



Cooking Fuel Needs in Haiti: A Rapid Assessment

by Women's Refugee Commission & World Food Programme

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1. EXECUTIVE SUMMARY

In 2009, the Inter-Agency Standing Committee Task Force on Safe Access to Firewood and alternative Energy in Humanitarian Settings (IASC Task Force SAFE), co-chaired by the Women's Refugee Commission (working under the authority of InterAction), the World Food Programme (WFP) and the UN High Commissioner for Refugees (UNHCR), produced a roadmap¹ for coordinated humanitarian response to challenges associated with the collection, supply and use of cooking fuel—including identifying the key fuel-related activities that each of eight key humanitarian response sectors must undertake in emergency preparedness, acute emergency and protracted response phases.

Even before the earthquake struck Haiti on January 12, 2010, the demand for cooking fuel had put the country in a precarious environmental situation. More than 70 percent of the population was reliant on charcoal and firewood to cook its food, and with less than two percent of Haiti's forest cover remaining, this practice was unsustainable. The earthquake only exacerbated fuel-related problems, with hundreds of thousands of people now dependent on food rations that must be cooked in order to be edible, living in densely packed camps with severe fire and health risks and with greatly reduced economic possibilities—and thus even more difficulty purchasing charcoal or other fuels.

Following the earthquake, the Women's Refugee Commission and WFP quickly agreed that the situation called for the implementation of SAFE guidance in the early stages of disaster response. In February, a team from both agencies undertook **the first rapid needs assessment on SAFE** to understand the situation on the ground and to develop a set of recommendations for the humanitarian response.² More specifically, the purpose of the mission was to understand the following:

- How the population is currently cooking their food, how the fuel/cooking device is being sourced and how long the fuel source will continue to be sustainable;
- The immediate protection and health concerns associated with fuel shortages, use of inappropriate materials as cooking fuel and collection constraints;
- The feasibility of existing fuel-related proposals, including transport and infrastructure, cultural adaptability and cost; and
- Existing capacities and efforts.

¹ The guidance consists of a **Matrix** on Agency Roles and Responsibilities for Ensuring a Coordinated Multi-Sectoral Fuel Strategy in Humanitarian Settings and **Decision Tree Diagrams** on Factors Affecting Choice of Fuel Strategy in Humanitarian Settings. The matrix is at www.womensrefugeecommission.org/docs/iasc_tf_safe_matrix.pdf; the decision trees are at: http://www.womensrefugeecommission.org/docs/iasc_tf_safe_decision_trees.pdf.

² The team consisted of Catherine Bellamy, Policy Officer (WFP) and Erin Patrick, Senior Program Officer – Fuel and Firewood Initiative (Women's Refugee Commission). The Women's Refugee Commission was hosted in Haiti by the International Rescue Committee (IRC).

The mission team met with UN agencies, clusters and local partners, and undertook several site visits, including in a range of urban settlements and rural areas. The mission concluded that cooking fuel is an issue of major concern throughout the country, both with regard to the immediate cooking needs of earthquake-affected populations as well as the long-term challenge of Haiti's environmental sustainability and recovery. The assessment also generated a set of concrete recommendations for humanitarian and development actors, Haitian government and civil society and current and potential donors to the humanitarian response to address cooking needs in Haiti. In addition, the assessment reflects a set of lessons that can be applied to the wider humanitarian system on SAFE.

The need for sustainable cooking practices has long been a challenge in Haiti. The vast majority of the country relies on wood or wood products as cooking fuel: firewood is used almost exclusively in rural areas, and most of the urban population uses charcoal. Charcoal making is a key livelihoods activity that manages to persevere despite the country's severely depressed economy. Charcoal manufacture and use have also greatly contributed to environmental degradation and problems in agricultural productivity. The risk in the coming weeks and months is that the population will not have means to cook their food, and the production of charcoal and use of firewood as cooking fuel will undermine future recovery efforts.

The assessment concluded that the earthquake has created additional constraints on safe access to appropriate cooking fuel for many Haitians, including the following key concerns:

- Many people have lost their stoves and have been forced to burn debris or trees in Port-au-Prince.
- Crowded settlements leave little space for cooking—posing health and safety risks.
- The minority of the population that was previously using gas or electricity has now switched to using charcoal or firewood.
- While the cost of charcoal is now only slightly above pre-earthquake costs, it has become increasingly unaffordable to many that have lost their assets and employment.
- In cities outside Port-au-Prince, households receiving displaced family members and friends are struggling with the cost of cooking for more people.
- As the rural areas receive more displaced people, firewood consumption is also increasing—as more people need to cook and more people produce charcoal (to sell in urban areas) as a coping mechanism.
- As a result of the increasing demand for firewood, women must walk farther afield to find sufficient quantities of firewood for consumption, which poses protection risks.
- Tarpaulins have yet to reach many of the urban settlements. With the rainy season starting, the need to keep fuel dry will make cooking even more of a challenge.

RECOMMENDATIONS

Based on the findings of the assessment mission, the Women's Refugee Commission and WFP are recommending a coordinated, multi-sectoral fuel strategy to address the immediate,

medium- and longer-term energy needs in Haiti—which is summarized here and is fully elaborated in the report.

