies of foreign aid concluded that recipient governments must play a coordination role (Collier, 2007; Dollar, 1998; Easterly, 2006). Numerous reports on NGOs in Haiti from the 1980s until just before the earthquake recommend the same, as well as that NGOs must coordinate with one another. However, donors’ neoliberal policies that favour private, voluntary NGOs have kept both the national and local Haitian government from being able to respond to this crisis. While some may point to Haiti’s traditional kleptocracy, particularly Duvalierism, the elected governments of Haiti have been stripped of emergency resources through debt service and structural adjustment (Schuller, 2006). The progress in Cité Soleil resulted from the Haitian government’s collaborative approach with the UN, IOM, local governments and NGOs. It also reflects the fact that they began to identify problems
and demanded full coverage. This success story is significant; NGOs work best in a policy environment supported by a sufficiently resourced government leading the coordination. Where the government did not push, given existing reward structures, the collective of NGOs only added WASH services to 1% of the camps.

A solution regarding coordination was promoted by former US president Bill Clinton following the 2004 tsunami experience—the UN ‘cluster’ system (Bennett et al., 2006). The humanitarian response following Haiti’s earthquake was organized into 12 clusters, each responsible for a sector such as education, health care, water and sanitation. Despite the clusters’ potential for effective communication between agencies and beneficiaries and for assessing and ultimately responding to recipients’ priority needs, the majority of cluster meetings excluded local voices. All but the WASH cluster meetings were held in the UN base and most were held in English, a foreign language in Haiti (Miles, 2012). Instead of focusing on problem solving, meetings tended to promote ‘messaging’ or an NGO or for-profit service, with the WASH cluster again being the notable exception, since they met in all seven city halls and included local and national governments in addition to NGO field staff. WASH cluster meetings followed camp-by-camp discussions of SOS calls from local residents.

The earthquake relief effort inspired an unprecedented generosity, international collaboration and sustained global media attention. Its high profile—boosted by a former US president and a range of Hollywood stars and pop musicians—also underscored the structural failures of Haiti’s highly privatised system, providing useful lessons for other disaster contexts. It is easy for foreign agencies, including the media, to blame the Haitian government or the Haitian people, citing the legal framework, ineffective bureaucracies or Haiti’s persistent social inequality for the slowness of aid. However, the gaps in the services persisted despite the constant presence of NGOs. In this context, it would be fruitful to focus the attention of humanitarian actors on policies and implementation structures that can be adjusted, not only with the aim of improving performance but also to enhance preparedness for future disasters.

This research contributes to understanding disaster responses in urban areas. The rapid spread of cholera, exacerbated by persistent gaps in the coverage of WASH services to Haiti’s most vulnerable, suggests a possible explanation: an overdependence on NGOs (Lwijis, 2009). The inadequate response points to one possible consequence of the erosion of public capacity and the lack of public accountability, coordination and collaboration of private NGOs. To fulfil even this minimal role of oversight and supervision requires qualified technicians and support staff within the public sector, propositions that run counter to a hostility towards public employees within certain donor countries, notably the United States.

This research is only the beginning of a necessary conversation about the strengths and limitations of NGOs and the appropriate roles of various humanitarian actors following a disaster. These statistical indices are useful for framing some policy suggestions; in-depth understanding of structural constraints requires a different set of tools and more data from humanitarian agencies. This analysis is meant to inspire self-analysis and constructive criticism from the many humanitarian actors following Haiti’s earthquake. From the quantitative data gathered thus far, the following policy recommendations emerge:
Recommendations

1. The Haitian government, particularly within the WASH sector, needs to have adequate funding to fulfil regulatory responsibilities and build long-term public water and sanitation systems.

At least in the short term, this is entirely dependent on the will of foreign agencies. It is in their interest to fund the regulatory and oversight capacity of the most successful yet still underfunded sector, one that is also key to stopping the spread of cholera. Donors can willingly pay a ‘tax’ on their aid to NGOs to fund responsible Haitian government agencies.

2. NGOs need to assume roles as camp management agencies in all camps.

As this article shows, the most statistically significant predictor of service outcomes is the presence of an NGO management agency. NGOs still manage a minority of camps, even considering the depopulation of IDP camps; according to the February 2012 DTM, there were fewer than 500,000 IDPs. Donors such as the United States Agency for International Development, the Canadian International Development Agency, and UN agencies can offer incentives to NGOs to play this function, such as making the renewal of contracts contingent on accepting additional IDP camps.

3. Water and sanitation services need to be provided in the neighbourhoods surrounding the camps.

As of November 2011, DINEPA mandated an end to the more expensive trucking option. If this decision is to be a viable, sustainable solution, the agency needs to increase the capacity for delivery of clean water.

4. The successful state-led public–private partnership needs to be scaled up.

The progress, however small, in Cité Soleil is an example of a facilitating policy environment, with NGOs and the recipient government—both local and national—working together. This best practice should be replicated on a national scale. As part of this effort, in the summer of 2012, the Unit of Coordination of NGO Activities within the Haitian government organised Departmental Councils that include both government (local as well as national) and NGO agencies meeting to discuss priorities, gaps in services and progress.

