

Assessing Needs After the Quake: Access to Food, Water, Fuel and Property

A Study by the University of Michigan and the Small Arms Survey

Introduction

This second report features the findings of a major randomized **post-disaster household survey** (n: 2,947) conducted in Port-au-Prince in late February and early March 2010. It is the only (geo-referenced) pre- and post-disaster survey (comparing 2009 and 2010 population samples) available.

This particular report was prepared by a team of Haitian, US and Canadian researchers affiliated with the University of Michigan and the Geneva-based Small Arms Survey. It focuses on a wide range of issues, including food security, access to water, use of fuel and property issues. The report is designed to support the activities of multilateral and bilateral donors working on post-disaster needs.

A selection of the key findings observes that:

Food security varies dramatically within the population and is highly geographically varied. Within the general population less than one in four is food secure. The rest are severely or moderately hungry. Among camp residents more than two in three are food insecure with severe hunger. Populations in Cite Soleil, Cite Militaire/Cite Simon, Northwest Port-au-Prince, and Carrefour are more likely to be food insecure with severe hunger than those in suburbs of Delmas, Petionville, and Carrefour, as well as the neighborhoods of Airport/Cazeau, Pacot, Boudon, and Canape Vert.

Food insecurity is strongly correlated with income and access to remittances. Nearly three quarters of food-secure households reported receiving remittances or monetary gifts, while no food-insecure with severe hunger households did so. Any amount of income and receiving gifts and money from others, especially family abroad, are protective factors in regards to food security.

Before and after the earthquake, most (approximately 75%) respondents reported that their main source of water for cooking and drinking is water purchased at a water kiosk. The next most common source of water both before and after the earthquake was truck water delivered to a cistern. Moreover, those using bottled water rose from 1 per cent before the quake to over 5 per cent afterwards. After the earthquake, use of treated water increased to 35% to 40% in most neighborhoods

About half of Port-au-Prince residents used pit latrines prior to the earthquake. Following the earthquake, the overall use of flush toilets decreased, while use of shared pit latrines increased. Both before and after the earthquake, residents in the suburb of Petionville as well as the neighborhoods of Pacot, Boudon, and Canape Vert, were more likely to report using flush toilets than those in other neighborhoods.

In 2009, the vast majority of residents (88%) reported that their household had electricity, most often provided by the city. After the earthquake the vast majority (87%) of respondents said they had been left without any electricity at all. The pattern of

electricity loss post earthquake was consistent across neighborhoods; at least 80% of residents in all neighborhoods reported having no electricity.

With respect to cooking fuels, charcoal was the most commonly reported source of energy for cooking (reported by 79% of households) both before and after the earthquake. There was a dramatic difference in access to cooking energy between in the post earthquake period. Every survey respondent in every neighbourhood had access to cooking energy in 2009, but after the earthquake ten percent of households said they had no access to cooking facilities or cooking energy at all.

Property issues are a major flashpoint. Before the earthquake, just 2.3 per cent of the population described access to housing as a problem In 2010, 100 per cent of the population felt it was a major problem. Only 34.7 percent of the general population respondents and 3.2 percent of the camp population reported no visible damage to their homes. Among the general population, households with a yard were less likely to be displaced in camps or to have sleep in public areas

Methodology

In order to better understand locally varied experiences and perceptions of security, justice, access to basic services and other issues, two household surveys were conducted in 2009¹, and in 2010 following the earthquake. The follow up survey in 2010 was shortened and modified to include demographics and socioeconomic status, information on deaths, injuries and illness, a short mental health assessment including the PTGI to measure post-traumatic growth, and an assessment of the household's housing situation.

The household surveys were led by Dr. Athena Kolbe from the University of Michigan. A research team consisting of American, Canadian and 27 Creole-speaking and university-educated men and women were recruited to administer and undertake analysis. All team members received intensive training in July 2009 and again in February 2010. An ethical review board at the University of Michigan approved the initial study in July 2009 and approved the follow-up surveys in February 2010.

First, between July and September 2009, a total of 2,800 households² were interviewed according to robust protocol and structured questionnaire. Of these, 1,800 resided in metropolitan Port-au-Prince area. Of these, 1,500 were randomly sampled from throughout the Port-au-Prince area and an additional 300 were over-sampled (100 per area) in the three densely populated neighborhoods of Martissant/Gran Ravine, Cite Soley, and Bel Air.

Second, after the January 2010 earthquake, the same 1,800 households were re-approached. The follow-up interviews occurred between late February and early March 2010. Follow-up interviews drew on a modified version of the first questionnaire with additional questions added to determine the effect of the earthquake on citizen mortality, injuries, illness, changes in household composition, demographics, real and perceived victimization, basic social conditions, and perceptions of state and non-state providers.

At the request of the United Nations Development Programme (UNDP) and the International Development Research Centre (IDRC) an additional 1,147 structured interviews were administered with residents of 30 Internally Displaced Persons (IDP) camps during the first week of March 2010. A similarly structured interview instrument was used with camp residents as was used with the follow up interviews with the general population. As such, the findings of this report highlight the uneven impact and implications of the earthquake on different sub-groups of concern.

