WHAT DID WE LEARN?

The Shelter Response and Housing Recovery in the First Two Years after the 2010 Haiti Earthquake

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Foreword

The World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR) and their partners, the International Federation of the Red Cross and Red Crescent Societies (IFRC), UN-Habitat, and Habitat for Humanity International, joined forces in 2013 to analyze what was learned from the 2010 Haiti earthquake shelter response and housing recovery experience. This report is the outcome of that process. It is based on candid conversations and reflections among the people and organizations that helped shape and deliver the international community's urban shelter and housing assistance programs following one of the major urban disasters of recent times.

This report is not a formal evaluation, but rather a synthesis of the experiences, observations, and recommendations of a large group of experienced post-disaster shelter and recovery experts gathered from interviews, surveys, and direct discussions, and information derived from a desk review of the wide variety of available evaluations and reports.

The shelter response and housing recovery efforts in Haiti during the first two years after the earthquake have been widely scrutinized. There is certainly much that could be questioned—with respect to timeliness, policy orientation, equity, and cost-effectiveness. There were also aspects of these efforts that worked well, despite some initial delays. Lessons learned have already been incorporated in subsequent post-disaster recovery responses and have motivated organizational reforms.

It has become almost a cliché to say that we live in an increasingly vulnerable world. Haiti embodies many of the factors that contribute to global vulnerability: it is rapidly urbanizing, low-income, hampered by fragile governance mechanisms and institutions, supported by an economy that is largely informal and that exhibits extreme disparities, and highly dependent on its external partners for both social and economic support. Worldwide, population growth and unplanned urbanization in the fragile cities of developing economies, combined with the impacts of climate change, are causing a concentration of urban risk.

Helping the countries most at risk become more resilient and better prepared for more effective urban crisis response is a collective responsibility. We hope this report can contribute to that effort.

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Preface

Kay koule twompe soley soley men li pa twompe lapil.
A leaky house can fool the sun, but it can't fool the rain. (Haitian proverb)

Many of us left Haiti after our completing our work on post-earthquake recovery with feelings of regret. These regrets had much to do with leaving Haiti and its people behind. But they had also to do with our acknowledgment that the results we had accomplished did not reflect the effort we had made.

Moreover, we faced criticism from some Haitians and perplexed questions in our home countries that we sometimes struggled to answer: "Where did the money go?" "Is there as much corruption as they say?" "Why couldn't they do it themselves?" "Why did you stay so long?" "Why did you leave so soon?"

These questions, and many others that we asked ourselves, do not have easy answers. Perhaps the experience should be stored away with the files and mementos we brought back. But for some of us, examining the experience in detail, and discussing it collectively, seemed like it could be useful both to ourselves and to others who may participate in future recovery efforts.

The agencies involved in this initiative, led by the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR), graciously provided the time and resources to allow this analysis to be carried out. The Steering Committee provided invaluable support. A large number of individuals and organizations, Haitian and foreign, gave their time, feedback, and materials (see the Acknowledgments).

Hopefully this report conveys the good intentions that motivated the work on recovery in Haiti, while explaining how it was often undermined by the complex situation that faced Haitians and external actors alike. It describes successes and failures, including the difficulty of thinking long term while dealing with so many urgent requirements. It shows how, in the effort to show results, equity and accountability were too often sacrificed. And it demonstrates that urban disaster recovery will require new approaches and skills.

This is one of many reports produced by agencies hoping to better understand the impact of their involvement in Haiti in the aftermath of the devastating January 2010 earthquake and how to apply the lessons taken from this experience to future recovery programs. My hope is that it contributes something uniquely useful, and that the observations, findings, and recommendations included here will be taken in the constructive spirit in which they are offered.

Priscilla M. Phelps
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Acknowledgments

Acronyms

16/6	Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps
AFD	Agence Française de Développement
APNRDH	Action Plan for National Recovery and Development of Haiti
BBB	Building Back Better
BMPAD	Bureau de Monétisation des Programmes d'Aide au Développement (Office of Monetization of Development Aid)
CBO	Community-Based Organization
CCCM	Camp Coordination/Camp Management
CHAP	Consolidated Humanitarian Appeal
CIAT	Comité Interministériel d'Aménagement du Territoire (Interministerial Committee for Territorial Planning)
CIDA	Canadian International Development Agency
CNGRD	Comité National de Gestion des Risques et des Désastres (National Risk and Disaster Management Committee)
CNIGS	Centre National d'Information Geo-Spatiale
DALA	Damage, Loss, and Needs Assessment
DGI	Direction Générale des Impôts (General Tax Office)
DRF	Disaster Recovery Framework
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DTM	Displacement Tracking Matrix
ECAP	Emergency Community Assistance and Planning
EERI	Earthquake Engineering Research Institute
EPPLS	Entreprise Publique pour le Logement Social
ER	Early Recovery
ERC	UN Emergency Relief Coordinator
EU	European Union
FAES	Fund for Economic and Social Assistance
FTS	UN OCHA Financial Tracking Service
G11	Group comprising the EU, World Bank, Inter-American Development Bank, International Monetary Fund, United Nations, Canada, Spain, France, the United States, Japan, and a rotating representative of Argentina, Brazil, and Chile
GC	Global Communities
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GPS	Global Positioning System
HCT	Humanitarian Country Team
HFHH	Habitat for Humanity Haiti
HFHI	Habitat for Humanity International
HLPWG	Housing Land and Property Working Group
HNRSP	Housing and Neighborhood Reconstruction Support Program
HRF	Haiti Reconstruction Fund
HSDP	Haiti Strategic Development Plan
IASC	Inter-Agency Standing Committee
IDB	Inter-American Development Bank

IDP	Internally Displaced Person
IFRC	International Federation of the Red Cross and Red Crescent Societies
IHC	Interministerial Housing Commission
IHCSR	Interim Haiti Commission for Shelter and Reconstruction
IHRC	Interim Haiti Recovery Commission
IHSI	Institut Haïtien de Statistique et d'Informatique (Haitian Bureau of Statistics)
ILO	International Labor Organization
INA	Integrated Neighborhood Approach
IOM	International Organization for Migration
MAST	Ministry of Social Affairs and Labor
MEF	Ministère de l'Economie and des Finances (Ministry of Economy and Finance)
MICT	Ministry of Interior and Local Government
MINUSTAH	UN Stabilization Mission in Haiti
MPCE	Ministère de la Planification et de la Coopération Externe (Ministry of Planning and External Cooperation)
MTPTC	Ministry of Public Works, Transport, and Communications
NDC	Neighborhood Development Council
NGO	Nongovernmental Organization
NRHRF	Neighborhood Return and Housing Reconstruction Framework
OCHA	UN Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
OFDA	Office of U.S. Foreign Disaster Assistance
OSE	UN Office of the Special Envoy for Haiti
PCI	Project Concern International
PDNA	Post-Disaster Needs Assessment
PMC	Project Management Contractor
PNGRD	Plan National de Gestion des Risques et des Désastres (National Risk Management Plan)
PPR	Plan de Prevention des Risques (Risk Prevention Plan)
PREKAD	Port-au-Prince Neighborhood Housing Reconstruction Project
PRODEPUR	Urban Community-Driven Development Project
RRS	Return and Relocation Strategy
RSCG	Rental Support Cash Grant
SAG	Strategic Advisory Group
SILQ	Système d'Information du Logement et des Quartiers (Housing and Neighborhoods Information System)
SNGRD	Système National de Gestion des Risques et des Désastres (National Disaster Risk Management System)
SPDH	Strategic Plan for the Development of Haiti
SPGRD	Secrétariat Permanent de Gestion des Risques et des Désastres (Permanent Secretariat for Disaster Risk Management)
TWIG	Technical Working and Information Group
U.S.	United States
UCLBP	Unité de Construction de Logements et de Bâtiments Publics (Housing and Public Building Construction Unit)
UN	United Nations
UNDP	United Nations Development Programme
UN-Habitat	United Nations Human Settlements Programme
UNOPS	United Nations Office for Project Services
USAID	U.S. Agency for International Development
WASH	Water, Sanitation, and Hygiene

All dollar amounts are U.S. dollars unless otherwise indicated.
Figures without source information are based on the survey conducted for this report.

Photo credit: World Bank

Executive Summary

The Haiti Earthquake:
Unprecedented Damage in an Urban Context

When Haiti was hit by a 7.3 magnitude earthquake at approximately 5:00 pm on January 12, 2010, the effects were stunning: hundreds of thousands of people dead or wounded and damage to buildings and infrastructure later estimated at $7.8 billion, a figure that exceeded the country's entire gross domestic product (GDP). Housing was the sector most affected, with total damages estimated at $2.3 billion.

Disaster risks in Haiti were well understood, but the country was not prepared for an event of this scale. Listed by the World Bank as a natural disaster hotspot, with particular exposure to seismic and hydro-meteorological hazards, Haiti is one of the most vulnerable countries, due to such factors as topography, environmental degradation, poverty, and uncontrolled urbanization.

The Post-Disaster Needs Assessment (PDNA) estimated that 1.5 million people were directly affected by the earthquake. Around 105,000 buildings were destroyed and more than 208,000 were damaged. Educational buildings, hospitals, and health centers were lost, as were the presidential palace and the buildings of parliament, the courts, and many ministries.

While the earthquake affected the entire country, Haiti's urban areas were especially hard hit. There was widespread physical destruction in the Port-au-Prince metropolitan area and in cities in the southwest and southeast parts of the country.

The Challenge of Response and Recovery:
Planning and Coordinating in the Absence of Policy

International assistance was offered to Haiti following the earthquake at a level not seen since the 2008 Indian Ocean tsunami. The Inter-Agency Steering Committee (IASC) immediately mobilized the cluster system, and a flood of financial and technical assistance began to arrive.

In the immediate aftermath of the earthquake, the focus was on the humanitarian crisis, but by the time the donor pledging conference was convened at the United Nations (UN) in New York in March 2010, the Interim Haiti Recovery Commission (IHRC) had been created, and attention turned to the reconstruction and recovery effort.

The 2010 Haiti earthquake recovery demonstrated that, in spite of the level of assistance made available, good recovery from a major disaster does not just happen. It depends on important decisions being made at critical moments, and on diligent planning and coordination among all involved.

The Shelter Response:
Laudable Efforts in the Early Weeks and Months

The emergency shelter response following the January 12, 2010, earthquake was successful. A straightforward initial "Shelter Sector Response Plan" was developed by the Shelter and Non-Food Items Cluster (hereafter referred to as the "Shelter Cluster") that had been established by the IASC. The plan had three clear objectives—emergency shelter within three months, before the hurricane season; full transitional shelter within 12 months; and plans for durable shelter for the entire affected population developed within 12 months—and was supported by both the Haitian government and the international community. The original emergency shelter goal of providing emergency shelter for 100,000 families before the hurricane season was met. The success factors included a strong mobilization effort and implementation capacity, the early coordination framework, and agreement on the three objectives.

In the early months, Haitians and international actors worked in concert. After initial effective collaboration, overall coordination weakened as a result of, among other things, lack of familiarity by Haitian actors with the IASC cluster system and a failure of clusters to adapt to Haitian requirements; limited government resources to coordinate with numerous international actors, since many interactions took place outside of cluster coordination; turnover and instability in the cluster system itself; discontinuity in decision making during the election and early post-election periods; and language and cultural barriers.

The initial shelter strategy was not adjusted sufficiently as the situation evolved. While the IASC cluster system was fully activated in Haiti, there was significant variation in capacity from one cluster to another and weak inter-cluster coordination, which contributed to the fragmentation of the response. Further, the clusters were humanitarian mechanisms that had no mandate for housing recovery and reconstruction. Decision making on the recovery approach needed to come from the government. With no government platform assuming responsibility for recovery coordination and planning, the transition from shelter to recovery faltered.

Ultimately, shelter resources were concentrated on two options: camp support and a massive "T-shelter" program. These two options reflected more what agencies could provide than what the population needed, preferred, or was capable of doing for itself. The T-shelter strategy, and the disproportionate funding it absorbed, supported property owners more than renters, since T-shelters required access to land. Miscalculating the capacity for self-recovery and the resilience of the urban property market resulted in an underfunding of solutions for renters and landlords, for hosting arrangements, and for support to safe self-recovery.

The humanitarian shelter and housing recovery strategies needed to be developed jointly, with the government. Doing so would have ensured that the two phases reinforced each other and that they were manageable and managed by the government. Better knowledge of the housing culture in Haiti and better analysis of how the shelter strategy would affect recovery and would ultimately wind down could have contributed to a shorter humanitarian phase that transitioned more effectively to housing recovery. Instead, the humanitarian phase continued for years after the earthquake.

Housing Sector Recovery:
Households and the Informal Sector Led Housing Recovery

The government had no policy framework on which to base the housing reconstruction strategy. There was also no agency of government to which the responsibility for planning and coordinating housing recovery would have naturally fallen. Housing reconstruction planning required clarity about reducing disaster risk, a topic never systematically addressed by national agencies.

Debates ensued over relocation versus rebuilding in place. Project proposals overemphasized the need for agencies to build housing, rather than to create the conditions for housing recovery. Time was lost analyzing fundamental housing recovery issues.

There was a scarcity of data for planning housing reconstruction. By late 2010, as the result of building safety assessments overseen by the Ministry of Public Works, Transport, and Communications (MTPTC), there were good data on building conditions, but there were limited data on affected households, except for those in camps. While the range of situations of households was understood (renters versus owners, types of displacement, etc.), there was no guidance on which households or types of households should be helped first, and in what way. It was not until 2012 that the Système d'Information du Logement et des Quartiers (Housing and Neighborhoods Information System) was launched by the Centre National de l'Information Géo-Spatiale (National Geospatial Information Center) with support from the Housing and Neighborhood Reconstruction Support Program (HNRSP). This will be useful data for future disaster recovery planning, but most recovery aid had already been programmed by the time the data were available.

Household self-recovery was the predominant form of recovery. Large numbers of affected Haitian households displayed their characteristic resilience and found housing solutions on their own. Self-recovery of housing was the principal method utilized by households in the first two years. This included repair and continued occupation of damaged buildings, rebuilding by households with the financial means, and acquisition of owned and rented housing through normal housing market forces. Market-based options grew to include renting out T-shelters and shelters in internally displaced person (IDP) camps.

Put another way, the informal sector was the biggest player in housing recovery. Housing construction in newly settled informal areas, housing repair and reconstruction in informal urban neighborhoods, and non-permitted construction of new rental units throughout the country were three major sources of housing units for those displaced by the earthquake. While agencies aspired to promote higher housing standards and to formalize housing production activities, the existing informal system set about providing housing for the displaced population.

Disaster Risk Reduction in Recovery:
The Challenge of Mainstreaming Disaster Risk Reduction

The earthquake created a renewed awareness of the need to strengthen disaster risk management (DRM). Although significant work on DRM had taken place in Haiti before the earthquake, the urgency of additional institutional strengthening became clear to everyone afterward. Areas to strengthen include, among others: (i) the capacity of national DRM agencies and local governments in disaster risk reduction (DRR) and recovery (in addition to disaster response), (ii) the engagement of civil society and the scientific community in DRR policy, (iii) the norms and capacity for risk-informed urban planning, (iv) architectural and construction sector capacity for safe building, and (v) enforcement of building codes and construction supervision.

The building safety assessment process was successful and provided data that were used in unanticipated ways. In March 2010, MTPTC launched the building safety (or habitability) assessment process to assess the condition of all buildings in the earthquake-affected area. The assessment process demonstrated that, with adequate assistance, a high-quality assessment process can be conducted even when technical experience is limited. While the focus was on speed and consistency, greater attention might have been paid to communications and the collection of additional information, given the multiple uses for which the data were later used.

There were significant efforts to improve construction methods, but the related knowledge didn't reach important target groups. The government worked on critical DRR issues with external assistance following the earthquake: guidelines for repair and construction of small masonry buildings were completed by January 2011, retrofitting guidelines were published in 2012, and significant resources were dedicated to training masons in improved building methods. These masons then found work on many donor projects. Nevertheless, the benefits of these efforts were not fully realized because the guidelines were not widely distributed and little effort was made to require production of the quality construction materials that the guidelines called for. While many masons were trained, few were involved in self-recovery projects, where their expertise could have improved the safety of the majority of houses that were built or rebuilt by families themselves.

Assistance to the government did not sufficiently strengthen its regulatory capacity. Technical support on reconstruction guidelines, building codes, training, and related matters was welcomed by government agencies. While this assistance helped build short-term technical capacity, government's enabling and regulatory roles in DRR were rarely strengthened by these efforts.

Without a strong lead agency for DRR, government policy on DRR in recovery was unclear in the first two years, even within the government, and DRR in recovery was implemented in a somewhat ad hoc manner. One result of this leadership gap was that no agreement was ever reached on what key concepts such as "building back better" (BBB) and "acceptable risk" meant in the Haitian reconstruction context.

DRR standards should have been more widely communicated and self-enforcement promoted.
Instead of being promulgated through minimal but credible norms and regulations, the DRR imperative
was pursued almost exclusively on a project-specific basis. The policies applied were based on good
international standards, but they benefited only a small percentage of the affected population. In
effect, DRR was treated as a "private good," not a "public good" accessible to all.

Given that most households were not assisted by any reconstruction project, but instead recovered on
their own, much more emphasis should have been put on making DRR a public good: communicating
DRR messages, regulating the quality of construction inputs, and promoting self-enforcement of
safe building practices at the household level. This communication program could have begun
with engineers carrying out the building safety assessments, since they visited every affected
neighborhood. Using conditional financing to incentivize safe construction practices—an international
good practice—should also have been much more extensively employed.

Post-disaster DRR policy needed to have been established in advance. The post-disaster period
is not the right time for DRR research or policy making; it must be done before a disaster strikes.
In addition, responsibility for DRR must be clearly assigned. While the disaster motivated donors
to provide more support to the Système National de Gestion des Risques et des Désastres (SNGRD)
(National Disaster Risk Management System), recovery policy was not within its mandate. Haiti has
established a number of good DRR practices as a result of the earthquake recovery, but most still need
to be codified in national policies or regulations.

Land and the Urban Context:
Managing the Spatial and Economic Dimensions of Urban Recovery

The urban nature of the earthquake had wide-ranging effects on recovery. Government and
development partners were unprepared for the spatial, physical, and institutional challenges
associated with recovery from such a large-scale urban disaster as the earthquake. Weaknesses in
urban planning, land management, and development regulation; difficulty in removing rubble; and lack
of space for emergency shelters and transitional housing were all issues specific to the urban context
that affected the pace of recovery decision making, the relevance of prior experience, and the speed of
implementation.

Initially, urban economic realities and their impact on recovery were not well understood. The
nature of economic vulnerability and the cash economy, and their implications for recovery, were not
well understood by many recovery actors. Agencies were not always prepared for such situations as
families occupying both housing and camps or the exploitation that took place between those with and
without income or among gangs. While agencies came to understand urban survival strategies and how
they affected their recovery projects, in some cases these dynamics caused the abandonment of agency
interventions. Tools to more carefully assess the urban economy, its incentives, and the implications
for urban recovery interventions should be employed early in future urban disasters.

Agencies and government used reconstruction to improve neighborhoods. Realizing that
rebuilding housing was not enough, agencies turned to the "integrated neighborhood approach"
(INA) for reconstruction in existing neighborhoods. Community planning, never employed before the
earthquake, was seen as the best way to organize INA. Agencies that were involved in community
planning coordinated with both the national government and local governments and standardized

their methods. Early community planning pilots helped the government develop replicable community planning and neighborhood upgrading models in the Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project that can have important long-term urban development benefits for Haiti. An institutional framework will be needed for these activities, so that the capacities developed and outputs produced will be built on in the future.

The time required for larger-scale planning was incompatible with the need to accelerate recovery. Government and external agencies agreed on the importance of using the recovery process to advance strategic development goals, but disagreed on the cost of delaying recovery to take time for urban planning. Even so, the plans that were prepared after the earthquake, such as those for downtown Port-au-Prince, have the potential to positively influence future development in the country, as does the National Housing and Neighborhood Strategy, approved in 2012. However, what was more critical in the first two years, which was never put in place, was an urban planning framework that could have increased the coherence of recovery projects at the local level and guided newly urbanizing areas, in order to maximize the contribution of these initiatives to strategic urban development goals.

Land-related challenges consumed enormous resources and greatly affected recovery outcomes. The weakness of land regulation and tenure in Haiti may have contributed more than any other factor to the disaster. Attempting to address such conditions as informal ownership and the lack of records affected both the quality and the timeliness of international housing-related interventions and absorbed significant resources in new settlements projects. Addressing the lack of tenure security of most Haitians should be a national priority, and could be viewed in itself as a DRM strategy, since secure tenure encourages households to invest in such activities as retrofitting and safer construction.

The participation of mayors and neighborhood residents and groups in recovery built local capacity that should be sustained. Resilience means having local systems capable of recovering from future shocks. A goal of any recovery program should be to strengthen systems for engagement and mutual support, including the planning and management capacity of the people involved. Haiti has slowly built rural capacity in aspects of DRM such as preparedness, but building capacity in the urban context is more complex. Significant efforts were made to engage local actors (e.g., mayors and neighborhood residents and groups), including through community platforms. These nascent efforts require evaluation and continued support to ensure their sustainability.

Recovery Financing:
Leveraging Scarce Resources to Stimulate Maximum Recovery

Uncertainty about how to finance housing recovery began with the PDNA. The donor-led PDNA and the government-led Action Plan for National Reconstruction and Development of Haiti (APNRDH) reflected significantly different ideas of what government's role would be in financing housing recovery. For example, the PDNA assumed the government would finance the contingent liability of housing reconstruction for low-income Haitians, whereas the government assumed a combination of humanitarian funds and credit would be used. The PDNA assumed repair and reconstruction in situ would be major cost items, whereas the APNRDH assumed the major costs would be for land acquisition and infrastructure for major relocation sites.

A housing sector recovery framework was needed to reconcile differences and to provide the basis for programming housing recovery funding. The APNRDH was not translated into a financing plan, so the differences between the PDNA and APNRDH were never addressed. Absent this reconciliation, agencies with funding were on their own to design housing interventions and program their funds. Many found costs rising as projects progressed, so the number of housing units declined, which resulted in fewer project beneficiaries.

