Haiti Humanitarian Assistance Evaluation
From a Resilience Perspective

**Tulane University's Disaster
Resilience Leadership Academy**
In Collaboration with
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ueh

DRLA

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Executive Summary

This report of the Haiti Humanitarian Assistance Evaluation of the 2010 earthquake that struck Haiti on January 12th was undertaken by Tulane University's Disaster Resilience Leadership Academy in partnership with the State University of Haiti (UEH) and funded by the Bill & Melinda Gates Foundation.

The research process was dynamic, allowing the evaluation team to explore the theme of resilience and humanitarian assistance led by and between Haitians in stakeholder workshops in impacted communities. Guided by these discussions, the evaluation team developed a resilience framework based upon 7 dimensions of resilience (wealth, debt and credit, coping behaviors, human capital, community networks, protection and security, and psychosocial) and used primary data collected through a national household and community key informant surveys, to measure the relationship between the earthquake, Haitian resilience, and exposure to humanitarian assistance and resilience outcomes. Resilience outcomes were measured at the household and individual levels.

This evaluation found that humanitarian assistance provided by the national and international community did not make a detectable contribution as defined by the 7 dimensions of resilience and in some instances, may have been associated with undesirable outcomes. Furthermore, this evaluation demonstrates the importance of engaging the impacted community from the on-set of the disaster to lead strategy, policy, and implementation based upon a thorough understanding of resilience and coping mechanisms that should be integrated into humanitarian programming starting at the beginning and continuing through the recovery process.

The framework for measuring resilience defined and used in this evaluation can serve as a catalyst for future discussions related to Haitian resilience and to support and refine the monitoring and evaluation strategy for Haiti's recovery. However, more resources are needed to strengthen Haitian capacity to further develop evaluation methods and metrics (particularly metrics that track resources through the value chains to Haitian end user organizations and beneficiaries) that will allow for a deeper understanding of resilience and provide evidence to support data driven programming. A major constraint of the evaluation was the inability of the evaluation team to capture fully and analyze resource flows and a reluctance of many aid organizations to assist in this effort. Strengthening capacity in this regard will allow Haitian public and private institutions to more easily track, analyze, and ultimately target and manage humanitarian and recovery assistance to promote resilient outcomes.

Finally, it is important to emphasize that the findings in the Haiti Humanitarian Assistance Evaluation reflect the views and perceptions of Haitians themselves and that the recommendations provided in this evaluation, serve to guide the people of Haiti, and their government, to more effectively partner with the international community to work towards a brighter and more resilient future.

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Acknowledgements

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Abbreviations

ACF	Action Contre la Faim
ACTED	Agency for Technical Cooperation and Development
ANOVA	Analysis of Variance
BEVI	Built Environment Vulnerability Index
BRIC	baseline resilience indicators for communities
CAP	Consolidated Appeal or Consolidated Appeal Process
CARE	Cooperative for Assistance and Relief Everywhere
CARRI	Community and Regional Resilience Institute
CCCM	Camp Coordination and Camp Management
CNSA	Coordination Nationale de la Sécurité Alimentaire (National Coordination of Food Security)
CSI	Coping Strategies Index
CVI	Coastal Vulnerability Index
DPC	Direction de la Protection Civile (Directorate of Civil Protection)
DRLA	Tulane University's Disaster Resilience Leadership Academy
DRM	Disaster Risk Management
DROP	Disaster Resilience of Place
EC	European Commission
EFSA	Emergency Food Security Assessment
ERF	Emergency Response Fund
EVI	Environmental Vulnerability Index
FAO	Food and Agriculture Organization of the United Nations
FG	Focus Group
FTS	Financial Tracking Service
GFDRR	Global Facility for Disaster Reduction and Recovery
GoH	Government of Haiti
GHQ-12	General Health Questionnaire – 12
HH	Household
HFHI	Habitat for Humanity International
HIV/AIDS	human immuno-deficiency virus/acquired immuno-deficiency syndrome
HRF	Haiti Reconstruction Fund
HTG	Haitian Gourde
IASC	Inter Agency Standing Committee
IBESR	Institute de Bien-Être Social et Recherche (Institute of SocialWelfare and Research)
IDB	Inter-American Development Bank
IDP(s)	internally displaced person (people)
IFC	International Finance Corporation
HRC	Interim Haiti Recovery Commission
IOM	International Organization for Migration
MAST	Ministère des Affaires Sociales et du Travail (Ministry of SocialAffairs and Labor)
MCH	Maternal and Child Health
MDM	Medecins Du Monde
MHPSS	cluster working group on Mental Health and Psychosocial Support
MINUSTAH	United Nations Stabilization Mission in Haiti
MOE	Ministry of Education
MoE	Ministry of Environment
MSPP	Ministère de Santé Publique et de la Population (Ministry of Public Health and Population)
NGO(s)	non-governmental organization(s)
NSSS	National Sentinel Site Surveillance System
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PAHO	Pan-American Health Organization
PCA	Principle Component Analysis
PDNA	Post Disaster Needs Assessment
ROC	Receiver Operating Characteristic analysis
SC	Save the Children
SERP	Socio-Economic Resilience Profile
SOPAC	South Pacific Applied Geoscience Commission
SOVI	Social Vulnerability Index
UCAONG	Unite de Coordination des Activites des Organisations Non-Governmentales
UEH	State University of Haiti
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United States Dollar
USG	United States Government
USGS	United States Geological Survey
WASH	Water, Sanitation, and Hygiene
WBI	Well-being Index
WFP	World Food Program
WHO	World Health Organization

7.0 QUAKE
DEVASTATES
D OF HAITI
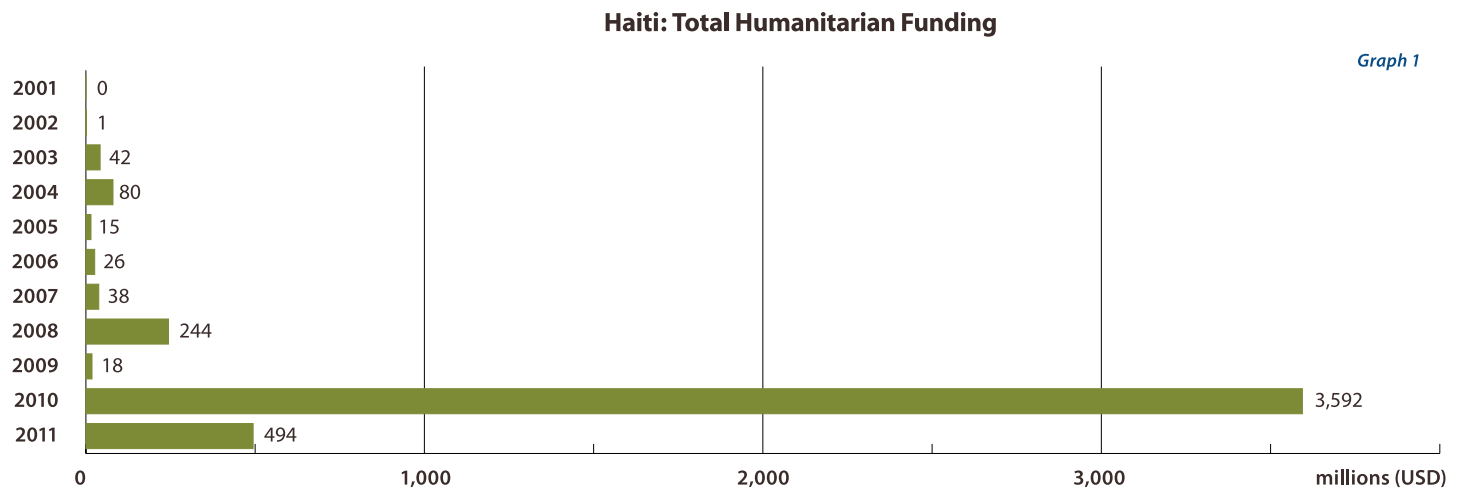
Thousands feared dead or buried..

Section 1- Introduction

The 2010 earthquake in Haiti was one of the worst natural disasters the western hemisphere has ever seen; its effects were exacerbated by environmental degradation, social vulnerability, and repetitive exposure to shocks. As shown in Graph 1, the financial resources Haiti received in the year following the earthquake dwarfed past humanitarian funding in the country. Humanitarian actors included traditional multi-lateral and bi-lateral responders, large and small non-profit organizations and individual citizens from around the world who traveled to Haiti and who acted remotely through digital avenues, including social media. This massive outpouring of resources to the country supported immediate lifesaving activities and presented an opportunity to address Haiti's vulnerabilities—chronic poverty, environmental degradation, population density and rapid urbanization—through efforts to improve the strength and resiliency of Haitian people and organizations.

No stranger to disaster, Tulane University's Disaster Resilience Leadership Academy (DRLA), based in New Orleans, Louisiana, has witnessed, experienced and evaluated the problems that can arise when supply-side humanitarian assistance is directed by external actors. In Haiti, Louisiana, and other places impacted by natural and man-made disasters, effective humanitarian assistance should include two objectives: preventing excess mortality and human suffering in the immediate, and in the longer term, improving the community's ability to respond to potential future shocks.

In an effort to advance this approach to humanitarian assistance, DRLA, in partnership with the State University of Haiti (UEH), conducted the Haiti Humanitarian Assistance Evaluation. The evaluation attempts to build a framework for analyzing resilience and the effects of humanitarian assistance on resilience outcomes. This evaluation is summative in nature—it represents a multiple method research strategy, drawing upon existing secondary data and analyses as well as primary data collection, including household survey data, community level key informant data and qualitative data from focus groups.

This report first details the data collection methodologies and the resilience framework and metrics used to analyze resilience at the household level. Next, the report provides an in-depth discussion of the seven DRLA/UEH resilience dimensions. After defining and analyzing the dimensions, the report examines Haitian households' perceptions of humanitarian assistance and the impact that it has had on each of the dimensions. The report concludes with recommendations for improving recovery programming in Haiti, for future evaluations of humanitarian assistance and for further research and monitoring.

Haiti: Total Humanitarian Funding

Graph 1

Year	Value
2001	0
2002	1
2003	42
2004	80
2005	15
2006	26
2007	38
2008	244
2009	18
2010	3,592
2011	494

0 — 1,000 — 2,000 — 3,000 — millions (USD)

Source: UN OCHA FTS 2012 (Includes funding for projects through CAP as well as funding to projects not listed in the appeals.)

Section 2- Evaluation Methodology

This study used multiple methods research techniques[1]; the research process was dynamic, allowing the team to explore the theme of resilience and humanitarian assistance in close collaboration with stakeholders and affected Haitian communities. A key strategy of the evaluation was the use of stakeholder workshops to help identify indicators and research themes. Hypothesis testing was employed to examine the relationship between exposure to humanitarian assistance and resilience outcomes.

A. Stakeholder Engagement

UEH and DRLA hosted four workshops to help guide the design and implementation of the evaluation. The goals of the workshops were to introduce the project to stakeholders, discuss humanitarian assistance, develop definitions of resilience in Haiti, develop comprehensive survey tools to address and measure resilience, and to create a series of recommendations for how humanitarian assistance can affect positive resilience outcomes in Haiti and elsewhere. These workshops invited stakeholders from the Government of Haiti, the Interim Haiti Recovery Commission (IHRC), Haitian civil society, local and international NGOs, the United Nations, the Red Cross movement, the donor community and academia.

Key outcomes of the stakeholder workshops included refining the definition of resilience and tailoring it to the Haiti context, identifying key thematic areas that describe dimensions of resilience, identifying and developing key indicators and stratifications to be assessed in the primary data collection stage, establishing the need to track resource flow of humanitarian assistance and identifying the engagement of Haitian stakeholders and beneficiaries as paramount to the success of humanitarian assistance efforts.

During the workshops, stakeholders highlighted key issues with the recovery process that directly impacted Haitian resilience. Direct quotes from Tulane DRLA and UEH-hosted 2010 and 2011 stakeholder workshops in Haiti are included for emphasis.

The "Economy of Disaster"
Many international NGOs and agencies arrived in Haiti following the earthquake. It was difficult for local organizations to compete with large, well-funded international organizations; they were being "pushed out" of the response.

"All we need is information. Why can't we get information?"
"There was little to no information exchange between the international community tasked with the humanitarian response and Haitian NGOs, civil society or affected persons/communities themselves."

"Haitians know what they need."
Local leaders and networks needed to be involved in the response; their expertise and understanding of Haitian culture could have informed how best to recover from the disaster.

"It is time to include Haitians in rebuilding the country."
"The assistance that arrived immediately following the earthquake was good but Haitians were the first responders and have been forgotten."

"Many Haitians fled to the provinces and have returned, but to nothing."
A primary focus of the workshops was identifying the right indicators and data needed to complete the research. Some of the indicators identified and included in the survey instruments were standard and some were novel and/or specific to Haiti. For example:
• Coping strategies related to use of savings and diversification of revenue sources
• Creation of new economic activities
• Levels of psychological stress
• The use of social/community resources, beyond psychosocial assistance programs, to manage stress

The inclusion of stakeholder input at all stages of the Haiti Humanitarian Assistance Evaluation allowed for an ongoing review of the following questions: What does resilience mean to disaster-affected communities? How is resilience defined and measured? How can humanitarian assistance be better utilized to strengthen resilience of households and communities?