¹ The baseline survey administered in 2009 focused on household demographics, conflict experiences, human rights violations, attitudes toward firearms, screening for post-traumatic stress disorder, and substance use history.

² Consistent with best practice, a household was defined for respondents as "you and all the other people you live in this same place with, with whom you share food, money and living space; a household may include not only your family but also a boyfriend/girlfriend, another person's child that you care for, or a roommate." A household's residence or home was defined as "the living place of the household members which is unique to this particular group of people who live together; the residence includes the household's yard, toilet, cooking hut and roof even if it is shared with other households, so long as all members of the household have unhindered access to the shared yard, toilet, cooking hut or roof."

Populations included in the 2010 Post-Earthquake Study		
Total Interviewed	Interview Dates	Sampling Process
Residents of Port-au-Prince metropolitan area (1,500)	July – September 2009 (baseline) February – March 2010 (follow-up)	1. Geographic boundaries of area were demarcated. 2. Generated a list of random GPS coordinates within the area. 3. Each household within 20 m identified. 4. One household was randomly chosen. 5. Respondent was randomly chosen from amongst all adult household members.
Residents of three highly populated zones in Port-au-Prince (300)	August–September 2009 (baseline) February 2010 (follow-up)	
People living in 25 randomly chosen IDP camps and 5 large intentionally chosen IDP camps(1,147)	March 2010	1. Randomly generated 25 GPS locations within the boundaries of the Greater PAP area. 2. Visited each location and identified all IDP camps within .5 miles. 3. Randomly chose one camp and obtained the number of households residing in the camp from the camp leadership and/or NGOs serving the camp. 4. (For five large camps, we began with this step) Randomly generated GPS coordinates within the boundaries of the camp. The number of coordinates equaled 1% of the total number of households in the camp or 1, whichever was greater. 5. Visited the selected GPS coordinate and interviewed a randomly chosen adult household member living at the location selected.

A multi-stage approach was used to identify households and main respondents throughout Port-au-Prince and in the three over-sampled highly populated zones in both 2009 and 2010. In the first instance, a list of random GPS locations was generated within the sampled areas. For each location, interviewers identified all households within a 20m radius. After the GPS locations were identified, a household was randomly selected from within a 20m radius: the probability of choosing a household was $1/\text{number of households within 20m}$. Thus for items related to the household as a whole, the weight used was the inverse, i.e. the number of households within 20m.³

³ Within the household, one adult was randomly chosen from all the adults in the household. The interviewer recorded the total number of adults in the household and chose the one with the most recent birthday (at the date of the interview) to be the main respondent. Consequently, the probability of selection of an individual, given that his/her household had been chosen, was $1/\text{number of adults in household}$. The overall probability of selecting an individual given a GPS location was the product of the probability of choosing a household and the probability of choosing an individual within the household. The weight for items related to the individual was the inverse of this product, which is equivalent to the product of the number of households within 20m and the number of adults in the household. When a GPS location was not within 20m of a household so defined, another location was used. One household was randomly chosen to participate. The numbers of households within 20m of each location were recorded for later use in determining the probability of selecting the household and determining the sampling weight.

In addition to re-sampling the 2009 subgroup in 2010, 30 IDP camps were visited and included in the survey. Five large camps were identified based on Google maps and an estimated population figure for each camp was obtained from the Haitian government, the UN, and/or NGOs servicing the camp. What is more 25 random GPS locations within Port-au-Prince were generated. Each site was visited and all IDP camps (defined as a gathering of 5 or more unrelated households living in an out-of-doors area) were identified. One camp was randomly selected. This camp was also included in the sample and was approached in the same manner as the five largest camps.

Contact was made with camp leadership who provided an estimated population figure, and permission to enter the camp. Meanwhile, the boundaries of the camp were obtained on foot using GPS locators and the boundaries were marked using GIS software. A number of GPS coordinates within the camp were generated. This number was equal to one percent of the number of camp residents. Figures from official sources and the camp leadership were averaged to determine the number of residents for sampling purposes; if no official number existed, the estimated population figure given by the camp leadership was used.⁴

⁴ Each GPS location was visited in person. If the GPS location landed on a household's living space, that household was selected for an interview. If a GPS location landed on a space that was not used for living (e.g., a path) the household directly north was selected. If there was no household living space north of the coordinate, an alternate GPS location was generated.

Food Security

Food security was measured according to guidelines designed by the US Department of Agriculture (USDA) in 2000. Households were surveyed using an 18-item instrument consisting of multiple indicator questions aimed at capturing and distinguishing the full range of severity of food insecurity. This instrument has been shown to be stable, robust, reliable measure of food security among US households. Affirmative responses to the 18-item measure were summed and then categorized according to food insecurity severity per USDA guidelines. Categories consist of: food insecure with severe hunger, food insecure with moderate hunger, food insecure without hunger, and food secure.