Coordination

While humanitarian organizations recognize the importance of cooking fuel needs, many interviewees agreed that a mechanism is required to ensure that the issue is effectively addressed, appropriate projects implemented and that safe access to alternative energy is prioritized within humanitarian response. Two possibilities for accomplishing this goal are the establishment of a “FuelCap” staff position to advocate for and coordinate fuel-related activities across agencies and clusters (based on the successful model of the “GenCap”) and the establishment of a sub-cluster working group that brings together the key actors on food, shelter and camp management to operationalize a common fuel strategy. Based on the multi-sectoral nature of fuel and energy and the track record of poorly coordinated fuel-related initiatives, the lead agencies should strongly consider including funding for either a “FuelCap” position or a sub-cluster coordinator within appeals for their fuel-related activities.

Immediate response

In Port-au-Prince, in their capacities as cluster leads for Food Aid, Camp Management and Camp Coordination (CCCM), Shelter and Non-Food Items and Early Recovery, respectively, WFP, the International Organization for Migration (IOM), the International Federation of Red Cross and Red Crescent Societies (IFRC) and the UN Development Program (UNDP), with additional guidance and technical support on environmental management from the UN Environment Program (UNEP), should quickly scale-up distribution of fuel-saving stoves and fuel (pellets, briquettes, ethanol) at the institutional and household levels. This requires a dual-track approach: importation of stoves and fuel while the local capacity production is strengthened. With the onset of the rainy season, small kitchens for the distribution of hot meals and the distribution of stockpiled meals ready to eat (MREs) should be utilized; and innovative technologies—ethanol disks, for example—should be pre-positioned and piloted. While smaller cities and rural areas require more localized rapid assessments, WFP, IOM, IFRC, UNDP and UNEP should work together as cluster leads to scale up any existing efforts and capacities in fuel-efficient stoves.

Medium- to long-term response

In the medium to longer term, humanitarian and development agencies should consider working with the government to promote alternative forms of fuel (liquid petroleum gas (LPG), ethanol and biomass) with the development of alternative livelihoods opportunities in rural areas for populations that are currently dependent on charcoal production—including the production of environmentally friendly fuel technologies.

By addressing cooking fuel needs in the earliest stages of disaster response, the international humanitarian system can help to mitigate the potential environmental, health and protection threats associated with the cooking requirements of beneficiaries in Haiti. However, strategic and rapid investment in effective coordination mechanisms and on a range of activities is urgently required.

2. KEY RECOMMENDATIONS

PRIORITIES FOR FUNDING:

Cooking fuel is a multi-sectoral issue that cannot be effectively addressed by a single agency or cluster acting alone. Fuel response (of the lack thereof) has implications for the protection, environment, shelter/non-food items (NFI), health and early recovery clusters, among others. Coordination, therefore, is a key challenge. Key recommendations:

- Immediately deploy a “FuelCap” staff person to coordinate cross-cluster fuel-related activities, ensuring that the IASC Task Force SAFE guidance is implemented.
- Pilot test and pre-position fuel supply/supplies to cover needs during the rainy/hurricane season.
- Distribute fuel-saving stoves to affected households in both Port-au-Prince and outside of the capital (host families, etc.) in order to reduce overall charcoal consumption.
- Conduct a more detailed assessment of alternatives to the “wood transformation activities” that comprised nearly one-fifth of the rural economy before the earthquake, to begin the process of rural livelihoods diversification and set the stage for sustainable recovery.

FUEL STRATEGY:

Several attempts were underway prior to the earthquake by the World Bank, UNDP and others to begin to address fuel-related concerns as a part of the overall development process for Haiti. A key constraint to fuel-switching was the population’s general lack of capital: even though cleaner, more sustainable fuels such as LPG did indeed prove to be cheaper in the long run, the relatively large amount of money needed up front to purchase the necessary supplies (e.g., an LPG canister; burner) was often prohibitive. Research was also conducted into the possibility of developing Haiti’s own ethanol production capacity—both to generate a domestic energy source as well as to promote livelihoods opportunities in rural areas. The current humanitarian response presents an opportunity to kick-start these types of initiatives and eventually to transition them into the long-term development activities originally intended. The strategy below was developed with this guiding principle in mind.

Recognizing both the immediate needs *and* the pre-existing concerns regarding the sustainability of charcoal and firewood as the primary sources of cooking fuel in Haiti, as well as recognizing the severe current logistical constraints affecting the immediate humanitarian response to the earthquake, the Women’s Refugee Commission and the WFP are recommending a three-phase approach in three distinct regions/types of settlements:

	Port-au-Prince (PaP)	Host families (urban/peri-urban settings outside PaP)	Rural areas (also including host families)
GOALS	<i>Likely to remain charcoal in immediate term, but goal should be to switch to more sustainable, healthier, less costly fuel in medium-long term. Options meriting further consideration include LPG, ethanol and biomass/waste briquettes</i>	<i>Likely to remain charcoal at least through medium term; focus should be on reducing consumption via fuel-efficient stoves/cooking techniques and manufacture of biomass/waste briquettes</i>	<i>Charcoal/woodfuel activities are a main source of rural income; thus the focus should be to develop a range of alternative livelihood opportunities, including engaging rural populations in the manufacture of alternative fuels/energy technologies over the long term</i>
IMMEDIATE TERM	• Pilot fuel distribution (solid ethanol disks) in 1-2 camps • Promote small wet kitchens where possible to reduce overall fuel needs • Pre-position fuel supply (such as ethanol disks) and MREs for rainy/hurricane season • Distribute fuel-efficient stoves and fuel (possibly pellets; other biomass) in institutional settings • Distribute fuel-efficient stoves at the household level; consider distribution of fuel for the most vulnerable populations	• Provide fuel (including charcoal only if more sustainable options are not immediately available) in addition to food rations to reduce burden on hosts • Consider providing fuel-efficient stoves as a one-off distribution	• Conduct detailed assessment to better examine response options, including previous attempts at fuel-saving alternatives and livelihoods diversification options • Consider development and promotion of fuel-efficient stoves, such as “récho mirak”
MEDIUM TERM (beginning once immediate survival needs have been met; ideally before the onset of the hurricane season)	• Consider distributing LPG equipment (stoves/burners/cylinders) and initial stock of fuel as families begin rebuilding • Consider (as was underway before quake) supporting expansion of domestic ethanol production capacity • If domestic ethanol production deemed feasible over long term, begin short-term importation of ethanol/stoves	• Build local capacity to manufacture/sell improved stoves (e.g., récho mirak, fuel-efficient wood-burning stoves; gasifiers)	• Build local capacity to manufacture/sell alternative fuels/improved stoves • Consider (as was underway before quake) supporting expansion of domestic ethanol production capacity • If domestic ethanol production deemed feasible over long term, begin process of identifying crops, farmers, production facilities, etc.
LONG TERM (no definitive start or end point; long term is meant to encompass the transition from relief to development)	• As household economies stabilize, gradually reduce any outright distribution or subsidies on LPG/ethanol while incentivizing continued supply via tax structures, support for producers, etc. • Include cooking fuel needs/sources in shelter rebuilding process (e.g., location of distribution points) • Engage former small-scale urban charcoal sellers in ethanol/LPG/biomass cooperatives		• Engage rural communities in domestic ethanol, biomass/waste briquette and improved stove production as livelihoods options • Work with Government, partners on development of other livelihood strategies to reduce reliance on charcoal making and distribution as primary sources of income

With the onset of the rainy season and continued challenges to the humanitarian system to provide a full response package to the entire affected population, the humanitarian system should also consider contingency plans, including MREs, small wet kitchens³ and piloting other technologies, such as ethanol disks, to meet the immediate cooking fuel needs of the affected populations. When asking beneficiaries how they planned to cook in the rain, some said that they would share cooking space with neighbors or those that have tarpaulin. Others mentioned buying hot food (it is daily practice for many in Port-au-Prince to buy their breakfast, and buying other meals is not uncommon), and still others indicated that there would be no possibility to cook—between the expense of charcoal and the inability to keep an area dry for cooking.

COORDINATION STRATEGY:

The ultimate goal of any fuel response must be to ensure that a cross-sectoral strategy (including Shelter/NFI; CCCM; Food Aid; Environment; Livelihoods/Early Recovery and Health, at the least) is developed for fuel-related interventions over the short, medium and long term, and that all related interventions are consistent with this strategy. Developing and implementing a cooking fuel strategy in a cross-sectoral manner will result in less expensive, more efficient, more appropriate and more sustainable (both environmentally and economically) interventions over the long term.

The most relevant “home” for addressing fuel-related interventions in the immediate current response in Haiti would be in the Shelter/NFI; CCCM; Food Aid and/or Early Recovery Cluster(s).

- All four clusters should create a sub-cluster or working group to address cooking fuel needs and concerns, as these will only increase as food distributions become more regular; as families exhaust any saving they have to purchase fuel; and as the rainy season approaches.
- In addition, a “FuelCap” staff should be deployed to Haiti to work across the clusters to develop and coordinate the implementation of a comprehensive and multi-sectoral fuel strategy.
- As the lead agency for environment in the Post-Disaster Needs Assessment (PDNA) process, UNEP should work with the UN system and its partners to ensure that fuel needs are sufficiently and appropriately addressed in the PDNA and recovery process.
- The ICVA-InterAction NGO coordination cell should be requested to serve as a liaison between any NGOs planning to undertake fuel-related interventions as the respective cluster lead(s), to ensure coordination of all fuel-related interventions and avoid possible unsafe, inefficient or otherwise ad hoc fuel initiatives.

INSTITUTIONS & SMALL-MEDIUM ENTERPRISES:

Institutions—including schools, hospitals and clinics—are large users of fuel and represent a possibility of achieving relatively large fuel savings for relatively little cost in terms of time and money. At the very least, institutions should be supported to install fuel-saving stoves as part of

³ “Wet kitchens” are mobile kitchen units that can prepare and cook food for large numbers of people at once.

the rebuilding process. In many cases, such stoves may be able to be produced domestically (at least over the longer term) and thus present livelihood opportunities as well.

Bakeries, street vendors and laundries represented a major component of fuel use prior to the earthquake. One of the main constraints identified by owners of these enterprises that prevented them from investing in more efficient fuels and energy technologies (e.g., LPG or ethanol, both of which are less expensive than charcoal over the long term), was the amount of capital needed for a fuel switch. Such vendors could now be supported as a part of the relief process with LPG or ethanol stoves, burners, etc., to accelerate fuel-switching and thus reduce total charcoal consumption over the longer term. WFP has so far taken the lead in this area, partnering with WorldStove to plan for distribution of innovative fuel-saving biomass stoves in school feeding programs.