B. Haiti Evaluation Knowledge Center

Haiti Evaluation Knowledge Center

A literature review was an important part of the planned research and the stakeholder workshops confirmed the need for a well-organized repository of relevant documents. This led to the creation of the Haiti Evaluation Knowledge Center, the most exhaustive source of information on the response to the earthquake, to be used by all stakeholders involved in response and recovery work in Haiti. More than 700 post-earthquake documents were reviewed and a database of more than 350 key reports and analyses were coded, analyzed and incorporated into this study. Figure 1

Haiti Evaluation Knowledge Center

Haiti Humanitarian Aid Evaluation Structured Analysis Report –www.drlatulane.org

Haiti Humanitarian Aid Evaluation Structured Analysis Report – www.drlatulane.org

The Haiti Evaluation Knowledge Center is current as of January 2012 and is publicly accessible. The evaluation team anticipates that the learning associated with the earthquake and response will continue and the team intends to maintain the Haiti Evaluation Knowledge Center for future use. *Haiti Humanitarian Aid Evaluation Structured Analysis Report –www.drlatulane.org*

In January 2011, using the initial data collected and coded from the Haiti Evaluation Knowledge Center, the DRLA/UEH team produced a report summarizing existing knowledge about humanitarian interventions to inform data collection and analyses in subsequent research. Figure 2

Important findings from the initial analyses included:
- Of the 94 key documents initially reviewed, 31 provided some evidence of the use of participatory methods when collecting post-earthquake information. Only 12 were judged to have any demonstrated use of participatory methods to inform conclusions and recommendations.
- Nearly half of the evaluations reviewed made a strong recommendation to better include Haitian staff, local NGOs, and other local organizations in the design and implementation of programs.
- Many evaluations made recommendations focusing on community engagement and the involvement of the local Haitian private sector to maximize local systems, structures, and professionals.
- Psychosocial impacts from the earthquake were only covered in six evaluation documents.
- Only 10 documents produced in the year following the earthquake were found to contain quantitative household or individual probability survey data and most only focused on specific, limited areas. For most of the country, there was no new data of this type in the year following the earthquake.

Prior to the completion of the evaluation study, an additional analysis of the database found little change in both the quality of evaluation reports and the evidence base for assessing the effectiveness and impact of humanitarian assistance.

C. Household and Community Key Informant Surveys

Primary data, guided by review/secondary analysis and stakeholder workshops, were collected to supplement the evidence base. A national household survey was implemented in partnership with the National Coordination for Food Security (CNSA). Tulane DRLA and UEH additions to the CNSA's[2] national food security survey added measures of household dimensions of resilience and captured household perceptions on humanitarian assistance and its impacts. Community level key informant data explored service availability and humanitarian assistance management at the community level.

The sampling strategy was designed in partnership with CNSA to permit comparison of camp and non-camp residents in affected and non-directly affected areas. Measures of resilience dimensions were included in the survey; most notable were indicators related to levels of well-being and psychosocial stress, in-depth information regarding community networks/social capital, and exposure to humanitarian assistance.

Key reporting strata included:
- **Directly affected area:** This strata includes households that lived, at the time of the survey, in areas directly affected by the earthquake, including communes of Port-au-Prince, Croix-des-Bouquets, Cite Soleil, Tabarre, Delmas, Pétionville, Carrefour, Gressier, Léogâne, Jacmel, Grande Goâve and Petit Goâve.
- **Camps:** This refers to households living in displacement camps at the time of the survey. The updated list of camps published by the camp management cluster (CCCM) was used. Most camps were located in the directly affected areas.
- **Directly affected non-camp residents:** This includes households that lived in the directly affected areas, but not in camps, at the time of the survey.
- **Metropolitan zone of Port-au-Prince:** This includes households that lived in the urban areas (as defined by the 2003 census) that make up the greater urban metropolitan area of Port-au-Prince (beyond the commune of Port-au-Prince). All of the Metropolitan zone of Port-au-Prince is within the directly affected area.
- **Other urban areas:** This includes directly affected and non-directly affected households that lived in urban areas (as defined by the 2003 census) outside of the metropolitan zone of Port-au-Prince at the time of the survey.
- **Non-directly affected area:** This includes households that lived in all areas of the country except the directly affected area (defined above).

The Haiti Humanitarian Assistance Evaluation analysis compared resilience measures across the various strata to explore the correlation of residence and resilience characteristics.

D. Qualitative Data, Focus Groups

Qualitative focus group (FG) research focused on identifying challenges to recovery that communities and households impacted by disaster face, as well as their resilience characteristics and the role humanitarian assistance has played in helping them achieve recovery. Forty focus groups were conducted in the Port-au-Prince metropolitan area, Léogâne and Petit-Goâve. Focus groups were organized by location and by gender; there were 20 women's and 20 men's groups. Eighteen of the focus group sites were in camps.

Themes for the focus group discussions included: (1) The impact of the earthquake on households and communities, (2) How the humanitarian response affected households, (3) The degree to which community residents were or are involved in deciding the type and distribution of humanitarian assistance, (4) How households would address future shocks and (5) What type of support household members received from other members of their community (defining social networks).

Results from the focus groups confirmed and amplified household survey findings and also included important aspects of resilience not assessed in the household survey.

E. Evaluation of Resource flows

This component of the evaluation used primary and secondary data sources to trace the flow of humanitarian financial resources through agencies to relief and recovery sectors.

The secondary data collection consisted of a desktop review and analysis of organizational and programmatic data to capture how resources were directed in response to the earthquake, and how the direction evolved over time. The evaluation team determined the quantity of resources moving through the humanitarian assistance supply chain, which sectors and populations were receiving resources and through which mechanisms. The team also examined the degree to which beneficiaries were engaged in managing humanitarian assistance. The more than 720 projects that were submitted to the UN FLASH Appeal, UN Consolidated Appeal Process (CAP), and Haiti Reconstruction Fund (HRF) were reviewed and the analysis is included in this report.

The primary data collection took place between June 2011 and February 2012 and consisted of an online survey as well as interviews with representatives from major entities involved in the humanitarian response. The resource survey primarily explored changes in programmatic coverage (both sector and geographic), changes in workforce and recruitment of local staff and changes in policies related to transitional programming and return.

Section 3 - Resilience Framework

A. Background and Definition

Within the humanitarian and disaster management community, the concept of resilience is gaining recognition as an important consideration in designing, monitoring and evaluating interventions that lead to risk reduction (World Bank 2009).

The study of resilience originated in the fields of psychology and physiology, where it was narrowly focused on understanding why some people are able to recover from shock and trauma, while others experience longer-lasting negative effects (Werner & Smith 1982; Tusaie & Dyer 2004). On a parallel track, resilience research has emerged from ecological and human ecology literature examining the characteristics of communities and households that enable them to respond to risk (Holling 1972; Adger 2000).

Resilience is now commonly understood as the ability of a system (individual, household, community or society) to withstand, recover or even become stronger from exposure to critical incidents or shocks. Resilience literature is currently being produced in a number of fields: natural hazards, leadership, organizational management and engineering (Moser 2008; Everly, Strouse, & Everly 2010; Somers 2009; Chang 2009). Resilience is increasingly gaining ground in the disaster management community as a potentially measureable result of developmental humanitarian assistance—or assistance that better simultaneously addresses vulnerabilities of affected populations.

For this report, the evaluation team defines resilience as follows:
> *Resilience is the capacity of the affected community to self-organize, learn from and vigorously recover from adverse situations stronger than it was before.*

Resilience is often portrayed as a product of the vulnerabilities and capabilities of a system. Vulnerabilities are characteristics that amplify risk and capabilities are characteristics that enable individuals, communities and societies to successfully manage shocks and risks. Resilience dimensions are composed of capabilities.

Several frameworks have emerged from the literature and have been applied to disaster management and risk reduction work; however, the majority of these have been applied in high-income countries where substantial secondary data for resilience analysis is available.

Some of the most commonly cited literature builds upon work by Susan Cutter, of the University of North Carolina, on the measurement of lower level administrative units' vulnerability (2003). By analyzing 42 socioeconomic and built environment characteristics using secondary data, Cutter developed county level vulnerability maps that have been used for disaster preparedness and evaluation of risk reduction strategies. More recently, physical and structural environmental features have been incorporated into these profiling efforts (Borden et al. 2007; SOPAC 1999). However, these efforts are based upon administrative and environmental data available through secondary sources and the data measure long-term, as opposed to short-term, change in resilience characteristics.

Currently, more complete models of resilience are being developed and operationalized, also primarily in high-income countries. The Community and Regional Resilience Institute's (CARRI) Disaster Resilience of Place (DROP) model is an extension of Cutter's vulnerability profiling (2003). Using secondary data and reduction techniques, five resilience dimensions (social, economic, institutional, infrastructure and community capital) and 35 sub-components, were identified. The Baseline Resilience Indicators for Communities (BRIC) model (Cutter, Burton and Emrich 2010) uses a specific set of significant composite indicators for measuring baseline resilience characteristics of communities and is based on the DROP Model.

Forgette and Boening, key researchers from the University of Mississippi, developed a resilience framework that includes more dynamic variables that can be monitored at the household level over time (2009). These include behavioral attributes, such as the degree to which an affected population is aware of their individual/community vulnerabilities, is aware of the need to mitigate effects and has plans for emergencies. The framework has been applied in post-shock contexts. This research identified the importance of behavioral variables, including community capital and community networks, in modeling resilience and is captured in the Socio-Economic Resilience Profile (SERP).

Research on resilience to food insecurity has recently resulted in the development of a framework and approach more appropriate for examining disaster resilience such as that in Haiti. Additionally, Alinovi, Mane and Romano have explored dimensions of resilience with household data. These included access to services, social safety nets, agricultural assets and practices, non-agricultural assets, stability, adaptive capacity, and income and food access (2009; 2010).
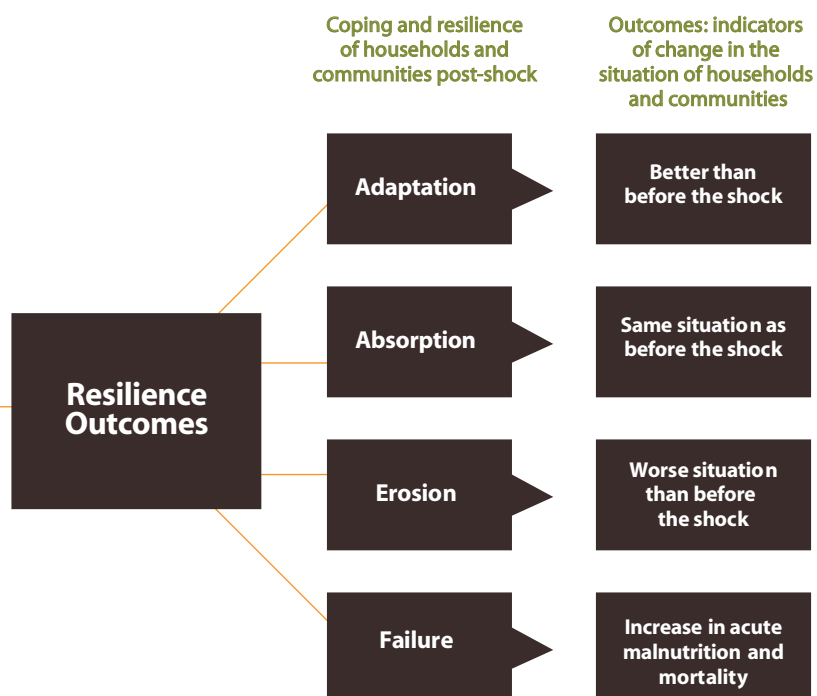
Figure 3

Dimensions of Resilience Model

Figure 4

Wealth

Psychosocial

Debt and Credit

Resilience

Protection and Security

Coping Behaviors

Community Networks

Human Capital

Shock

Resilience

Humanitarian Assistance

Haiti Resilience Impact and Change Model

Coping and resilience of households and communities post-shock	Outcomes: indicators of change in the situation of households and communities
Adaptation	**Better than before the shock**
Absorption	**Same situation as before the shock**
Erosion	**Worse situation than before the shock**
Failure	**Increase in acute malnutrition and mortality**

Resilience Outcomes

B. DRLA/UEH Evaluation Resilience Framework

Building upon the analytical work on resilience to date, the DRLA/UEH team developed a household data based framework for analyzing resilience. The dimensions were identified through a combination of stakeholder consultation, review of the literature and preliminary analysis of the household survey dataset. According to stakeholders, resilience at the household level was identified as the most important to study. Therefore, large and crosscutting resilience themes, such as governance and environment, are not independently analyzed as they are measured at a higher level than household. This work led to the creation of the resilience dimension model illustrated below. Figure 3

To measure the relationship between a shock, resilience and humanitarian assistance, the team developed the Haiti Resilience Impact and Change Model that illustrates resilience outcomes. The framework is based on three components: the resilience characteristics of a community, household or individual; the scope and nature of the shock; and the presence and type of humanitarian response. The framework also demonstrates how communities, households and individuals who experience a shock can adapt, absorb, erode or fail. Figure 4

A quantitative composite score was calculated for each dimension in the framework, using principle component analysis (PCA), to combine multiple relevant indicators to the particular dimension. This analysis was applied to the entire household sample, creating standardized dimension scores. All scores had an average of zero at the national level. Each dimension score was scaled such that a higher score signified higher household resilience. The scores measured household resilience at a specific point in time (a "snap-shot") and can be further described and validated with change-over-time and additional complementary data.

Following the creation of a composite score for each dimension, the indicators were analyzed in the post-earthquake context to measure the impact of humanitarian assistance on resilience. This is examined In Section 5, "Impact of Humanitarian Assistance".

Section 4 - Dimensions of Resilience: An Overview

As discussed, the team identified and quantified seven dimensions of resilience for this evaluation. Each is described below.