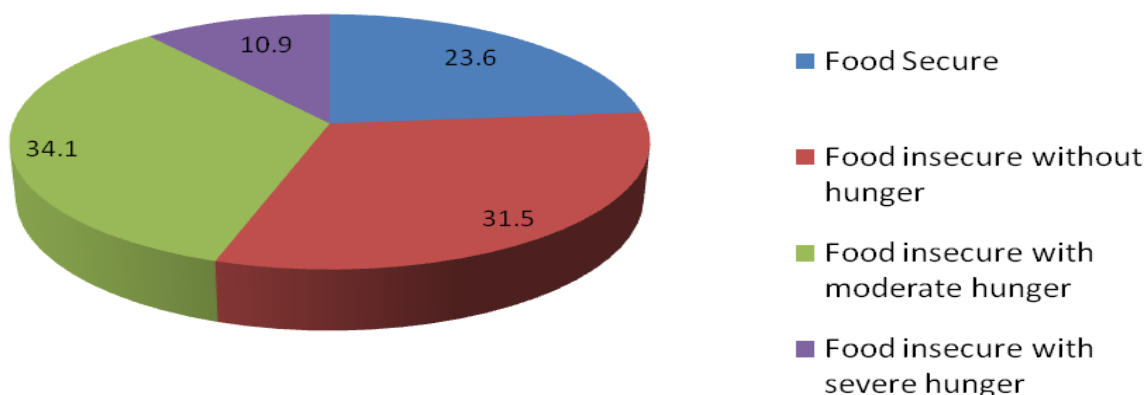
Within the general population of Port au Prince, **10.9%** meet criteria for food insecurity with **severe hunger**. In Port au Prince, **32.8%** of households are food insecure with **moderate hunger**, **31.5%** are food insecure without **hunger**, and only **23.6%** are **food secure**. Within camp households, we found that **68.9%** of all households are **food insecure** with **severe hunger**. Of all camp households, only **4.4%** are food insecure without hunger or better by these same guidelines.

Food security varies **dramatically across neighborhoods**. In Cite Soley, Cite Militaire/Cite Simon, Northwest Port-au-Prince, and Carrefour, more than **40%** of households are food insecure with severe hunger, while in the suburbs of Delmas, Petionville, and Carrefour, as well as the neighborhoods of Airport/Cazeau, Pacot, Boudon, and Canape Vert, , less than **5%** of households meet these criteria for food insecurity with severe hunger. A similar pattern arises in regards to income. Of households with any income at all, a third are food secure, while less than 5% are food insecure with severe hunger

Receiving remittances from abroad or money from others is strongly related to food security. Nearly three quarters of food-secure households reported receiving remittances or monetary gifts, while no food-insecure with severe hunger households did so. Only 0.3% of food secure households reported that they had received no gifts or money. When asked about the source of gifts and money, nearly **70% of food-secure households identified family abroad**. In sum, results suggest that having any amount of income and receiving gifts and money from others, especially family abroad, are protective factors in regards to food security.

Food Security in Port-au-Prince households (2010)				
	Frequency	Percent	Valid Percent	Cumulative Percent
<i>Food-secure</i>	408	22.7	23.6	23.6
<i>Food-insecure without hunger</i>	545	30.3	31.5	55.0
<i>Food-insecure with moderate hunger</i>	591	32.8	34.1	89.1
<i>Food insecure with severe hunger</i>	188	10.4	10.9	100.0
<i>Total</i>	1732	96.2	100.0	

Food Insecurity in Port-au-Prince



Food Security in Port-au-Prince households by income (2010)

Income	Food- secure	Food- insecure without hunger	Food- insecure with moderate hunger	Food- insecure with severe hunger
No income	15.3%	30.2%	37.9%	16.6%
Any amount of income	32.5%	32.8%	30.1%	4.7%
Total	23.6%	31.5%	34.1%	10.9%

Food-security in Port-au-Prince households by neighborhood (2010)

Neighborhood	Food- secure	Food- insecure without hunger	Food- insecure with moderate hunger	Food- insecure with severe hunger
Delmas	22.6%	37.9%	37.4%	2.1%
Martissant/Gran Ravine	10.1%	17.1%	36.4%	36.4%
Bel Air	10.7%	16.1%	44.6%	28.6%
Cite Soley	0.9%	8.0%	49.6%	41.6%
Petionville	30.1%	37.5%	32.1%	0.3%
Airport/Cazeau	36.7%	33.9%	26.6%	2.8%
Cite Militaire/Cite Simon	0.0%	12.5%	43.8%	43.8%
Pacot/Boudon/Canape Vert	32.5%	40.7%	26.3%	0.5%
Carrefour	28.2%	39.4%	32.4%	0%
Northwest Port-au-Prince	12.7%	14.5%	23.6%	0.5%
Nazon	9.1%	9.1%	36.4%	45.5%
Total	23.6%	31.5%	34.1%	10.9%

Food Security in Port-au-Prince households by gift/money receipt (2010)				
	Food-secure	Food-insecure without hunger	Food-insecure with moderate hunger	Food-insecure with severe hunger
Received no gifts or money	0.3%	35.4%	48.4%	15.9%
Received monetary gift or remittances from abroad	74.0%	22.9%	3.1%	0%
Total	23.6%	31.5%	34.1%	10.9%

Food-security in Port-au-Prince by source of gift/money (2010)				
Source of gift/money	Food-secure	Food-insecure without hunger	Food-insecure with moderate hunger	Food-insecure with severe hunger
Family in Haiti	68.8%	20.0%	11.3%	NA
Friend in Haiti	59.6%	31.9%	8.5%	NA
Family abroad	77.2%	21.7%	1.1%	NA
Friend abroad	71.2%	28.8%	0%	NA
Church or other charity	87.5%	12.5%	0%	NA
Total	74.0%	22.9%	3.1%	NA