3. Details on the Assessment Mission

IASC Task Force SAFE:

The Women's Refugee Commission (working under the authority of InterAction), the World Food Programme (WFP) and the UN High Commissioner for Refugees (UNHCR) co-chaired the InterAgency Standing Committee Task Force on Safe Access to Firewood and alternative Energy in Humanitarian Settings (IASC Task Force SAFE) from 2007 to 2009.

The key goal of the Task Force was to develop guidance for the humanitarian system as a whole, recognizing the multi-sectoral nature of the issue—in other words, the need for safe access to appropriate cooking fuel touches on protection concerns (women are at risk as they collect fuel); environmental concerns (deforestation); health concerns (indoor air pollution); shelter (timber and firewood are often in competition) and other humanitarian response sectors.

In 2009, the Task Force launched its guidance documents⁴ for the humanitarian system:

- A **Matrix** on Agency Roles and Responsibilities for Ensuring a Coordinated, Multi-Sectoral Fuel Strategy in Humanitarian Settings—identifying the key fuel-related activities that each of eight key humanitarian response sectors must undertake in emergency preparedness, acute emergency and protracted response phases; and
- **Decision Tree Diagrams** on the Factors Affecting Choice of Fuel Strategy in Humanitarian Settings—recognizing that there is no single fuel or energy technology that will be equally appropriate in all settings, the Decision Tree assists practitioners in assessing the relevant concerns in each unique setting, guiding the creation of a fuel strategy relevant to that specific context.

⁴ These guidance documents are available in English and French at www.fuelnetwork.org

Since the summer of 2009, the Women's Refugee Commission and WFP have been working together to undertake feasibility studies on the implementation of the SAFE guidance in two settings: North Darfur and Uganda. The resulting pilot projects—addressing specific protection, food, nutrition, livelihoods, environment, health and shelter concerns in each setting—were launched in early 2010, in part to provide humanitarian partners and donors with empirical evidence regarding the cross-sectoral benefits of “SAFE” interventions. WFP is considering additional global sites (including Haiti, Nepal, Sri Lanka and Kenya) for undertaking similar SAFE pilot projects.

Immediately following the Haiti earthquake, and encouraged by the U.S. Agency for International Development's (USAID) Office of Foreign Disaster Assistance (OFDA), WFP and the Women's Refugee Commission began bilateral conversations and reaching out to partners regarding cooking fuel needs and challenges in the country, particularly given that the majority of the population's pre-earthquake reliance on charcoal had long been noted (by the World Bank, USAID, UNDP and others) as being unsustainable.

Given the urgency and scale of the humanitarian response in Haiti, information regarding availability and access to cooking fuel—and the associated risks—was difficult to obtain, it was agreed by all that a rapid fuel needs assessment was urgently needed.

THE MISSION:

Prior to the assessment, the Women's Refugee Commission expanded a draft version of its “rapid assessment tool” for cooking fuel (available at www.fuelnetwork.org) and prepared it for use in Haiti. The mission team then undertook a preliminary review of pre-earthquake household energy assessments, strategies and projects in Haiti for background and comparison purposes.

Summary of the Agenda:

- Meetings were held with key UN, Cluster and NGO stakeholders: Shelter; Camp Coordination and Camp Management (CCCM); Protection and Gender-Based Violence Clusters; WFP and NGO staff (including the International Rescue Committee's (IRC) Emergency Market Mapping and Analysis team leader); and USAID-OFDA Disaster Assistance Response Team (DART) team members (8-11 February);
- Household-level and focus group interviews were conducted with a total of approximately 40 persons in five diverse types of settings that are broadly representative of the different ways in which earthquake-affected populations are living:
 - o Approximately six household-level interviews were conducted with approximately 12 women in Villambetta settlement in the Tabarre quartier of Port-au-Prince—a medium-sized, relatively dispersed settlement that, at the time of the interviews, had not yet been reached by humanitarian distributions (9 February).

- Approximately 15 household-level interviews were conducted with approximately 20 persons in Place Boyer settlement in Port-au-Prince—a large, densely packed settlement that was being reached by humanitarian distributions (food, water and shelter materials) at the time of the interviews (11 February).
- Approximately two household interviews of host families were conducted in Saint Marc town, a non-affected small city two hours outside of Port-au-Prince (10 February).
- One group interview with displaced families and camp managers of a collective settlement for displaced persons was conducted in Saint Marc town (10 February).
- A focus group was conducted with 20 (male and female) members of a rural community near the border with the Dominican Republic in the southeast of the country (approximate population 25,000) (12 February).