1. Wealth

Financial and physical capital, income expenditures and food security/consumption are reflected in the wealth dimension. The Haiti data was found to be consistent with Alinovi's research that suggests these indicators can be accounted for in a single dimension (2010).

2. Debt and Credit

This dimension includes information on the use of credit to access food and non-food items necessary for survival. Analysis of the variety of debt and credit behaviors of households indicated that debt and credit behavior was not necessarily associated with wealth and therefore, required its own dimension. Although access to credit could be considered a way to increase resilience, use of credit (accumulation of debt) for survival is an indication of vulnerability.

3. Coping Behaviors

This dimension includes behaviors used to respond to recent shocks, as well as behaviors that households might employ should their situation become more difficult. This dimension focuses not on the ability of households to respond, but rather on the negative aspects of coping that can lead to the exhaustion of household resources.

4. Human Capital

Human capital involves the skills and abilities that enable households/individuals to generate income and have access to food and goods and services. While there are many indicators of human capital, it is represented here by education level and workforce capacity within the household.

5. Protection and Security

Protection and security were measured in terms of self-reported experiences, perceptions and opinions of household members related to their personal sense of security and their reported exposure to personal and property crime.

6. Community Networks

Community networks reflects the connectedness of households to groups—particularly those related to livelihoods, income or decision-making within the community— and community decision processes (this is related to the concept of social capital).

7. Psychosocial Status

Psychosocial status is not typically measured and monitored in Haiti and it had not been assessed on a large-scale, post-earthquake level before the June 2011 survey. Psychological status and well-being of household heads is a dimension of resilience often adversely affected in the short term, and potentially long-term, depending, in part, upon the nature and effectiveness of humanitarian assistance.

Two internationally recognized instruments were included for assessment.

GHQ-12 (General Health Questionnaire - 12): This tool measures acute psychological stress. The module consists of 12 questions that address issues such as loss of sleep due to worries, loss of concentration, trouble making decisions, enjoyment of daily activities, feelings of depression and ability to face problems as compared to a "normal" time. It is sensitive to the respondent's short-term psychiatric distress/disorders, but not any long-standing attributes (GL Assessment.co.uk).

In this study, the questionnaire was used as a measure of acute "psychological stress," and not as a screening for specific psychiatric disorders. Although no calibrated threshold for the GHQ-12 has been established for Haiti, application of this indicator in various contexts reveals a range of thresholds (Goldberg et al 1998; Goldberg et al 1997). In the analysis of the Haiti post-earthquake data, the team used the most conservative cut-point (threshold) found in the literature to quantify the prevalence of acute psychosocial stress among household heads.[3] This indicates that the prevalence of psychological stress among the adult population is likely underestimated in this evaluation.

The Personal Well-Being Index (WBI): The WBI asks respondents to rate their personal satisfaction in eight different life categories, such as standard of living, health, relationships, safety and community-connectedness. This indicator was used as a subjective measure of well-being. For the well-being index, a standard approach to defining thresholds (The Australian Centre on Quality of Life, Deakin University 2010) was applied to measure prevalence.[4,5]

Graph 2   **Dimensions of resilience by camp and non-camp households in the directly affected areas**

Psychosocial

Security and Protection

Community Networks

Coping Behavior

Debt and Credit

Wealth

Human Capital

1.0
.8
.6
.4
.2
0
-.2
-.4
-.6
-.8
-1.0

— Camp households (directly affected areas)   — Non-camp households (directly affected areas)

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

A. Dimensions of Resilience in the Areas Affected by the Earthquake

The composite scores for each of the seven Haiti Humanitarian Assistance Evaluation resilience dimensions are displayed in the "radar graph" shown in Graph 2. The figure shows the overall differences for each dimension between camp households and non-camp households in the directly affected areas. Each dimension is represented on one of the axes in the radar graph using the composite dimension score. The area within the polygon for each group can be conceptualized (but not quantified) as the overall (average) resilience status of each compared to the other.

The mean composite scores were significantly worse in camp households than non-camp households[6] on all dimensions except for community networks, which was slightly (but statistically significant) better[7] in camps than non-camps in the directly affected areas, and human capital, which showed no statistically significant difference between camp and non-camp households in the directly affected areas.[8] The greatest differences between groups were found on the psychosocial and wealth dimensions. Differences are explored in more detail in the following sections.

B. Dimension: Wealth

Finding: Nearly two years after the earthquake, more than a third of households in the areas directly affected by the earthquake, and more than a half of households living in the camps, had not recovered their basic physical assets.
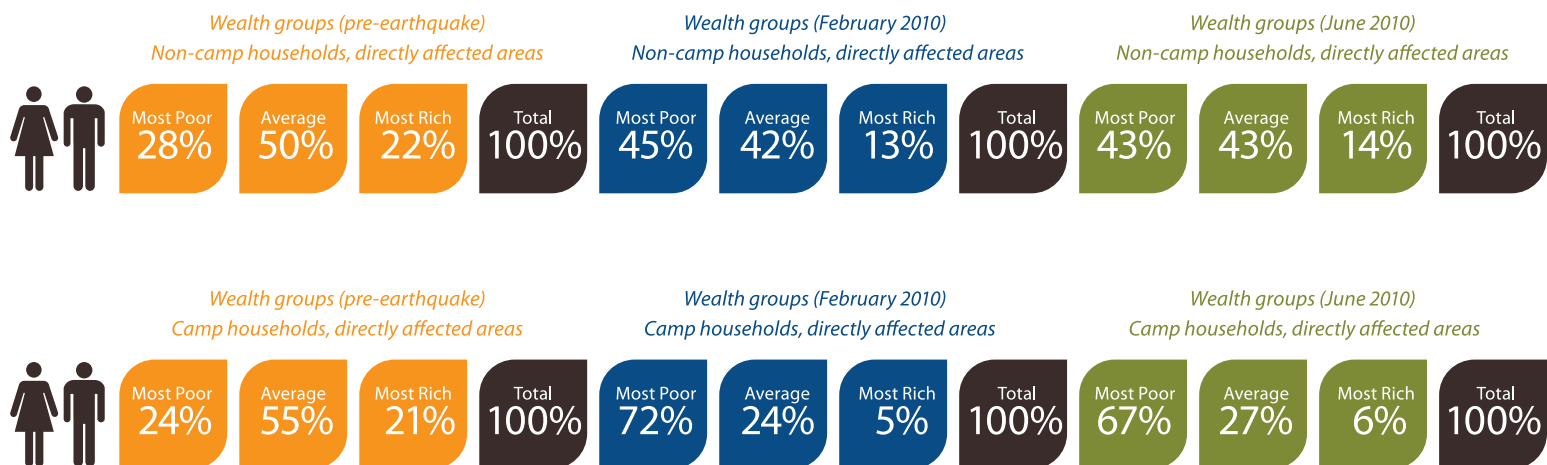
Finding: Populations in the directly affected areas, particularly those in camps, are now at risk of becoming chronically poor at levels similar to those found in the most vulnerable populations throughout the country.

According to the UN, the earthquake caused approximately $3.5 billion USD in loss of existing economic flows (wages, production, revenue, etc.). Approximately 60% of focus groups noted that the earthquake caused significant disruption in their economic activities (commerce, employment, etc.). Women were impacted at a higher rate than men (70% versus 55%).

Notably, the Haiti Humanitarian Assistance Evaluation survey found that camp and non-camp residents in affected areas had similar wealth statuses before the earthquake; however, camp residents were significantly more decapitalized after the earthquake than non-camp residents. **Table1** shows the similar pre-
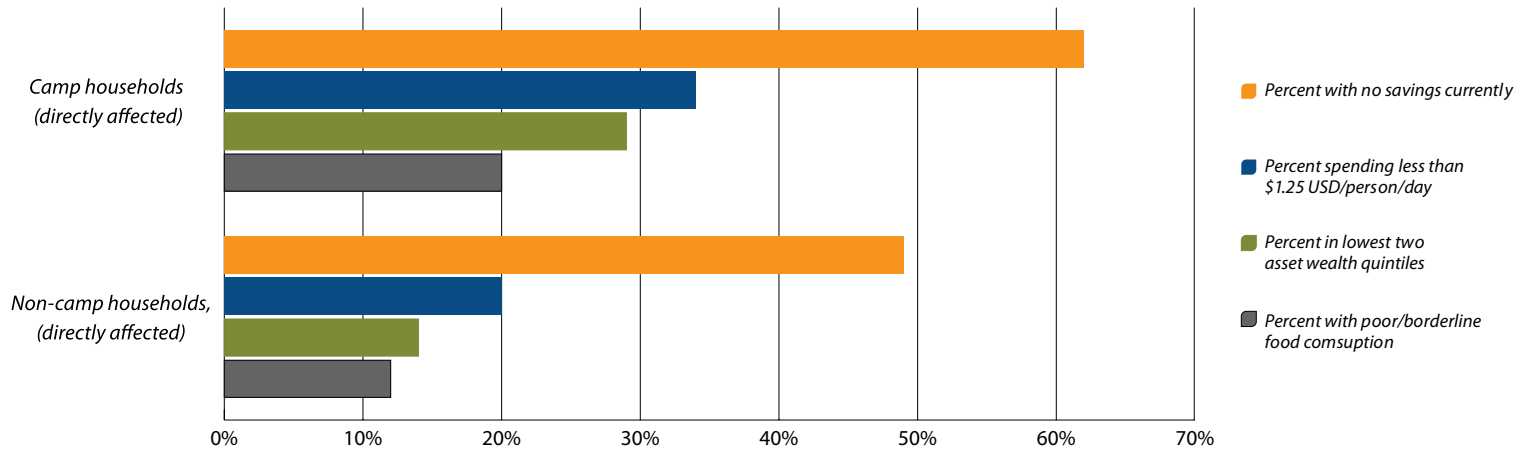
Table 1

Asset wealth group prevalence over time

Wealth groups (pre-earthquake)
Non-camp households, directly affected areas

Most Poor 28% | Average 50% | Most Rich 22% | Total 100%

Wealth groups (February 2010)
Non-camp households, directly affected areas

Most Poor 45% | Average 42% | Most Rich 13% | Total 100%

Wealth groups (June 2010)
Non-camp households, directly affected areas

Most Poor 43% | Average 43% | Most Rich 14% | Total 100%

Wealth groups (pre-earthquake)
Camp households, directly affected areas

Most Poor 24% | Average 55% | Most Rich 21% | Total 100%

Wealth groups (February 2010)
Camp households, directly affected areas

Most Poor 72% | Average 24% | Most Rich 5% | Total 100%

Wealth groups (June 2010)
Camp households, directly affected areas

Most Poor 67% | Average 27% | Most Rich 6% | Total 100%

Data source: CNSA EFSA II, 2010

Wealth indicators by camp and non-camp households in directly affected areas

Camp households
(directly affected)

Non-camp households,
(directly affected)

0%   10%   20%   30%   40%   50%   60%   70%

■ *Percent with no savings currently*

■ *Percent spending less than
$1.25 USD/person/day*

■ *Percent in lowest two
asset wealth quintiles*

■ *Percent with poor/borderline
food comsuption*

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

Percent of households that had fewer, the same, or more assets in June 2011 as compared to immediately pre-earthquake

Camp households
(directly affected areas)

Non-camp households,
(directly affected areas)

54%

40%

6%

30%

60%

10%

■ *Fewer physical assets
than before the earthquake*   ■ *Same*   ■ *More physical assets than
before the earthquake*

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

22
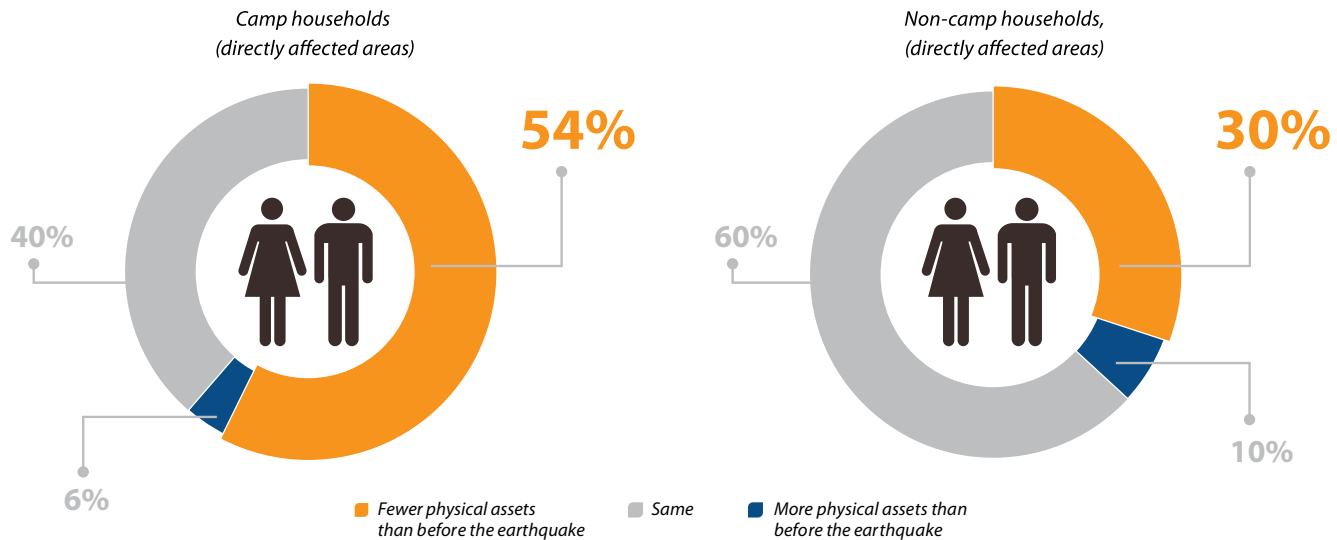
earthquake asset ownership of camp and non-camp populations in directly affected areas. Furthermore, this survey found that pre-earthquake wealth status was not a predictor of whether a household in the directly affected area would be found in a camp or residence after the earthquake. This indicates that camps are made up of households from a range of pre-earthquake asset-wealth levels.