Access to Water for Cooking, Drinking, Bathing & Toileting

Water Source

Both pre and post-earthquake, **three quarters** (approximately 75%) of all respondents reported that their **main source of water** for cooking and drinking is water purchased at a **water kiosk**.⁵ Kiosk water is sometimes treated, but is generally not considered to be potable even when the individual kiosk advertises its water as being “purified,” “treated,” or “natural.” Kiosks are located in most neighborhoods in Port-au-Prince and are open to the public anywhere from a few hours once a week to five or six hours every day. The cost of water from a kiosk is set by the kiosk manager and though there is no standardized price, residents typically pay between 10 and 50 Gourdes per bucket with discounts for larger purchases and favored customers.

Other than kiosks, the next **most common source of water** both before and after the earthquake was truck **water delivered to a cistern** (19% in 2009 and 15% in 2010). While more than a third of Petionville, Airport/Cazeau and Pacot/Boudon/Canape Vert residents reported having water delivered to a cistern prior to the earthquake, this figure dropped to about 10% after the earthquake. Qualitative interviews revealed several possible reasons for this drop including damaged cisterns, difficulty scheduling water deliveries (several residents mentioned being unable to reach the water truck companies by phone or in person), and the reduction in regularly scheduled water delivery routes.

Whereas **only 1% of households overall reported using bottled water** as their primary source of drinking and cooking water prior to the earthquake, this **figure rose to 5.2 % after the quake**, with use most common in Bel Air and Carrefour (approximately 9%). Only .1% of households reported getting their water from a relief agency following the earthquake. When asked after the earthquake to rate the priority of water access from amongst a list of eight other issues and problems affecting their household, 13.5% of respondents said that access to water was the first or second priority problem.

Almost all respondents reported having access to a place to store water after the earthquake, although a quarter said they were using only buckets to store water. Other water storage containers included drums (the size of a metal oil drum), tanks and cisterns. More than a fifth of residents of Bel Air and Nazon said they had only one bucket in which to store water.

Access to Potable Water

In **2009, 72% of households did not treat the water** they used for drinking or cooking, however **after the earthquake, only 58% reported using untreated water**. Of these, most used bleach to treat the water themselves; only 7% used water that was treated by others. Prior to the earthquake, nearly half of Airport/Cazeau residents and about a third of Carrefour, Northwest Port-au-Prince, Petionville, and those residing in the neighborhoods of Pacot, Bourdon, and Canape Vert reported treating their water, while water treatment was less common in other neighborhoods (only 8% in Martissant/Gran Ravine). After the earthquake, use of treated water increased to 35% to 40% in most neighborhoods, reaching

⁵ Water kiosks are cement block buildings with an elevated cistern. Water is supplied to the cistern by private companies, which deliver the water by truck and transfer it into the cistern, or by CAMEP, the public water company.

nearly 50% in the neighborhoods of Pacot, Bourdon, and Canape Vert as well as in the suburb of Delmas.