4. Overview of findings

AVERAGE PRICES OF COOKING FUELS PRE- AND POST-EARTHQUAKE:

These figures are based only on interviews with fuel users and sellers during the mission, not actual market observation).⁵

<i>Pre-earthquake</i>	<i>Unit cost</i>	<i>Avg. weekly cost</i>	<i>Post earthquake</i>	<i>Unit cost⁶</i>
Charcoal—marmite ⁷	20-25 gourdes (gd) (\$0.57-0.71)	\$14	Charcoal—marmite	25 gd (\$0.71)
Charcoal—bag (small/large) PaP	450/750 gd (\$12.85/21.42)	\$6.43-10.71	Charcoal—bag (small/large) PaP	500/700 gd (\$14.29/20)
Charcoal—bag (St. Marc)	350-400 gd (\$10-11.43)	\$10-11.43	Charcoal—bag St. Marc	400-450 gd (\$11.43-12.86)
Kerosene—gallon	100-130 gd (\$2.86-3.71)	\$6.09 ⁸	Kerosene—gallon	<i>No interviewees were using kerosene</i>
LPG—25kg bottle	\$20	\$6.66	LPG—25kg bottle	<i>No interviewees were using LPG</i>
Traditional charcoal stove	100 gd (\$2.86)	Stove lasts 3 mo; avg. cost USD 0.24/week	Traditional charcoal stove	150-250 gd (\$4.29-7.14) ⁹

⁵ Since the mission was concluded, the Emergency Food Security Assessment (EFSA) team has suggested that actual daily charcoal expenditures are lower than estimated here. However, this may be because - due to insufficient food, fuel and cash - many families are now able to cook only one meal per day rather than the two to three meals customarily cooked per day before the earthquake.

⁶ Average weekly cost post-earthquake is not included because cooking habits (and number of meals per day) was largely in flux at the time of the mission.

⁷ A marmite is a form of measurement in Haiti; roughly the size of a large coffee can. Approximately one marmite is required to cook an average-sized meal.

⁸ Data on average kerosene consumption rates supplied by Project Gaia, Inc.

⁹ Data on average post-quake stove price supplied by International Lifeline Fund.

It should be noted that the Cash for Work programs in which many interviewees or their family members were employed pay USD 4-5 per day; two to three marmites of charcoal are required per day at a total cost of USD 1.42—2.13 per day—thus, **nearly 40 percent of the average post-earthquake daily income is being spent on charcoal**. The EFSA also found that over 50 percent of all households have gone into debt post-earthquake. Fifty-five percent of households surveyed also indicated that charcoal was one of the basic needs for which they went into debt.¹⁰

DISTRIBUTIONS AND HUMANITARIAN PRIORITIES:

Cooking fuel is recognized by all relevant clusters/agencies as a key issue. However, there are no specific fuel-related interventions yet being undertaken. According to many interviewees, this is because there is no "advocate" for fuel within the current system (this precise phraseology was used by more than one interviewee on separate occasions).

Because of logistical constraints (including physically getting materials into the country) as well as production constraints, the current response can only focus on identified priorities. For the Shelter-NFI cluster, these are, in order: plastic sheeting, water and sanitation (WASH) materials, hygiene kits and kitchen sets. Cooking fuel was discussed as a potential priority, but was ultimately dismissed as being less important. It is unclear even among Shelter cluster staff precisely *why* it was not deemed a priority; it appears to be a combination of the following:

- Lack of knowledge regarding options and lack of experience/expertise in addressing fuel-related concerns (in other words, the Shelter cluster is *used* to distributing shelter materials and the supply chain, procedures and expertise on plastic sheeting, for example, are already there—this is not the case for cooking fuel);
- A belief that beneficiaries would be able to find/buy some form of cooking fuel themselves (including a belief that, in some cases, cooking fuel could be more easily found/purchased than other forms of assistance could be);
- Lack of advocacy; and
- Logistical constraints (physically bringing in and then distributing both stoves and cooking fuel would be a major challenge).

The kitchen sets that are being prioritized as a key NFI (though it is recognized that not nearly enough have yet been distributed) include pots and utensils.

WFP is distributing rice and has reached approximately 5.5 million beneficiaries in total as of mid-March (3.7 million through the two surge operations). In addition, 1,539.3 metric tons of meals ready to eat (MREs) are currently in the pipeline in preparation for the rainy and hurricane seasons.¹¹

¹⁰ Coordination Nationale de la Sécurité Alimentaire (CNSA). "Evaluation rapide d'urgence de la sécurité alimentaire post-séisme." March 2010, p.29.

¹¹ WFP Emergency SitRep 11-15 March 2010, pp. 3-4.

Thus, the food itself, the pots in which to cook the food *and* the utensils with which to eat the food are being distributed. However, the middle piece of the “edibility equation”—how to turn the distributed dry rice that should be cooked in the distributed pot into something that can actually be eaten with the distributed utensils—is entirely missing.

Several separate humanitarian staff interviewed indicated that it would not be possible to focus on any additional needs—including cooking fuel—for at least six months. However, the rainy season begins in March, and the hurricane season begins in June, which will further strain resources and response capacity, as well as severely restrict the use of charcoal, firewood and other biomass-based cooking fuels in non-water-resistant shelters. Pre-preparedness for the rainy and hurricane seasons is critical.

HOUSEHOLD NEEDS, CHALLENGES AND CONCERNS:

As noted above, several different types of “settlements” were visited during the mission; each with slightly different findings/concerns regarding cooking and cooking fuel.