Annexe 1. WASH services in Haiti

<table>
<thead>
<tr>
<th>Scope</th>
<th>Conditions</th>
<th>Water</th>
<th>Toilet</th>
<th>Shower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationwide</td>
<td>Camps with WASH agency</td>
<td>187 (15.6%)</td>
<td>383 (31.9%)</td>
<td>300 (25.0%)</td>
</tr>
<tr>
<td></td>
<td>People with WASH agency</td>
<td>261,877 (24.73%)</td>
<td>434,901 (41.07%)</td>
<td>337,214 (31.85%)</td>
</tr>
<tr>
<td></td>
<td>People without WASH agency</td>
<td>796,976 (75.27%)</td>
<td>623,952 (58.93%)</td>
<td>721,639 (68.15%)</td>
</tr>
<tr>
<td>Metro area</td>
<td>Camps with WASH agency</td>
<td>165 (18.5%)</td>
<td>287 (32.2%)</td>
<td>229 (25.7%)</td>
</tr>
<tr>
<td></td>
<td>People with WASH agency</td>
<td>257,171 (26.74%)</td>
<td>406,430 (42.25%)</td>
<td>316,829 (32.94%)</td>
</tr>
<tr>
<td></td>
<td>People without WASH agency</td>
<td>704,742 (73.26%)</td>
<td>555,483 (57.75%)</td>
<td>645,084 (67.06%)</td>
</tr>
</tbody>
</table>

Source: WASH cluster database, 1 November 2010.
Annexe 2. Sample and population characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Sample</th>
<th>DTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of camps*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port-au-Prince</td>
<td>8 (17%)</td>
<td>138 (16%)</td>
</tr>
<tr>
<td>Delmas</td>
<td>25 (24%)</td>
<td>206 (24%)</td>
</tr>
<tr>
<td>Carrefour</td>
<td>18 (17%)</td>
<td>148 (18%)</td>
</tr>
<tr>
<td>Pétion-Ville</td>
<td>12 (11%)</td>
<td>98 (12%)</td>
</tr>
<tr>
<td>Cité Soleil</td>
<td>7 (7%)</td>
<td>55 (7%)</td>
</tr>
<tr>
<td>Tabarre</td>
<td>12 (11%)</td>
<td>97 (12%)</td>
</tr>
<tr>
<td>Croix-des-Bouquets</td>
<td>13 (12%)</td>
<td>99 (12%)</td>
</tr>
<tr>
<td>Management agency present</td>
<td>33 (33%)</td>
<td>183 (22%)</td>
</tr>
<tr>
<td>Number of families per camp (mean)</td>
<td>395 (range 15–8,500)</td>
<td>391 (range 10–16,732)</td>
</tr>
<tr>
<td>Camp committee present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>96 (91%)</td>
<td>787 (94%)</td>
</tr>
<tr>
<td>No</td>
<td>4 (4%)</td>
<td>24 (3%)</td>
</tr>
<tr>
<td>No information</td>
<td>5 (5%)</td>
<td>30 (4%)</td>
</tr>
</tbody>
</table>

Note: * Does not include all municipalities, so percentages do not add up to 100%.
Source: authors.

Acknowledgements
The authors would like to first thank the IDPs, the committee members and agency representatives for taking the time to conduct the research. In addition, the authors thank the research assistants, all finissants (graduates) at the Faculté d’Ethnologie, Université d’État d’Haïti: Jean Dider Deslorges, Mackenzy Dor, Jean Rony Emile, Junior Jean François, Robenson In-Julien, Rose-Mercie Saintilmot, Castelot Val and Jude Wesh, with a special thank you to Faculté Ethnologie colleague Smail Chevalier for his assistance in quantitative research. Research was made possible by a Senior Research Grant (#1122704) from the National Science Foundation, a Professional Staff Congress–City University of New York (CUNY) Faculty Research Grant and the CUNY Haiti Initiative.

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Endnotes
1 An unofficial report commissioned by the US Agency for International Development provides a much lower estimate of the death toll: 48,000–85,000 (Schwartz, Pierre and Calpas, 2011). Another study arrives at an estimate of 158,000 (Kolbe et al., 2010).
2 When the data collection began, on 23 July, the 3 May database was the first listing on the website (‘list of sites’).
3 In French, it is the Faculté d’Ethnologie at the Université d’État d’Haïti.
4 This name is a pseudonym, used to protect respondent’s identity. Full names are provided whenever interviewees asked for them to be noted.
5 The authors selected measures that were statistically significantly related to both independent variables.
6 Cité Soleil’s levels of violence are not significantly higher than those of areas that were not designated red zones; it was, however, the focus of clashes between UN troops and local armed groups.
7 See Acuto (2013) for a nuanced analysis.
8 See, for example, A.R.S. Progetti (2005); Mathurin, Mathurin and Zaugg (1989); and Morton (1997).

References


IOM (International Organization for Migration) (n.d.) ‘Displacement Tracking Matrix (DTM)’.

http://www.iomhaitidataportal.info.