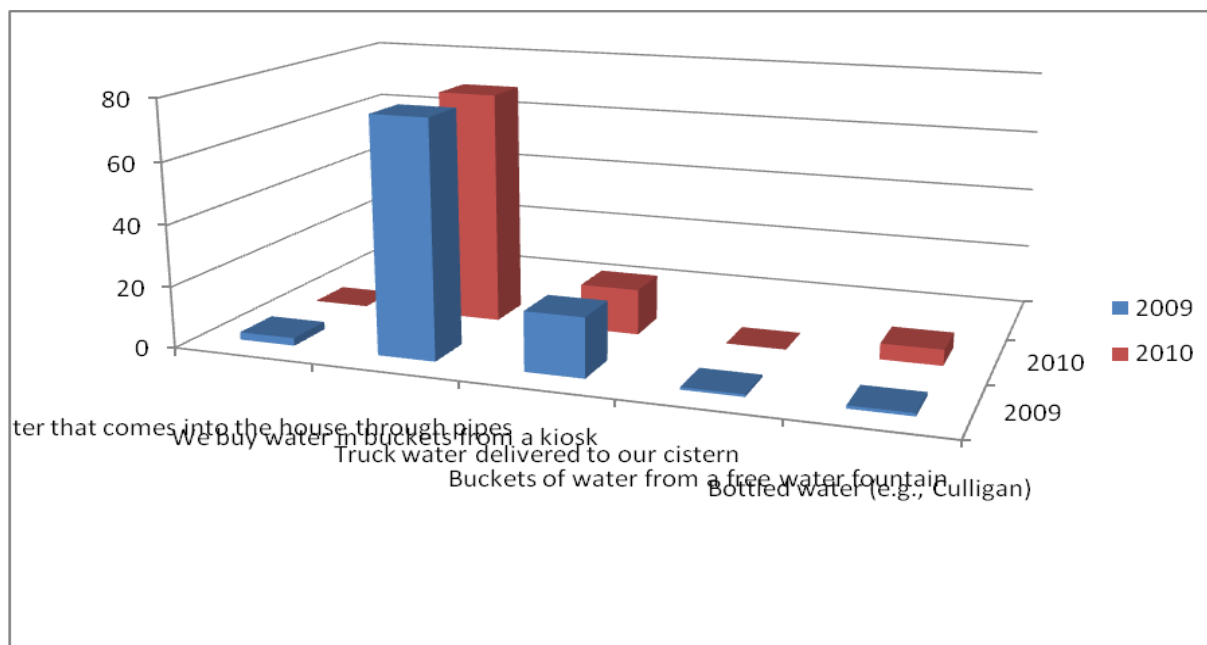
Bathing & Toilet Facilities

The **majority of respondents** reported having **access to a place to bathe** following the earthquake, and 2/3 of these reported having a private place to bathe. Following the earthquake, respondents most commonly reported having no place to bathe in the highly populated neighborhoods of Martissant/Gran Ravine, Bel Air, and Cite Soley. In Delmas, Petionville, Airport/Cazeau, and Pacot/Boudon/Canape Vert, those who did have a place to bathe most often reported that these places were private rather than public. In all other neighborhoods, public bathing areas were more common.⁶

Regarding toilet facilities, **about half of Port-au-Prince residents used pit latrines prior to the earthquake.** Toilet facilities are either private (for one household), semi-private (shared amongst several households, generally those with whom one shares a yard, roof or cooking area) or shared with others in your neighborhood. For the purposes of this survey, we coded toilet facilities as private if they were only used by the responding household. Pit latrines do not use water while flush toilets are used either by emptying a half bucket of water into the toilet bowl to activate the flushing mechanism or by using the handle to flush (if the house has water flow from an elevated or rooftop cistern through pipes into a bathroom). Anecdotal reports indicate that the bucket flush method is most common amongst those with flush toilets.

Following the earthquake, the overall use of flush toilets decreased, while use of shared pit latrines increased. Post-earthquake, about 8% of households reported using a hole in the ground or not having access to any toilet on a regular basis and just “going” wherever they can. Both before and after the earthquake, residents in the suburb of Petionville as well as the neighborhoods of Pacot, Boudon, and Canape Vert, were more likely to report using flush toilets than those in other neighborhoods. While all neighborhoods reported increased use of pit latrines after the earthquake, this increase was especially dramatic in Petionville, Carrefour, Delmas, Cite Soley, and Martissant/Gran Ravine.

⁶ Respondents were not asked about access to bathing and shower facilities in the 2009 baseline survey, although observations from the research team indicate that the vast majority of Port-au-Prince households had private bathing areas prior to the earthquake.



Household's main source of water for cooking and drinking (2009)

	Weighted Frequency	Weighted Percent
Water that comes into the house through pipes	44	2.5
We buy water in buckets from a kiosk	1374	76.5
Truck water delivered to our cistern	347	19.3
Buckets of water from a free water fountain	15	.8
Bottled water (e.g., Culligan)	18	1.0
Total	1798	100.0

Household's main source of water for cooking and drinking (2010)

	Weighted Frequency	Weighted Percent
Truck water delivered to a formal cistern	256	15.0
Water Kiosk	1302	76.0
Truck water delivered to a temporary cistern (water bladder)	26	1.5
Buy bottled water	89	5.2
Relief agency (not a water bladder)	1	.1
Other	38	2.2
Total	1712	100.0

Household's Main Source of Water for Cooking & Drinking (2010)						
	Water that comes into the house through pipes	We buy water in buckets from a kiosk	Truck water delivered to our cistern	Buckets of water from a free water fountain	Bottled water (e.g., Culligan)	Other/ Spring water
Delmas	2.1%	83.4%	13.2%	.9%	.4%	0%
Martissant/Gran Ravine	0%	94.6%	4.7%	.8%	.0%	.0%
Bel Air	4.5%	71.4%	20.5%	3.6%	.0%	.0%
Cite Soley	.9%	78.8%	17.7%	.9%	1.8%	.0%
Petionville	4.9%	49.1%	42.6%	1.4%	1.0%	1.0%
Airport/Cazeau	2.8%	58.7%	36.7%	1.8%	.0%	0%
Cite Militaire/Cite Simon	3.1%	78.1%	15.6%	3.1%	.0%	.0%
Pacot/Boudon/Canape Vert	4.1%	59.6%	34.2%	1.6%	.5%	.0%
Carrefour	4.2%	78.9%	15.5%	.7%	.7%	.0%
Northwest Port-Au-Prince	.0%	90.9%	9.1%	.0%	.0%	.0%
Nazon	.0%	72.7%	27.3%	.0%	.0%	.0%
Total	3.4%	66.9%	27.4%	1.3%	.6%	.3%

Percentage of Respondents Who Said Water Access is a Priority for their Household (2010)		
	Frequency	Percent
Access to water is our household's first priority	89	5.1
Access to water is our household's second priority	148	8.4
Total	1758	100.0