For the wealth dimension, the team calculated a composite score using the following indicators from the June 2011 Household Survey:[9]
   • Food consumption
   • Asset wealth
   • Percent of expenditure on food
   • Household expenditure per capita
   • Household savings

Within the directly affected areas, the camp households had a much lower overall composite wealth score than the non-camp households (0.004 versus 0.580). Substantive differences among the wealth indicators are further described in Graph 3.[10]

Camp and non-camp households in the directly affected areas had a similar prevalence of savings pre-earthquake (48% and 53% respectively), but camp households (18%) were more likely than non-camp households (9%) to have lost their savings since the earthquake, and less likely to have accumulated any savings since. A higher percentage of camp households (62%) than non-camp households (49%) in the directly affected areas had no savings.

Camp households also reported lower expenditures (indicating lower income) than non-camp households in the directly affected areas, with a higher percentage of camp households (34%) spending less than $1.25 USD/person/day compared to non-camp households (20%). In the directly affected areas, camp households had a median per capita monthly expenditure of 1,884 Haitian gourde (HTG) as compared to the non-camp households, which had a median per capita month expenditure of 2,491 HTG.

A higher percentage of camp households (29%) than non-camp households (14%) were in the lowest two asset wealth quintiles. Furthermore, 20% of camp households fell into the poor/borderline level of food consumption, while only 12% of non-camp households did. Overall, 45% of households with acceptable food consumption reported having been able to save in the past year, compared to 27% of households with poor/borderline food consumption.

Finally, Graph 4 shows that 18 months after the earthquake, 54% of camp households still had not recovered to their pre-earthquake asset ownership level, compared to 30% of non-camp households. Therefore, the wealth indicators and trends suggest that camp households were at a higher risk of becoming chronically poor even though many were not asset poor before the earthquake.

C. Dimension: Debt and Credit

Finding: Camp households were more highly indebted and had less favorable terms of credit than non-camp households in the directly affected areas.

Haiti's vulnerable households have historically experienced a high debt burden, and the effects of the earthquake have continued to exacerbate this problem. According to ACTED's 2011 study on the economic situation of Haitian households, 80% of Port-au-Prince households that were living below the poverty line, and 94% of all households in rural areas affected by the earthquake, were in debt. In 2011, Haiti had 13% more households in debt than before the earthquake. The Haiti Humanitarian Assistance Evaluation further investigated the relationship between credit/debt and location of residence.

For the credit and debt dimension, the team calculated a composite score by combining the following indicators from the household data:[11]
   • Household solicited credit in the past 12 months
   • Household accumulated debt in the past 12 months
   • Household purchased food using credit in the past month
   • Household purchased non-food items/services using credit in the past 12 months
   • Percent of total cited food consumed that was purchased on credit

A higher score indicates a household was less likely to have relied on credit for purchases, and was less likely to have accumulated debt. Camp households had a lower (worse) score than non-camp households in the directly affected area (-0.05 versus 0.29, respectively).

The team found that 64% of camp households solicited credit as compared to 51% of non-camp households; 39% of camp households had used credit to purchase food in the past month as compared to 27% of non-camp households; and 32% of camp households reported going further into debt in the past year, whereas 13% of non-camp households did. Finally, even when controlling for wealth,[12] the camp households still had a significantly lower (worse) debt/credit score than non-camp households in the directly affected areas. Graph 5
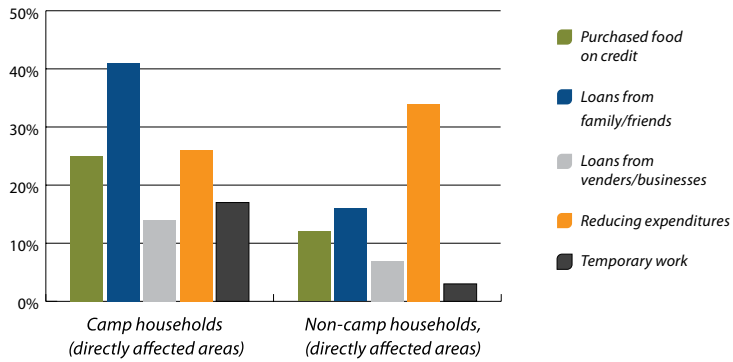
Graph 5

Debt and credit indicators by camp and
non-camp households in directly affected areas

■ Households had
solicited credit
in the past 2 months

■ Households had
used credit to
purchase food in
the past month

■ Households had gone
futher into debt the
past year
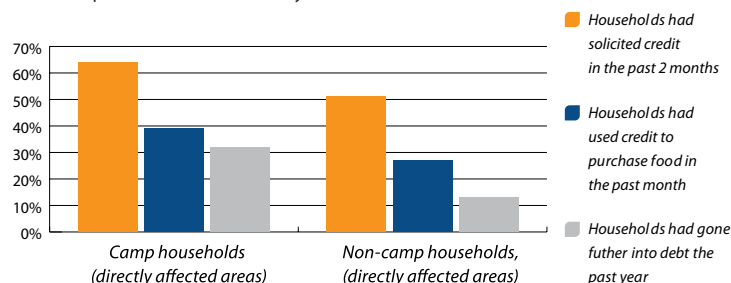
Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

Prevalence of common coping behaviors used in the past year

Legend:
- Purchased food on credit
- Loans from family/friends
- Loans from venders/businesses
- Reducing expenditures
- Temporary work

Camp households (directly affected areas)

Non-camp households, (directly affected areas)

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

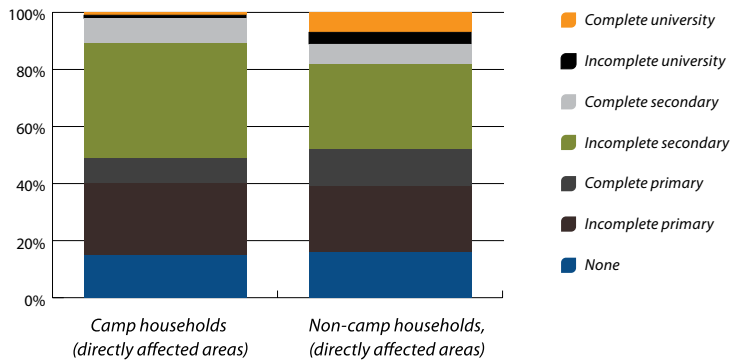## Percent of households with one or more members over 18 years old, incapable of working

4%

Camp households (directly affected areas)

16%

Non-camp households, (directly affected areas)
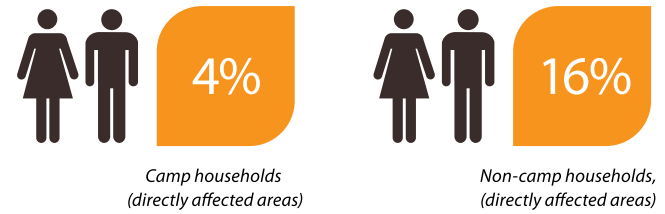
Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

Human Development Index: Trends 1980–present

Legend:
- Latin America and the Caribbean
- World
- Haiti
- Low human development
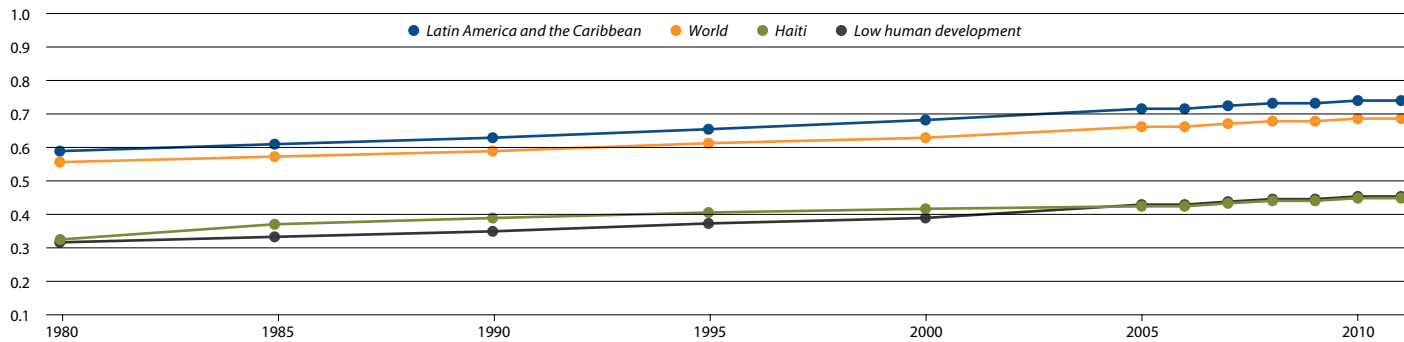
Level of education of the head of household

Legend:
- Complete university
- Incomplete university
- Complete secondary
- Incomplete secondary
- Complete primary
- Incomplete primary
- None

Camp households (directly affected areas)

Non-camp households, (directly affected areas)

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

Mean dependency percent

38%

Camp households (directly affected areas)

36%

Non-camp households, (directly affected areas)

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

D. Dimension: Coping Behaviors

Finding: Among the directly affected population, camp households were participating in more coping behaviors that led to decapitalization than non-camp households.

Camp households employed negative coping mechanisms more often than non-camp households in directly affected areas; this appears to be an ongoing trend post-earthquake. These behaviors included dietary modification, increased debt, engagement in alternative, low-income livelihoods and selling assets. Similar results were found in both the earlier emergency food security surveys (EFSA I and EFSA II) that were conducted by CNSA and partners in February and June of 2010 in the directly affected areas.

A composite coping behavior score was created to capture coping strategy severity using the following measures:[13]
   • Reduced Coping Strategies Index (CSI)
   • Number of coping strategies used in the past year (a module asked what households did to deal with shocks in the past year, with codes for 34 possible answers)
   • Number of coping strategies that might be used in the future (a module asked what households could envision doing in the future if their situation became more difficult, and allowed for the same 34 possible coping codes)

A lower score indicates that the households engaged in a higher number of coping behaviors (i.e. selling of assets or diet modification). The composite coping strategy score suggests a large difference between camp and non-camp household coping behaviors. The composite score among camp households was 0.05, while the score for non-camp households in the directly affected areas was 0.37. Differences in specific key coping behaviors are illustrated in Graph 6.

Camp households more frequently used coping behaviors involving debt and credit than non-camp households did. For instance, camp households were more likely than non-camp households to purchase food on credit and receive loans from friends, family and other lenders. Households in camps were also more likely to rely on temporary work—often poorly paid and not a reliable source of income—as a coping behavior. Households wealthy enough to have discretionary income frequently reduced expenditures as a coping mechanism; camp households were substantially less able than non-camp household to employ this coping behavior. Wealthier households in directly affected areas tended to rely more on remittances, cash savings and modifications of expenditures as coping mechanisms. When households in the directly affected areas were asked about future coping strategies in the face of risk, they displayed similar patterns.

E. Dimension: Human Capital

Finding: Among the directly affected populations, there was little difference in overall human capital between camp and non-camp households.

In 2011, the United Nations Human Development Program (UNDP) ranked Haiti's Human Development, a standard means of measuring well-being, at 158 out of 187 countries globally with comparable data. That is the lowest ranking in Latin America. Graph 7

For this evaluation, a composite indicator for human capital was created using the following indicators:[14]
   • Dependency percent[15]
   • Household head's level of education
   • Presence of one or more household members incapable of working regularly

A higher composite human capital score is associated with lower dependency percent, higher education level of the household head and a smaller likelihood of having one or more household members incapable of working.

The composite score for human capital was calculated for camp (.54) and non-camp (.48) populations, but it was not statistically significant. This finding is consistent with the earlier analysis of wealth, which suggested that camp residents were similar in socio-economic status to non-camp residents prior to the earthquake. Specific analyses of differences in individual component indicators are presented here. Graph 8, Graph 9 and Graph 10

Little difference in education levels and dependency percent was found between camp and non-camp households. However, the percentage of camp households having members incapable of working (4%) was lower than non-camp households in the directly affected areas (16%), which may suggest sharing of social vulnerability among households in better economic contexts.

The demographic structure of camp and non-camp households was similar with respect to age of household head, the prevalence of households with children under two years old, marital status of the head of household and the prevalence of female-headed households. However, female-headed households had, on average, a significantly lower human capital composite score than male-headed households, even when controlling for residential status of camp/non-camp and urban/rural.[16]

Graph 11

Percent of households that reported a
security problem since the earthquake
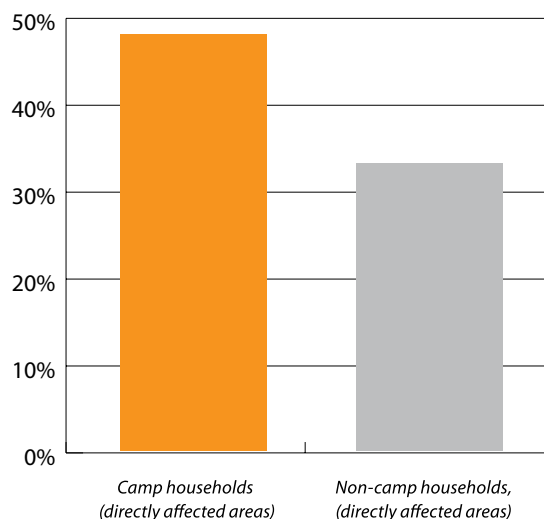
Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

F. Dimension: Protection and Security

Finding: Camp populations had the lowest composite security score of any population group in Haiti.