- Protection concerns:
While prior to the earthquake men were somewhat involved in the collection and/or preparation of food for the household, it appears that the burden has shifted more onto women since the earthquake. Moreover, the responsibility of finding spices, beans, condiments and cooking fuel has become more of a challenge for women. In addition to relying on family and communal support and food aid, women are at risk of resorting to negative coping strategies—including selling part of their rations and/or their coupons, skipping meals and exchanging sex for basic and survival needs. In the rural areas, the protection risks are increasing as the distance between settlements and available firewood for cooking becomes greater.
- Livelihoods concerns:
Many women in Port-au-Prince have lost their livelihoods and assets. Those who may have used “higher status” fuels such as LPG and kerosene before the earthquake have lost both the stoves (a rather sizeable capital investment in the case of LPG) as well as the income that allowed them to purchase these fuels. As noted above, approximately 40 percent of daily income from Cash for Work programs is being spent on charcoal. In the rural areas, “wood transformation activities,” which include felling trees, charcoal manufacture, charcoal wholesaling, distribution and sale, made up nearly one-fifth of the total economy. There is no indication that demand for charcoal has dropped since the earthquake—if anything, it is likely to have increased due to the larger percentage of the urban population now using charcoal rather than gas fuels (according to a recent WFP survey, use of gas fuels in urban areas has declined nearly 10 percent since the earthquake).

However, as noted above, any process of reducing overall charcoal consumption and/or replacing it with a cheaper, cleaner, more sustainable option will need to include efforts

to diversify the livelihoods options for the rural populations that are otherwise dependent on its manufacture and sale.

- Environmental concerns:

The minority of the population that was previously using gas or electricity has now switched to using charcoal or firewood—contributing to even more environmental degradation. Moreover, the main coping strategy of increasingly burdened rural populations is charcoal production. Both of these facts combine to create an even more perilous situation for the less than two percent of remaining forest cover in Haiti. Moreover, continued felling of trees and lack of reforestation activities lead to soil erosion and landslides, decrease agricultural possibilities and further threaten food security.

- Camp Management concerns:

Many of the settlements are very densely packed, with large numbers of people living in close proximity under bedsheets, plastic sheeting, tarpaulins and other flammable materials. The use of many types of cooking fuels in these conditions poses a serious fire and safety risk.

FOCUS GROUP FINDINGS:

1. Villambetta, Tabarre, Port-au-Prince

This settlement is in one of the newer areas of Port-au-Prince, in the northwestern part of the city. At the time of the visit, 3,000 individuals/500 households were living in Villambetta under the most basic of shelters (made primarily of salvaged bedsheets and scraps of cloth, some salvaged corrugated iron sheets and cardboard boxes).

The land on which the settlement was built is privately owned; according to the self-appointed “camp manager”; the landowner’s home had also been destroyed. The settlement itself is surrounded by an open field with some scrub bushes and small trees; the land is hilly, dry and rocky. “Shelters” within the settlement are close together, but compared with some other settlements observed nearer to the center of Port-au-Prince, they are fairly dispersed.

At the time interviews were conducted on 9 February (nearly one month after the earthquake occurred), residents of the settlement were yet to receive much organized assistance. During the team’s visit, the U.S. military dropped off boxes of meals ready to eat (MREs), which caused a mass rush to the camp entrance and eventually a small riot over the empty cardboard boxes. The MREs were pop tarts, salt and dried pasta meals. There was one nearly empty water container, but the water therein was not potable (it was meant for bathing and washing clothes). The International Rescue Committee (IRC) was in the process of establishing an office in the settlement to address environmental health (primarily water and sanitation) needs, but at the time of the visit this office was not yet operational. No plastic sheeting or other new shelter materials were observed, nor were any latrines. At the

time of the interviews, no residents of the Villambetta settlement had received food rations (beyond scattered MREs) or any ration coupons.

When asked what fuel is used for cooking, nearly all of the women interviewed indicated that since they lost everything in the earthquake and had not received any food rations, they were struggling to cook. A few households (perhaps a total of two to three out of approximately 100 total households observed) were seen cooking or had the remnants of a cooking fire near their shelter. One man was seen roasting nuts over a charcoal fire (using a traditional metal charcoal stove); he indicated he would try to sell them. Apart from the nut-seller, nearly all of these households had used firewood. When asked from where the firewood was sourced, all indicated they had collected it from the empty field just on the edge of the settlement. There were some scrub bushes and small trees in this field; however, it is clear they would not last long were the entire settlement to rely on them for woodfuel needs. The families who were collecting firewood said they needed to do it every day. As long as the wood was available, one woman indicated she would rather receive only food than food *and* fuel—“I can find firewood. I cannot find rice.” No protection concerns related to the collection of this firewood were mentioned; it was stated that either men or women would collect the firewood and cook, depending on who was available.

One of the women interviewed in Villambetta said she had occasionally purchased “plats chauds” (meals cooked on the street; typically rice and sauce) when she had been able to find enough money; otherwise, she did not cook or eat. A small plate cost approximately 50 gourdes (USD 1.43); a larger plate costs between 75- 100 gourdes (USD 2.14–2.86) [before the earthquake, a large plate cost between 60 and 75 gourdes (USD 1.71–2.14)].

Most of the women interviewed in Villambetta had used a combination of LPG or kerosene AND charcoal prior to the earthquake, and typically cooked indoors. Most preferred the gas fuel and mentioned few safety concerns (only one woman said she thought charcoal was safer) because it cooked quickly and was easier to use. However, many respondents indicated that they would sometimes use charcoal because it was less expensive when cooking large meals/slow-cooking foods (in other words, some woman believed that the relative cost of the total amount of charcoal needed to cook slow-cooking foods seemed less than the relative cost of the equivalent amount of LPG needed to cook the same food. This belief was not borne out by pre-earthquake studies by the World Bank Energy Sector Management Assistance Program (ESMAP), however).¹²

Other uses for charcoal (prior to the earthquake) included heating water and ridding the house of mosquitoes.