Do you have a place to store water? (2010)						
Unweighted Responses						
Neighborhood	Yes, one bucket or smaller	Yes, more than one bucket	Yes, drum	Yes, tank	Yes, cistern	No place to store water
Delmas	7.2%	9.8%	33.6%	10.7%	30.6%	.0%
Martissant/Gran Ravine	14.0%	13.2%	27.1%	15.5%	29.5%	.8%
Bel Air	21.5%	11.7%	22.5%	18.9%	24.3%	.9%
Cite Soley	16.8%	8.0%	27.4%	18.6%	29.2%	.0%
Petionville	13.4%	18.2%	31.4%	15.6%	21.2%	.2%
Airport/Cazeau	6.5%	19.4%	24.1%	24.1%	25.9%	.0%
Cite Militaire/Cite Simon	3.1%	12.5%	34.4%	18.8%	28.1%	3.1%
Pacot/Boudon/Canape Vert	10.4%	14.5%	22.4%	24.0%	29.7%	.0%
Carrefour	7.0%	12.7%	35.9%	24.6%	19.7%	.9%

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Northwest Port-au-Prince	9.1%	7.3%	30.9%	23.6%	29.1%	.0%
Nazon	22.7%	45.5%	9.1%	13.6	9.1	.0%
Total	11.8%	14.6%	29.2%	19.0%	25.2%	.2%

Do you treat the water before you drink or cook with it? (2010)						
Unweighted Responses						
Neighborhood	Yes, using bleach (Clorox)	Yes, using a filter	Yes, by boiling or solar heat	Yes, using tablets	Only use bottled water	No
Delmas	11.1%	3.8%	3.8%	4.3%	4%	76.5%
Martissant/Gran Ravine	4.7%	.8%	.8%	1.6%	.0%	92.9%
Bel Air	18.8%	3.6%	.0%	1.8%	.9%	75.0%
Cite Soley	13.3%	.9%	.0%	1.8%	.0%	84.1%
Petionville	12.4%	7.7%	2.8%	7.0%	1.0%	69.4%
Airport/Cazeau	22.9%	8.3%	5.5%	11.9%	.0%	51.4%
Cite Militaire/Cite Simon	15.6%	3.1%	.0%	3.1%	.0%	78.1%
Pacot/Boudon/Cana pe Vert	12.5%	5.2%	6.2%	6.7%	2.6%	66.8%
Carrefour	19.0%	3.5%	3.5%	4.9%	.0%	69.0%
Northwest Port-au-Prince	14.5%	9.1%	1.8%	7.3%	.0%	67.3
Nazon	18.2%	.0%	.0%	.0%	.0%	81.8%
Total	13.5%	5.2%	2.8%	5.5%	8%	72.2%

What type of toilet does your household normally use? (2010)						
Unweighted Responses						
Neighborhood	Shared Pit latrine	Private Pit latrine	Private Flush toilet	Shared Flush toilet	Hole in the ground	No Toilet facilities
Delmas	48.9%	11.1%	3.8%	17.9%	16.2%	3.8%
Martissant/Gran Ravine	63.3%	21.1%	3.9%	7.0%	1.6%	3.1%
Bel Air	31.8%	31.8%	.9%	20.0%	1.8%	13.6%
Cite Soley	56.6%	22.1%	.0%	10.6%	1.8%	8.8%
Petionville	28.4%	8.7%	25.3%	28.2%	2.4%	7.1%
Airport/Cazeau	33.0%	14.7%	39.4%	9.2%	.0%	3.7%
Cite Militaire/Cite Simon	46.9%	46.9%	3.1%	3.1%	.0%	.0%
Pacot/Boudon / Canape Vert	23.7%	6.7%	47.4%	16.5%	1.0%	4.6%
Carrefour	73.2%	5.6%	8.5%	7.0%	.7%	4.9%
Northwest Port-au-Prince	61.8%	5.5%	21.8%	9.1%	.0%	1.8%
Nazon	57.1%	4.8%	9.5%	14.3%	.0%	14.3
Total	41.0%	12.7%	20.8%	17.8%	1.6%	6.0%

Do you have access to a bathtub, shower or other place to bathe? (2010)		
	Weighted Frequency	Weighted Percent
Yes	1526	89.1
No	187	10.9
Total	1712	100.0

For those who have a place to bathe: is it private? (2010)		
	Weighted Frequency	Weighted Percent
Yes	1019	66.8
No	506	33.2
Total	1525	100.0

Do you have access to a bathtub, shower or other place to bathe? (2010)		
Unweighted Responses		
Neighborhood	Frequency	Percent
Delmas	98.3%	1.7%
Martissant/Gran Ravine	79.8%	20.2%
Bel Air	74.8%	25.2%
Cite Soley	72.6%	27.4%
Petionville	98.3%	1.7%
Airport/Cazeau	99.1%	.9%
Cite Militaire/Cite Simon	93.8%	6.3%
Pacot/Boudon/Canape Vert	99.0%	1.0%
Carrefour	95.8%	4.2%
Northwest Port-au-Prince	85.5%	14.5%
Nazon	81.8%	18.2%
Total	92.9%	7.1%

Energy

In **2009**, the vast **majority of residents** (88%) reported that their household **had electricity**, most often provided by the city. Although the availability of city electricity was sporadic, it was most often the only source of electricity that residents relied on, although inverters and generators were also used. In **2010** after the earthquake the **most residents** (87%) of respondents said **they had been left without any electricity** at all.