Since 2010, more than $52.6 million USD have been provided for protection activities that primarily serve vulnerable populations, like children, women, the elderly and the disabled. The UN and NGO community has approached protection and security issues through programs with the UN Protection Cluster, which includes sub-clusters for gender based violence, human rights and child protection. The UN Protection Cluster, in close coordination with other UN Clusters (including Education and Health) has been providing protection training and developing social mobilization projects in partnership with a number of in-line ministries, including the Ministry of Public Health and Population, Ministry of Education, Ministry of Social Affairs and Labor, Institute of Social Welfare and Research and Ministry of Justice.

For the protection and security dimension, the team created a composite security indicator from the survey data by combining three indicators related to security:[17]
  • Prevalence of households that reported having a security problem since
    the earthquake
  • Prevalence of households that reported that the security situation had
    improved, remained stable, gotten worse but returned to normal, or gotten
    worse and remained that way since the earthquake
  • Shock of "insecurity" in the past year had negatively impacted their livelihood,
    their capacity to produce or buy food or has led to the depletion of savings
    and assets

This composite indicator demonstrates significant differences in self-reported security status between camp and non-camp households (-0.43 and 0.20, respectively).

Camp residents were by far the most likely to report having experienced security problems since the earthquake (46%) as compared to non-camp residents (32%) (Graph 11) in the directly affected areas. Furthermore, camp residents were more likely to cite insecurity risks specific to women (18%) than non-camp residents (7%) in the directly affected areas.

The survey data generally indicated that camp residents perceived themselves to be at greater protection and security risk than non-camp residents. In both groups, the majority indicated no change in security status as a result of the earthquake, but among those that did indicate a change, more indicated that the situation had worsened than improved (see Graph 12).

More than 90% of protection and security related documents found in the Haiti Evaluation Knowledge Center described camp populations as especially vulnerable to security/protection threats and 85% of the reviewed documents highlighted specific threats to women and children. However, analysis of these studies found

very little empirical data in support of these claims. The Haiti Humanitarian Assistance Evaluation data also explored the prevalence of exposure to various risks/threats, including violent crime and property crime, during the period and found that camp and non-camp residents had little difference in level of exposure to these risks. Though perception of security threats was elevated, there was no survey evidence to quantify levels of victimized households. Both the quantitative and qualitative survey data indicated that reports of violence and insecurity were widespread and not targeted specifically at women, children or other often-vulnerable groups.

G. Dimension: Community Networks

Finding: Community networks were a vital component of resilience and were an important entry point for humanitarian programming. Populations in camps tended to be aware of more community networks in their communities, yet individual participation remained low.

Finding: Locally initiated community networks tended to reflect the true needs of the communities, often revolving around creation of jobs and other income-generating activities.

Community networks played an important role in the development, implementation and impact of programs; nearly a third of all the collected documents (110 of 357) and nearly half of collected evaluations (46 of 106) in the Haiti Evaluation Knowledge Center acknowledged the value of community networks in Haiti's relief and recovery efforts. Moreover, approximately half of Focus Groups indicated that the earthquake reinforced solidarity between groups, noting that many people helped one another, shared resources and

provided emotional support. Forty-five percent of women's FGs and 40% of men's FGs indicated that new community networks (associations and organizations) were created among camp households. However, this awareness of community networks had not resulted in significant direct financial support or capacity building activities. In 2010, through the UN FLASH Appeal, approximately $14.4 million USD was provided to UN agencies to support community network and community-based programming. Stakeholder workshops and resource flow analyses all noted the lack of "trickle down" of these resources to Haitian institutions.

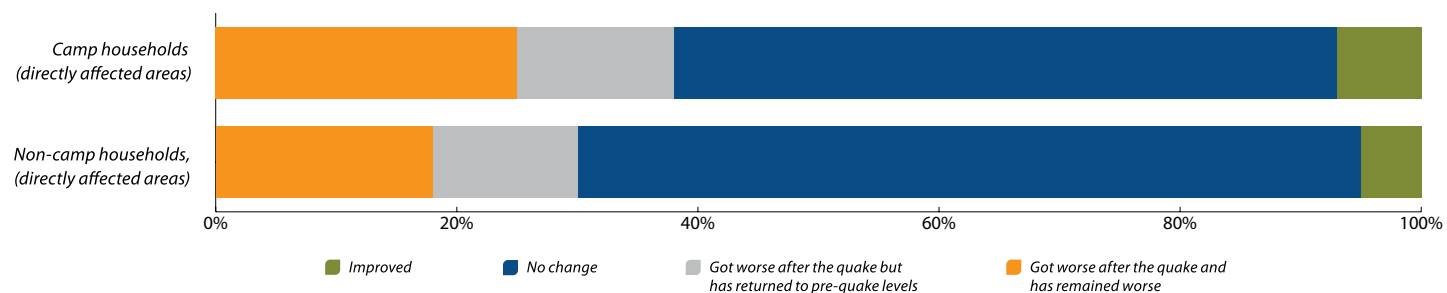A composite community networks score was calculated using the following:
 • Awareness of the existence of community networks (associations/ organizations)[18]
 • Members of household who participated in community networks (associations/organizations)

The composite score demonstrated that camp households experienced a somewhat higher level of community networking than non-camp households (-0.27 compared to -0.43),[19] though the difference was primarily due to the higher level of humanitarian aid management committees in camp settings. Participation levels were not statistically significantly higher in camp than non-camp settings. This suggests that the community networking measurement strategy may require more refinement in future measurement efforts.

Camp households were also more aware of the existence of community networks (associations/organizations) than non-camp households in the directly affected areas (average of 2.7 vs. 1.8);[20] the majority of the familiar associations/ organizations were ones involved in managing and delivering aid (see Graph 13). However, 50% of FGs were not involved in the decision making process for allocating assistance and more than 40% of groups indicated receiving "little-to-no information" about meetings concerning aid and aid distribution.

How has the security situation changed since the
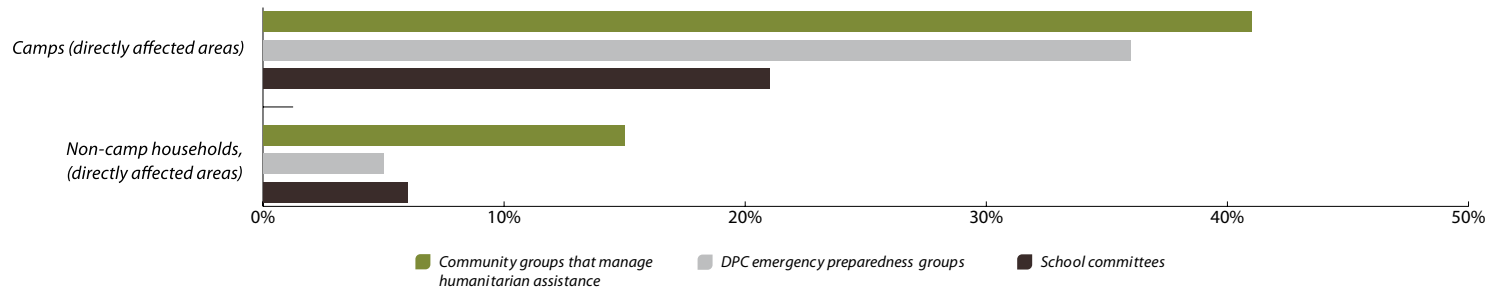earthquake (as compared to the pre-earthquake situation)?

Graph 12

Camp households (directly affected areas)	
Non-camp households, (directly affected areas)	

0%   20%   40%   60%   80%   100%

■ *Improved*   ■ *No change*   ■ *Got worse after the quake but has returned to pre-quake levels*   ■ *Got worse after the quake and has remained worse*

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

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Graph 13

Camp and non-camp respondents' awareness of most common types of community networks (associations/organizations)
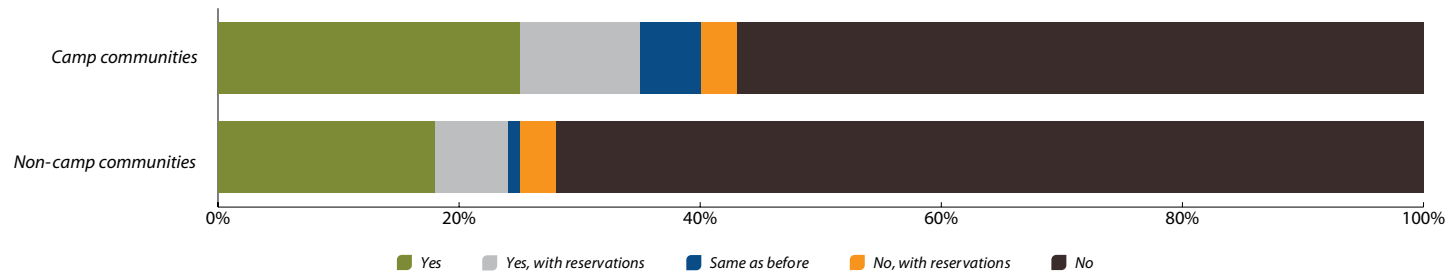
Camps (directly affected areas)

Non-camp households,
(directly affected areas)

0%   10%   20%   30%   40%   50%

■ Community groups that manage humanitarian assistance   ■ DPC emergency preparedness groups   ■ School committees

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

Graph 14

In order to cope with problems following the earthquake, are community members engaging in new activities that make the community stronger?

Camp communities

Non-camp communities

0%   20%   40%   60%   80%   100%

■ Yes   ■ Yes, with reservations   ■ Same as before   ■ No, with reservations   ■ No

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

Graph 15

Psychological stress and low well-being status in camp and non-camp populations in the directly affected areas

Camp residents

Non-camp residents in the directly affected areas

0%   5%   10%   15%   20%   25%   30%   35%

■ Percent of adult population suffering from psychological stress   ■ Percent of adult population with poor well-being status

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

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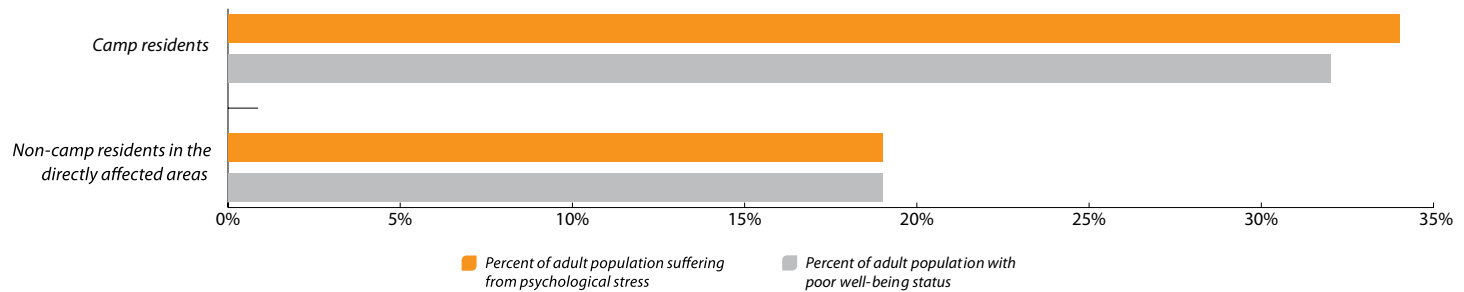
In key informant surveys, 25% of camp respondents and 18% of non-camp respondents in the directly affected areas indicated that community participants engaged in activities that made the community stronger (see Graph 14). Among respondents who cited participating in community-strengthening activities, ones related to commerce or other job creation activities were cited most often (37% of the time).

H. Dimension Psychosocial

Finding: Camp residents had a significantly worse psychological and well-being status than any other group in the country. Conservative estimates indicated that at least 35% of adult camp residents (most of which were household heads) have suffered from acute psychological stress and at least 33% had a poor well-being status.

Finding: The poor psychosocial status of the camp populations was overwhelmingly due to the stress of living in the camps.

Prior to the 2010 earthquake, there was no public health surveillance mechanism in place to measure psychological health. To date, this evaluation's quantitative fieldwork constitutes the only post-earthquake, national-level psychosocial survey (Schinina et al. 2010).[21] While a UN cross-cluster working group on Mental Health and Psychosocial Support (MHPSS) includes more than 110 organizations providing health care and psychosocial support, Haiti's current mental health surveillance system is limited to one variable in the National Sentinel Site Surveillance System (NSSS).

Though some psychosocial programs were funded directly through the 2010 UN FLASH Appeal, those projects received only 1% of total requested funds, and the funds went directly to international NGOs and the UN agencies. Funding for psychosocial programs in Haiti decreased fivefold between the 2010 UN FLASH Appeal and 2011 UN CAP Appeal, and no funds went directly to either the Government of Haiti or to Haitian NGOs.[22]

The composite psychosocial score was created using two composite scales based on the household survey data. These questions were primarily directed at heads of households (the target subjects of the data collection) and the indicators were measured at an individual level, not a household level:[23]
   • General Health Questionnaire – 12 (GHQ-12)
   • Well-Being Index

Household heads living in the directly affected areas, particularly those in camps, had a higher level of psychological stress and poor well-being than those living in any other area. The value of this composite score was -0.56 among camp household heads and -0.03 among non-camp household heads in the directly affected areas. The indicators that make up the score are further profiled by residential group in Graph 15).