IHRC and Haiti Reconstruction Fund (HRF) support for recovery financing was limited. These agencies were viewed early on as a system for approving financing for projects. But in general this was not true, since donor contributions to the HRF were quite limited and often earmarked for specific projects. As a result, most proposed projects submitted to the IHRC lacked financing and a number were not financeable, due to issues with design or the experience of project sponsors, or both. IHRC staff reviewed projects and made suggestions, but greater effort to assist sponsors to design more financeable projects and to raise financing would have been useful and might have helped more locally generated housing recovery initiatives prosper.

Tracking of agency financial commitments was not systematic in the IHRC or elsewhere. Good efforts established at the beginning of the recovery period to monitor the mobilization of recovery funds and coordinate humanitarian action were not sustained, making it difficult to monitor recovery expenditures and project outputs. With no systematic tracking, the collection of project data was limited, which undermined any effort to account to the Haitian people for the use of recovery funds.

Public and donor funds were rarely used to leverage private investment. Co-financing of construction with households, neighborhood groups, nongovernmental organizations (NGOs) (including local NGOs or diaspora groups), and the private sector was rarely tried in Haiti. Most public funds (including HRF funds) went to projects that were fully publicly funded, which ignored interesting opportunities for collaboration and leveraging.

At the same time, agencies downplayed the context and experience from other disasters to pursue various models for providing small-scale housing credit. Haiti had in place few of the conditions necessary to ensure the success of new credit programs for housing reconstruction, and worldwide post-disaster experience would generally discourage such initiatives. Nevertheless, numerous agencies attempted to set up credit programs. There were no results from these efforts in the first two years, but these initiatives should be analyzed over the medium term to guide similar efforts in future recovery programs.

Recovery Coordination and Capacity:
Gaps in Policy and Planning Affected the Entire Recovery Effort

Strategies for shelter and for housing recovery were considered separately. This disconnect between shelter and housing strategy was due to gaps in coordination between humanitarian and recovery actors and the predominance of funding mechanisms that supported one type of activity or another, skewed toward humanitarian shelter. The government was not prepared to communicate a clear national vision of recovery to the international community on which an exit strategy from the humanitarian phase could be based or to assume responsibility for the planning and coordination of recovery.

The lack of an overall reconstruction strategy caused the reconstruction effort to fragment.
There was a near consensus among national and international agencies about the issues that the reconstruction strategy needed to address. However, there was no government body with the mandate or influence to build on this consensus to develop a reconstruction strategy that would serve as the roadmap for all. Even the IHRC was not capable of serving this role, in spite of the involvement of major donors. Even though the international community recognized this situation, it was not capable of acting collectively to establish an effective system to support this critical government role.

With or without a strategy, agencies needed to complete fundraising and implement recovery activities. Having no strategy both simplified and complicated agencies' work. While there was no requirement to conform to government guidelines or priorities, each agency had to identify a place to work and define its own approach. The result was a proliferation of unique standards and approaches in individual housing-related projects and an inequitable distribution of the available resources.

The technical assistance provided to the government was fragmented. The lack of an overriding reconstruction strategy led each project sponsor to seek individualized advice from ministries on project design and implementation issues. Realizing that the government had limited capacity to manage this "one-off" approach, donors provided technical assistance to support housing-related decision making by government agencies. While relatively generous, this support was poorly coordinated and not strategic in its purposes. Only the HNRSP addressed the need for inter-institutional coordination by providing programmatic support to key agencies, but its impact was blunted by delays and institutional culture in both the UN and the Haitian government.

The transition from programmatic to project-based recovery made the results more unequal.
International donor support to Haitian recovery was generous. While financial commitments to housing recovery fell considerably short of the $3.2 billion reconstruction need estimated in the PDNA, they were still significant. However, the housing recovery model pursued in Haiti produced (and continues to produce) a small number of high-quality, relatively high-cost housing reconstruction projects. If these projects set new safety and quality standards that are maintained in the future, that will be a positive outcome.

Recommendations for the Future:
Learning from the First Two Years of Response and Recovery in Haiti

Recover resiliently
Plan recovery so that it serves as a bridge between humanitarian action and development and accelerates this transition. Maintain social capital and minimize urban displacement by reopening neighborhoods and adapting to informal systems. Commit to a goal of strengthening resilience through recovery and give preference to approaches that accelerate recovery from the current disaster while leaving central and regional governments, local governments, and communities more capable of coordinating with each other and managing future events. Accountability systems contribute to resilience by giving those at risk a voice in recovery decisions, so international agencies should make an effort to strengthen national accountability mechanisms and, at a minimum, model good accountability in recovery.

Recover strategically

Clear government direction on recovery both informs the affected population and ensures that partner investments contribute to strategic housing and urban development goals. Early designation of a lead agency for housing and urban recovery is key. A housing recovery plan provides a necessary framework for collaboration between central and local governments and partners. Recovery policies and arrangements established before a disaster make strategic recovery more likely.

Recover equitably

Governments should seek equity in recovery programs and favor approaches that encourage self-recovery, build up local institutions, and support solutions that can reach scale. This may mean discouraging "showcase" projects until minimal assistance for priority affected households is fully funded. Empower households and local actors by supporting participatory problem solving instead of providing ready-made solutions that limit options.

Recover safely

Understand the urban context and build on its dynamism. Promoting safe construction when most housing is provided by the market does not mean government becoming a homebuilder, but rather government focusing on removing barriers to safe construction practices. Disseminate guidance on reducing risk to acceptable levels widely and, if regulation is weak, encourage self-enforcement.

Recover (cost) effectively

Think holistically about recovery financing and use scarce public and donor resources in ways that leverage private investment, including that of households. Public investments in risk reduction and basic infrastructure are often enough to encourage private investment in housing, for example. Seek consistency in eligibility rules and levels of financial assistance. Encourage all funding sources to align programming with the recovery plan, and—to ensure accountability—track and report on results.

I. Introduction

A. Purpose of the Report

The response to the January 2010 Haiti earthquake has been in the spotlight ever since the disaster, and a significant number of evaluations and analyses have been disseminated in the years since.

This report is intended to help housing and shelter practitioners improve future post-disaster shelter responses and housing recovery programs and the integration between them. The report covers the shelter and housing responses in Haiti, and looks especially at how early decisions about sheltering affected the housing response. The analysis also covers other interrelated topics that heavily affected work on shelter and housing: disaster risk management (DRM), the urban context, and recovery financing.

The report served as an input to work of the Global Facility for Disaster Reduction and Recovery (GFDRR) to improve disaster recovery, in particular, the development of the *Guide to Developing Disaster Recovery Frameworks* (DRF Guide)[1]. Increasingly, disaster recovery frameworks are being prepared to use the information gathered and analyzed in post-disaster needs assessments (PDNAs) to plan post-disaster recovery and reconstruction programs. The DRF Guide is a tool to help governments carry out this planning process and to put pre-disaster recovery arrangements in place. It provides a framework for defining recovery policy, assigning roles and responsibilities, and establishing an inclusive process for planning and implementation.

Haiti was one of 10 countries studied in depth in developing the DRF Guide in order to assess its planning framework and recovery strategy.

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[1] GFDRR, 2015, "Guide to Developing Disaster Recovery Frameworks," https://www.gfdrr.org/sites/gfdrr/files/publication/DRF-Guide.pdf.

B. Development of the Report

The World Bank and GFDRR initiated a series of activities to consolidate the Haiti post-earthquake experience and to extract lessons for future post-disaster situations. This included formation of a Steering Committee composed of representatives from Habitat for Humanity International (HFHI), UN-Habitat, the International Federation of the Red Cross and Red Crescent Societies (IFRC), the World Bank, and GFDRR to guide the development of this report.

Annex 1 has a detailed timeline of events and key decisions made in the aftermath of the disaster. The process of putting this timeline together confirmed, for example, that certain key early decisions that greatly affected long-term housing and shelter recovery were heavily influenced by high-level decision makers, such as military personnel, unfamiliar with the dynamics of housing recovery.

The authors conducted a review of literature that included agency internal evaluations, third-party evaluations, documents on best practices, surveys of displaced people, and financial reports related to the Haiti housing and shelter response.

Forty-three organizations and 25 individuals responded to a survey prepared to gather information for the report, and approximately 30 organizations participated in face-to-face interviews. One version of the survey was provided to those who could answer on behalf of an organization that was active in Haiti after the earthquake. Another was provided to individuals who were actively involved and answered on their own behalf. Survey and interview results were incorporated into this report.

Forty technical experts who had worked with more than 25 organizations convened in Washington for a meeting in May 2013, to analyze the Haiti shelter and housing

experience. Invitees were selected to ensure a representative mix of institutional experiences; however, participants were not necessarily representing their organizations[2]. Participants also acted as peer reviewers for an early draft of this report.

C. First 24-Month Timeline

No one involved in the Haiti earthquake response and recovery had a complete understanding of what occurred, particularly in the first year. Few of those involved in the development of this report understood the numerous attempts at decision making, coordination, or programming.

A timeline developed while carrying out this analysis is included as Annex II. It includes key activities related to: national events, such as elections; government coordination; Inter-Agency Standing Committee (IASC) coordination; policy, planning, and financing; and implementation. Milestones were verified through interviews and agency documentation.

The timeline presents a revealing snapshot of the recovery effort. It also helps put in context many critical moments and sequences of events mentioned in the report. Some observations about the timeline follow.

Integration among activities. The structures set up to coordinate actors and facilitate decision making themselves did not always function in a coordinated and open manner. For instance, while the Shelter and Non-Food Items Cluster (hereafter referred to as the "Shelter Cluster") was already active when the PDNA and the Action Plan for National Recovery and Development of Haiti (APNRDH) were prepared, there was minimal communication between the teams working on these documents and

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[2]   Chatham House Rule was followed, and, as a result, participants were free to use the information received, but neither the identity nor the affiliation of the speakers, nor that of any other participant, is revealed in this report.

the clusters. Similarly, neither the government nor international agencies briefed the Interim Haiti Recovery Commission (IHRC) sector teams on the numerous planning and policy-making efforts that had already taken place before the IHRC started up. The government was committing funds to shelter and housing projects that were never reported to the IHRC. These types of situations undermined the efficiency and effectiveness of the shelter and housing response.

Continuity of and support for government efforts. The government made numerous efforts to establish coordination structures and to define recovery objectives, but these generally did not advance. Rather than identify and address the factors that were undermining leadership and management by the government, humanitarian structures were operated in parallel, which further weakened government authority. Uncertainties created by the electoral process and difficulties establishing a stable government weakened the government's response during a crucial period for both humanitarian action and recovery, from approximately mid-2010 to early 2012.

International shelter sector coordination. Numerous changes took place in international coordination structures over time, in staffing, lead agencies, and available resources. This was particularly the case with the Shelter Cluster. While these changes sometimes brought in new experiences and energy, they also created uncertainty about mandates, weakened coordination, and undermined efforts to work with the government. At the same time, it is important to acknowledge that the Shelter Cluster mandate did not go beyond transitional shelter.

Timing and assignment of critical decisions. The direction of the Haiti recovery process was determined as much by decisions that were not taken as by the ones that were. Giving too much influence in decisions to actors with little knowledge of housing recovery, such as military officials, set resettlement patterns in motion that will be very costly to mitigation in the future. Not designating a lead agency for housing recovery and not sanctioning any one of several proposed housing recovery strategies produced a fragmented, suboptimal recovery process and an inefficient use of recovery resources.

II. Overview of the Haiti Earthquake Shelter and Housing Response

A. The Context of the Earthquake Event

On January 12, 2010, at approximately 5:00 pm, an earthquake of magnitude 7.3 on the Richter scale hit Haiti for 35 seconds. The hypocenter of the earthquake was located at a depth of 10 km, while the epicenter was located near Léogâne, 17 km from the capital city, Port-au-Prince. The earthquake affected the entire metropolitan area of Port-au-Prince, as well as the cities of Jacmel in the southeastern part of the country, and Léogâne, Grand Goâve, and Petit Goâve in the southwest. It was the most powerful earthquake in Haiti in more than 200 years.

Although Haiti is known to be very vulnerable to natural disasters (the most important ones are seismic and hydro-meteorological) and the World Bank's Natural Disaster Hotspots study ranks Haiti among the countries with "the

highest exposure to multiple natural hazards,"[3] the destruction observed after the January 2010 earthquake was exacerbated by other contributing factors, such as topography, environmental degradation, poverty, and uncontrolled urbanization.

Haiti shares the island of Hispaniola, the second largest island of the Antilles, with the Dominican Republic. It occupies the western third of the island, with a surface area of 27,749 km^2. Its location makes the country vulnerable to seismic hazards that are caused by the interaction of the Caribbean and North American tectonic plates, as shown in the map in Figure 1.[4]

In addition, the country is exposed to hydro-meteorological hazards related to the

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[3] Maxx Dilley, et al., 2005, "Natural Disaster Hotspots: A Global Risk Analysis," http://hdl.handle.net/10986/7376.

[4] D.M. Manaker, E. Calais, A.M. Freed, S.T. Ali, P. Przybylski, G.S. Mattioli, et al., 2008, "Interseismic plate coupling and strain partitioning in the Northeastern Caribbean," Geophysical Journal International 174(3), 889–903, doi:10.1111/j.1365-246X.2008.03819.x

Figure 1. Map of Haiti and Its Environs
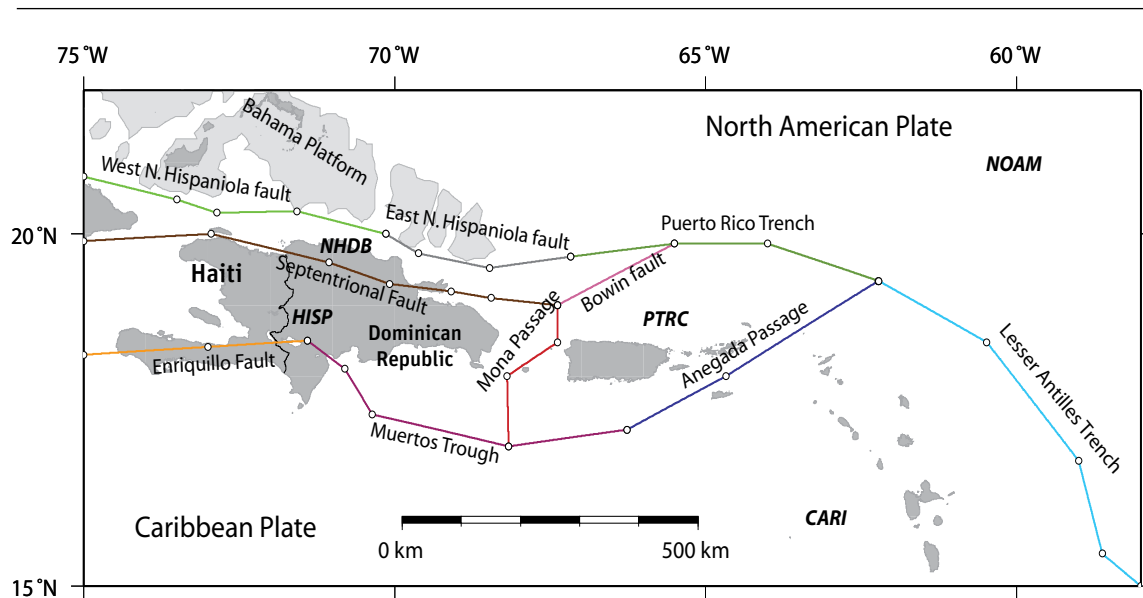
Source: Geophysical Journal International. Used with permission.

precipitation caused by northern polar fronts, tropical cyclones, the Inter-Tropical Convergence Zone, and convective-orthographic activity. El Niño/Southern Oscillation episodes affect Haiti by delaying the arrival of the rainy season, creating drought conditions, and increasing the number and intensity of cyclones. Other secondary hazards that have an impact in Haiti include landslides, torrential debris flows, soil liquefaction, and tsunamis.[5]

1. The Impacts of the Earthquake

The impacts of the earthquake were devastating. The Post-Disaster Needs Assessment (PDNA) estimated that roughly 1.5 million people were directly affected, more than 300,000 died, and similar number were injured.[6] In addition, around 105,000 buildings were destroyed and more than 208,000 were damaged. Over 1,300 educational institutions and more than 50 hospitals and health centers collapsed or were

unusable. The country's main port could not be used. The presidential palace and the buildings of parliament, the courts, and many ministries were destroyed. The monetary damages nationwide from the earthquake were estimated at $7.8 billion, more than 120 percent of the country's 2009 gross domestic product (GDP).

While the earthquake affected the entire country, Haiti's urban areas were especially hard hit. There was widespread physical destruction in the Port-au-Prince metropolitan area and in several other cities in the southeast and southwest.

The metropolitan area of Port-au-Prince. The Port-au-Prince metropolitan area includes the municipality of Port-au-Prince and the surrounding municipalities of Carrefour, Croix-des-Bouquets, Cité Soleil, Delmas, Kenscoff, Pétionville, and Tabarre. It has the largest agglomeration of people in the country. With an estimated 2.5 million people, the Port-au-Prince metropolitan area overshadows the other cities in its size and influence, and represents about 27.3 percent of the country's

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[5] Ibid.

[6] As a result of subsequent research, this figure is now generally considered to be a significant overestimation. The proposed figure on the order of 100,000 to 200,000 is still a catastrophic event.

population and 47.9 percent of its urban population.[7]

According to the displacement camp registration update issued by the International Organization for Migration (IOM) in October 2010, there were 891 camps housing displaced people in the metropolitan area, which included 262,851 families or a population of 1.1 million. This represented nearly 85 percent of the entire displaced population. Of this population, nearly 86 percent reported being located in a camp in the same commune and the same communal section as where they had been living. In addition, 19 percent were owners who believed that they could repair their buildings, 11 percent were owners who did not believe that they could repair, and 64 percent were renters.

Jacmel. Located 80 km from Port-au-Prince, the city of Jacmel is the capital and main city of the South-East Department, with a population of 43,906. The commune of Jacmel had a population of approximately 140,000 during the last census in 2003. Jacmel is a port city, located in the Bay of Jacmel, east of the La Gosseline River. Its economy is based on services and retail. The city is known as a tourist destination, especially during the carnival period and the Jacmel Film Festival. Tourists are also attracted by the vast array of handicrafts. As the administrative center of the department, Jacmel housed the government's departmental offices.

According to the mayor's office, 350 people in Jacmel lost their lives in the earthquake, 307 buildings collapsed, 11,131 buildings were too dangerous to occupy, and 4,589 buildings were damaged. The unaffected buildings represented less than 30.0 percent of all buildings in the city, and the destroyed and damaged buildings represented 16.6 percent of all buildings. As of the IOM registration update in October 2010, there were 21 camps housing displaced people

in Jacmel, which included 3,393 families with a population of 14,617.

Léogâne. The city of Léogâne, located in the West Department about 32 km from Port-au-Prince, was near the epicenter of the earthquake. Due to its location on the Gulf of Gonâve and in the fertile Léogâne Plain, Léogâne's economy is based on fishery and cultivation of sugar cane, fruit, and other crops. Léogâne served as an administrative center of the colony of Saint-Domingue. Léogâne was rebuilt after being destroyed by an earthquake in 1770.

An estimated 20,000 to 30,000 of Léogâne's 100,349 inhabitants were reported to have died in the earthquake and a large number of buildings were destroyed.[8] The IOM registration update in October 2010, identified 179 camps in Léogâne that housed 27,220 families, or a population of 94,645. A higher percentage of this population reported being owners than in Port-au-Prince, with 16 percent owners who could repair, 38 percent owners who could not repair, and 42 percent who were tenants.

Petit Goâve and Grand Goâve. The two towns of Petit Goâve and Grand Goâve are located in the West Department and are among the oldest cities in Haiti. The two towns were originally one, named Goâve by the Amerindians. After French colonization, the French divided the city into Petit Goâve and Grand Goâve. Petit Goâve, 72 km southwest of Port-au-Prince, had a population estimated at nearly 100,000 inhabitants at the time of the earthquake. In the earthquake, Petit Goâve was almost destroyed. The church, the state telephone company building, the mayor's office, a hotel, and scores of houses were destroyed. Residents estimated that at least 350 died.

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7   Institut Haïtien de Statistique et d'Informatique (IHSI), 2007, *Projections de population totale, urbaine, rurale et économiquement active.*

8   World Food Programme official quoting U.S. military report, in: Lisa Millar, January 2010, "Tens of thousands isolated at quake epicenter," ABC News, Australia.

Grand Goâve, with a population of approximate 68,000, is located closer to Port-au-Prince on National Route No. 2. The Grand Goâve River is located east of the town. The earthquake destroyed 90 percent of Grand Goâve's buildings, including public buildings, such as schools, city hall, and the police station.

As of October 2010, the IOM registration update counted 88 camps in Petit Goâve that included 10,423 families with a population of 42,704, and 53 camps in Grand Goâve that included 9,518 families with a population of 38,364.

As in Léogâne, a higher percentage of the displaced population reported being owners in these two towns than in Port-au-Prince, but the number of people with houses that could not be repaired was high. Of the population registered in Petit Goâve, 22 percent were owners who could repair, 23 percent owners who could not repair, and 50 percent reported being tenants. In Grand Goâve, 23 percent reported being owners who could repair, 36 percent owners who could not repair, and 37 percent were tenants.

2. The Socioeconomic Context

According to the Institut Haïtien de Statistique et d'Informatique (IHSI) (Haitian Bureau of Statistics), in 2010, Haiti had an estimated population of just over 10 million inhabitants, and a population density of 941 people per m^2 (359 per km^2).[9] As of the previous census, conducted in 2003, the population was slightly more rural than urban, with a strong urbanization trend. The population is young, with 35 percent of the population 14 years of age or younger in 2013 (versus 26 percent worldwide and 42 percent for all low-income countries). The infant mortality rate is high, at 55 per 1,000 live births in 2013 (versus 34 worldwide and 53 for all low-income countries), and the life expectancy is relatively low, at 65 years for women and 61 years for men in

2013 (versus 73 and 69, respectively, worldwide and 61 and 58, respectively, for all low-income countries).[10]

The Haitian economy is dominated by the tertiary sector (retail, the restaurant and hotel industry, transportation and communication, other trade and non-trade services), which makes up 58 percent of the country's GDP. The primary sector (agriculture, forestry, cattle, fishing, and extractives industries) contributes 25 percent of total GDP, and the secondary sector (manufacturing industries, electricity and water services, construction, and public works) comprises 17 percent of GDP.[11]

Much of the Haitian population lives in poverty. The World Bank has characterized the situation as follows:

> With a GDP per capita of US$656 in 2009, one of the lowest in the World, Haiti is also one of the most unequal countries in the World (Gini coefficient of 0.59). Over half of its population of 10 million was estimated to live on less than US$1 per day, and 78% on less than US$2 per day in 2001 (last available data). Any poverty gains from the country's average real growth of 2.2 % p.a. from 2004 to 2009 are likely to have been eradicated by the earthquake. The country ranks 158th out of 187 in the 2011 Human Development Index ...[12]

The informal economy represents about 90 percent of the Haitian economy and comprises mostly the unregulated micro, small, and medium businesses that provide employment for about 80 percent of the workforce. The informal sector generally provides "precarious working conditions, a reflection of low-productivity and lack of economies of scales."[13] Complicating the

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[9] IHSI, 2007.