The pattern of electricity loss post earthquake was consistent across neighborhoods; at least 80% of residents in all neighborhoods reported having no electricity (ranging from 83% in Delmas to 100% in Nazon). Across neighborhoods, only 4% stated that their household had city electricity, while another 4.5% reported that they use electricity provided by a generator.

In terms of energy used for cooking, **no households either before or after the earthquake reported using electric stoves**. *Charcoal* was the most commonly reported source of energy for cooking (reported by 79% of households) both before and after the earthquake. There was a dramatic difference in access to cooking energy between in the post earthquake period. Every survey respondent in every neighbourhood had access to cooking energy in 2009, but after the earthquake ten percent of households said they had no access to cooking facilities or cooking energy at all.

These findings were **geographically varied**. Nazon residents were most likely to report a lack of cooking facilities (22%), while in Cite Militaire/Cite, Airport/Cazeau, Carrfour, Pacot/Boudon/Canape Vert, and Delmas almost all residents reported access to some form of energy for cooking (6% or less reported no energy for cooking). Residents of Petionville, Airport/Cazeau, and Carrfour were most likely to report using gas, with approximately 30% of households in these neighborhoods using gas rather than charcoal in 2009. However, after the earthquake, only a third as many households reported using gas for cooking.

Despite these difficulties, when given a list of nine issues or problems facing their household after the earthquake and asked to put in order of priority which should be addressed, only 12 percent of survey respondents in the general population of Port-au-Prince said that access to electricity was either their first or second priority.

Does your home have electricity (2009)					
unweighted responses					
Neighborhood	Yes, city electricity	Yes, city electricity and inverter	Yes, a generator	Yes, city electricity and a generator	No, we don't have electricity
Delmas	26.8%	36.6%	3.0%	32.8%	0.9%
Martissant/Gran Ravine	48.8%	3.1%	0.8%	3.9%	43.4%
Bel Air	67%	19.6%	0%	6.3%	7.1%
City Soley	20.4%	4.4%	0%	0.9%	74.3%
Pietonville	41.6%	31.9%	1.9%	20.5%	4.1%
Airport/Cazeau	42.2%	33.9%	8.3%	9.2%	6.4%
Cite Militaire/ Cite Simon	71.9%	18.8%	0%	6.3%	3.1%
Pacot/Boudon/ Canape Vert	30.4%	30.4%	6.7%	26.3%	6.2%

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Carrefour	51.1%	18.4%	22.0%	8.5%	0%
Northwest PAP	34.5%	29.1%	21.8%	5.5%	9.1%
Nazon	36.4%	4.5%	13.6%	4.5%	40.9%
Total	40.2%	26.0%	5%	16.8%	12.0%

**Does your home have electricity (2010)
unweighted responses**

Neighborhood	Yes, city electricity	Yes, City electricity and inverter	Yes, a generator	Yes, city electricity and a generator	No, we don't have electricity
Delmas	5.5%	1.3%	9.8%	0.4%	83.0%
Martissant/Gran Ravine	4.7%	0%	0.8%	0%	94.5%
Bel Air	5.5%	0%	4.5%	0.9%	89.1%
City Soley	0.9%	0%	0%	0%	99.1%
Peitionville	4.2%	0.5%	3.6%	0.7%	91%
Airport/Cazeau	3.7%	0%	6.4%	0.9%	89%
Cite Militaire/Cite Simon	3.1%	0%	0%	0%	96.9%
Pacot/Boudon/Canape Vert	3.6%	1%	3.1%	1.5%	90.7%
Carrefour	4.2%	1.4%	6.3%	0%	88%
Northwest Port-au-Prince	7.3%	0%	9.1%	0%	83.6%
Nazon	0%	0%	0%	0%	100%
Total	4.2%	0.6%	4.5%	0.6%	90.2%

What is the household's main source of energy for cooking?

Neighborhood	2009			2010		
	Charcoal	Gas	No cooking facilities	Charcoal	Gas	No cooking facilities
Delmas	90.3%	9.7%	0%	88.1%	6%	6%
Martissant/Gran Ravine	91.7%	8.3%	0%	86.8%	2.3%	10.9%
Bel Air	87.1%	12.9%	0%	79.5%	4.5%	16.1%
City Soley	84.4%	15.6%	0%	82.3%	3.5%	14.2%
Peitionville	68.6%	31.4%	0%	74.0%	12.2%	13.8%
Airport/Cazeau	71.2%	28.8%	0%	88.1%	6.4%	5.5%
Cite Militaire/Cite Simon	100%	0%	0%	96.9%	0%	3.1%
Pacot/Boudon/Canape Vert	79.2%	20.8%	0%	85.6%	8.8%	5.7%
Carrefour	71.6%	28.4%	0%	85.2%	9.9%	4.9%
Northwest PAP	86.4%	13.6%	0%	87.3%	1.8%	10.9%
Nazon	87.5%	12.5%	0%	63.6%	13.6%	22.7%

Property Issues

Of the general population of Port-au Prince, only, **2.3 percent** said that before the earthquake the ability to find housing was either a very serious or a serious problem. But after the earthquake, **100 percent** of general population respondents said that finding housing was either a serious or very serious problem. Within the camp resident population, housing problems were also acute; 82.3 percent of respondents reported that no one was using any resources from their previous home at all, including water, bathing, kitchen, or other living facilities at the home.