The qualitative portion of this evaluation also demonstrated similar findings regarding psychosocial status among camp populations. Despite the fact that the focus group guides did not contain questions specific to psychosocial issues, 88% of FGs identified psychological stress as an important negative consequence of the earthquake affecting their potential to recover. In fact, 50% of women's FGs and 25% of men's FGs indicated that they and/or others in the community were not psychologically able to handle another disaster. Furthermore, 18% of FGs volunteered unsolicited information indicating that they were still experiencing symptoms from the earthquake such as insomnia, anxiety, re-experiencing episodes and/or flashbacks. The true prevalence of post-traumatic stress disorder and other psychosocial sequelae may be higher.

Items in the well-being module were highly inter-related with the exception of self-reported satisfaction with spiritual life. The camp and non-camp residents in the directly affected areas replied overwhelmingly that they were satisfied with spiritual life (91% and 87%, respectively).[24] Additionally, 75% of focus group participants identified faith as a coping strategy.

Psychological well-being and absence of stress scores were lower among camp household heads than among household heads in any other group. Even when controlling for wealth and food insecurity, the rate of psychological stress and low well-being in camps was higher than in other residency status groups. There was no association among camp households between wealth/food security and psychological stress or well-being. However, among other residency groups, poverty and food insecurity were correlated with measures of psychological stress and well-being.

Forty-five percent of women's FGs and 35% of men's FGs indicated that deplorable living conditions in the camps were contributing to long-term deterioration of mental health. This illustrates that continued poor living conditions in camps may constitute a hidden emergency. The effects of the earthquake on the Haitian psyche are not limited to the trauma of the event itself—the psychosocial emergency continues, and may even be worsening, particularly among camp residents.

Section 5 - Humanitarian Assistance and Resilience Outcomes

To fully understand the impact that humanitarian assistance has had on household and community resilience in post-earthquake Haiti, the evaluation team analyzed the flow of humanitarian assistance resources. This section examines the amount of resources allocated to Haiti after the earthquake, the coordination and implementation of programs and the allocation of resources to beneficiaries.

According to the United Nations Office of the Special Envoy for Haiti (2011), in response to the Action Plan for National Recovery and Development of Haiti, donors pledged $10.17 billion USD toward reconstruction and recovery efforts over a ten-year period. To date, $2.38 billion USD of programmable funds have been disbursed to partners and an additional $2.1 billion USD have been approved for recovery projects and initiatives.

In addition, since 2010, more than $4.1 billion USD has been provided to support urgent humanitarian aid and early recovery efforts through private funding, the 2010 UN FLASH Appeal and the 2011 and 2012 UN CAP Appeals (UN OCHA FTS 2012).

A. Overview of Coordination Systems

Immediately following the earthquake, at the Government of Haiti's request, the international community activated the Inter Agency Standing Committee (IASC) Cluster system. The IASC Cluster System was tasked with facilitating and coordinating humanitarian response funding, as well as activity with national and international NGOs, the UN family, the Government of Haiti and the donor community. Using a UN FLASH and UN CAP Appeal funding process, the IASC Cluster system primarily supported humanitarian and immediate early recovery activities. The IASC Cluster systems includes the following sectors: agriculture, CCCM, coordination and support services, early recovery, education, emergency telecom, food aid, health, logistics, nutrition, protection, shelter and non-food items and water and sanitation (WASH). An additional category was reserved for funds that were unspecified, such as those in the Emergency Response Fund (ERF). Each cluster developed its own standards, strategy, programs and partnerships.

Based on the Government of Haiti's March 2010 Post Disaster Needs Assessment, (Refondation.ht 2011) the Government of Haiti, in partnership with key stakeholders, developed the Action Plan for the Recovery and Development of Haiti (Haiti Conference.org 2011). The plan outlined the immediate and long-term challenges regarding reconstruction, recovery and the nation's underlying vulnerabilities. The Government of Haiti's IHRC (CIRH.HT 2012) and Haiti Reconstruction Fund (HRF) were tasked with supporting the strategic planning, coordination and implementation of resources for financing priority reconstruction and recovery projects.

Since 2011, these entities and coordination mechanisms have developed a synergistic relationship to ensure that strategies and policies support the transition from relief to long-term recovery.

B. Overview of Funding Channels

For this evaluation, the team used data from the UN OCHA FTS to provide an analysis of humanitarian funding received via the UN FLASH and CAP Appeals. The team also used financial reports from the United Nations Office of the Special Envoy to discern overarching funding trends since the 2010 earthquake.

According to the UN OCHA Financial Tracking Service, the majority of funding requested and received since 2010 was linked to traditional life-saving activities in directly affected areas. Table 2, outlines the clusters that requested and received the largest amount of funds via the UN FLASH and UN CAP mechanisms. In addition, the table illustrates that in 2010, activities were heavily focused on Port-au-Prince and other directly affected communities; in 2011, activities transitioned to a more diverse geographical coverage; and in 2012, activities returned to humanitarian programming in and around Port-au-Prince and to preparedness activities throughout the country.

More specifically:

- In 2010, the top five clusters requested 69% and received 70% of all funds disbursed through the UN FLASH.

- In 2010, 97.7% of all funding supported projects in the directly affected areas and 1.7% of all funding supported logistics and emergency humanitarian assistance projects in neighboring Dominican Republic.

- In 2011, the top five clusters requested 72% and received 73% of all funds disbursed through the UN CAP.

- In 2011, more than 23.5 % of funding went to activities in Port-au-Prince;

Table 2

Year(s)	Top clusters ranked by funding requirements	Top clusters ranked by funding received	Top geographical zones/ departments
2010	Food aid, shelter/non-food items, early recovery, health, WASH	Food aid, shelter/non-food items, health, WASH, education	National
2011	Health, WASH, CCCM, food aid shelter/non-food items	Health, WASH, food aid, CCCM, shelter/non-food items	Ouest, National, Artibonite, Sud Est, all others
2012	CCCM, WASH, health, protection, food aid	Agriculture, CCCM, food aid	National, Ouest

Table 3

Year(s)	Top five UN recipients	Top five NGO recipients	Top five donors plus carry-over
2010	WFP, UNICEF, IOM, UNOCHA, WHO	Save the Children, ACF, HFHI, Partners in Health, Plan	Private, USA, Canada, EC, Saudi Arabia
2011	UNICEF, WFP, IOM,WHO, UNOCHA	ACF, Save the Children, MDM France, Samaritain's Purse, Solidarites	USA, Canada, EC, Sweden, Private, carry-over funds
2012	FAO, IOM, WFP, UNOCHA *at the time of this publication there were only four recipients*	None at publication of this document	EC, private, carry-over *at the time of this publication there were only three donors*

68.3% went to national scale projects (of which 53% supported cholera projects); 3.1% went to Artibonite (of which 50% supported cholera projects); and the remaining 5.1% went to cholera activities in other departments.

• In 2012, the top five clusters requested 73% and received 100% of all funds disbursed through the UN CAP.

In June 2011, the Office of the Special Envoy to Haiti report "Has Aid Changed" found that 1% of disbursed humanitarian aid had been received by the Government of Haiti and that no Haitian NGO had received direct assistance from humanitarian funding mechanisms such as the UN FLASH and CAP Appeals.

C. Overview of Top Funding Recipients

As illustrated below in Table 3, the top five UN agencies and IOM recipients and the top five NGO recipients were similar in 2010 and 2011.

• In 2010, the top five funding recipients were UN agencies, IOM and Save the Children; they received 72.7% of all 2010 UN FLASH Appeal funding.

• In 2011, the top five funding recipients were UN agencies, IOM and Action Contre la Faim (ACF); they received 68% of UN CAP Appeal funding.

• Collectively, the top five UN and/or IOM and the top five NGO recipients received 92% of all funding via the 2010 UN FLASH Appeal. The top five UN and/or IOM and the top five NGO recipients received 76% of all funding via the 2011 UN CAP Appeal.

• Collectively, the top five donors to the 2010 UN FLASH and 2011 UN CAP Appeals represented 67% and 73% of the total funding, respectively.

• All funding to the UN FLASH and UN CAP Appeals was provided directly to international actors.

To date, the Haiti Reconstruction Fund has received contributions of $343.2 million USD, of which $67.4 million USD were provided for budget support and $275.8 million USD to grants. To date, 93% of funds made available for the grants have been disbursed to the World Bank, IDB and UN agencies.

5.1 Perceptions of Humanitarian Assistance

As noted in the previous section, the financial resources supporting humanitarian assistance programs in the year following the earthquake dwarfed all previous humanitarian aid funding in Haiti. The evaluation team attempted to capture Haitians' perceptions of the effectiveness of humanitarian assistance in meeting their needs for achieving resilient recovery. This data was collected through a household survey, key informant surveys and focus group discussions.

First, this section outlines Haitians' perceptions of the impact of humanitarian assistance during the three months immediately following the earthquake. Second, it addresses interviewees' perceptions of change in the quality of humanitarian assistance over time and finally, it presents the respondents' key priorities for rebuilding Haiti.

A. Haitians' Perceptions of Humanitarian Actors' Post-Earthquake Response

To learn more about Haitian interaction with humanitarian actors following the earthquake, the team asked key informants to rate the actions of different humanitarian actors during the three months following the earthquake as "good," "so-so," "poor," or "don't know/no response." The humanitarian actors most recognized by key informants included international NGOs, the central government of Haiti, and the local government of Haiti.

Nationally, key informants rated the local and central Haitian government lowest, with 53% of informants rating the central government "poor." This number was higher in camps, where 72% of key informants rated the central government "poor." Local governments were rated "poor" by 40% of key informants nationally and by 60% of key informants in camps.

International NGOs and foreign governments received the best ratings nationally from key informants, with 40% of key informants rating international NGOs as "good," and 33% rating foreign governments as "good." International NGOs received better ratings from camp residents (48% "good") than from non-camp residents (35% "good") in directly affected areas and than from residents in non-directly affected areas (40% "good"). Foreign governments received higher ratings from camp residents (44% "good") than from non-camp residents (23% "good") in directly affected areas and than from residents in non-directly affected areas (34% "good").
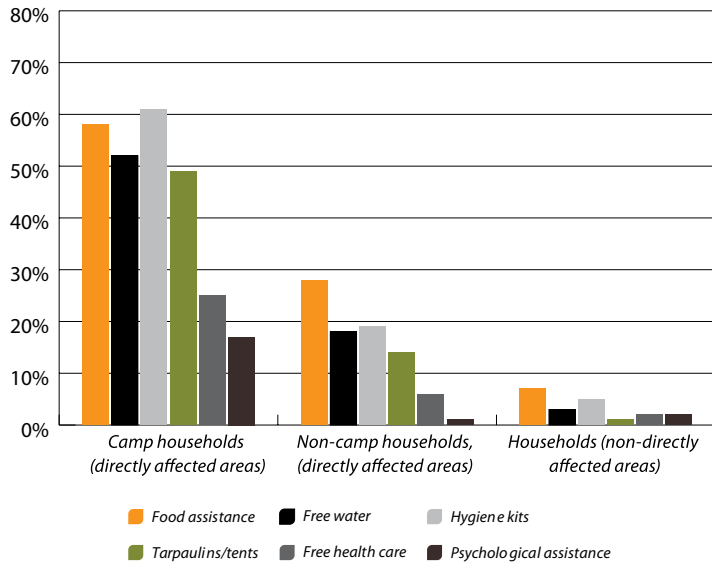
The humanitarian actors least recognized by key informants (received no rating or responses of "don't know") included local NGOs, local committees/organizations, the UN and military/MINUSTAH. When asked, 28% of all key informants could not rate local NGOs, 28% could not rate local committees/organizations, 24% could not rate the UN and 25% could not rate military/MINUSTAH. The variation in these percentages could be due to poor branding, lack of coverage at the field level or simply, lack of presence in the country.

Qualitative inquiry suggested that though initial assistance met survival needs, the continued efforts were not as effective at meeting needs for resilient recovery. The nature of assistance and equity in distribution were identified as the source of significant constraints to the effectiveness of humanitarian assistance. Focus groups indicated that aid, though initially useful and appreciated, did not improve their situation because it did not reflect their mid-term and long-term needs. Indeed, 13 out of 40 focus groups (30% of female FGs and 35% of male FGs) identified the need for different interventions focusing on long-term recovery, such as sustainable employment. In addition, participants from camps generally felt that humanitarian assistance was distributed inequitably. Only three out of 40 focus groups concluded that distribution was equitable. The majority (22 out of 40 FGs) felt that humanitarian assistance was distributed in a partisan and unequal way, with, for example, some camp committees distributing aid to their family and friends.
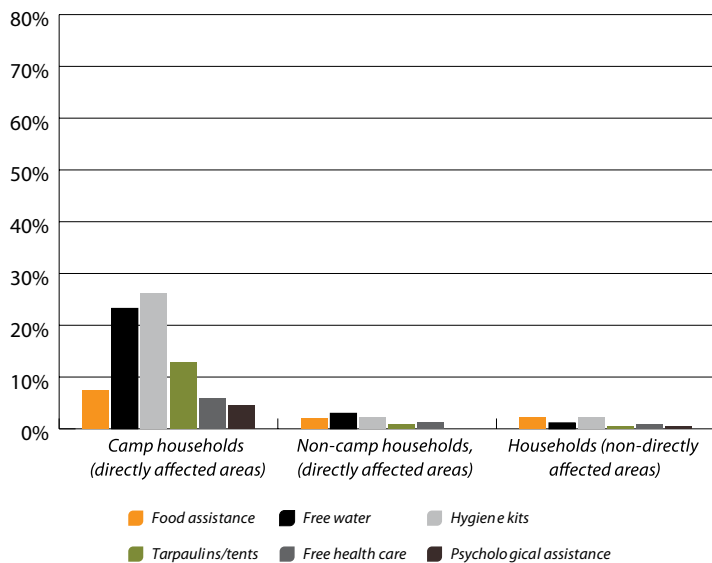
Graph 16

Most common forms of assistance received (out of all households) in the three months following the earthquake

Food assistance   Free water   Hygiene kits
Tarpaulins/tents   Free health care   Psychological assistance

Most common forms of assistance received (out of all households) in the month prior to the survey

Food assistance   Free water   Hygiene kits
Tarpaulins/tents   Free health care   Psychological assistance

Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

B. Access to Assistance

In the national household survey, the evaluation team asked Haitians about the type of humanitarian assistance they received in the three months after the earthquake and in the month preceding the survey.[25]

Access to assistance indicators included:
- Self-reported access to assistance during the three months after the earthquake • Where the household received its primary information about humanitarian assistance during the three months after the earthquake
- Self-reported access to assistance in the month preceding the survey • Where the household received its primary information about humanitarian assistance in the month preceding the survey

In the directly affected areas, 61% of households reported receiving assistance in the three months following the earthquake (87% of camp households and 41% of non-camp households). In the non-directly affected areas, 13% reported having received assistance in the three months following the earthquake. This ranking of coverage levels was the same for the month preceding the survey.