Prior to the earthquake, most women interviewed had engaged in petty street commerce, such as selling candies or vegetables, as their main livelihoods activity. One woman interviewed (Nadine, the same woman who mentioned she was buying *plats chauds* when

¹² See World Bank, “Haiti: Strategy to Alleviate the Pressure of Fuel Demand on National Woodfuel Resources.” ESMAP Technical Paper 112/07. April 2007.

possible) was a cook in a private household and cooked street meals twice per week (boiled bananas and some meat dishes) prior to the earthquake. Nadine used kerosene in her own home, charcoal on the street and LPG in the private home.

Three interviewees were engaged in commerce in the settlement; as noted, one was roasting nuts on a charcoal stove; another was selling cooking oil and vegetables (a bottle of cooking oil sells for 300 gourdes (USD 8.57) now—prior to the earthquake it was 65 gourdes (USD 1.86); and the third was selling charcoal (she had purchased the bag for 500 gourdes (USD 14.29) at the main market in Carrefour).

2. *Host families, Saint Marc town, Artibonite*

Two families receiving family members and friends were interviewed in Saint Marc town, a medium-sized city (160,000 residents according to 2003 census) about two hours up the coast from Port-au-Prince, in Artibonite region. Saint Marc itself was not affected by the earthquake, but has received an estimated 40,000 new arrivals (a 25 percent population increase). The new arrivals are living primarily with host families as the Government of Haiti and humanitarian agencies are actively discouraging the creation of camps. Nonetheless, there are approximately 13 collective settlements in the greater Saint Marc region, with a total population of just over 1,000 persons (none of these figures are yet confirmed; they were received by WFP-Saint Marc and are only “working numbers”). In many cases, the new arrivals are in fact from Saint Marc originally but had moved to Port-au-Prince to seek work or other opportunities. Many new arrivals come at night by bus.

The only UN agencies operational in the region are WFP, IOM and MINUSTAH (the UN Stabilization Mission in Haiti).

WFP is distributing rations to camps and “centres d’accueil” (welcome centers) but not yet to host families as they are still working to obtain accurate numbers and locations (host families had not yet been included as a target group in the agency’s Emergency Operation (EMOP)). In addition, WFP is providing food to a U.S.-based church NGO that is cooking two meals per day for 2,000 persons out of 20 centers. Exit strategies are a concern for both WFP and the church group.

There is a large potential to use Food for Work programs, especially in institutions, over the medium to longer term in Saint Marc. WFP’s school feeding and Mother and Child Health programs are ongoing; the schools use large charcoal stoves and the community is responsible for supplying the charcoal.

Two families were interviewed.

The first family is hosting six people (the family size is now 13), including one pregnant woman and a five-month-old baby. Both before and after the earthquake, the woman interviewed used only charcoal for cooking. Before the earthquake, a bag of charcoal cost 350-400 gourdes (USD 10—11.43); now, it costs 400—450 gourdes (USD 11.43 - 12.86). The

same amount of charcoal is available in the markets as before the earthquake. However, one bag of charcoal used to last her one week; now, it lasts only three days. She cooks two times per day on a traditional “récho métal” with three chambers; typically rice, spaghetti, beans, vegetables and meat. The beans take the longest time to cook (approximately two hours). The only fuel-saving technique she uses is to douse the charcoal once she finishes cooking, in order to reuse it later. She sells vegetables and other foods as her main livelihoods activity, but business has decreased since the earthquake because her own capital has been exhausted.

The second family is hosting 16 people (to make a family size now of 25 persons); some family and some friends. Before the earthquake, the woman interviewed used LPG, kerosene and charcoal for cooking—typically kerosene (“gaz blanc”) in the morning for quick and easy light meals, because it is a small stove and easier to use just that for uncomplicated meals; and LPG (“gaz propane”) at other times, on a four-burner stove. The LPG was preferred because of the flexibility of cooking on the four-burner stove. Charcoal was used to supplement the gas fuels—however, there were sometimes problems with the supply of charcoal, especially in the rainy season (the charcoal comes to Saint Marc on donkeys or sometimes in cars from the plateau and mountains; rural people make it and bring it into the town—especially if brought on donkeys, it is easy to see why this might be difficult in the rainy season). One 25 kg bottle of LPG lasted two weeks and cost 650 gourdes (USD 18.57); 5 liters of kerosene—it is unclear how long this would last—cost 150 gourdes (USD 4.29); and average weekly charcoal expenditure was 1,000 gourdes (USD 28.57).

Since the earthquake, the woman interviewed said that she now uses only charcoal, because the pot needed to cook for so many people is too large to fit on the LPG or kerosene stoves. The amount of charcoal that used to last for one week now lasts for three days. Now, 3 kg of charcoal costs 130 gourdes (USD 3.71), whereas it used to cost 100 gourdes (USD 2.86). Cooking oil, as another example, used to cost 200 gourdes per container (USD 5.71); it now costs 250 gourdes (USD 7.14).