This is understandable, as damage to one's home was frequently experienced, both in the general population of Port-au-Prince as well as among those now living in IDP camps. Only **34.7 percent of the general population** respondents and **3.2 percent of the camp population** reported **no visible damage to their homes**. All other respondents reported either damage to the home or total destruction of the home. Of those in the general population who experienced only damage to their homes, 82.5 percent reported cracks or bulges in the wall and 24.5 percent reported cracks or bulges in the foundation of their home. However, there was variation in the degree of home destruction by neighborhood. For instance, in Bel Air, Nazon, and Carrefour the vast majority of respondents reported that their homes were either totally damaged or damaged.

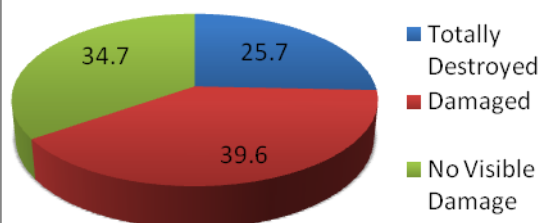
In order to assess the kind of housing conditions general population survey respondents were living in, we asked if the respondent's home had a yard. Half of the respondents reported that their homes had either a private or shared yard. Among the general population, **households with a yard were less likely to be displaced in camps** or to have sleep in public areas such as plazas, school yards, churches and informal neighborhood camps the night before we interviewed them.

On average, half of the people in the general population reported staying in the same home, even though the vast majority of residents were still sleeping outside of the physical building. When people did relocate, most often it was in the same neighborhood or in another Port-au-Prince area. Not surprisingly, in an assessment of their priorities, 75.2 % of respondents reported that repairing or retrofitting their home was among their first or second priorities following the earthquake.

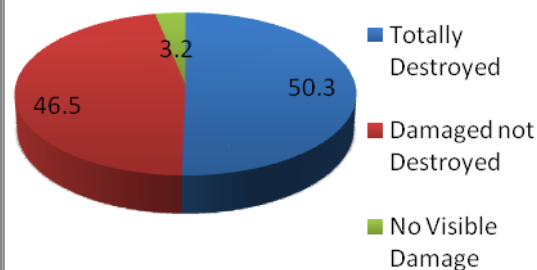
	Difficulties finding housing before earthquake unweighted responses		Difficulties finding housing after earthquake unweighted responses	
	Frequency	Valid Percent	Frequency	Valid Percent
Very Serious	14	.8	1633	93.1
Serious	12	.7	121	6.9
Moderate	798	45.4	--	--
Minor	605	34.4	--	--
Very Minor	325	18.5	--	--
Valid Total	1754	99.8	1754	99.8

Neighborhood	Same house	Different house, same neighborhood	Another PAP area	Camp	To family in the provinces	To the provinces but not to family	To another big city in Haiti	DR	Total
Delmas	59.6%	25.1%	4.7%	.9%	8.9%	.0%	.9%	.0%	.0%
Martissant/Gran Ravine	48.1%	13.2%	22.5%	7.8%	8.5%	.0%	.0%	.0%	.0%
Bel Air	44.6%	11.6%	25.0%	10.7%	6.3%	.0%	.9%	.9%	.0%
Cite Soley	47.8%	16.8%	24.8%	5.3%	5.3%	.0%	.0%	.0%	.0%
Petionville	36.1%	44.3%	2.4%	.5%	10.1%	1.7%	2.9%	.7%	1.4%
Airport/Cazeau	70.4%	22.2%	.9%	.0%	5.6%	.0%	.0%	.9%	.0%
Cite Militaire/Cite Simon	81.3%	6.3%	3.1%	.0%	9.4%	.0%	.0%	.0%	.0%
Pacot/Boudon/Canape Vert	66.5%	25.3%	2.1%	.0%	4.1%	.0%	1.0%	.0%	1.0%
Carrefour	59.2%	23.2%	6.3%	2.8%	6.3%	1.4%	.7%	.0%	.0%
Northwest PAP	70.9%	5.5%	16.4%	3.6%	3.6%	.0%	.0%	.0%	.0%
Nazon	13.6%	22.7%	45.5%	13.6%	4.5%	.0%	.0%	.0%	.0%
Total	50.6%	28.0%	8.3%	2.4%	7.7%	.7%	1.3%	.3%	.6%

General Population (weighted %)



Camp Population (valid %)



Was your home destroyed completely? unweighted responses

Neighborhood	Totally damaged	Damaged	No visible Damage
Delmas	13.6%	51.9%	34.5%
Martissant/Gran Ravine	27.1%	54.3%	18.6%

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Bel Air	41.1%	58.9%	.0%
Cite Soley	23.0%	18.6%	58.4%
Petionville	10.7%	19.2%	70.1%
Airport/Cazeau	.9%	28.4%	70.6%
Cite Militaire/Cite Simon	9.4%	25.0%	65.6%
Pacot/Boudon/Canape Vert	20.1%	55.2%	24.7%
Carrefour	50.0%	49.3%	.7%
Northwest PAP	12.7%	21.8%	65.5%
Nazon	36.4%	63.6%	.0%
Total	19.1%	36.6%	44.3%