[10] World Bank, 2013, *World Development Indicators, 2013.*
[11] Banque de la République d'Haïti, 2011, *Rapport Annuel 2010.*
[12] World Bank, 2012, *Haiti: Interim Strategy Note for the Republic of Haiti for FY13–FY14.*
[13] Office of the UN Secretary General's Special Advisor, 2013, "On Community-Based Medicine & Lessons from Haiti," http://www.lessonsfromhaiti.org/lessons-from-haiti/key-statistics/.

employment picture is an adult literacy rate of around 55 percent.[14]

The Haitian economy is dependent on remittances from the Haitian diaspora. Remittances represented 26 percent of the country's GDP in 2010 or $500 million.[15] Over a third of the adult population of Haiti with incomes below $500—over 1 million individuals—receive remittances from their relatives, mostly from the United States (U.S.).

Emigration has been a major factor in Haiti's development since the 1960s, although reliable data are not readily available. There were 535,000 Haitians in the U.S. in 2008, of whom 230,000 were lawful permanent residents.[16] According to the Inter-American Development Bank (IDB), the number of recorded Haitian migrants to the Dominican Republic is about 100,000, but Dominican officials estimate that there are about 1 million Haitian immigrants.[17] The other popular destinations for Haitian migrants are Canada, Guadeloupe, France, French Guiana, Bahamas, Cuba, and Martinique.

3. The Environmental Context

"Haiti" means "little mountain" (or "mountainous land") in the language of the Tainos/Arawaks, the native inhabitants of the island. Most of the country is occupied by limestone mountains with very marked gradients, bordered by small inland and narrow coastal plains (see Figure 2). The population density in Haiti, as well as the population's low standard of living, creates pressures on the environment, and explains in great part the rapid deforestation and other forms of environmental degradation that have occurred in the country over the past several decades.[18]

About 98 percent of the Haitian territory is deforested.

The average annual rainfall in Haiti is more than 1,300 mm. Hurricanes are a major threat because of both their direct effects (rain and wind) and their secondary effects (particularly floods and landslides.). During the last decade, Haiti has been hit by at least one major hurricane every year. In 2008, Haiti experienced four hurricanes. The risks of hydro-meteorological hazards are aggravated by the topography of the country, the deforestation, and the urbanization of the steep slopes. Torrential rains hitting steep deforested slopes cause landslides, erosion, and heavy sedimentation that clogs rivers and washes to the sea.

The fertile lands in the Cul de Sac Plain and other areas surrounding Port-au-Prince are becoming urbanized, reducing agricultural production areas for a growing population. This has contributed to the reduction of rainwater infiltration and increased the volume of surface water. Each year during the rainy season, hundreds of houses and their occupants are exposed to serious, sometimes fatal, flooding. This happens both on hillsides and in the lower floodable areas.[19]

Collectively, these environmental phenomena affect the health of watersheds and the environment in general, causing irreversible soil degradation, declining agricultural production, and a significant water deficit: 25 of the 30 watersheds are extremely eroded, which prevents the groundwater recharge that would help ensure the availability of water supplies during dry periods.

4. The Urban Context

The January 2010 earthquake was an urban disaster, as the most-affected areas were cities, including the Haitian capital, Port-au-Prince. In

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[14] Ibid.
[15] Dilip Ratha, 2010, "Helping Haiti through migration and remittances," People Move blog.
[16] U.S. Census Bureau, 2008, "American Community Survey."
[17] Jason DeParle, 2007, "Border Crossings: A Global Trek to Poor Nations, From Poorer Ones," The New York Times, December 27, 2007.
[18] World Bank, 2012, *Haiti-Disaster Risk Management and Reconstruction*.

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[19] Gérard Holly, 1999, "Les Problèmes Environnementaux de la Région de Port-au-Prince," Port-au-Prince: United Nations Development Programme (UNDP)/Ministère de la Planification et de la Coopération Externe.

Figure 2. Topographic Map of Haiti
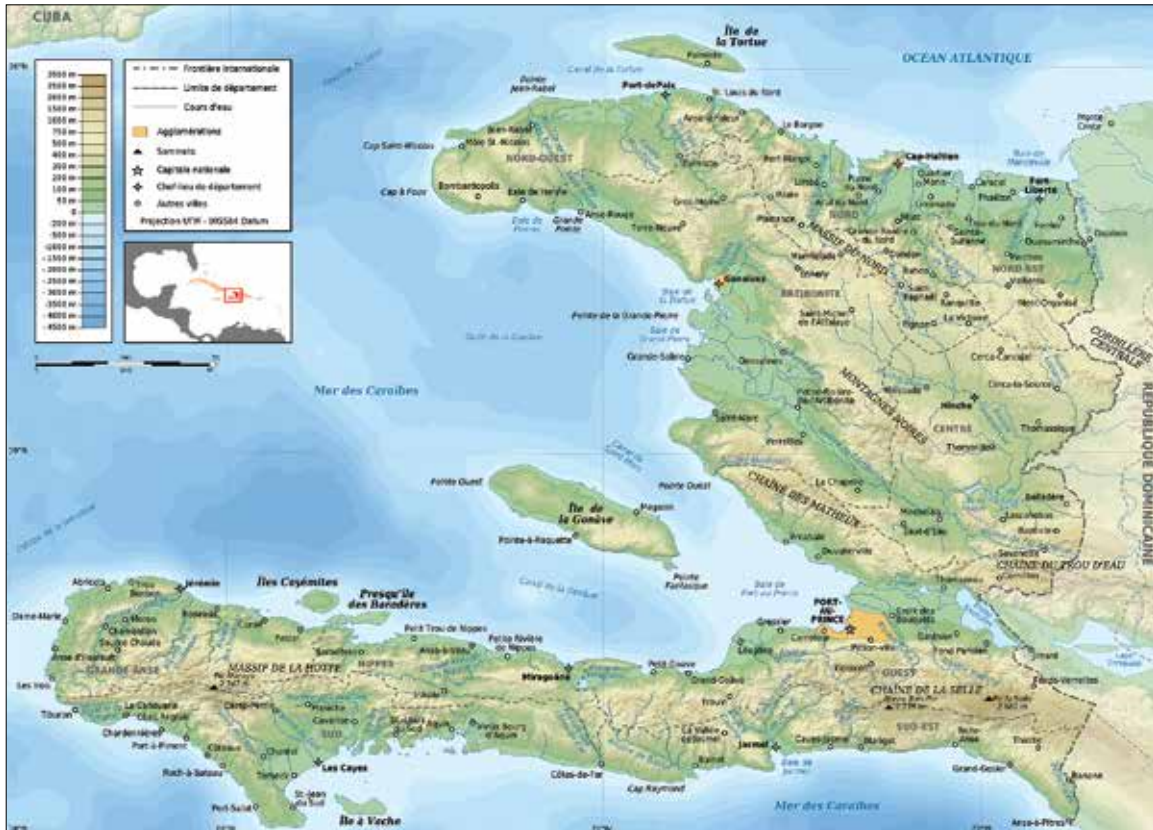
Source: Rémi Knaupp. Permission under Creative Commons, https://commons.wikimedia.org/wiki/File:Haiti_topographic_map-fr.png.

addition to the intensity of the earthquake, the urbanization process that Haiti is undergoing contributed significantly to the level of devastation. Urbanization is taking place in the socioeconomic context described above and in the absence of any significant planning or land use regulation.

The annual population growth rate between 1982 and 2003, the years of the last two censuses, was 2.5 percent for the total population, 1.0 percent in rural areas, and 5.8 percent in urban areas. The 2003 census showed that 47.8 percent of the Haitian population lived in urban areas and 52.2 percent in rural areas. In 1950, 12 percent of the population lived in urban areas.

In 2003, the economic activities of the Port-au-Prince metropolitan area represented 90 percent of the economy's secondary sector and 75 percent of the tertiary sector. As a result, it is

sometimes referred to as the "Republic of Port-au-Prince."[20]

Migrants come to the Port-au-Prince metropolitan area, and other cities like Jacmel, Léogâne, and Grand Goâve, from rural areas and other smaller cities in the country in an effort to escape poverty. Rural poverty is due to the destruction of the environment, overpopulation, lack of economic opportunities, and very limited access to basic services. Haiti's rural area has a high population density living on already fragile land. A recent study on poverty in Haiti showed that 90 percent of the poor inhabitants in the rural areas live on between $1 and $2 per day per capita. Fleeing the countryside is seen as one of the only hopes for Haitian peasants seeking to improve their living conditions.

[20] Georges Anglade, 1982, "Atlas Critique d'Haiti."

However, in reality, the unemployment rate is higher in urban areas than in rural areas, reaching 40 percent in urban areas compared to 33 percent in rural areas. Migrants who flee the impoverished countryside can face lower incomes in cities other than Port-au-Prince. However, household incomes in Port-au-Prince in 2007 were four times those in rural areas.[21]

Haitian cities are growing without the planning and regulation that would help ensure the availability of safe land and housing. The metropolitan area is a coastal plain surrounded by the Morne l'Hôpital mountain chain, which severely limits the availability of land for growth.[22] The trees and other vegetation that used to cover Morne l'Hôpital have almost completely disappeared, giving way to a spontaneous and anarchic urbanization occurring on both state-owned and private land. This unplanned urban growth has created vulnerabilities for both the physical environment and those who live in it.

Numerous plans had been produced for the cities affected by the earthquake, but without proper institutions and sufficient political will, they have remained largely unimplemented. Most housing for low-income households is supplied through the informal sector. As a result, the areas of extension of the Haitian cities have developed into slums with a very high building density and a lack of roads and formal urban services, such as water, sanitation, and waste management. In 1997, it was reported that 67 percent of the Port-au-Prince population lived on 22 percent of the city's inhabited area.[23]

Nationally, 58 percent of the population had access to water before the earthquake, but only 19 percent had access to improved sanitation facilities. In Port-au-Prince, 67.1 percent had access to safe drinking water, yet only 15.4 percent of households had water piped to their homes; most relied on public standpipes and water tanks. In Port-au-Prince, 29.2 percent of the population had access to a toilet inside their dwelling; others relied on shared toilets and 13.2 percent had no access to sanitation facilities at all.[24]

5. The Political Context

The year of the earthquake was the last year of President René Préval's second five-year term. At the time of the earthquake, there was relative political instability in Haiti, especially in comparison to the several preceding years.

In 2007 and 2008, the country experienced a series of riots to protest the dramatic increase in food and gas prices. Because of the government's inability to bring down food prices and restore peace, the senate dismissed Prime Minister Jacques Edouard Alexis in April 2008. In September 2008, Michele Pierre Louis was confirmed as prime minister, but was dismissed in late 2009, partly as the result of charges that she did not effectively manage the recovery effort following the 2008 hurricane season. Jean Max Bellerive became prime minister in October 2009.

Presidential, parliamentary, and senatorial elections were scheduled for February 28, 2010, but were postponed until November 28, 2010, because of the earthquake. Thirty-four candidates ran in the presidential election. Initial results were announced on December 7; however, protests ensued due to charges of intimidation at the polls and vote rigging. After a period of recounts and wrangling, during which the second-place finisher, Mr. Jude Celestin, withdrew, Mrs. Mirlande Manigat and Mr. Michel Martelly were announced as candidates for

21 Dorte Verner and Willy Egset, eds., 2007, Social Resilience and State Fragility in Haiti, World Bank.

22 Georges Corvington, 1991, Port-au-Prince au Cours des Ans (4 Volumes), Port-au-Prince: Henry Deschamps.

23 UNDP, 1999, Project HAI-94-003, Commission pour la commémoration du 250e anniversaire de la fondation de la ville de Port-au-Prince.

24 Duong Huynh et al., 2013, "Housing Delivery and Housing Finance in Haiti: Operationalizing the national housing policy,"

the runoff election, which took place on March 20, 2011. On April 21, 2011, Michel Martelly was declared the winner of the runoff, and he became the 56th president of Haiti on May 14.

The Martelly presidency started slowly. Parliament rejected Martelly's first two nominations as prime minister (Daniel Gerard Rouzier and Bernard Gousse) and finally, on October 5, 2011, confirmed Garry Conille to the post, 5 months after Martelly's inauguration and more than 10 months after the first round of voting. Conille resigned on February 24, 2012, amid conflict with his ministers and Martelly over a number of policy and governance issues. In May 2012, 18 months after the first round of elections, Laurent Lamothe succeeded Conille as prime minister.

The elections and delays in establishing the government made access to government officials more difficult for international agencies. Instability in the office of the prime minister, where many policy decisions are normally made

in Haiti, particularly affected the pace and direction of the reconstruction effort.

Two other political events threatened to destabilize the country's politics during the reconstruction period: the return of former dictator Jean-Claude Duvalier on January 7, 2011, after 25 years in exile, and the return from exile of former President Jean Bertrand Aristide on March 18, 2011. Ultimately, these events had minimal impact on the course of recovery.

6. The International Donor Context

Official Development Assistance has played a significant role in financing Haiti's development activities over the past decades, but had fluctuated notably in the years preceding the earthquake, ranging from a low of $714 million in 2006 to $2.1 billion (including nearly $1 billion in debt relief) in 2009, according to OECD data shown in Figure 3.

Figure 3: Composition of Official Development Assistance to Haiti, All Donors, 2005-2012, in millions of USD

	2006	2007	2008	2009	2010	2011	2012
■ Administrative costs	2	1	2	2	3	4	5
▢ Other and unallocated	17	45	42	42	100	81	71
▢ Debt relief	23	94	7	957	1,037	8	2
■ Country programmable aid (ODA)	543	588	680	928	1,320	1,052	912
■ Humanitarian and food aid	129	90	248	206	1,695	563	303
Total	714	818	980	2,136	4,156	1,708	1,293
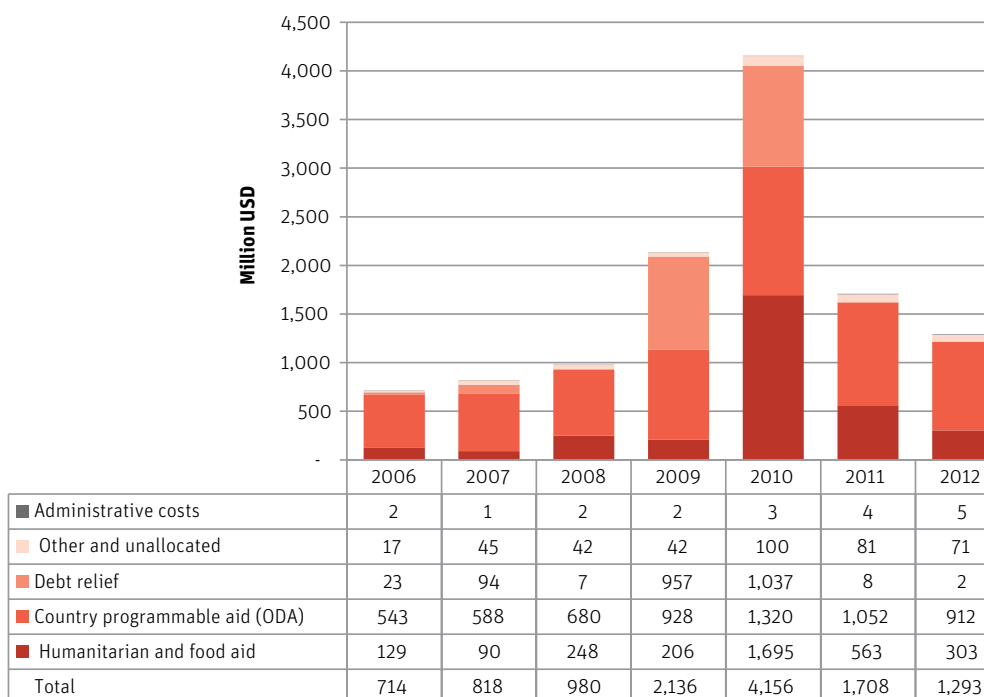
Source: OECD-DAC from Aid Flows database, www.aidflows.org.

**Figure 4: Humanitarian, Peacekeeping and Development Aid 2000-2008,
in millions of constant 2007 USD**
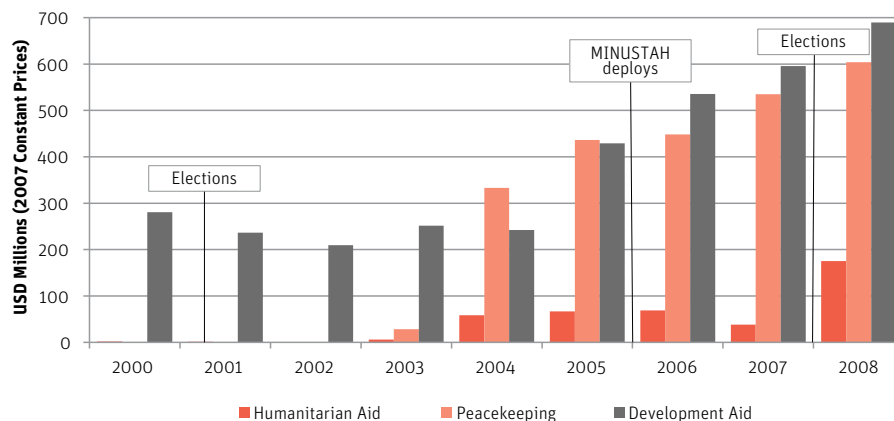
Source: OECD-DAC Online database and 'Annual Review of Global Peace Operations.'

Events such as tropical storms, elections, and civil unrest affected the level of external financing, as shown in Figure 4, which includes peacekeeping expenditures in addition to humanitarian and development aid.[25]

Many bilateral and multilateral donors provide support to Haiti, although the contributions of the U.S., Canada, and the Inter-American Development Bank have predominated over time. The average annual total disbursement of the top 10 donors to Haiti was $1,485 million for the period 2009-2013, compared to an annual average of US$775 in the prior two years (2007-2008), nearly a doubling of assistance in nominal terms. Table 1 shows the annual average disbursement of the top 10 bilateral and multilateral donors for these two periods.

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[25] Figures 3 and 4 are based on separate data sources and definitions, so annual data are not identical.

**Table 1: Average Annual Disbursement of ODA by Top 10 Bilateral and Multilatera Donors,
2009-2013 and 2007-2008**

Country Name	Average disbursements 2007-2008, in million USD	Share 2007-2008	Average disbursements 2009-2013, in million USD	Share 2009-2013
United States	230.97	30%	588.38	40%
Canada	133.39	17%	232.54	16%
IDB Special Fund	114.24	15%	173.56	12%
EU Institutions	107.65	14%	157.82	11%
France	56.92	7%	75.45	5%
Spain	30.45	4%	78.32	5%
IDA (World Bank)	31.26	4%	70.56	5%
IMF (Trust Funds)	30.93	4%	47.69	3%
Japan			31.90	2%
Norway			28.31	2%
Global Fund	29.16	4%		
Italy	9.85	1%		
Total	**774.79**	**100%**	**1,484.53**	**100%**

Source: OECD-DAC.

**Figure 5: Distribution of Gross ODA Disbursements by Major Sector,
5-year average, 2009-2013**

Production sectors, 4%
Multisector/cross-cutting, 5%
Education, 5%
Program assistance, 7%
Economic infrastructure and services, 9%
Health and population, 10%
Humanitarian aid, 27%
Debt reduction, 19%
Other social sectors, 14%
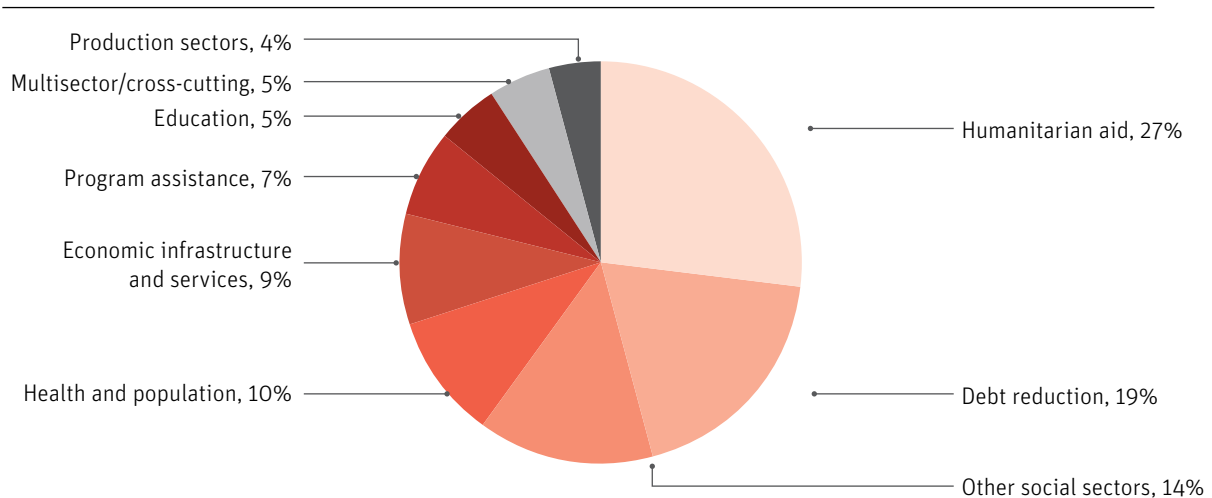
Source: OECD-DAC.

Social sectors and infrastructure have traditionally received the bulk of donor support. The distribution of ODA disbursements by sector over the 2009–2013 period is shown in Figure 5. Even though the distribution is heavily weighted toward humanitarian aid (27 percent) and debt reduction (19 percent) during this period as the result of the earthquake, health, population, and other social sectors together received 24% of donations. Separate data for housing and slum upgrading are not available, but are likely included in "Other social sectors." The prevalence of humanitarian aid suggests that the economic return on risk reduction activities should be very high in Haiti.