According to the survey, the types of assistance received most often in the three months following the earthquake were hygiene kits, food assistance, free water, tarpaulins/tents and free healthcare and psychological assistance. Other types of assistance more aligned with resilience outcomes—cash/food for work, school feeding, construction materials, agricultural inputs and other cash—were reported less frequently.

Although the receipt of humanitarian assistance was reportedly lower during the month prior to the survey, the most commonly cited types of humanitarian assistance changed little, as illustrated in Graph 16.

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5.2 Impact of Humanitarian Assistance on DRLA/UEH Resilience Dimensions

As described in the "Resilience Framework" section, the evaluation team developed a framework, illustrated below, to measure the relationship between a shock, humanitarian assistance and resilience. Figure 4

Haiti Resilience impact and change model

To examine the effect of humanitarian assistance on resilience outcomes, the team used multiple regression analysis that adjusted for the type of evaluation (propensity score). [26] The analysis was adjusted for the "targeting" of humanitarian assistance and it then examined the effect of humanitarian assistance on each of the resilience outcomes. Wealth was by far the greatest predictor of most other resilience dimensions, so wealth variables were included in the regression analysis as independent variables. The effects of humanitarian assistance are analyzed with and without wealth variables.[27]

A. Key findings: Access to Assistance

Regression analyses were used to identify the best model for predicting having received humanitarian assistance in the month prior to the survey.[28] The analyses show that targeting of humanitarian assistance in the month prior to the survey focused, in general, on poorer households and households living in camps.

An additional model was developed to generate the "propensity scores," using the location code of the household (the sampling cluster in which the household was located) and household demographic information. [29] Wealth indicators were excluded to allow for testing the impact of wealth on resilience outcomes in subsequent analysis. This model was strongly predictive. [30]

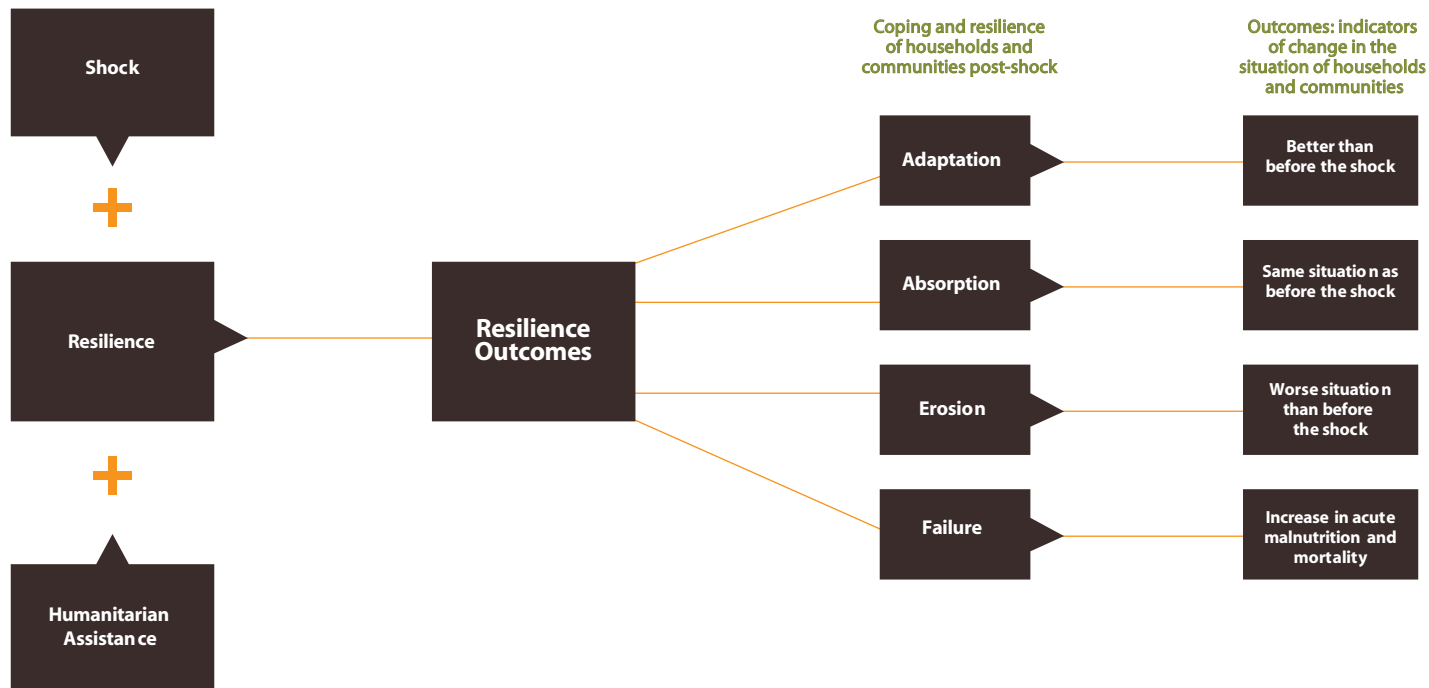## Haiti Resilience Impact and Change Model

Figure 4

Table 4

Linear regression analyses of resilience outcomes

Resilience outcomes	Adj. R squared (and sig. of model)	Parameter estimates- Beta and significance						
		Intercept	No assistance past month	No assistance during three months post earth- quake	No assistance past month, and received assistance during three months following earthquake	Wealth Index	ln total Expenditures per capita	Probability of receiving assistance
Food consumption score	0.27	-29.466	-0.189	3.63	-1.973	4.897	11.845	2.69
Wealth dimension score	0.048	0.415	-0.031	-0.156	0.266			-0.574
Debt and credit dimension score	0.053	0.806	0.064	-0.059	0.199	0.207	-0.104	0.199
Coping behaviors dimension score	0.093	-0.719	-0.09	0.438	-0.532	0.193	0.136	-0.573
Protection and security dimension score	0.01	0.741	-0.25	0.273	-0.162	-0.053	-0.093	-0.548
Community networks dimension score	0.024	0.458	-0.11	0.156	-0.308	0.057	-0.092	0.138
Well-being Index	0.066	27.736	-0.256	-4.98	3.73	-0.844	-0.513	0.298
GHQ-12 (psychological stress)	0.109	23.13	-1.389	-4.6	3.696	-1.285	-0.823	1.01
Psychosocial dimension score	0.139	-1.75	0.184	0.974	-0.729	0.227	0.153	-0.75

$p<0.001$ $p<0.05$ $p<0.10$

B. Key Findings: Impact of Humanitarian Assistance and Wealth on Resilience Outcomes

The effects of wealth and access to humanitarian assistance on the resilience outcomes were explored controlling for the likelihood of having received assistance. This analysis included the effects of having received humanitarian assistance in the three months after the earthquake. Because there were very few households in the sample that did not receive assistance in the three months after the earthquake, but that did receive it in the month prior to the survey, that scenario was not analyzed.

Table4 illustrates that reported receipt of humanitarian assistance showed little relationship with any of the resilience outcomes, except for a somewhat negative relationship with psychosocial status.

The following results are observed for the resilience dimensions:

Wealth Dimension
To examine the effects of reported receipt of humanitarian assistance on wealth status, the team conducted an analysis on the composite wealth dimension score as well as the food consumption score, since food consumption is often a directly intended outcome of humanitarian assistance.
- The wealth composite score outcome was not associated with humanitarian assistance; however, it was negatively associated with the predicted probability of having received assistance, which reflects appropriate targeting of assistance (wealthier households were less likely to have received assistance).
- Food consumption did not show any relation to humanitarian assistance, though it was highly positively associated with wealth.

Debt and Credit Dimension
- The debt and credit dimension score was not associated significantly with humanitarian assistance, though it was associated with wealth (more wealth is associated with less reliance on debt/credit).

Coping Behaviors Dimension
- Negative coping was not associated significantly with humanitarian assistance, though it was associated with wealth (more wealth was associated with less use of negative coping behaviors).

Protection and Security Dimension
- Humanitarian assistance was not associated significantly with protection/security or with wealth.

Community Networks Dimension
- Community networks was not associated significantly with either humanitarian assistance or wealth.

Psychosocial Dimension
Since psychosocial status was one of the striking differences in resilience outcomes among vulnerable groups in Haiti, the analysis included both the composite psychosocial domain score as well as the two individual scale scores.
- The composite dimension score was slightly negatively associated with humanitarian assistance, meaning that psychosocial status was somewhat lower among those who had received assistance than among those that had not; however, wealth was positively associated with psychosocial status. This was true for the composite as well as individual component indices.
- Households that had consistent access to assistance (during the three months following the earthquake and also in the month prior to the survey) tended to have better psychosocial status than households that only had assistance in the three months following the earthquake.
- Households who never had access to humanitarian assistance, however, had the best psychosocial outcomes.

These findings are not surprising when considering that a significant portion of humanitarian resources were directed to immediate survival needs and, to some degree, to interventions, such as education and infrastructure, that have longer-term impacts on resilience. However, the analysis suggests that early and mid-term recovery needs were not being sufficiently addressed by humanitarian assistance efforts and that the efforts may have even contributed to psychosocial stress. The qualitative research supports this interpretation. Indeed, more than one-third of the focus group discussions indicated distress associated with dependence on humanitarian assistance. Some participants indicated shame for their lack of autonomy.

Section 6 - Conclusions and Recommendations

Humanitarian assistance should go beyond immediate and life-sustaining activities to promote resilience outcomes.

The humanitarian assistance provided by the national and international community met, and in some cases, exceeded, the immediate needs of the affected areas. However, this evaluation found that humanitarian assistance did not make a significant positive contribution toward the seven resilience dimensions. In some instances, the humanitarian assistance may have even caused harm.

As identified by stakeholder workshops, had Haitians been more involved from the on-set of the disaster, the strategies, policies and implementation of programs to support affected communities would have been better designed to meet Haitian needs. As this evaluation highlights, the humanitarian response frequently undermined the capacity of Haitian individuals and organizations. Key organizations were hindered by poaching of staff and their inability to compete with larger, international NGOs for support and access to the decision making process. Moving forward, the international community must engage local stakeholders in recovery and reconstruction efforts to ensure that Haitians are more involved in all aspects of programming.

In the future, Haitian-driven recovery strategies, based upon a more thorough understanding of resilience and coping mechanisms, should be integrated into humanitarian programming from the beginning and continuing through the recovery process. Changing the approach to response would promote the attainment of self-sufficiency, rather than the ongoing status of dependency on "standard humanitarian assistance."

Indeed, the Haitians interviewed for this evaluation, from members of local government and NGOs to beneficiaries, highlighted the need for long-term, sustainable solutions. Camp populations repeatedly cited their desire—but inability—to leave the camps. Across the country, 63% of people overwhelmingly cited sustainable employment as their key priority for rebuilding Haiti. Focus groups indicated that solutions to help people help themselves were desired. For instance, employment assistance would help Haitians, who are entrepreneurial by necessity, find solutions appropriate to their context thereby building their resilience in a dignified and sustainable manner.

Stakeholders in Haiti should continue to explore and optimize resilience outcomes through the development of resilience metrics.

The dimensions defined and used in this evaluation can serve as a catalyst for future discussions related to resilience and for the development of a monitoring and evaluation strategy for Haiti's recovery. However, more research is needed to better understand and quantify the impacts that community networks have on resilience and their relation to other dimensions of resilience. Community level metrics must be refined and made operational. Finally, a smaller set of monitoring indicators, based upon the Haiti Resilience Framework, should be adopted and routinely assessed over time. Several Haitian entities, with capacity support from international institutions, are well positioned to undertake this work.

The development of recovery monitoring and evaluation methods and metrics (particularly metrics that track resources through the value chains to Haitian end user organizations and beneficiaries) is essential for sound use of public and private recovery investments; additional resources should be invested in strengthening the capacity of Haiti's public and private institutions in this regard. Notably, this evaluation found a lack of effort to capture and analyze resource flow, as well as reluctance by most private organizations to aid in these efforts. The lack of transparency in program dispersal of resources was a major constraint in our research of effective program evaluation. By strengthening Haitian institutions' ability to monitor and evaluate, Haitians will more easily be able to track and monitor international efforts.