3. *Centre d'accueil, Saint Marc town, Artibonite*

This collective settlement is run by a local community-based organization (CBO) called “Visionnaires de Haiti,” which is a socio-political, cultural organization bringing together various smaller CBOs, focused especially on youth. The center hosts approximately 150 persons in an abandoned, half-finished hotel that was temporarily “donated” to Visionnaires de Haiti by the family of the deceased owner. Visionnaires de Haiti sends buses to Port-au-Prince to collect those displaced by the earthquake and bring them to the settlement. One woman interviewed came with her three children on the bus from Port-au-Prince. She is not from Artibonite, nor does she have family in the region, but she had no place else to go. She worked as a petty street vendor in Port-au-Prince and would like to do so in Saint Marc to earn some money, but she does not have any capital to invest. She is entirely dependent on the center and assists with the communal cooking (see below).

The displaced families live in the hotel “rooms” and cook together in a collective kitchen (each household is responsible for helping with the cooking). Meals are cooked once per day (they cannot cook more frequently because they do not have enough food or fuel to do so) and consist of rice and beans, and sometimes sardine-based sauce if it can be found. They are cooked on a traditional charcoal stove with no fuel-saving modifications, using charcoal donated by the local radio station owner (half a bag per day is used). Cooking is done indoors, though since construction of the center was not completed, there is significant ventilation. Visionnaires de Haiti also received some food and non-food items from IOM; some town residents have been making *plats chauds* for the center’s residents.

4. Place Boyer settlement, Port-au-Prince

This settlement is a former park in the middle of Pétienville neighborhood in Port-au-Prince. It is a much more “urban” setting than Villambetta (surrounded by busy streets and markets, whereas Villambetta is surrounded primarily by open fields) and the settlement itself is much more densely populated. The settlement hosts 4,000 persons, most of whom have received their ration coupons and exchanged them for rice—some families received a half bag of rice; others received a whole bag. It is unclear how the amounts were determined as it appeared that some larger families received less, whereas smaller families in some cases had received more. It appeared as though both WFP and USAID had been distributing rice near the settlement. Plastic tarps had also been distributed, covering both many individual households as well as some common areas of the settlement; one water bladder was in place but only provided non-potable water. Some water bottles had been distributed.

It had rained lightly on the morning of the visit and the ground was muddy and slick. Most households did not have any sort of “flooring” and it was clear that any more rain than the drizzle that had fallen would have caused severe problems.

Approximately 15 households and one charcoal seller were interviewed. The charcoal seller was also a charcoal seller before the earthquake. Nearly all families interviewed said they had used both charcoal and kerosene before the earthquake, preferring kerosene but having to also use charcoal because kerosene was more expensive (some charcoal supply problems during the rainy season were also mentioned by residents of Place Boyer).

Kerosene cost 130 gourdes (USD 3.71) per gallon before the earthquake; a kerosene stove cost 600 gourdes (USD 17.14) and lasted approximately one year. One marmite of charcoal cost 20 gourdes (USD 0.57) before the earthquake and now costs 25 gourdes (USD 0.71). From interviews it appears the price of kerosene has increased much more than the price of charcoal, but it is unclear yet by how much or why this is the case.

All interviewees were using charcoal to cook the rice they had been given; all had to purchase the fuel. Other main purchasing priorities included food items (primarily beans and spices) and laundry soap. In order to earn the money for such purchases, the women interviewed either worked themselves, relied on other family members who were working

and/or received remittances. Whereas they typically cooked two to three times per day before the earthquake, they are now cooking once per day or even less, since they do not have the means to cook more (“moyens”—when asked to expand on this, nearly all interviewees stated they did were not receiving enough food and did not have enough money to purchase the remaining food nor the fuel with which to cook it).

The charcoal seller interviewed in Place Boyer was purchasing her large charcoal bags from the same wholesaler as she did before the earthquake; she said there had not been any problems with supply. The cost is now 700 gourdes (USD 20) per bag; it was 600 gourdes (USD 17.14) before the earthquake. She sells a marmite for 20 gourdes (USD 0.57; it should be noted that this price is 5 gourdes lower than the average post-earthquake price and matches the estimated pre-earthquake price. It is not clear if this was indeed the *actual* selling price; or what she told the interviewer to avoid being seen as taking advantage of the earthquake to raise her prices).

5. Rural town in the southeast, near the Dominican Republic border

A focus group consisting of 20 men and women was conducted in a town that was home to approximately 25,000 residents prior to the earthquake. The town had since received a large influx of family members from Port-au-Prince (no estimate of precisely how many new arrivals was available, though three-fourths of those interviewed were hosting additional family members and friends). While many of those interviewed had been involved in the informal sector (mostly trade) in the city, most hoped to participate in the farming season. Apparently land was not an issue of immediate concern, but the seeds are. The earthquake had also destroyed the water reserve, meaning that women have to walk two to three hours for water collection (and it was mentioned that there is violence/conflict over the water at the source). Without water, the respondents said that livestock and agriculture are at high risk of death or failure.

Not unsurprisingly, charcoal production has ramped up, despite the fact that production is often illegal, as the main coping mechanism. As in many other similar circumstances, charcoal is sold for income but firewood is used, over an open fire, at the household level. Women have to walk, often in small groups, for one to two hours to gather firewood on a daily basis. Men are primarily responsible for making the charcoal, while women are responsible for selling it. The Government was encouraging the use of LPG, but production capacity and cost remain prohibitive.



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