Haiti was working to improve its donor coordination prior to the earthquake, including the creation of sector-level coordination (sector tables), with support from the U.N. This process advanced slowly in 2010–2011. Momentum to improve sector coordination increased once the IHRC closed in October 2011. In May 2013, the government launched the Coordination Framework for External Aid for the Development of Haiti (CAED) (Cadre de Coordination de l'Aide Externe au Développement d'Haïti),

housed in the Ministry of Planning and External Cooperation, to coordinate donor support.

7. **Conclusions**

The social, economic, environmental, and political contexts in Haiti necessarily had an impact on what outside agencies could accomplish—especially in the short term—to address the housing situation of those affected by the earthquake.

The long history of international donor involvement in the country might have been beneficial for housing recovery; however, donor coordination mechanisms were not in place to handle the influx of support, and donor support to housing was historically extremely limited.

Further, even though donors had long-standing presence in the country, many agencies working on housing recovery implementation had limited knowledge of these issues both in general, and in Haiti. The survey conducted for this report revealed that only 22.5 percent of the agencies working in shelter and housing after the earthquake had experience in these sectors in Haiti beforehand, and another 25.0 percent had "somewhat related" interventions.

Figure 6. Was your organization working in Haiti before the earthquake?

Yes, but interventions were not related to neighborhood upgrading or housing 35.0%

Not present in Haiti before the earthquake 17.5%

Yes, with interventions in neighborhood upgrading or housing 22.5%

Yes, with interventions somewhat related to neighborhood upgrading or housing 25.0%
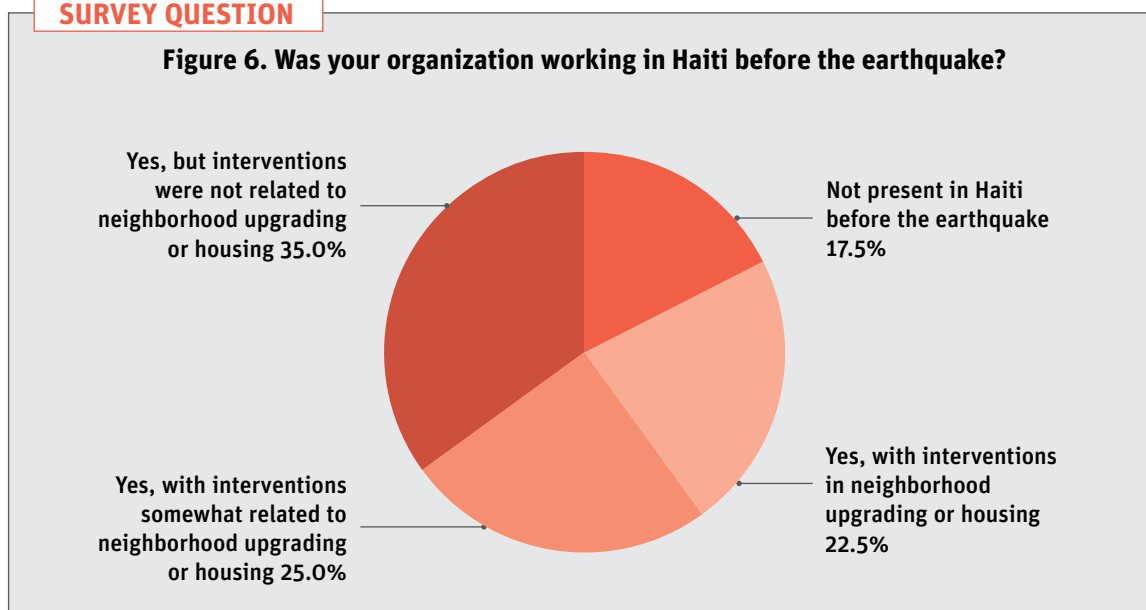
The remaining 52.5 percent either had no interventions in the sector or were not present in Haiti before the earthquake. (See Figure 6)

The pace and coherence of the activities described in this report were strongly influenced by the complex contextual factors discussed in this section. But the lack of familiarity of this context, and of the housing sector and recovery practices in general, also may have been a significant impediment for many of the agencies and individuals working there. International agencies might reflect on what can be done in future disasters to ensure adequate capacity and preparation within their own organization.

B. Recovery and Reconstruction Policies and Goals

1. Introduction

A PDNA was conducted from February 18 to March 24, 2010, under the direction of the government, with assistance from about 200 national and international experts working in sector and thematic teams, each led by a government-appointed official.

Overall damage and losses from the earthquake were estimated $7.8 billion in the PDNA, of which $3.7 billion, or nearly 50 percent, was attributed to housing and community infrastructure. Of this $3.7 billion, only about 25 percent was considered loss and damage of public goods (the majority of that community infrastructure), since housing is categorized as a private good.

The total value of needs of $12.2 billion over three years was divided into 52 percent for the social sectors, 15 percent for infrastructure, and 11 percent for the environment and risk and disaster management.[26] The remaining 22 percent was distributed among the production sectors, governance, and cross-cutting aspects. Housing and infrastructure were included for a total of $825 million in the infrastructure component, which was 7 percent of overall needs. (Section III.E includes more discussion of these figures.)

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26 Total needs in the PDNA from the PDNA working groups are also stated as $11.5 billion, which appears to be an editing error in the document.

The short timeline for delivering the PDNA created limited opportunities for stakeholder consultations, which affected the legitimacy of its goals in the eyes of many Haitians in government, civil society, local government, and affected communities.[27] This influenced the decision of the government to develop a parallel Action Plan for National Recovery and Development in Haiti (APNRDH), based on an ongoing national strategic development planning process.

The question of whether there would be sufficient resources to finance a full recovery began to be raised soon after the donor pledging conference at the United Nations (UN) in New York in March 2010. Concern about constrained resources should have created an imperative to carefully define recovery goals and to program the available resources to produce maximum results. Ideally, a recovery plan or framework for the housing sector would have been developed, based on the PDNA, in which the policies, principles, and institutional framework for housing recovery were defined. Unfortunately, this did not take place.

As a result, there was little consensus on precisely which policies should guide recovery and reconstruction in Haiti and on the concrete goals and objectives of the reconstruction

program. The following section describes several of the reference documents that were used in the absence of a recovery plan, and the different ways in which these documents defined the goals of recovery.

2. Recovery and Reconstruction Objectives

Those who responded to the survey were asked to identify the national-level policy framework that had guided the design of the interventions with which they were involved. The most frequently named source was the Shelter Sector Response Plan, which provided very general guidance and emphasized emergency and transitional sheltering. The next most commonly cited framework was the strategy of the organization for which the respondent worked. Twenty-seven percent also cited the Haiti Strategic Development Plan (HSDP). However, until nearly two years after the earthquake, the version of the HSDP that was available provided very limited guidance on housing.

While the PDNA and the Action Plan for National Recovery and Development of Haiti (APNRDH) were among the top five choices for respondents from organizations, for individuals these two were in the bottom five, perhaps reflecting a greater familiarity of representatives of organizations with the documents, since they were presented to donor organizations at the donor pledging conference. Figure 7 shows the responses of representatives of organizations involved in the recovery and reconstruction effort.

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[27] GFDRR, 2015, Disaster Recovery Framework Case Study: Haiti Disaster Recovery Framework: Recovery from a Mega Disaster. The case study identifies three factors that undermined the usefulness of the PDNA as a basis for recovery planning: (i) limited public consultation, (ii) data limitations concerning the scale and impact of the disaster and the cost of rebuilding, and (iii) uncertainty about the amount of funding that would be available.

Figure 7. What did your organization use as its national-level policy framework to design its recovery or reconstruction interventions?

Framework	Percentage
Shelter Sector Response Plan (Shelter Cluster)	73%
Organization's own strategy	57%
Post Disaster Needs Assessment (PDNA)	54%
IHRC sector targets	49%
Action Plan for National Development and…	46%
IHRC Housing Framework document	43%
Objectives defined with other agencies	35%
Strategic Development Plan for Haiti	27%
National sector-level strategy	22%
Don't know	3%

Percentage of Organizations Responding

a. Recovery and Reconstruction Objectives in the PDNA

The PDNA identified the objectives for post-earthquake recovery shown in Box 1, anticipating that a recovery framework would be developed.[28]

As well as describing the damages and losses from the earthquake, the PDNA lays out a list of recovery activities for the housing and the urban and community infrastructure sectors, along with their respective costs. Associated with each cost were expected results and output indicators, including:

- Financial assistance is transferred to the beneficiaries.
- All the players involved in housing reconstruction are trained in risk-resistant construction techniques.
- The target populations and groups

BOX 1

Recovery Framework Objectives

The objective of the recovery framework is to offer a coherent, and concrete view of the actions to be undertaken in order to respond to the communities' immediate recovery needs over a period of 18 months. The objectives being pursued are:

- Respond to communities' needs in terms of the economic and social dimensions of human security.
- Support communities' abilities to withstand disasters.
- Take over as quickly as possible from humanitarian aid.
- Lay down the foundations for longer-term recovery, while incorporating measures for preventing, reducing, and managing future risks.

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[28] Government of Haiti, 2010a, "Haiti Earthquake PDNA: Assessment of damage, losses, general and sectoral needs: Annex to the Action Plan for National Recovery and Development of Haiti," p. 20.

Table 2. Haiti Earthquake PDNA: Summary of Recovery and Reconstruction Requirements Years 1–3, in US$[29]

Housing Sector	
Housing rebuilding fund (1)	500,000,000
Security provision funds	100,000,000
Training in reconstruction and security provision	42,000,000
Public information campaign	1,000,000
Support to communes	12,000,000
General technical assistance, coordination and monitoring	5,000,000
Total	**660,000,000**
Urban and Community Infrastructure Sector	
Reconstruction fund	146,000,000
Technical assistance (TA) to national authorities	9,200,000
TA to towns	3,600,000
Strengthening of local community and civil society organizations	2,200,000
TA and training of public and private businesses	2,800,000
Technical assistance for the definition and monitoring of risks	1,500,000
Total	**165,300,000**
Grand Total	**825,300,000**

(1) The total estimate for the housing reconstruction fund was based on a financial assistance of: (a) 500 USD per partially damaged dwelling, (b) 1,000 USD per damaged dwelling, and (c) 3,500 USD per dwelling damaged beyond repair or destroyed dwelling.

Source: Haiti PDNA.

receive continuous information about the reconstruction policy and are made aware of risk assessment.

■ Appropriate construction techniques and standards are adopted.

■ Towns are capable of monitoring the progress of reconstruction work.

■ Local NGOs are capable of ensuring cohesion in their actions.

■ A legal framework that is appropriate and respected is established.

■ The financial assistance is released on the basis of the inspections.

The recovery and reconstruction requirements identified in the PNDA for housing and community infrastructure totaled more than $825 million. The principal outputs and their associated costs are shown in Table 2.[30]

b. Recovery and Reconstruction Objectives in the APNRDH

The PDNA was attached to the APNRDH as an annex when the two documents were presented to donors at the donor pledging conference at the UN in New York. The APNRDH laid out both a long-term development vision and a set of shorter-term (18 months) reconstruction objectives. The organization of the APNRDH mirrored that of the HSDP, the principal

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[29] Government of Haiti, 2010a, pp. 77 and 79

[30] PDNA tables show three-year costs for some sectors and four-year costs for others. The figure of $825 million represents three-year costs for both housing and community infrastructure.

Vision and Approach for Haiti's Rebuilding

[Haiti will rebuild] by turning the disaster on 12 January 2010 into an opportunity to make it an emerging country by 2030. This restructuring will be marked by:

- **A fair, just, united and friendly society living in harmony with its environment and culture; a modern society characterised by the rule of law, freedom of association and expression and land management.**
- **A society with a modern, diversified, strong, dynamic, competitive, open and inclusive economy based on the land.**
- **A society in which people's basic needs are met quantitatively and qualitatively.**
- **A knowledge-based society with universal access to basic education, mastery of qualifications based on a relevant professional training system, and the capacity for scientific and technical innovation fed by a modern and efficient university system, in order to create the new type of citizen the country needs for reconstruction.**
- **All of this, under the supervision of a responsible, unitary state guaranteeing the implementation of laws and the interests of the people with a strong commitment to deconcentration and decentralization.**

Source: Action Plan for the Reconstruction and Development of Haiti.

output of a planning effort that was under way before the earthquake in the Ministère de la Planification et de la Coopération Externe (MPCE) (Ministry of Planning and External Cooperation).[31]

The HSDP vision is to make Haiti an emerging economy by 2030. Short-term activities in the APNRDH were organized to show how they would support the long-term vision of the HSDP. Box 2 shows the long-term vision and the short-term goals from the APNRDH.

The four pillars of the HSDP are described below:

- **"Territorial rebuilding**. Including identifying, planning and managing new development centres, stimulating local development, rebuilding affected areas, implementing economic infrastructure required for growth (roads, energy and communication), and managing land tenure, in order to protect property and facilitate the advancement of large projects.
- **Economic rebuilding**. Along with developing key sectors, this pillar will aim to modernise the various components of the agricultural sector, providing an export potential in terms of fruits and tubers, livestock farming and fishing, in the interests of food security; develop the professional construction sector with laws and regulations relating to earthquake-resistant and hurricane-resistant materials and implementation and control structures; promote manufacturing industries; and organise the development of tourism.
- **Social rebuilding**. Prioritising a system of education guaranteeing access to education for all children, offering vocational and university education to meet the demands of economic modernisation, and a health system ensuring minimum coverage throughout the country and social protection for the most vulnerable workers.[32]
- **Institutional rebuilding**. Focus on making state institutions operational again by prioritising the most essential functions; redefining our legal and regulatory framework to better adapt it to our requirements; implementing a structure that will have the power to manage

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[31] Government of Haiti, 2010b, "Action Plan for National Recovery and Development of Haiti: Immediate Key Initiatives for the Future."

[32] Government of Haiti, 2010b. Housing was included in the Social rebuilding pillar of the APNRDH.

reconstruction; and establishing a culture of transparency and accountability that deters corruption in our country."

The government then identified in global terms, by pillar, the actions it wanted the reconstruction program to support for the first 18 months, as shown in Box 3.[33]

For housing and community recovery, $295 million was budgeted in the APNRDH to set up five new settlement sites outside of Port-au-

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BOX 3

Immediate Actions for the Future

The Action Plan for National Recovery and Development includes actions which are defined in time, over an eighteen month timescale. It is based on four major areas of work which should enable the practical rebuilding of Haiti. The sectoral actions and initiatives are brought together according to the themes of regional, economic, social and institutional reconstruction.

The specific action plans for each field are organized in the following way:

- Territorial rebuilding: Reconstruction of the devastated zones and urban renovation, the road network, regional development hubs and urban renovation, preparation for the hurricane season and regional planning and local development.
- Economic rebuilding: Relaunch of national production, restoration of economic and financial circuits, access to electricity.
- Social rebuilding: Health, food safety, nutrition, water, sanitation, highly labor-intensive activities.
- Institutional rebuilding: Democratic institutions, restart of public administration, justice and security.

Prince and to pay for reconstruction and other (unspecified) activities.[34]

The territorial rebuilding pillar includes a number of other land and infrastructure-related requirements, including debris management, land appropriation, land use and urban planning, and basic infrastructure. Two other requirements identified under the territorial rebuilding pillar are "Regional development centres and urban renovation" and "National planning and local development."

There were significant differences between the PNDA and the APNRDH with respect to the defined requirements and the costs associated with them. These differences are examined in more detail in Section III.E1.

APNRDH goals were broad and general, and they needed to be translated into specific results and related projects and reconciled with requirements identified in the PDNA. In fact, the PDNA acknowledges that this will need to take place. However, this reconciliation of recovery goals and objectives did not occur. To the extent government and agencies continued to refer to either the PDNA or the APNDRH as they planned and executed recovery activities, they may very well have operated with different visions of what the reconstruction priorities were.

c. Interim Haiti Recovery Commission Recovery and Reconstruction Objectives

The Interim Haiti Recovery Commission (IHRC) was a joint national/international entity created to serve mostly as a high-level forum for donor coordination. Created by presidential decree in April 2010, the IHRC began operations in June 2010.

The principal planning horizon of the IHRC was not the entire reconstruction effort; it was the 18-month mandate period of the IHRC itself, which ended in October 2011.

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33 Government of Haiti, 2010b.

34 Ibid., p. 42

The IHRC was organized into sector teams. Beginning with the December 2010 IHRC Board Meeting, sector teams presented targets to be met by the end of the IHRC mandate period. The targets for housing presented in December 2010, with a cost of $320 million, were the following.[35]

- 400,000 people relocated from camps
- 25 percent of all "yellow" houses repaired[36]
- New projects for 5,000 households completed
- All affected households registered/solutions identified
- Phase I of Port-au-Prince strategic redevelopment plan completed and financial plan outlined
- Credit program for housing in operation
- Financial plan for housing in place

Implicit in this proposal were three assumptions: (1) that funding in the amount of $320 million was available in the Haiti Reconstruction Fund (HRF) and donor programs,[37] (2) that the IHRC had the ability to influence the programming of funds to accomplish these goals, and (3) that these projects would see results in the remaining 10 months of the IHRC's mandate.

The housing targets reflected goals proposed in the Neighborhood Return and Housing Reconstruction Framework (NRHRF), a policy document developed by IHRC staff with national and international input and issued in draft in October 2010 for government and IHRC Board approval. The NRHRF established the following objectives:

- Restore the status of households to what it was before the earthquake, that is,

help owners rebuild and assist renters to reestablish their rights as tenants
- Improve the safety of houses, and the safety and functionality of neighborhoods that are reoccupied through community planning and a "building back better" (BBB) approach
- Reduce the number of houses and neighborhoods in unsafe and undesirable locations using risk assessment and relocation
- Ensure that both reconstruction and new construction contribute to urban renovation and regional development, as envisioned in the government's long-term rebuilding plan

The NRHRF included principles for projects in the sector (such as that "housing" projects must also provide funding for infrastructure and rubble removal). It also proposed that the government and the IHRC work with agencies to ensure a rational and equitable use of the overall pool of resources available for housing and neighborhood reconstruction and to issue a financial plan that would coordinate reconstruction resources. The NRHRF was never approved; the draft document continued to serve as a reference document, but without the imprimatur of the government or the IHRC Board.

d. Recovery and Reconstruction Objectives in the Shelter Cluster

Entities operating under the umbrella of the Inter-Agency Standing Committee (IASC), including the Shelter Cluster and the Emergency/ Transitional Shelter and Camp Coordination and Camp Management Cluster, issued several policy documents during the first 18 months of the response. Policy proposals to the government addressed the overall response and strategies for camps and emergency shelter. Over time, the approach became more operational, and focused on transitional shelters, repairs, reconstruction, and activities that would make it possible for the displaced to leave the camps and find permanent

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[35] IHRC, "Interim Haiti Recovery Commission, Board Meeting. December 14, 2010," PowerPoint presentation.

[36] The safety assessment labeled all buildings as either "green" (building may be safely occupied), "yellow" (no entry to a portion of the building or some restriction on the use or occupancy of the whole building), or "red" (unsafe to occupy or enter the building for any reason). See Section III.C for a description of the building safety assessment.

[37] The HRF multi-donor trust fund went into effect on May 11, 2010, upon signature of the first Administration Agreement with Brazil. The World Bank acted as trustee of the HRF on behalf of the government. It was administered by the UNDP Multi-Donor Trust Fund Office.

housing solutions. These documents included, among others:

- Emergency/Transitional Shelter and Camp Coordination and Camp Management (ETS/CCCM) Strategic Framework for Haiti, Version 5, ETS/CCCM Cluster (January 2010)

- Shelter Sector Response Plan, Shelter Cluster (February 2010)

- Transitional Shelter Technical Guidance, Shelter Cluster (February 2010)

- Host Family and Community Needs Assessment Guidelines, Shelter Cluster (April 2010)

- Transitional Shelter Parameters, Shelter Cluster (April 2010)

- Advocacy Document, Shelter Cluster (April 2010)

- Return and Relocation Strategy, Inter-Cluster Coordination/Humanitarian Country Team (HCT) (January 2011)

The HCT began developing the "Return and Relocation Strategy" (RRS) in September 2010.[38] The content of the RRS was similar to that of the NRHRF, and many key agencies were involved in the preparation of both. Nevertheless, preparation of the two documents took place independently. Draft 13 of the RRS was approved in January 2011 by the HCT and the Inter-Cluster Coordination Team. The RRS document did not define an operational plan for implementation, but stated it would be presented in a separate document. This operational plan was never developed.

e. Recovery and Reconstruction Objectives in International Partner Projects

The objectives defined in individual partner projects are important to understand because, in the absence of programmatic guidance for shelter and housing recovery, the "project approach" took over. In theory, each project contributes to an overall reconstruction program; however, without a housing sector recovery plan, strong coordination, and monitoring, the results of projects can be quite variable and the collective impact of all projects hard to measure.

When organizations and individuals were surveyed regarding the objectives of the projects they were involved in, they reported significant variation. Agencies generally focused on outputs, such as the number of Tshelters or repairs, and in some cases the stability of the family in the housing solution (this could be considered a surrogate for beneficiary satisfaction) or other social indicators. In interviews, some organizations mentioned that they were given unusual flexibility and length of time by their headquarters to define their project-level objectives (in some cases as long as two years), due to the fluidity of the situation.

When asked how well the government defined its expectations of agencies involved in recovery, and how well these were communicated to these agencies, 54 percent of organizational respondents and 83 percent of individual respondents answered that this was "poorly defined." This largely explains the range of policy documents used as references and project objectives defined by organizations.

Box 4 lists a small selection of the project indicators in housing recovery-related projects reported by organizations. While these indicators are not wholly inconsistent, they help demonstrate the diversity of goals and outcomes established for individual recovery projects.[39]

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[38] According to the UN Office for the Coordination of Humanitarian Affairs (OCHA), the Humanitarian Country Team (HCT) is a strategic and operational decision-making and oversight forum established and led by the Humanitarian Coordinator. Composition includes representatives from the UN, IOM, international NGOs, and the Red Cross/Red Crescent Movement. Agencies designated as Cluster leads represent the Clusters as well as their respective organizations. The HCT is responsible for agreeing on common strategic issues related to humanitarian action.