Stakeholders must recognize the importance of developing and monitoring resilience related outcomes.

This study demonstrates the importance of early monitoring of resilience related outcomes in ensuring that humanitarian efforts achieve two goals: (1) effectively protecting affected populations from long-term decapitalization and (2) rapidly decreasing vulnerability and enhancing capabilities. Resilience measurements can be easily grafted to many large-scale survey tools that are frequently implemented before and after disasters, such as the Multi-Indicator Cluster Surveys, food security and vulnerability assessment methods promoted by WFP and FAO and Demographic and Health Surveys. This study also points to the importance of capturing change over time, which ideally includes a small longitudinal panel of households and communities.

Resilience is the critical link between disaster and development; monitoring it will ensure that relief efforts are supporting, and not eroding, household and community capabilities. This study is one of the few that measures and highlights decapitalization during the relief and early recovery process. The findings here should sober the humanitarian community's self-evaluation of efforts to date.

Graph 17

**Dimensions of resilience by camp and non-camp households
in the directly affected and non-directly areas**

Camp households (directly affected areas)

Non-camp households (directly affected areas)

Non-directly affected areas (rest of the country)
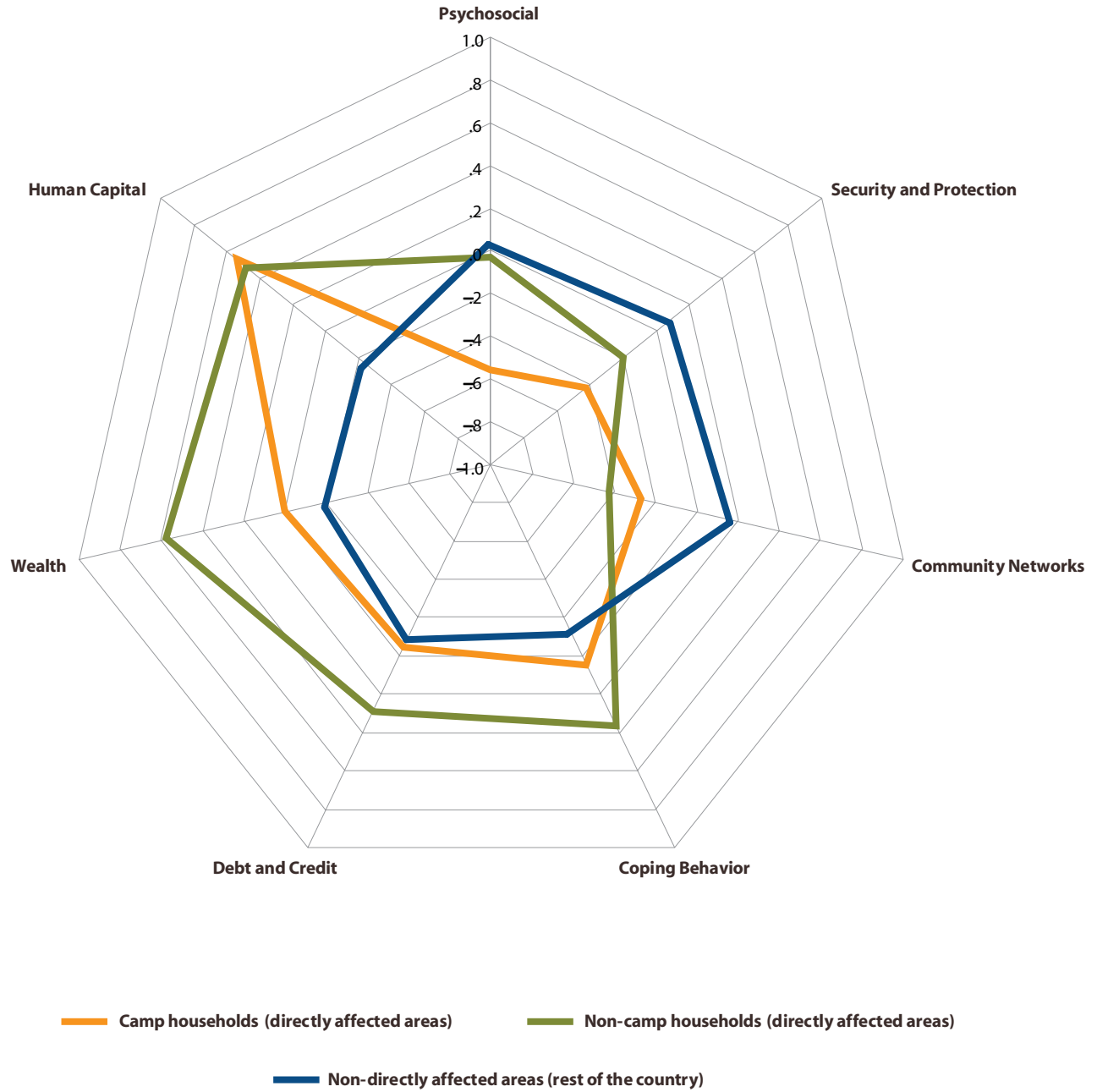
Data source: Household Survey, Tulane DRLA, UEH, CNSA June 2011

To effectively build household and community resilience in Haiti, the entire nation must be actively engaged and substantial investments must be made outside the directly affected areas.

In Haiti, it is often said that there are "pockets" of vulnerability—malnutrition, food insecurity, and poverty; the same is true for resilience. Though the earlier analyses in this report focused on tracking and evaluating outcomes in directly affected areas of the country, the broader nationwide analysis captured in this evaluation found that the non-directly affected areas were, on average, more vulnerable/less resilient than even the camp residents in the directly affected areas. Improving Haiti's resilience against future risks and shocks will also require attention outside the directly affected areas. Graph 17

While camp residents had poorer resilience outcomes than non-camp residents in directly affected areas, the two groups' resilience was more similar to each other than either was to the resilience of residents of non-directly affected areas. Residents outside directly affected areas were significantly better off in psychosocial, protection/security assessment and community networks measures, but they exhibited more negative coping strategies, debt accumulation, lower wealth and poorer levels of human capital than residents in camps.

Therefore, to increase the resilience of Haiti as a whole, it is imperative that investments be made not only in earthquake affected areas, but also in rural communities that have a history of being chronically poor and vulnerable. To minimize the impact of the earthquake and to mitigate the development of a new cohort of the chronically poor, it is essential that the augmentation of livelihood and economic development activities be prioritized throughout Haiti. As these opportunities arise and expand, it is critical that stakeholders are engaged at every level of the process to ensure appropriate policies and interventions are developed and implemented. This inclusive approach, coupled with appropriate monitoring and evaluation mechanisms, will allow for apt and sustainable development and stability in Haiti, therefore improving Haitian resilience as a whole.

Finally, humanitarian assistance must go beyond life-saving and life-sustaining activities to address the root causes of vulnerability: chronic poverty, social inequality and environmental degradation, etc. If the humanitarian community is serious about building resilience in Haiti and other vulnerable communities globally, it needs to continuously study, reflect and, in some cases, change the way it operates.

ENDNOTES

[1] Full descriptions of instruments, sampling methodology, indicator descriptions and other technical information can be found at www.drlatulane.org

[2] The official Food Security Survey Report was formally released by CNSA in March 2012.

[3] A threshold of 6/7 was applied to the GHQ-12 score (binary method). The mean score was also applied in contexts where no threshold was applied (see references above). The mean score at the national level was 3.9, and among camp residents the mean score was 5.9. The camp mean at threshold 5/6 would yield a prevalence of psychological stress of 46% among camp residents, 30% among non-camp residents in the directly affected area, 27% in the non-directly affected areas and 29% nationally. The national mean at threshold 3/4 would yield a prevalence of 68% in camp populations, 49% in non-camp populations in the directly affected areas and 48% in the rest of the country.

[4] A threshold of 25/26 was applied to the eight-question score (value range of 8 to 40).

[5] To ensure that the results reflected the general well-being of the individuals interviewed, the indicator was tested against the simple question "When reflecting on your own personal situation, how satisfied are you with your life in general?" The results indicate that the prevalence of the adult population with poor well-being presented in this report is likely to be underestimated. A ROC analysis (un-weighted data) was run on the 8-question well-being index score, testing against the 0/1 indicator of general life satisfaction (not totally/not at all satisfied with life in general = 1, neutral/more or less/totally satisfied = 0). The area under the curve was 0.816. At the threshold of 25/26, the sensitivity was 0.319, and 1, minus specificity, was 0.037. This indicates that there were many false negatives at this threshold, but very few false positives, and as such, the threshold provided a conservative estimate of the prevalence of poor well-being.

[6] t-test: Psychosocial (p<0.001), security (p=0.005), coping behaviors (p <0.001), debt and credit (p <0.001), wealth (p<0.001)

[7] t-test: Community networks (p = 0.007)

[8] t-test: Human capital (p=0.423)

[9] A PCA was used to combine the indicators (food consumption score, number of assets, percent of expenditures on food, natural log of total expenditures per capita (gourdes) and whether the household currently has savings) and the first component was retained as the composite wealth dimension score. The first component had an eigenvalue of 2.217 and accounted for 44.377% of the variance in the data. The other components had eigenvalues of less than 1.

[10] There were no significant differences in the percent of expenditure on food between camp and non-camp households in directly affected areas.

[11] A PCA was run on the indicators listed. The first component had an eigenvalue of 2.41, accounted for 48.2% of the variance and was retained as the composite debt score; however, a second component had an eigenvalue of 1.45, accounting for 29.0% of the variance. The second component accounted for variation in which households reported purchasing food on credit in the past month, non-food items on credit in the past year, and a higher percent of food sources coming from credit in the past week, but that had not solicited credit in the past year and had not accumulated debt in the past year. A rotated PCA more strongly highlighted these two separate components, the second component accounting for much of the variation in the solicitation of credit and accumulation of debt. However, the unrotated analysis accounted for much of the variation in all indicators in the first component, and so was conserved as the overall debt/credit composite score.

[12] The team controlled for wealth either using the continuous wealth index, or the wealth index quintiles, to allow for the fact that the relationship between wealth and the debt/credit score may not be linear.

[13] The reduced CSI (inverse), the number of coping mechanisms used in the past year (out of 34 coded) and the number the household could envision using in the future if the situations worsens (out of 34 coded), were combined through a Principal Component Analysis. The first component, which had an eigenvalue of 1.664 and accounted for 55.46% of the variance in the data, was retained as the composite score. The other components had eigenvalues of less than 1.

[14] The three indicators were combined using PCA. The eigenvalue of the first component was 1.219 and the first component accounted for 40.6% of the variance in the data. The other components had eigenvalues of less than 1.

[15] The dependency percent is calculated for each household by dividing the number of dependents (defined as under 18 or over 60) by the total number of people in the household.

[16] The evaluation team analyzed this using multiple linear regression; the dependent variable was human capital composite score. Independent variables included urban/rural, camp/non-camp and female headed/male headed households. The adjusted r2 for the model was (p<0.001). The partial t-test in this model contrasting male vs. female headed household was statistically significant: (p<0.001).

[17] A PCA was run on the three described indicators. The first component had an eigenvalue of 1.722 and accounted for 57.4% of the total variance. However, since indicators used were all categorical, many households (62%) had the same first component value, indicating they gave the same answer to the three indicators included.

[18] Associations surveyed include religious associations/groups, unions, cooperatives, traditional saving groups, women's groups, agriculture or livestock work associations, school committees, civil protection (DPC) groups, camp committees, other humanitarian activity groups and "other."

[19] To address the issues concerning theory based positive impacts of community networks, a series of analyses were conducted to measure the impact of community networks on various resilience, food security and psychological status measures, while controlling for a variety of geographical factors. The data indicate that the composite community networks score was a positive predictor of improved food consumption (food consumption score), improved psychological status (GHQ-12), improved well-being (WBI) and greater asset wealth. This analysis suggests that the composite community network score served as a measure of overall resilience.

[20] Statistically significant, p<.0001

[21] Although IOM conducted an evaluation of psychosocial needs in the earthquake's immediate aftermath by "brainstorming with community leaders," a comprehensive assessment was not carried out due to capacity constraints.

[22] Though the Government of Haiti and Haitian NGOs were used as implementing partners, they were not able to receive funding directly.

[23] Roughly one-third of respondents to the psychosocial sections were men; however approximately one half of households identified as being headed by a male.

[24] The pattern holds true in the rest of the country as well: Ninety-three percent of respondents in the non-directly affected areas indicated that they were "more or less," or "totally satisfied."

[25] The household and key informant data on access to assistance does not provide an accurate measure of coverage of humanitarian assistance as they were self-reported.

[26] The propensity score methodology was used to provide unbiased estimates of effects of humanitarian assistance treatment. To control for differences between households based on possible targeting criteria for humanitarian assistance, the probabilities of receiving assistance based on geographic and household characteristics were calculated and controlled for.

[27] Analysis in this section used un-weighted data from households living in the directly affected areas.

[28] Independent variables tested in the logistic regression model included camp and non-camp, urban and rural, wealth index, natural log of total expenditures per capita, wealth index quintile groups, sex of the head of household, dependency percent, displacement status (out of neighborhood of origin), households hosting displaced people and presence of one or more adult (18 years or older) member of the household incapable of working.

[29] This logistic regression model used the following independent variables: sex of the head of household, dependency percent, displacement status (out of neighborhood of origin), households hosting displaced people, presence of one or more adult (18 years or older) members of the household incapable of working and cluster code.

[30] This model gave a pseudo r2 of 0.602. The mean predicted probability of receiving assistance among households that did receive assistance was 0.602, and among those who did not receive it, it was 0.122

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