[39] World Bank, 2013, *Haiti Shelter and Housing Organizations Survey.*

BOX 4

Sample of Performance Indicators Used by Shelter and Housing Agencies in Haiti, 2010–2013

- Improve the culture of construction toward safer and better quality housing and housing services.
- Accelerate self-recovery.
- Improve quality of life through better access to basic services, improved spatial organization, connection/integration within the city and reduced risks.
- Contribute to social cohesion; contribute to improved governance by (re)establishing dialogue between communities and their elected official and government; contribute to overall improvement of the city functioning at agglomeration level; strengthen government institutions with responsibilities for the planning and/or management of housing, urban development, and risk reduction.
- Serving 50,000 families through a range of different interventions over the response and recovery phases in Haiti.
- Number of houses to safely repair in accordance with the priority areas for the government, internally displaced persons (IDPs), affected areas, and availability of funds.
- Repair as many houses as we could afford to repair.
- Initially, number of people served directly with assistance. Now, people trained, served and the impact of this in the medium term, for the future, indicators will be improvement of connectivity between sectors, for example the number of families which are served by public services, but also who are paying taxes.
- Households still in the same safe place after one year.
- Indicators from the ASPIRE tool for Sustainable Development.

III. Analysis of the Shelter and Housing Effort

This chapter details the key activities undertaken, the issues that were being addressed, the findings related to those activities, and recommendations for future recovery programs. The sections address the shelter response, housing activities, disaster risk management, the impact of land and urban development issues, and recovery finance.

A. The Shelter Response

GOOD PRACTICE IN POST-DISASTER SHELTER INCLUDES:

- Acknowledging that there is one housing sector in which both shelter and housing interventions take place

- Developing an integrated strategy that anticipates the impact of the shelter response on housing self-recovery and reconstruction

- Defining a shelter strategy that reflects both humanitarian standards and country goals

- Providing choice among a variety of context-sensitive sheltering solutions that are consistent with normal housing processes

- Setting up coordination platforms for shelter agencies, led by government

- Using two-way communications to keep the shelter response flexible, coherent, and cost-effective

- Involving the affected population in the design and monitor of interventions

1. Background

According to the International Federation of the Red Cross and Red Crescent Societies (IFRC), the goals of the humanitarian shelter effort in the aftermath of a disaster are to save lives while setting the path for sustainable reconstruction.[40] The emergency or relief phase should orient the recovery phase, and both should have disaster risk reduction as a principal objective. However, the massive humanitarian and transitional shelter response in Haiti, while it can be credited with saving many lives, did not establish a clear path for housing recovery. The reasons for the disconnect are discussed in this section.[41]

Perhaps no contingency plan could have fully prepared Haiti for a disaster on the scale of the 2010 earthquake, especially since disasters in Haiti have tended to affect rural areas, not the capital city. The Inter-Agency Standing Committee (IASC) global cluster system was established to ensure a more coherent and effective response at the country level by mobilizing groups of agencies and nongovernmental organizations (NGOs) to respond strategically across key sectors.[42] It had existed for a few years before the earthquake, but it had never been mobilized to handle a disaster on the scale of the Haiti earthquake in an urban context. For shelter sector actors, the challenge was to support the short-, medium-, and long-term sheltering needs of a huge population in a dense, volatile, and complex urban environment.

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[40] IFRC, "What We Do in Shelter," website.
[41] Ibid. These principles comprise what the IFRC calls the "one housing sector approach."

[42] UNICEF, 2011, "Partnering in the humanitarian context" website.

BOX 5

Revised Flash Appeal (February 2010)

Shelter Sector Response Plan Objectives

The overall objective of this cluster is to achieve safe and dignified shelter for those families affected, both directly and indirectly, by the earthquake. Two main phases have been identified:

Phase 1: Shelter within three months, before the hurricane season: 100,000 displaced and non-displaced families receive waterproof cover before 1 May. Cluster members will strive to provide support to the rest of the affected populations responding to on going needs analysis;

Phase 2: Full transitional shelter within 12 months: 100,000 targeted families, both displaced and non-displaced, are living in safe transitional shelters with an expected lifetime of up to three years before the rains of 2011. A further 100,000 hosting families in rural areas receive material shelter support within the same time frame. This activity should start with immediate effect."

Plans for durable shelter for the entire affected population are developed within 12 months.

The objective for coordination is to ensure that governmental and humanitarian stakeholders in the response participate in a single coordination structure. The capacities of the armed forces and the private sector are recognized by this coordination structure.

Working with other Clusters to advocate that plans for rubble clearance are developed, prioritizing drainage and demolition of unsafe structures, and recycling of materials as appropriate."

Source: UN OCHA, 2010, *Flash Appeal: Haiti Humanitarian Appeal* (Revised).

An estimated 1.3 million people (approximately 260,000 households) had immediate shelter needs following the earthquake. With the hurricane season coming, shelter was quickly acknowledged as a humanitarian priority and received immediate support through the mobilization of key international actors and massive funding commitments.[43]

a. Shelter Sector Response Plan

The Shelter Sector Response Plan was issued in draft on January 26, 2010, just 14 days after the earthquake. The plan had three principal objectives (see Box 5):

- **Phase 1**: Emergency shelter within 3 months, before the hurricane season
- **Phase 2**: Full transitional shelter within 12 months

- Plans for durable shelter for affected population developed within 12 months

The emergency shelter target was met. On March 24, the coordinator of the Shelter and Non-Food Items Cluster (hereafter referred to as the "Shelter Cluster") issued a press release calling it one of the quickest international emergency responses ever.[44]

After 18 months, the Shelter Cluster reported that 48 percent of the estimated shelter needs had been met with more than 124,000 solutions:

- 93,000 T-shelters
- 18,000 packages of shelter materials
- 1,900 rental subsidies
- 6,600 repairs
- 4,600 new houses

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[43] United Nations Office for the Coordination of Humanitarian Affairs, 2010, "Humanitarian Bulletin Issue #3," http://reliefweb.int/sites/reliefweb.int/files/resources/D43EE984293AC8228525772D0065474E-Full_Report.pdf.

[44] Haiti Shelter Cluster Coordinator, 2010, "Haiti [Steering Committee] reaches nearly a million people in one of the fastest shelter-relief operations of recent years."

Figure 8. Haiti Response Emergency, T-shelter, and Recovery Solutions Provided, January 2010–August 2011 in thousands of units

Source: IFRC data.
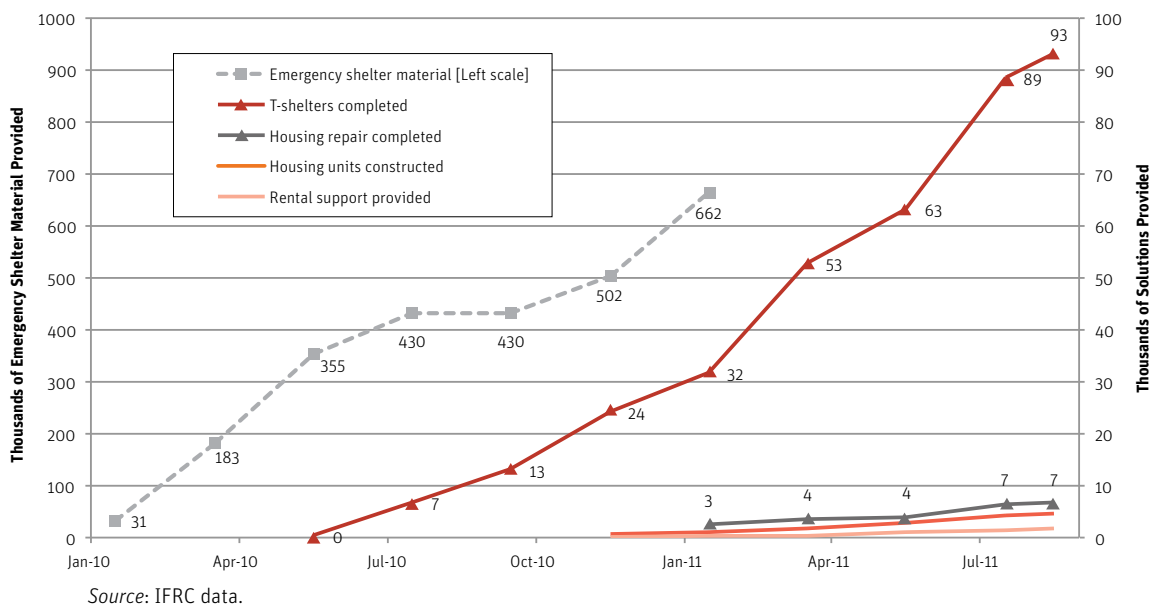
This included 2,100 T-shelters built at the Corail Cesselesse camp and 500 shelters built at the Tabarre Issa camp. Both sites were designated for this purpose by the government in February 2010.

Figure 8 shows the progress of the distribution of emergency shelter material, T-shelters, and other sheltering and housing solutions including repairs and reconstruction in the first 18 months after the earthquake.

b. Shelter Financing

The 2010 Flash Humanitarian Appeal was launched by the United Nations (UN) Office for the Coordination of Humanitarian Affairs (OCHA) on January 16, 2010. From the more than $1 billion in funding received in response, shelter and camp management-related clusters received $201 million.

In November 2010, OCHA issued the 2011 Consolidated Humanitarian Appeal (CHAP). While the funding requests for the appeal were prepared separately by the Shelter Cluster,

the Camp Coordination/Camp Management (CCCM), and the Early Recovery (ER) Cluster, and consolidated by OCHA, the general objectives of the clusters were complementary: to achieve safe and dignified shelter for families affected both directly and indirectly by the earthquake.

Through the 2011 CHAP, an additional $36 million was raised for camp management and shelter, for a total of $237 million.[45] As shown in Table 3, this represented 18.5 percent of the total humanitarian funding for the 14 clusters between 2010 and 2011, although it was less than half of what was originally requested by these clusters. In the Flash Appeal, 67 percent of the requested amount was raised. The CHAP provided only 38 percent of the requested amount.

Other sources of funds used in the shelter response included money contributed by the public directly and by bilateral and multilateral donors. The recipients of these funds were

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[45] In addition, IFRC had a budget of $2,238,475 for the coordination of the Shelter Cluster through the IFRC Emergency Appeal. Financial Tracking Service as of June 5, 2013.

Table 3. Summary of Original and Revised Requirements, Emergency Flash Appeal 2010, and Consolidated Humanitarian Appeal 2011 (US$ million)

	Original requirement	Revised requirement	Funding received	% covered
Emergency Flash Appeal 2010				
Shelter and Non-Food Items Cluster	$29.3	$162.3	$107.9	67%
Early Recovery Cluster	$49.2	$140.7	$56.8	40%
Camp Coordination/Camp Management Cluster	$1.3	$78.8	$36.5	46%
All shelter/housing-related	**$79.8**	**$381.7**	**$201.2**	**53%**
Total for all 14 clusters	**$562.1**	**$1,502.2**	**$1,095.9**	**73%**
CHAP 2011				
Shelter and Non-Food Items Cluster	$91.8	$31.8	$12.2	38%
Early Recovery Cluster	$115.7	$30.9	$7.2	23%
Camp Coordination/Camp Management Cluster	$93.0	$48.5	$17.0	35%
All shelter/housing-related	**$300.5**	**$111.2**	**$36.4**	**33%**
Total for all 14 clusters	**$910.5**	**$382.4**	**$190.8**	**50%**
Grand total shelter/housing-related	$380.3	$492.9	$237.7	48%
Grand total all 14 clusters	**$1,472.6**	**$1,884.6**	**$1,286.7**	**68%**
Shelter/housing-related as % of total			18.5%	

Source: OCHA, 2010, *Flash Appeal: Haiti Humanitarian* Appeal (Revised),
http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=15797.

humanitarian agencies, such as the IFRC, as well as NGOs, faith-based organizations, and other shelter sector agencies.[46] The OCHA Financial Tracking Service (FTS) recorded $2.5 billion of additional humanitarian funding in 2010 and $283 million for 2011.[47]

2. Issues

Even though its Phase 1 and Phase 2 shelter objectives were met during the first 18 months of the response, the humanitarian community confronted many challenges and questions, both within and among organizations.

a. The absence of a designated national counterpart complicated decision making

No single government institution was designated to chair the Shelter Cluster or to establish the coordination structure anticipated in the Shelter Sector Response Plan. This could be attributed to the fact that there was no institutional framework for affordable housing in Haiti.

Government entities with which the clusters cooperated on shelter matters included the following.

■ The Interim Haiti Commission for Shelter and Reconstruction (IHCSR) was created by President Préval in January 2010, with Minister of Tourism Delatour appointed as chair. The commission co-chaired the Shelter Cluster beginning in late January 2010, which helped provide political backing to the Shelter Sector Response Plan. However, the IHCSR disappeared after a few months, and co-

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[46] For the IFRC only, shelter-related expenditures were $172,157,495 as of September 30, 2011. IFRC, 2010, *Haiti Earthquake 2010, Two-Year Progress Report*.

[47] FTS, 2013, "List of all humanitarian pledges, commitments and contributions (2010 and 2011)," Report as of June 17, 2013. Table ref: R10c. http://fts.unocha.org. Non-appeal figures in 2010 include expenditures of $464 million by the U.S. Department of Defense. Agencies voluntarily report humanitarian contributions to the FTS.

chairmanship of the cluster by the government ceased.

■ The Secretariat for the Committee on Return was created in May 2010. It did not engage with the Shelter Cluster, and disappeared after few weeks.[48] The Interim Haiti Recovery Commission, (IHRC) was activated in mid-2010. Shelter actors expected it to serve a role similar to that of the Badan Rehabilitasi dan Rekonstruksi, which coordinated the recovery from the Aceh tsunami in Indonesia in 2004. The commission convened a meeting of key housing and shelter stakeholders in October 2010 that provided the first opportunity to discuss the overall scope of the shelter and housing situation. However, internal disagreements about the IHRC's role kept it from establishing a strong coordination capacity for the sector.

■ The Interministerial Housing Commission (IHC), headed by the Ministry of Social Affairs and Labor (MAST), was created in October 2010.[49] It served as a mechanism for information exchange among numerous ministries, but did not assume any leadership in the Shelter Cluster or with shelter and housing actors.

In late 2011, following the dissolution of the IHRC, the government created the Unité de Construction de Logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Unit), in the office of the prime minister. It quickly developed Haiti's first-ever housing policy. When a member of the UCLBP management team assumed co-chairmanship of the CCCM Cluster, he was the first Haitian

government chair or co-chair of a shelter- or housing-related cluster since March 2010.

b. Cluster and inter-cluster coordination had strengths and weaknesses

Some good cluster coordination practices were in evidence in Haiti, but there were also flaws in the way international coordination was carried out. These included a succession of handovers of responsibility and a shortage of resources for coordination.

The UN Emergency Relief Coordinator (ERC) initially tasked the International Organization for Migration (IOM) with coordination of the Shelter Cluster and the CCCM Cluster and with developing the Shelter Sector Response Plan. This replicated the assignment of responsibility established during the 2008 hurricane response.[50] Before the Shelter Sector Response Plan was finalized, however, the IFRC assumed Shelter Cluster coordination and finalized the plan.

In November 2010, after the 2011 Shelter Cluster strategy was prepared for inclusion in the CHAP, Shelter Cluster coordination was transferred from the IFRC to UN-Habitat. In September 2011, Shelter Cluster coordination was transferred from UN-Habitat again to IOM, and the Shelter Cluster was merged with the CCCM Cluster, at the request of the Humanitarian Coordinator.

Human resources were also a problem. The Shelter Cluster Coordination Team grew to 22 staff in the early months of the response.[51] However, by the time UN-Habitat took over coordination from the IFRC in November 2010, resources were available for only four staff.[52]

[48] The Secretariat was created by the government to support President Préval's effort to organize return initiatives from camps to neighborhoods, initially to support the return of displaced persons from the Champs de Mars to the Fort National neighborhood.

[49] The IHC, created by a decree issued by President Préval on October 1, 2010, was composed of MAST; the Ministry of Planning and External Cooperation; the Ministry of Interior and Local Government ; the Ministry of Economy and Finance; and the Ministry of Public Works, Transport, and Communications. MAST was responsible for convening the IHC.

[50] During August and September of 2008, 800 Haitians were killed by four consecutive tropical cyclones (Fay, Gustav, Hanna, and Ike).

[51] Documents that explain the Shelter Coordination Team are available at: https://www.sheltercluster.org/sites/default/files/docs/Shelter%20Coordination%20Team%20%28SCT%29.pdf.

[52] Alfonso Calzadilla Beunza and Ignacio Martin Eresta, 2011, "An Evaluation of the Haiti Earthquake 2010, Meeting Shelter Needs: Issues, Achievements and Constraints," http://reliefweb.int/sites/reliefweb.int/files/resources/HTShelterClusterReview11.pdf.

Keeping roles and responsibilities clear among the clusters and agencies was a challenge. In March 2010, the Shelter Cluster Strategic Advisory Group (SAG) published a paper to clarify the roles of various clusters. The Shelter Cluster was assigned the lead role for emergency shelter, transitional shelter, non-food items, and host families. The CCCM Cluster had responsibility for site selection and camp planning, internally displaced person (IDP) tracking, and coordination of basic services in camps as part of its camp coordination and camp management role. The ER Cluster was responsible for land tenure and property, permanent housing, urban planning, and rubble removal.

It was soon decided that the ER Cluster did not have sufficient resources for the responsibilities it was assigned. In May 2010, the United Nations Development Programme (UNDP) decided that the debris management responsibilities of the ER Cluster were better turned over to the Ministry of Planning and External Cooperation (MPCE). The ER Cluster was then dissolved, but it was reactivated in August 2010.[53]These changes negatively affected the coordination of agencies involved in debris management and other activities under the ER Cluster's oversight (see Box 6).

In spite of these issues, the Shelter Cluster continued to serve an important coordination function for 18 months after the earthquake, holding 40 national-level meetings with an average of 35 agencies participating. Four of these meetings were held jointly with the Logement-Quartiers (Housing-Neighborhoods) working group in 2011.[54]

In an effort to decentralize its coordination, the cluster created nine "hubs" and "sub-hubs" at departmental and municipal levels in collaboration with the mayors of Jacmel,

Léogâne, Petit Goâve, Carrefour, Delmas, Port-au-Prince, Tabarre, Croix-des-Bouquets, and Pétionville, and local and international NGOs operating locally. One hundred twenty hub and sub-hub meetings were held, beginning in April 2010.

The Shelter Cluster SAG, which met 16 times, was tasked with defining objectives and strategy, in coordination with other clusters, the international community, and the government.

The Technical Working and Information Group (TWIG) defined guidelines and standards on practical matters, such as shelter parameters, outreach messaging, and cash for work. The TWIG developed a "Who Does What Where" matrix; an information system for shelters; and the Haiti Shelter Cluster website, which made documents, meetings minutes, technical standards, and agency contact information publicly available.[55]

Frequent staff changes and difficulties mobilizing sufficient French-speaking staff negatively affected the quality of coordination and the capacity of agencies. Most meetings (especially national-level meetings) were held in English, and many documents were produced only in English. This reduced the engagement of the government and local NGOs in Shelter Cluster meetings. In spite of ongoing efforts by both the international community and government, the cluster system gained a reputation of lacking Haitian involvement and ownership.[56]

Inter-cluster coordination was also weak at times, due to shortages of leadership and resources. Poor coordination between the Water, Sanitation, and Hygiene (WASH) Cluster and the Shelter Cluster, for instance, slowed the resolution of key issues that required

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53 Ibid.
54 Between 26 and 47 agencies attended Shelter Cluster meetings.

55 The Shelter Cluster website in English and French is accessible at https://sites.google.com/site/shelterhaiti2010/.
56 Silvia Hidalgo and Marie Pascale Théodate, 2011, "Inter-Agency real-time evaluation of the humanitarian response to the earthquake in Haiti, 20 months after."

BOX 6

The Urgent but Complex Task of Debris Management

Debris often stood in the way of people who wanted to return and rebuild in their neighborhoods. From the donor and government sides, there were shortages of funding, expertise, and coordination mechanisms for debris management. Disputes over dumping sites and the feasibility of recycling the debris for reconstruction slowed decision making. Agencies were "learning by doing" much of the time.

UN agencies supervised debris projects themselves and used cash-for-work debris removal programs to inject needed cash into communities and clear certain zones. Community members salvaged metal and other material of value, and property owners moved debris to streets. However, the limitations of labor-intensive debris removal soon became evident, and later projects used a more mechanized approach when possible, still largely supervised by international agencies.

UNDP executed two large-scale rubble projects financed by the Haiti Reconstruction Fund, and the government used Petrocaribe funds to hire private contractors to clear priority zones, such as downtown Port-au-Prince. Prices paid per unit removed diverged considerably at the beginning, but converged over time. Once timing and cost patterns were established, contractors were more likely to be paid by volume removed than for their time and effort, which greatly increased efficiency.

Agencies—generally in collaboration with local governments—established procedures to secure permission to demolish damaged buildings. But implementing these procedures proved to be an obstacle to scaled-up debris removal, due to questions about the reparability of buildings and the authority to grant permission when land and building ownership were not clear, owners could not be located, or owners were not ready to demolish. Another obstacle was the density of neighborhoods, which in many cases did not permit the entry of heavy equipment.

Eventually, the Ministry of Public Works, Transport, and Communications, with support from Shelter and ER cluster actors, the UN Stabilization Mission in Haiti (MINUSTAH), IOM, and others, established a coordination platform. Certain buildable zones had not been cleared two and even three years after the earthquake, and the opportunity to use rubble removal strategically as a way to direct settlement away from high-risk areas was largely lost, except in some of the neighborhoods covered by the 16 Camps/6 Neighborhoods project.

UNDP was one of the international agencies most involved in debris management and has written a detailed guide describing its approach: "Signature Product: Guidance Note on Debris Management" available at http://www.undp.org/content/undp/en/home/librarypage/crisis-prevention-and-recovery/signature-product--guidance-note-on-debris-management.html.

Source: Based on interviews with various agencies and individuals.

collaboration, such as the relocation of water service from camps to neighborhoods.[57]

c. Information was collected but not well shared

Beginning immediately after the earthquake, the emergency response in Haiti triggered a proliferation of data-gathering exercises: the UN Institute for Training and Research Operational Satellite Applications Programme damage assessments; crowd-sourcing to update street maps; the IOM Displacement Tracking Matrix (DTM); a geographic information system to track Tshelter commitments by location; and the data collected during Ministry of Public Works, Transport, and Communications (MTPTC) habitability assessments, just to name a few.[58]

Even so, especially during the first crucial months, there was a general feeling that data were either lacking altogether or hard to access. Haitian institutions lost data in the earthquake and lacked protocols for open information sharing. Among humanitarian agencies, there was duplicative data collection and systems were often not designed to support access or interoperability. Some data were publically shared, often after long delays, but other crucial data remained restricted well into the first two years.

This proprietary approach to information management undermined coordination of shelter and housing programs and the ability to adapt strategies and improve geographic and operational coherence.

d. The affected population was only partially identified

The question of how best to register affected populations in an urban setting remains an unanswered question post-Haiti earthquake. Numerous initiatives were undertaken to identify or register the affected population, but none was intended to identify the entire affected population, both displaced and non-displaced, or even the most vulnerable subcomponent.

Registration was complicated by a number of factors, including:

- The high levels of structural vulnerability before the crisis (e.g., was a displaced person more deserving of assistance than a person who had been homeless before the earthquake?)
- The difficulty of defining who was an "affected person," since the combined direct and indirect effects were so widespread
- The number of Haitians without a reliable form of identification (e.g., national ID number)

The lack of a full count of the affected population made it difficult to estimate the cost of various recovery programs and to manage the delivery of assistance.[59]

The IOM established the DTM in March 2010. The DTM was a camp-based, rapid assessment tool that gathered information through observation, physical counting, and informant interviews on the population in formal and informal camps. The DTM became a de facto system for monitoring the affected population, even though it omitted those who were displaced but not in camps (such as those being hosted by others) and affected families who remained in their neighborhoods.

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[57] "At the level of specific Clusters, inclusion of cross-cutting issues is limited. This was the case even in the Shelter Cluster, which, when led by IFRC, was considered one of the best-run and most comprehensively resourced and coordinated Clusters." François Grünewald and Andrea Binder, 2010, "Inter-agency real-time evaluation in Haiti: 3 months after the earthquake."

[58] Some advocates of information technology for disasters considered Haiti a major success story. See Dennis King, 2010, "The Haiti earthquake: breaking new ground in the humanitarian information landscape," Humanitarian Exchange Magazine, Issue 48.

[59] According to a study by IOM and the Brookings Institution, 51% of families said that they were not displaced by the earthquake. Of those families that were displaced, only 51% spent time in areas that they identified as camps. See Angela Sherwood et al., 2014, "Supporting Durable Solutions to Urban, Post-Disaster Displacement: Challenges and Opportunities in Haiti," Washington, DC: IOM and the Brookings Institution.

It also counted as affected those in the informal settlements of Canaan, Jerusalem, and Onaville, as well as the population in Tshelter sites. Periodically, the IOM also sampled the IDP population and reported on its characteristics in the "IDP Registration" reports.[60]

An effort to systematically register all affected households and their associated housing in earthquake-affected neighborhoods began in mid-2011, as part of the Housing and Neighborhood Reconstruction Support Program (HNRSP) that was financed by the Haiti Reconstruction Fund (HRF). This census, organized according to national census tracts, was managed by the Institut Haïtien de Statistique et d'Informatique (IHSI) (Haitian Bureau of Statistics), with support from IOM and the United Nations Population Fund. The initiative helped IHSI prepare for the next national census and provided useful baseline information on earthquake impacts that will be useful in future national census. But by the time it launched, reliably associating previous residents with earthquake-affected housing had become nearly impossible.

IOM performed a critical data-gathering function when it established the DTM. Its outputs were used for a range of purposes, some of them unanticipated. Nevertheless, using IDP data to estimate the social impact of the entire population underestimated the scale and misrepresented the precise nature of the displacement problem. The reliance on camp data also signaled to the population that presence in a camp was required to be eligible for any future assistance. Anecdotally, this encouraged households to maintain a camp presence even after finding another housing solution, thus splitting up families, creating more "households," and artificially inflating the camp population.

e. Emergency shelter options for the displaced included spontaneous camps and being hosted

Many families stayed in their homes or on their own land after the earthquake, although often in somewhat precarious conditions. About half of the urban population was displaced. The alternatives for the displaced population were to move to spontaneous settlements, and later to camps; to be hosted by relatives or friends; or to find alternative housing in the market.

IDP camps. The humanitarian agencies were sometimes faulted for creating the IDP camps in Haiti. In fact, they originated from the collective decisions of the affected population, who settled on any available land to avoid the risks of aftershocks before emergency relief was deployed. In Port-au-Prince, debris limited the provision of emergency relief in neighborhoods, so food and water distribution was set up near these spontaneous settlements. Before long, humanitarian agencies started to manage these settlements, and many of them evolved into more formal camps.[61]

Originally, the Shelter Cluster agreed with the government to prioritize tarpaulin distribution over tent distribution due to the lower unit cost, versatility, small footprint, and secondary uses of tarpaulins. After six months, resale of emergency shelter materials had become commonplace in local markets and humanitarian actors expressed concern that continued distribution of materials and provision of services in camps were discouraging the return of households to their neighborhoods and even pulling people to camps. Nevertheless, distributions to replace worn tarpaulins took place in July 2010, October 2010, and May 2011.

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[60] IOM, "Phase II Registration" website, http://www.iomhaitidataportal.info/dtm/regcommune1.aspx.

[61] Other camps were intentionally established by international agencies. These were generally managed camps that provided services. Movement of displaced families among camps was not uncommon.

International experience demonstrates that closing camps must be done proactively, and as soon as possible, to avoid the loss of households' social networks, to reduce vulnerability, and to allow funding and effort to be redirected to recovery. While the collaboration of agencies in maintaining the camps was quite effective, especially during 2010, no agency was responsible for closing them. If a government or international agency had been assigned responsibility for putting in place programs that would allow the camps to be closed, incentives such as household or rental subsidies might have emerged sooner.

Hosting. In the early weeks after the earthquake, about 600,000 people left the Port-au-Prince metropolitan area for the "provinces." Keeping some of that population where they had relocated was a stated goal of government. Some camps were created in these locations to accommodate displaced households, but the vast majority were "hosted" by relatives or other local families.

Providing support to hosting families was a key component of the Shelter Sector Response Plan (it stated a goal of providing 100,000 hosting

families in rural areas with material shelter support). To support hosting, the Shelter Cluster issued the "Host Family and Community Needs Assessments Guidelines" in early April 2010. In recognition of this situation, the housing and shelter strategy developed by the IHRC identified help for municipalities as one of its four pillars (Pillar 3: Provide Support Outside of the Earthquake-affected Region).

Even so, minimal support was provided by donors or NGOs for hosting (see graph on next page). Many agencies lacked experience with it; others assumed that hosting was not sustainable, due to the pull factor of Port-au-Prince and to the lack of complementary support, such as for municipal governments that were accommodating the population influx. The U.S. Agency for International Development (USAID) Office of U.S. Foreign Disaster Assistance (OFDA) was one important exception (see Box 7).

Most of the IDPs who left the Port-au-Prince metropolitan area after the earthquake soon returned. Monitoring would likely have shown that hosting was a highly effective short-term

SURVEY QUESTION

Figure 9. Did the organization you worked for provide support to host families?

Yes, supported from early on	8
Yes, supported, but after delay	6
No, we did not identify need	5
No, we lacked resources	5
No, we lacked experience	3
Other situation	2
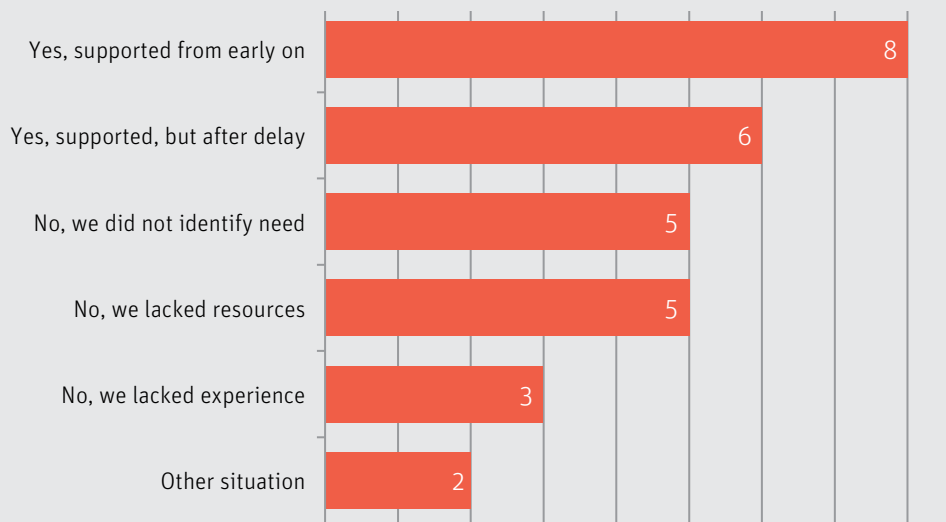
BOX 7

Host Family Assistance in Earthquake Affected Haiti

The earthquake generated an exodus of more than 600,000 people from Port-au-Prince and other disaster-affected areas to seek shelter with family and friends in outlying areas that were not damaged by the earthquake. Although most of those who left the affected area later returned, many chose to remain in a hosting relationship. Without some form of support, however, these relationships would have strained the patience and resources of all concerned, possibly resulting in movement of people to the then-burgeoning spontaneous camps, thereby exacerbating camp conditions.

The level of hosting support was notable, resulting in the provision of humanitarian shelter for thousands of families. Nearly 18,500 hosting arrangements—70 percent of hosting total by three NGOs—may have evolved into permanent housing solutions for those families, as they have decided to stay in hosting arrangements and host communities for the foreseeable future.

As many as 20 percent of all T-shelters may have been built on land provided by host families.

Hosting is not only an important humanitarian shelter solution, but appeared in Haiti to have also helped address longer-term housing needs at a cost far below housing reconstruction, and long before those efforts even commenced.

Based on: Charles A. Setchell, 2011, "Hosting Support in Haiti: An Overlooked Humanitarian Shelter Solution" http://pdf.usaid.gov/pdf_docs/PA00J781.pdf.

strategy, which not only provided income to host families, but in some cases allowed hosted families to take advantage of the T-shelter program.[62] However, the relative effectiveness of these activities was not monitored.

f. A single T-shelter concept became the only transitional solution at scale

Different approaches to transitional sheltering have been used successfully in recent large-scale disasters. The approach adopted in Haiti was to provide a temporary structure to households. These Tshelters quickly became the predominant post-emergency shelter solution financed by international agencies.[63]

Already by February 5, 2010, 24 organizations had committed to building a total of 116,100 T-shelters, including 30,000 by the IFRC.

When the IASC issued the Transitional Shelter Technical Guidance on February 19, 2010, it recommended a transitional shelter of 18–24 m^2 that would have a three-year lifespan, allow easy maintenance, be upgradeable by the recipient, and cost a maximum of $1,500.[64] The guidance made recommendations on foundations, roofing material, roof pitch, strapping, and designing for loads, and suggested that the structure be built

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[62] Charles A. Setchell, 2011, "Hosting Support in Haiti: An Overlooked Humanitarian Shelter Solution."

[63] Emerging good practice internationally is to provide transitional shelter to those displaced by disasters or conflicts as an alternative to continued occupation of camps or to the construction of temporary housing. In this way of thinking,

transitional shelter is not temporary housing, but a relatively low-cost solution aimed at those with land on which they intend to reconstruct their housing. It provides privacy to the family on its own property or in a nearby location and is made of materials that can be reused, often in the permanent reconstruction process.

[64] IASC, 2010, "Transitional Shelter Parameters," Shelter Cluster Haiti, and IASC, 2010, "Transitional Shelter technical guidance," Shelter Cluster Haiti.

Figure 10. Example of T-Shelter Elevation
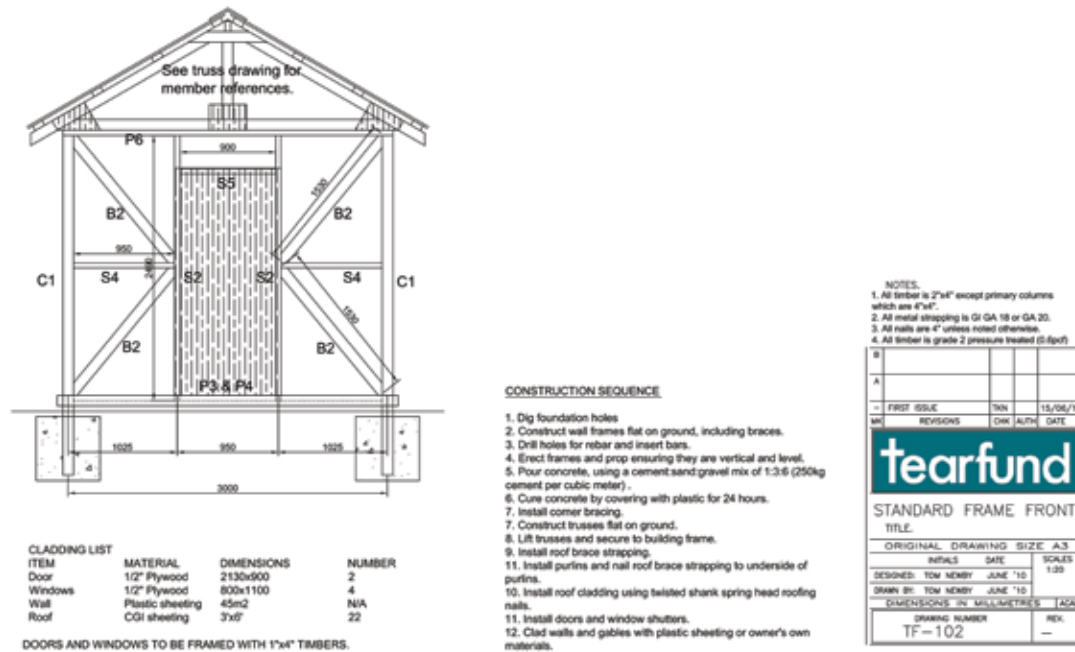
Source: Haiti IASC Shelter Cluster web site.

to withstand a 100 mph wind speed for Port-au-Prince. It also recommended that the location be chosen by beneficiaries, generally at or near to the existing "homestead," so that permanent housing reconstruction was not impeded.[65]

An elevation from one agency's T-shelter design, that of TearFund, is shown in Figure 10.

The T-shelter concept as it evolved responded to certain agency concerns that predominated in the first year, especially its potential portability as a response to the lack of proof of land ownership, and its apparent low cost, given the number of displaced families. However, concerns about hurricane resistance were also strong and caused a sort of T-shelter design "arms race." Before long, the recommended $1,500 solution became a wooden structure able to withstand three Level 3 hurricanes, costing as much as $10,000, including design, materials, labor, warehousing, and shipping (plywood and corrugated galvanized iron sheets for roofing

were imported). This amount came close to the cost of a modest-sized permanent house that a Haitian family could build from standard quality materials.

Delivery times were affected by such activities as customs clearance, rubble removal, community mobilization, and site stabilization, as well as the need to address land tenure issues. As of September 2010, approximately 13,000 T-shelters had been constructed and delivered, most in areas south of the capital, close to the earthquake epicenter. Of these, just over 2,000 had been delivered in the six metropolitan Port-au-Prince communes, and only 133 in Port-au-Prince itself.[66] The Phase 2 target of full transitional shelter within 12 months (January 2011) was not met, although by August 2011, 93,000 T-shelters had been delivered.[67] Nearly all the 113,000 T-shelters

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[65] IASC, 2010, "Transitional Shelter technical guidance."

[66] IASC/Shelter Cluster, 2010, *Transitional Shelter Progress Update.*

[67] OCHA, 2010, "Revision of the Flash Appeal for Haiti 2010," http://www.unocha.org/cap/appeals/revision-flash-appeal-haiti-2010.

finally committed were delivered by the second anniversary of the earthquake, in January 2012.

One international agency estimated that 20 percent of the T-shelters helped households leave camps. The overwhelming majority of urban IDPs were renters without land and therefore they could not benefit from the T-shelter program. Beneficiaries were predominantly wealthier families (those with land) disproportionately located outside of the Port-au-Prince metropolitan area, where there is more level land and plots were larger. (At one point there were enough excess T-shelters in Léogâne that the requirement for a family to be earthquake-affected was dropped.) At the time all the T-shelters were distributed, the camp population had fallen significantly; 515,000 IDPs remained in camps.

The T-shelter program has been widely debated. The structures had limited applicability in dense metropolitan neighborhoods and diverted resources from the reconstruction process. The IHRC estimated the total cost of the 113,000-unit T-shelter program at more than $500 million.[68] Most of the materials were imported, which limited the contribution to the local economy and livelihoods; and without technical assistance, there were limited options for safely upgrading most designs. Other problems in urban areas included the frequent construction of T-shelters on urban sites so small that no reconstruction could take place around them and the inefficiency of blocking sites with single-story T-shelters where multistory reconstruction could take place.

Haitians quickly incorporated T-shelters, and even tents, into the housing economy, and began to sublet them. This was evidence of a reality not always understood by international actors: that there was a single market in which people were

seeking housing solutions. Tents and T-shelters had simply been assimilated as additional market options.

In the spirit of the "one housing sector" approach, it is obvious that more leadership was needed to bring government and agencies together to answer the question "If this is transitional shelter, what is it a transition to?" Alternatives to providing T-shelters could have been more support for hosting solutions and scaling up repair and reconstruction early on, particularly of rental housing.

Humanitarian agencies were generally ill prepared to execute these options. T-shelter funding was difficult to reprogram toward other solutions once commitments were made, and, without pressure from the government to change course, there was little incentive to do so.

As a result, in the first two years, households were offered very few choices, and the choices that were available were not suitable for many people, especially renters. The T-shelter program was debated within the humanitarian community even while it was being carried out, but the next steps in housing recovery were not clear, nor did resources appear to be available for more permanent solutions, except in specific small-scale donor projects (see Box 8).

At a minimum, it will be important to monitor the long-term impact of the T-shelter program on households, neighborhoods, and the housing sector in Haiti.

g. Rental subsidies were successful after a slow start

Rental subsidies, also called Rental Support Cash Grants (RSCGs), were an appropriate response to the fact that renters made up the majority of the displaced households in the camps. RSCGs were not new to Haiti; they had been used after the 2008 Gonaïves floods. They were also listed as an alternative to be considered in the February 2010 Shelter Sector Response Plan.

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68 Priscilla M. Phelps, 2011, "Haiti Housing and Neighborhoods Reconstruction: Building the Bridge While We Walk On It." Unpublished Interim Haiti Recovery Commission end of mandate report.

BOX 8

Meeting Shelter Needs

"For the donor community, it was very desirable to pick on one or two very simple solutions. It was easier to explain to their constituents, to the population who was funding them, or back to their parliament, and it was very easy to articulate to their media. The challenge for the sector for future disasters is to try to ensure that conversation on a more tailored, flexible approach happens right at the very beginning. That meeting shelter needs means a range of solutions; it's not the provision of a shelter product."

Graham Saunders, Head, Shelter and Settlements, IFRC, *Haiti: Lessons to be learned.* https://www. youtube.com/ watch?v=z3nWo_y9_Q.

While some agencies feared rent escalation and displacement of existing tenants, a few began piloting this option beginning in mid-2010. They were piloted by the IFRC in October 2010 and by other organizations in 2011.[69] In the first 18 months, fewer than 2,000 subsidies were made available.[70]

Interest grew in rental subsidies with the successful and highly visible project to close the camps in Place Boyer, Place St. Pierre, and other priority public spaces in late 2011, under the Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project. Initial funding came from the U.S. Office of Transition Initiatives, and implementation was carried out by IOM. RSCGs provided $500 for one year's rent and other incentives to encourage continued occupancy of the rental unit.[71] This pilot proved that there

were livable units available in the housing market, and a later study showed that the availability of rental funds in turn increased the supply.[72] IOM reported that in 2011, 6,000 households had moved from camps into safe housing thanks to RSCGs.[73]

An evaluation of the program conducted in early 2013 seemed to show that the subsidies had not raised rents. In addition, 77 percent of the landlords reported that about two-thirds of the rent that they received from grantees had been invested in their property to meet program requirements and that they planned to invest a similar amount in further rental space in the coming year. However, 75 percent of families receiving rent subsidies did not remain in the same accommodation beyond one year.[74]

While the evaluators expressed concern that the program would have a higher social return if overhead costs were reduced so that more households could receive subsidies, the RSCG program was characterized as "a rapid, effective and relatively inexpensive method of providing housing solutions," with a significant secondary benefits.[75]

In late 2011, the government began working with an inter-agency working group to define standards that reflected the experience gained during the first 18 months of rental subsidies.[76]

The rental subsidy program is discussed in the context of the shelter response and camp closure in

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[69] Jeremy Condor, Charles Juhn, and Raj Rana, 2013, "External Evaluation of the Rental Support Cash Grant Approach Applied to Return and Relocation Programs in Haiti."

[70] Among the first agencies providing rental subsidies were the IFRC, the Canadian International Development Agency (CIDA), and the Lutheran World Federation.

[71] The IFRC subsidy was $1,000. All other agencies provided $500.

[72] Condor, Juhn, and Rana, 2013.

[73] By June 2013, 45,035 families had left the camps with subsidies, and an additional 15,700 were planned.

[74] UN-Habitat, 2013, "Improving the impact of rent subsidies," Internal discussion paper.

[75] Condor, Juhn, and Rana, 2013.

[76] Three years after the earthquake, 33,194 households had benefited from this option, helping them finally move from the temporary camps.

h. The humanitarian system was not set up to coordinate reconstruction

During the first 24 months after the earthquake, the lack of an official coordination platform for housing reconstruction delayed recovery.

Humanitarian platforms such as the clusters were created to coordinate humanitarian interventions. Once the humanitarian action is completed, these agencies typically hand further action back to government and reduce their profile (sometimes referred to as an "exit strategy"). Only the ER Cluster, which in Haiti attempted to coordinate housing and neighborhood response, rubble removal, and livelihoods, is intended to address post-humanitarian requirements.

Nevertheless, as the humanitarian programs of many of the agencies participating in the Shelter Cluster evolved into reconstruction programs, the Shelter Cluster did its best to evolve as well. Agencies and individuals rated the clusters as relatively effective (see Figure 11).

In April 2010, a new cluster-type entity was created—the Logement-Quartiers (Housing-Neighborhoods) working group. Led by UN-Habitat and placed under the ER Cluster, it advocated for the adoption of a neighborhood-based approach to reconstruction and repair and for a focus on supporting IDPs to return to their neighborhoods rather than continuing the heavy emphasis on the management of camps. But it had no mandate to develop a housing recovery strategy, and lacked resources, official status within the international coordination architecture, and an official government counterpart (see the Logement-Quartiers case study).

Major housing reconstruction actors, including the multilateral and bilateral agencies, did not participate regularly in the clusters or the Logement-Quartiers (Housing-Neighborhoods) working group. Their participation might have strengthened the dialogue about the lack of strategy and planning with the government.

The humanitarian phase continued well after the normal six-month to one-year humanitarian period. Many clusters continued to operate, albeit at a reduced level. The humanitarian system lacked both protocols and funding mechanisms for recovery coordination. As a result, there was a weak link between humanitarian action and housing reconstruction, and agencies with funding for reconstruction programs began to work in a fragmented way, without policy guidance or coordination.

3. Findings

The following findings summarize the situation of the shelter response in the first 18 months after the earthquake.

A straightforward initial "Shelter Sector Response Plan" was developed. The plan had three clear objectives, and was supported by both the Haitian government and the international community.

The emergency response was successful. The success factors in the emergency response included a strong mobilization effort and implementation capacity; the early coordination framework; and agreement on clear benchmarks, including universal coverage of emergency shelter needs within three months.

There were difficulties in adjusting the initial strategy to the evolving situation. These difficulties were due to the absence of shelter or housing sector policies prior to the disaster; the lack of a reconstruction framework and common, clearly defined goals; wrong assumptions and a lack of clarity on funding for reconstruction; and the failure of humanitarian agencies to define an exit strategy.

There was fragmentation among sectors and a poor transition between shelter and housing programming. Significant variation in capacity from one cluster to another and weak inter-cluster coordination contributed to the fragmented response. The poor transition between shelter and housing can be attributed

Figure 11. How would you rate the effectiveness of the coordination mechanisms in which you participated?

Number of organizations answering

to a lack of a cluster mandate for housing recovery and reconstruction, and having no government platform ready to assume responsibilities.

Haitians and international actors were increasingly not working in concert. This was the result of a number of factors, including the lack of familiarity with the cluster system by Haitian actors or a failure to adapt it to Haitian requirements, or both; limited government coordination of international actors; turnover and instability in the cluster system; the difficulty of maintaining continuity during the election and early post-election period; and language and cultural barriers.

Ultimately, the shelter response consisted almost exclusively of camp support and a massive T-shelter program. These options were made available based more on what agencies could provide than on what the population preferred or was capable of doing for itself. The T-shelters supported property owners more than renters, by committing disproportionate funding to T-shelters, which required access to land, and underfunding rental subsidies and hosting arrangements.

4. Recommendations

Base shelter and housing strategy on the concept of a "one housing sector approach" to reinforce the link between relief, rehabilitation, and development.

Even if a Shelter Sector Response Plan is developed early, during the emergency response, it should consider the entire housing recovery process and try to define mid- to long-term housing reconstruction objectives and to identify strategies to support self-recovery. Unless this is done, it is difficult for humanitarian shelter interventions (including transitional shelter) to set the path for permanent reconstruction.[77]

The leading agencies in housing, self-recovery, and development need to fully engage key

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[77] "Reconstruction actors need to be in place as soon as the crisis occurs, and should provide the framework for much of the emergency response. If reconstruction efforts were properly resourced and were on the ground in a timely way, emergency actors should look to phase out short-term tools much sooner; indeed one of the reason for the 'mission creep' of the humanitarian response into long-term reconstruction is precisely the weakness in the development/reconstruction response." Simon Levine, Sarah Bailey, Béatrice Boyer, and Cassandra Mehu, 2012, "Avoiding reality: Land, institutions and humanitarian action in post-earthquake Haiti," http://www.odi.org.uk/publications/6979-haiti-land-earthquake-humanitarian-cluster-camp-shelter.

institutions in the early days of a response and provide technical support so that a viable Shelter Sector Response Plan can be developed.

Establish housing sector coordination mechanisms that are properly resourced, and avoid the fragmentation of the "one housing sector approach" into a "shelter sector" and a " housing sector," especially in the urban context.

To be effective, inter-cluster coordination mechanisms must have the necessary leadership, expertise, and systems to identify cross-cutting areas and to integrate the work of clusters and other agencies. This includes having the capability to resolve key impediments, such as debris management and land issues.

The international community should look for mechanisms to better link humanitarian and reconstruction frameworks early on. The role of the Shelter Cluster SAG should also be reassessed, since in those instances where the government is unable to provide a coordination platform for reconstruction, it could play an integrating policy role in housing recovery.

Improve host government's and development institutions' understanding of the cluster approach and cluster understanding of government requirements.

If governments do not understand the cluster approach when clusters are activated, engagement and collaboration will be hampered.

Contingency planning should include dissemination of information about the cluster approach, especially in disaster-prone countries. Tools are also needed to better assess and strengthen the capacity of central and local governments to manage both shelter response and housing recovery. Shelter and housing can be difficult sectors in which to coordinate with government through the cluster system because there is often no single ministry with

the mandate for housing recovery. It is therefore crucial to identify in advance which institution will take the lead on shelter and housing, and what support it will need to fulfill its role.

Support the autonomy of the affected population to identify and implement their own sheltering and housing solutions.

Affected households generally know better than others what their best sheltering and housing options are and how to navigate the local system, even if that system has changed due to the disaster. However, households attempting self-recovery (assisted or not) should not be left completely to their own devices by recovery actors; even these households should be monitored to ensure that they succeed.

Particularly in the early months, shelter provision must be untied from formal resolution of land tenure issues. The affected population should be supported to find land solutions within either the formal or informal system.

Offer multiple shelter options, and focus on solutions (i.e., transitional sheltering), not products (i.e., T-shelters).

There is no one-size-fits-all solution to sheltering or housing in any context, but especially for urban disaster recovery, due to both the complexity of the environment and the adaptability of city dwellers. Agencies should develop the capacity to offer a range of options to the affected population, understanding that appropriate forms of support are likely to evolve over time, based on the response of the population and on the changing context. Funding and management systems must allow the flexibility needed to implement this approach.

A lesson learned from Haiti is that T-shelter programming is complex. It entails not just production of the physical structure, but understanding the environmental, social, cultural, and economic context. If the approach is adaptable and open to feedback, a program

can be started with limited assessment; however, a rigidly designed program, with long materials pipelines and slow adjustment times, such as existed in Haiti, creates its own risks, because it is difficult to fine tune over time.[78]

Use social intelligence and information systems to inform the strategy, and monitor the uptake of solutions offered, to ensure that they help intended beneficiaries and facilitate their access to acceptable choices.

Shelter sector strategies and contingency planning should be based on lessons learned from past disasters in the country, information about the housing market in normal times, and local social intelligence.

The response to a major disaster requires inclusive, independent monitoring to ensure that program outcomes are being met. The monitoring system should use feedback loops, including beneficiary communications, to adjust operations over time.[79]

All options should be monitored, using an information system that covers related sectors, such as WASH, livelihoods, and debris management, and indicators agreed to with government. Local and international agencies must be given adequate resources early on to build the necessary information base.

Work to reach a common understanding of urban shelter options and standards, including the relevance of the Sphere standards.

An agreement is needed within the global humanitarian response framework on shelter approaches for urban settings, and on the country framework to use to maintain compliance with agreed standards. T-shelter programming in Haiti diverged greatly from the parameters established in the IASC transitional shelter guidelines, without the applicability of either the guidelines or the approach being reassessed.

The Sphere standards were often referred to by agencies as the default standards in Haiti, but these need to be reviewed to respond to important shortcomings that have been identified there and elsewhere.[80]

Governments should ideally define shelter options and related standards in advance to ensure the quality, equity, and coherence of the shelter response. It is critical that Haiti develop a housing sector recovery framework, building on the earthquake experience, to increase the efficiency and predictability of shelter and housing activities in future disasters.

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[78] Levine, Bailey, Boyer, and Mehu, 2012.

[79] Peter Rees-Gildea and Olivier Moles, 2013, "Lessons Learned & Best Practices: The International Federation of Red Cross and Red Crescent Societies Shelter Programme in Haiti 2010–2012."

[80] Sphere Project, 2011, Humanitarian Charter and Minimum Standards in Humanitarian Response. Even though Haiti T-shelter parameters had been issued, respondents to the Shelter and Housing Survey for Organizations (20%) and Individuals (18%) identified the Sphere standards as the basis for their T-shelter designs. For organizations, this was the most-used reference.

B. The Housing Response

GOOD PRACTICE IN POST-DISASTER HOUSING INCLUDES:

- Developing humanitarian shelter and housing recovery strategies jointly, so that they reinforce each other

- Ensuring that a lead government agency for housing recovery and reconstruction is appointed early on, and that it has a clear mandate and the necessary authority, tools, and capacity

- Communicating regularly with affected households with messages that encourage self-recovery and that keep expectations realistic

- Focusing on reactivating both demand and supply in the housing market, since housing is a private good generally acquired through the market

- Involving households in deciding on recovery approaches and ensuring a choice of housing solutions

- Aiming for solutions that are similar to pre-disaster housing, but safer, while avoiding relocation, and supporting vulnerable households to recovery

- For government, focusing on its enabling role in building houses; this role is usually considered not necessary and, even when carried out, it is often unsuccessful

1. Background

The Haiti earthquake took place when, as a result both natural population growth and rapid urbanization fueled by migration over the past three decades, there was already a pent-up demand for housing in the Port-au-Prince metropolitan area. Not all of Haiti's urban population growth took place in Port-au-Prince, but of the 2 million people added to urban areas between 1982 and 2003 due to migration, 1.3 million were added in the West region, where Port-au-Prince is located.[81]

The Institut Haïtien de Statistique et d'Informatique (IHSI) (Haitian Bureau of Statistics) population and household size estimates for the metropolitan region suggest that in excess of 15,000 housing units were produced per year between 2003 and 2009, nearly all of it by informal means.

Most buildings in Haiti are one to three stories. According to IHSI, most families, regardless of income, reside in a house.[82] One-story, single-family dwellings comprise 63 percent of the housing stock in metropolitan Port-au-Prince and 72 percent in surrounding urban areas. Other housing types include multistory houses or apartments (10%), *taudis-ajoupa* (slums) (14%), kay ate (mud houses with joined roof and walls) (6%), and "other" (7%). Urbanization has led to very high density and multistory construction, particularly in informal neighborhoods.

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81 World Bank, 2006, Haiti: Social Resilience and State Fragility in Haiti, A Country Social Analysis.

82 However, IHSI's categorization of multistory single-family structures and apartment buildings into a single category makes it difficult to analyze the prevalence of apartment units.

In secondary cities, concrete block housing is similarly constructed, but less densely built. Wood frame construction and traditional designs are also more prevalent outside of Port-au-Prince, including Victorian frame houses and two-story frame structures with a commercial first floor and residential second floor that are still found in many town centers. Over time, however, these traditional buildings are being replaced by the type of concrete block construction found in Port-au-Prince.

A number of factors contributed to the extensive damage and destruction of housing from the earthquake. Because Haitians regularly experienced fierce tropical storms, they were most attuned to hazards like wind, rain, and flooding, and preferred solid houses that could withstand these conditions. Yet most homes were designed and constructed by the owner or a local mason, with no building permit or construction inspection.[83] Housing was commonly built over time as funds were acquired, which resulted in construction that was inconsistent and haphazard. Finally, poverty (and the lack of regulation of materials markets) fueled a market for lower-cost construction materials that were also of poor quality and, in the case of sand and aggregate, sometimes scavenged from nature.

The predominant structure type in Port-au-Prince was (and continues to be) a non-engineered building constructed of unreinforced masonry walls framed by slender concrete columns.[84] Hollow concrete block was the primary masonry unit used, with concrete slabs for floors and roofs. Ninety-seven percent of multistory dwellings and 76 percent of one-story houses were predominantly constructed with

concrete, block, or stone. Sixty-nine percent of multistory buildings and 64 percent of one-story houses were built with concrete slab floors. The remaining multistory buildings had tile or wood floors and the remaining one-story houses had compacted earth floors.[85] Other roofing methods included wood frames overlaid with lightweight corrugated metal. To reduce concrete requirements, concrete blocks were often placed within the floor and roofing slabs when they were being cast.

Post-earthquake condition of housing. After the earthquake, the Ministry of Public Works, Transport, and Communications (MTPTC), with assistance from several development partners, conducted an extensive building safety (or habitability) assessment.[86] The assessment included housing in informal neighborhoods.

This assessment was originally meant to indicate the advisability of occupying buildings immediately after the earthquake, but, in the absence of better information, it was used for various other purposes, including to estimate the overall scope and cost of the housing reconstruction effort. Table 4 shows the distribution of building types and conditions.

Multifamily buildings made up a significant portion of the urban housing stock. If each multifamily building was assumed to have four housing units (each often just one or two rooms), then the number of multifamily units was closer to the number of single-family units, as shown in Table 5 for red- and yellow-tagged buildings. Most multifamily units were rental units.

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83 Housing was not unique in this respect: the lack of construction regulation was universal, as evidenced by the number of public buildings and commercial locations that also collapsed.

84 Anna F. Lang and Justin D. Marshall, 2011, "Devil in the Details: Success and Failure of Haiti's Nonengineered Structures," *Earthquake Spectra*. Vol. 27, No. S1, S345–S372.

85 IHSI, 2003, Enquête sur les Conditions de Vie d'Haïti, Port-au-Prince: Ministère de l'Economie et des Finances (MEF) (Ministry of Economy and Finance).

86 The habitability assessment labeled buildings as "green" (habitable), "yellow" (habitable with caution or minor repairs), or "red" (inhabitable). See Section III.C for a description of the building habitability assessment.

Table 4. Building Conditions by Category and Building Type

Building Category/Type	Green	Yellow	Red	Red + Yellow	Total	%
Residential – single-family	155,757	72,413	59,560	131,973	287,730	72%
Residential – multifamily	37,324	20,966	11,477	32,443	69,767	17%
Total housing units	**193,081**	**93,379**	**71,037**	**164,416**	**357,497**	**89%**
Other building type	23,308	10,558	9,360	19,918	43,226	11%
Total buildings	**216,389**	**103,937**	**80,397**	**184,334**	**400,723**	**100%**
%	54%	26%	20%	46%	100%	

Source: MTPTC habitability assessment.

Table 5. Building Condition by Unit Type

	Yellow	Red	Red + Yellow	%
Residential – single-family	72,413	59,560	131,973	50%
Residential – multifamily	20,966	11,477	32,443	
Residential – multifamily units @ 4/building	83,864	45,908	129,772	50%
Total housing units	**156,277**	**105,468**	**261,745**	

Source: IHRC estimates based on MTPTC data.

2. Issues

a. Haiti lacked an institutional framework for housing

Prior to the earthquake, there was no single lead agency mandated to address housing issues in Haiti. There were individual agencies with limited mandates in specific areas related to community development and housing, including MTPTC, the Ministry of Social Affairs and Labor (MAST), the Ministry of Interior and Local Government (MICT), and Entreprise Publique pour le Logement Social (EPPLS). But support for affordable housing in the national budget was infinitesimally small, so the involvement of these agencies in this sector was almost nonexistent.

There was also no national policy on housing for the low-income population or any strategy for integrated upgrading of informal neighborhoods.

The lack of a lead agency and an institutional and policy framework for affordable housing before the earthquake meant that there was no available starting point for establishing a housing reconstruction policy. Such a framework could have helped improve the direction and the coherence of housing recovery effort.

b. A housing recovery strategy was never articulated

A government-led housing recovery strategy, prepared in consultation with families and agencies, should have defined goals, assigned roles and responsibilities, and laid out the financing plan. Unfortunately, such a strategy was never approved, to the detriment of affected families and all involved.

Both external agencies and government agencies, such as the Comité Interministériel d'Aménagement du Territoire (CIAT) (Interministerial Committee for Territorial Planning), pointed out the urgent need for policy decisions and coordination on housing and neighborhood reconstruction. The Logement-Quartiers (Housing-Neighborhoods) working group started advocating in April 2010 for a neighborhood return approach.

By early 2010, both domestic and international agencies, including the Shelter Cluster, CIAT, and UN-Habitat, identified the full range of housing situations that the reconstruction strategy would need to address, and drew attention to the predominance of low-income renters in the population.[87]

By mid-2010, there was a consensus on the principal housing reconstruction policy gaps. Agencies were seeking direction from the government on, among other things:

- Debris removal
- Disaster risk management (DRM), including where it was safe to rebuild
- Tenure security
- Land for new developments
- Building codes
- Standards for repair, retrofitting, and neighborhood improvements
- Beneficiary selection
- Subsidy and financing strategy

Agencies also wanted to know the government's own plans in the housing sector, as word of various government-promoted housing initiatives circulated frequently.[88]

The level of demands by international agencies and the dispersion of effort at times overwhelmed the government. The shear number of meetings and requests for advice left little time for government to chart its own course. Rather than offering programmable resources, agencies proposed pre-set projects and activities, which government officials did not feel empowered to turn down, even when they

were not consistent with the direction ministries wanted to go.[89]

Where a policy issue fell squarely within the mandate of a single government agency, these agencies did their best to provide advice. For instance, MTPTC provided guidance on construction standards for buildings and sites. But many open issues required consultation among government agencies. With no lead agency appointed, and individual ministries stretched to the limit, policy direction that the government provided on housing-related questions in the crucial first year was somewhat ad hoc.

In October 2010, the Neighborhood Return and Housing Reconstruction Framework (NRHRF) was prepared by the Interim Haiti Recovery Commission (IHRC) at the request of the IHRC co-chairs. The draft framework was based on the results of a workshop with international agencies and the government. It identified four overriding objectives for the housing and neighborhoods reconstruction process:

- To restore the status of households to what it had been before the earthquake, that is, to help owners rebuild and to assist renters to reestablish their rights as tenants
- To improve the safety of houses, and the safety and functionality of neighborhoods that are reoccupied through community planning and a "building back better" (BBB) approach
- To reduce the number of houses and neighborhoods in unsafe and undesirable locations using risk assessment and relocation
- To ensure that both reconstruction and new construction contributed to urban renovation and regional development, as envisioned in the government's long-term rebuilding plan

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87 See, for example: "Stratégie du Gouvernement d'Haïti pour appuyer le retour des populations au foyer dans habitat sûr et reconstruire les logements et les quartiers," prepared by CIAT, UN-Habitat, World Bank, and others, in July 2010. Other early policy documents practically overlook the rental housing challenge. See, for instance: Nicole Rencoret, Abby Stoddard, Katherine Haver, Glyn Taylor, and Paul Harvey, 2010, "Haiti Earthquake Response: Context Analysis."

88 AlterPresse, 2011, "Haïti-Séisme-Un an: Population de Fort National en colère."

89 GFDRR, 2014, "Disaster Recovery Framework Case Study: Haiti Disaster Recovery Framework: Recovery from a Mega Disaster."

The framework also identified four operational approaches that would make the realization of these objectives possible:

- Return to safe homes in safe neighborhoods
- Relocation from unsafe houses and sites
- Support outside the earthquake-affected area
- Closure of the camps

The framework and an initial work plan were presented to the IHRC Board in December 2010, but were never formally approved, due partly to questions about IHRC's mandate. Uncertainties surrounding the presidential elections also seemed to make approval of any housing reconstruction strategy by the government impossible.

In January 2011, the Inter-Cluster Coordination and Humanitarian Country Team (HCT) issued the "Return and Relocation Strategy."[90] Its purpose was to "define general guidelines necessary to implement durable solutions for displaced people after the earthquake, with reference to the Universal Declaration of Human Rights; international principles related to the 'Restitution of Housing and Property of Refugees and Displaced Persons'; Haiti's Constitution, Article 22; the Government's Decree 22 of March 2010, recognizing the obligation of the State to relocate earthquake-affected families; and the NRHRF."

This strategy was said to represent the joint perspective of the clusters, but it was not presented to government or the IHRC, nor was a promised implementation plan prepared.

Agency response to policy gap. Agencies hoping or planning to be involved in housing reconstruction needed a strategy for fundraising and programming purposes. Agencies were still fundraising in mid- to late 2010, but lacked concrete ideas about what interventions they should finance. Others had raised funds and

were under pressure to say how the funds were to be programmed.

The failure to produce and enforce a housing reconstruction strategy had a number of unfortunate impacts. It left agencies without a unifying vision of housing recovery, which caused a fragmentation of housing interventions.[91] The interventions proposed by donors were very diverse, due to the lack of guidance on standards, and often overly complex and expensive, leading to extensive delays. Principal activities of 42 agencies who answered the survey associated with this report are shown in Figure 12.

Good practices were sacrificed, as some agencies were unfamiliar with good international practices or unsure about how they could be adapted to the post-earthquake context. Economies of scale were also lost. This is particularly true with the use of owner- or community-driven reconstruction, which delegates considerable responsibility to households and communities, but requires a significant investment in training and management that was difficult to justify for small-scale projects.

c. Household Self-Recovery Was the Predominant Form of Recovery

Repair and reconstruction activity that was observed in cities in the first year was carried out mostly by households building on their own. These households generally received no technical assistance; they repaired and rebuilt in the same way they had built in the past, using traditional incremental construction.[92]

Incremental housing construction was the norm in Haiti before the earthquake. Households build and extend their housing as resources are mobilized. At the same time, because erecting

[90] Inter-Cluster Coordination and HCT, 2011, "Stratégie de Retour et de Relocalisation, Final."

[91] The setup of the IHRC contributed to this fragmentation, since it served largely to review projects designed by donors, rather than to establish project parameters *ex ante*.

[92] UN-Habitat, 2012, "Support for Housing Rehabilitation and Reconstruction: Progress and Issues."

Figure 12. What were your organization's principal recovery and reconstruction activities related to shelter, housing, and urban development? (42 responses)

Activity	Value
Community planning/technical assistance	29
Basic services in neighborhoods	27
Disaster risk reduction	27
Housing repairs	27
Housing reconstruction	26
T-shelter	26
Emergency shelter	23
Institutional support (government or other)	23
Housing retrofitting	22
Rubble removal	20
Other	17
Services in camps	15
Rental subsidies	12
Camp management	6
Other financing	2

a permanent structure demonstrates ownership of informally occupied land, there is pressure to advance the project to a significant degree as soon as the land is acquired.

Incremental construction is sensitive to the cost of inputs, and for low-income households nearly all inputs are acquired in the informal market. Plots are acquired through the informal land market often in precarious, illegal locations; labor is supplied by the household itself, unlicensed contractors, or both; and materials, such as blocks, ingredients for mortar, and reinforcing iron, are purchased from unregulated roadside suppliers whose products are largely substandard.

This dynamic operated with greater urgency after the earthquake, as Haitians displayed their characteristic resiliency and employed self-recovery to restore their housing, both for their own use and for rental purposes.

In the first year, the government and donors were developing disaster risk reduction (DRR) messages and designing housing-related interventions, but communication with homeowners about how to reconstruct or to get help were inconsistent and intermittent. Donors such as the U.S. Agency for International Development (USAID) announced large-scale housing interventions, but history told many Haitians that they would not have the necessary influence to be selected for these programs. Workers and some homeowners were being trained on safe construction practices, mostly in connection with a specific donor project; the general public's access to such training was extremely limited.

As a result, owners and landlords recovered as best they could, using a sped-up version of the incremental construction model. Canaan and other new informal settlements within the urban core were largely developed by internally displaced person (IDP) households through self-recovery (see Canaan case study). The fact that landlords had repaired and rebuilt made rental assistance programming feasible.

Recovering on their own meant households could leave the IDP camps or avoid them altogether, thus mitigating camp-related risks, such as high rates of crime, including sexual assaults. The Displacement Tracking Matrix (DTM) registered a drop in owners in camps from approximately 280,000 in September 2010 to 76,000 in January 2012 (see Figure 13). Some of that drop could be attributed to the provision of T-shelters to land owners, but in a group sampled by the International Organization for Migration (IOM), in March 2011, less than 1 percent reported having received a Tshelter and less than 3 percent reported receiving an assistance package (see Figure 14). The remaining drop can safely be attributed to self-recovery.

Informal self-recovery had its drawbacks, particularly that the construction materials and methods used often made the new structure no safer than the old structure that was damaged in the earthquake. On the other hand, this informal "system" was remarkably productive and efficient, both for owner-occupied and rental housing. In effect, the informal sector was the biggest producer of housing for recovery. In contrast, goals such as reforming and expanding construction regulation through the application of the building code and permitting and

inspection and providing planned, serviced sites for new construction went largely unrealized. Haiti demonstrated how important it is that governments and international agencies find a middle ground in recovery where the informal construction system's productivity can be harnessed and quickly augmented by minimal norms and standards, so that, in contexts where self-recovery is prevalent, disaster risk is reduced.

d. Rehousing the renter population required targeted approaches

Renters became displaced after the earthquake for two principal reasons: damage or destruction of their housing and inability to find an apartment or to afford to pay rent. Anecdotally, there were renters evicted by profiteering landlords, but there is no evidence that this was a major factor. While repair and rebuilding added both owner and rental units to the housing market, addressing the low-income renter population also required "non-structural solutions" that took longer to figure out.

In the 2003 census, IHSI reported that 53 percent of all Port-au-Prince metropolitan area residents were renters. This figure rose to 65 percent if those who rented land for an "owned" house were included. This included 20 percent

Figure 13. IDPs in Camps by Tenancy Status 2010-2012

	September 2010	January 2012
■No answer/don't know	82,456	15,475
■Owners	467,253	98,006
■Renters	824,564	402,339
Total	**1,374,273**	**515,819**
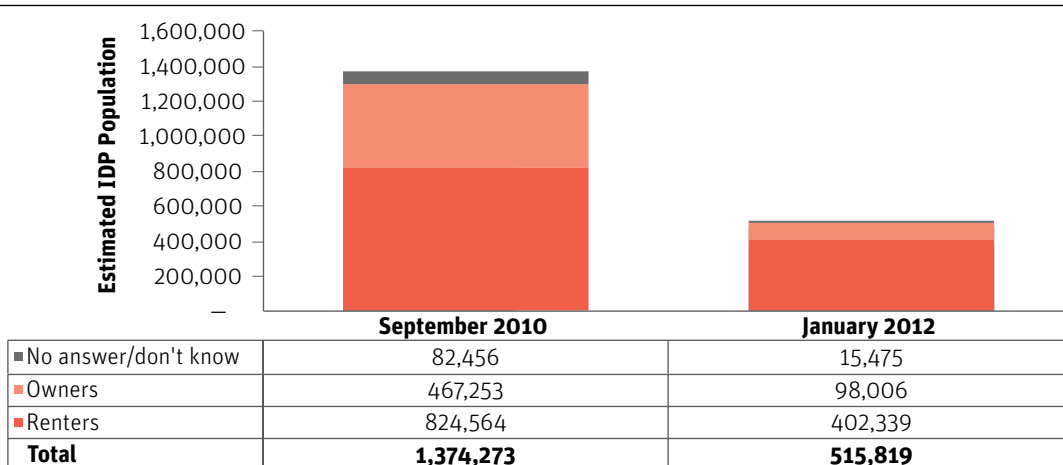
Source: IOM DTM and registration data, March 2012.

Figure 14. Reasons for Leaving IDP Camps, reported by Sample of Leaver Population, March 2011

Reason	Percentage
Poor conditions	32%
Rain/hurricane	21%
Crime/insecurity	13%
Eviction	7%
Family/friend offered support	5%
General lack of services	4%
Other-specify	3%
My home was repaired	3%
Assistance package	3%
T-shelter	1%
Null	1%
Employment	1%
Cholera	1%
No school	‹1%
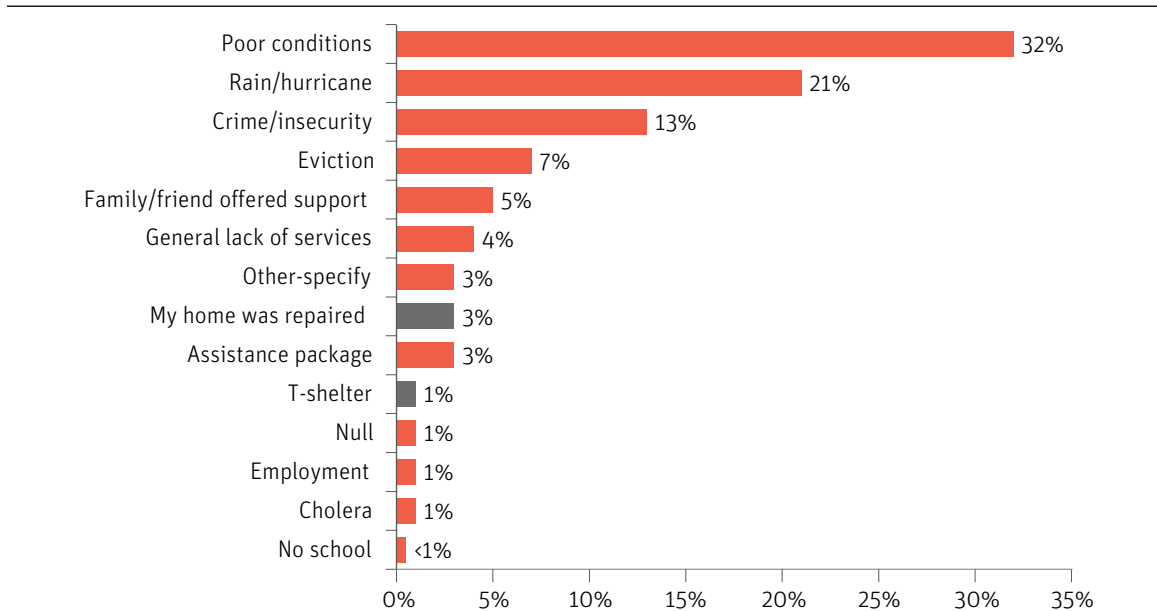
Source: IOM DTM and registration data, March 2011.

of all residents of single-story houses and 48 percent of multistory building residents.

The Phase 1 camp registration published by the IOM, in December 2010, reported the camp population to be 31 percent owners and 64 percent renters. By June 2011, the proportion of renters in the camps had risen to 79 percent. Another IOM report on camp resident intentions, issued in August 2011, reported that few tenants had any fears about leaving the camps, including concerns about the loss of services.[93] However, 57 percent reported lacking the financial means to leave, including to pay the first year's rent, which was estimated at just over $500.

Landlords and property owners willing to become landlords were obviously key players in any effort to rehouse renters, yet initially both agencies and the government were hesitant to provide support to these groups. There were concerns that paying for rentals would overheat the rental market. There were also questions about the equity of giving subsidies to landlords (landlords were assumed to be wealthy) and about the means by which the land had been acquired (land was distributed by past governments to political partisans).[94] Helping landlords with no proof of ownership was a hurdle for some agencies.[95]

The provision of rental housing for low-income families can be supported on the demand side (rental subsidies) or the supply side (construction

[93] IOM -ACTED, 2011, Enquête Haïti: Intentions des Déplacés. http://reliefweb.int/sites/reliefweb.int/files/resources/Full_Report_1967.pdf.

Offering a choice of solutions to those displaced is good practice, but suggesting that solutions were available that were not may have created false expectations—and a willingness to wait in IDP camps. The IOM's October 2010 Registration Update showed while 80% of owners who could not repair and 89% of owners who could repair intended to return to their neighborhood of origin, 74% of renters, who made up 61% of the camp population, expressed an intention to move to housing in a new planned site, an option that for most would never be available.

[94] In fact, according to 2003 IHSI census data, about 10 percent of all households have property-related revenue, which makes up 2.8 percent of all household revenue. Excluding the bottom quintile, the percentage of property-related revenue does not vary significantly across income levels.

[95] This may not have been a major concern: The 2003 census showed that 81.5 percent of owners of multistory houses reported having a deed for their property.

or repair subsidies), or both. Without an overall housing reconstruction strategy, agencies had difficulty devising interventions on the supply side, except for ongoing repairs and rebuilding in neighborhoods, but eventually a demand-side strategy emerged, with the provision of rental subsidies. The Rental Support Cash Grant (RSCG) program succeeded partly because more than a year had passed before the program reached scale, which provided time for owners to repair and reconstruct rental units on their own. A more targeted program of incentives might have accelerated this process and allowed renters to begin leaving camps earlier in larger numbers.

The rental subsidy program is discussed in the context of the shelter response and camp closure in Section III.A2.

e. Challenges in neighborhood reconstruction included limiting project scope

For a brief period following the earthquake, the disaster was seen as an opportunity to reduce the population of Port-au-Prince by moving slum dwellers and displaced households to new planned sites and enticing those who left the metropolitan area after the earthquake to stay in their new locations.[96] To support the government with this, a number of agencies embarked on a "new settlements" projects (see next subsection).

But the majority of agencies and the government itself soon realized that for most of the displaced a "return to neighborhoods" strategy was needed. This strategy aimed to return people to or close to their neighborhood of origin so that they could focus on self-recovery and avoid losing social capital.

The presence of rubble and the condition of streets and service infrastructure affected households' ability to return home. In Port-au-

Prince, the "return to neighborhood" strategy was originally focused on basic requirements: removing physical barriers to return, especially debris; moving basic services, such as water delivery, from camps to neighborhoods; and expanding the availability of transitional and permanent housing in neighborhoods.

Agencies had different criteria for identifying neighborhoods in which to work, including prior relationships. As agencies became more familiar with neighborhood conditions, they often became more ambitious in defining what improvements were needed. This expanded definition of what needed to be done at the neighborhood level became known as the "integrated neighborhood approach" (INA).

INA is an area-based intervention that reflects the social, economic, and physical features of an area; responds to multisectoral needs; and is informed by community-based decision making.

According to USAID's Office of U.S. Foreign Disaster Assistance (OFDA): "The [INA] approach is shelter-led, but settlement-focused; it shifts the attention from conventional 'four walls and a roof' efforts centered on households, toward a more synergistic and complementary focus on the entire community in defined spatial contexts. The process requires understanding of available local resources, emergent opportunities, and potential constraints regarding the sheltering of people, the recovery of affected economies, and the reduction of risks associated with vulnerability to natural hazards."[97]

The British Red Cross saw INA as helping to bridge the gap between relief and development, but also giving rise to questions about mandate for humanitarian agencies: "A geographic approach linked to urban systems is not without problems, such as knowing where a humanitarian mandate ends and that of development and

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[96] Nicolai Ouroussoff, 2010, "A Plan to Spur Growth Away From Haiti's Capital."

[97] USAID OFDA, 2011, "The 'Neighborhood Approach,' A Means of Improving the Delivery of Humanitarian Assistance in Urban Areas."

government agencies begins, and what to do if state and development partners fail to meet the basic needs of vulnerable people. However, if well managed, such an approach provides a significant opportunity for a more joined-up response from government agencies (including civil defense, emergency services, line ministries and service providers), the private sector and civil society."[98]

INA project components were a reflection of the resources and competencies of the executing agencies and priorities identified from the local level. Generally, INA projects included community organizing, community enumeration, risk mapping, and community planning, which together provided a baseline for identifying interventions that involved physical investment, ranging from repairs and reconstruction of housing to improvement of neighborhood amenities. Some INA projects invested only in neighborhood upgrading and not directly in housing. INA was also used in less urban projects. (See case studies for the Katye program, the Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project, PRODEPUR and PREKAD, and the Simon Pele project, all of which used a form of INA.)

INA projects addressed critical needs, but they could become complex and expensive. The upfront investment in becoming familiar with the neighborhood and developing trust with residents could be significant. The temptation for agencies who "adopted" a neighborhood was not just to restore housing, but to raise the quality of life to a level acceptable to the agency and its donors. Because Haiti had no neighborhood upgrading standards in place, agencies had to develop their own approaches, which also increased project costs. Unit costs varied widely.[99]

Even experienced agencies found it difficult to execute these projects. The capacity gap cited most often in the survey was project implementation. The first initiative of this kind by the government was the clearance and proposed reconstruction of Fort National, which faltered. UN-Habitat supported this approach with various partners, including Habitat for Humanity in Simon Pelé and Fondation Architectes de l'Urgence in Bristou-Bobin. More than one agency adjusted project scope due to conditions on the ground.

With little government direction, agencies had full discretion to use INA. But the philosophical question is not so clear—whether it was fair (especially in a highly inequitable country such as Haiti) to concentrate reconstruction funding on these relatively high unit-cost "showcase" projects that provided much more than housing recovery in select neighborhoods, while neglecting other neighborhoods and leaving many displaced families in camps, and whether this was the best way to use funding donated for recovery and reconstruction purposes.

f. Challenges in new settlements projects included costs and beneficiary selection

Several new settlements projects were initiated in the first two years after the earthquake by the Inter-American Development Bank (IDB), USAID, Habitat for Humanity Haiti (HFHH), faith-based organizations, and the government, among others.

New settlements generally took longer and cost more per unit than in situ housing recovery, and often took longer and cost more than originally planned by the agencies themselves. In a number of cases, the result was a reduction in the number of units provided. Finding land, verifying ownership, and subdividing land were

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[98] British Red Cross, 2012, "Learning from the City: British Red Cross Urban Learning Project Scoping Study," http://reliefweb. int/sites/reliefweb.int/files/resources/Learning%20from%20 the%20City%20%282012%29_0.pdf.

[99] The Ravine Pintade project spent about $9,500 per housing solution and $2,600 per household on improvements (see

case study 1). The Agence Française de Développement (AFD)/ European Union "Integrated upgrading of informal settlements in Port-au-Prince," which was originally planned to produce 2,000 improved housing units, may have cost over $22,000 per unit. These averages are calculated using housing units replaced or built as the denominator.

such complex activities that they led to the abandonment of some projects.

Beneficiary selection was another complicating factor in new settlements projects. As opposed to a neighborhood reconstruction effort, where prior residents were still onsite or could be identified, new settlements projects were by definition in unoccupied sites and required beneficiaries to be selected. Project executors struggled with beneficiary selection and sought guidance from the government and the IHRC. A natural instinct of these agencies was to select disadvantaged households. Yet not only were distinctions between more and less disadvantaged households difficult to make, due to the lack of a central register of affected households and of any government social safety net programs where the disadvantaged might have been registered, moving vulnerable families to what in some cases were relatively remote sites was not good policy, since it only increased their isolation and vulnerability.

Descriptions of new settlement projects in Haut Damier, Santo, and Canaan are included in the case studies. A few others that were initiated in the first two years are described below.

Government of Haiti. The Lumane Casimir Village (or Morne a Cabrit project) included construction of 3,000 planned units of housing and an industrial park in Thomazeau, 15 km northeast of Port-au-Prince. Begun in early 2012, the first keys were delivered to 1,128 households in May 2013. As of late 2013, $49 million had been allocated from Petrocaribe funds to the 3,000 housing units, an average of $16,000 per unit, making it the largest housing project and perhaps the largest single reconstruction project in the country.[100] The project was

designed to include various services, such as water and sanitation, electricity, in addition to a police station, a health center, elementary and vocational schools, and a marketplace, and several amenities, including a public square and a soccer field. A key feature is an industrial park, also being built by government. The beneficiary selection process was not made public, although police officers and those still in camps were mentioned as priority beneficiaries.

Haiti Fund for Economic and Social Assistance. The 400-unit "400 pour 100" housing project built in the Oranger area of Croix-des-Bouquets, north of Port-au-Prince, with funding from the IDB, was managed by the Fund for Economic and Social Assistance (FAES) and received implementation and financial support from Food for the Poor. The houses were part of a project approved by the IDB in April 2010, with an original goal of housing 5,000 households in temporary housing on individual plots of land. In June 2011, this number was reduced to 1,000 housing units in Oranger and 1,000 near the Caracol Industrial Park. The FAES used a screening and interview process to select beneficiaries, with data and logistical support from the IOM. The 35 m^2 permanent houses cost an estimated $20,000 per unit. The project was inaugurated in February 2012.

U.S. Agency for International Development. In 2010, USAID pledged to develop 15,000 new settlements plots, on which it would build up to 4,000 houses, with nongovernmental organizations (NGOs) and other donor partners building the remaining 11,000 houses. Between 2010 and 2013, USAID reduced its new settlements targets by more than 80 percent as unit costs increased from $9,800 to more than $33,000 per unit, due to input cost increases and design changes.[101] In 2013, only 2,649 housing units were expected to be built (906

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[100] Haiti joined the Petrocaribe agreement in October 2007, and under it, the Haitian government purchases and resells gasoline, diesel, kerosene, fuel oil, and asphalt from Venezuela at prevailing international market prices. A portion of the invoiced amount is paid in cash, and the balance is payable over 25 years with 1% annual interest, after a two-year grace period. At the time of earthquake, the agreement had provided

more than $1 billion to the government.

[101] U.S. Government Accountability Office, June 2013, *Haiti Reconstruction: USAID Infrastructure Projects Have Had Mixed Results and Face Sustainability Challenges*.

houses by USAID and 1,743 by NGOs). Even so, USAID's funding commitment increased from $53.3 million to approximately $90 million. Projects in the program included the 750-unit Caracol-EKAM site near the Northern Industrial Park, as well as projects in the municipalities of Cabaret, Quartier Morin, Terrer Rouge, and Titanyen. USAID hired consultants to design the beneficiary selection process, and worked with the IFRC to select beneficiaries. Not all households selected were earthquake-affected (see Haut Damier case study).

Lutheran Church Missouri Sinod. The "Building Homes and Hope in Haiti" project, a partnership between the Lutheran Church Missouri Sinod and the Evangelical Lutheran Church of Haiti, is planned to include about 225 houses in three Lutheran Villages in Jacmel, Beaudouin, and Léogâne. The project was originally proposed to the IHRC in 2010 as a 1,500-unit project.

Mission of Hope. In November 2010, Mission of Hope began its "Blue to Block" project in Leveque on property provided by the local government. This was the first faith-based project registered in the IHRC. The initial goal to build 500 permanent homes for displaced families has been increased to 650. Using local small construction firms, the Mission of Hope has built as many as 20 houses per month, at an average cost of $6,000 (originally estimated at $5,000). The project includes a church, a school, a marketplace, clean water solutions, and playing fields. The organization partnered with 410 Bridge to incorporate a deaf community from the La Piste slums into the community, reserving 160 of the anticipated 650 homes for deaf families.

Given the variety of new settlement project parameters, an impact evaluation after 5–10 years would be valuable to gauge which projects fulfilled their stated objectives and to understand their impact on the beneficiaries and the local areas.

g. With oversight, upgrading of T-shelters could provide permanent safe housing

Most T-shelters provided by agencies had timber frames or steel box or angle section frames. With proper maintenance, they may last as long as a decade.[102]

In rural areas, where traditional construction includes single-story, timber frame housing with woven or low-strength masonry infill, the T-shelters can be converted relatively easily to a similar permanent construction type. Modifications to T-shelters in these areas began almost immediately. In dense urban sites, less modification to shelters was seen, as residents instead saved for new permanent construction.

However, basing permanent construction on a T-shelter is unlikely to result in a building that meets urban standards, and doing so could create significant risks unless technical guidance is provided by the concerned authorities. Safety could be compromised, for example, if blocks or inadequately reinforced masonry is used to enclose T-shelter frames or if additional weight or stories are added without adequate foundations.

Only one T-shelter project was designed for upgrading. The IOM and EPPLS project of 335 semi-permanent shelters in Jacmel featured houses with a concrete foundation and partial concrete wall, topped by metal frame and fiber cement board that could be replaced over time by masonry.

Given the sheer number of T-shelters (approximately 124,000 units), upgrading could contribute to the permanent housing stock over time. For this to happen safely, government and agencies would have to develop and disseminate information on safe and cost-effective approaches to upgrading. Without such

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[102] This section is adapted from: UN-Habitat, 2012, "Support for Housing Rehabilitation and Reconstruction: Progress and Issues."

guidance, household resources would be better invested in permanent, safe construction based on correct site preparation, foundations, and reinforcement to allow for additional stories.

h. Technical assistance to government was plentiful but fragmented

Various government agencies received technical assistance to address capacity gaps related to housing and neighborhood reconstruction. In some cases, this was provided to facilitate specific reconstruction projects, such as assistance to MTPTC in the context of the Ravine Pintade project (see Katye program case study). In other cases, donors provided staff or funding to strengthen the policy and implementation capacity of specific government agencies that was not project-specific. Yet technical assistance was not able to overcome the fragmented way in which the government and agencies were working. Some examples of the technical assistance provided include the following.

UN-Habitat. UN-Habitat provided policy support on numerous occasions, including developing or contributing to outputs listed in the recovery timeline, including the Strategic Emergency Plan presented to the prime minister (February 2010), the housing chapter of the Post-Disaster Needs Assessment (PDNA) (March 2010), the Government of Haiti Strategy to Support the Return of Populations to Safe Habitats and the Rebuilding of Homes and Neighborhoods with CIAT (July 2010), and the IHRC NRHRF (October 2010), among others.[103]

The World Bank. The World Bank assisted MTPTC with the building safety (habitability) assessment and other technical activities and assisted CIAT in strengthening its capacity on DRM issues. The Bank also financed two major neighborhood upgrading programs, the Port-au-Prince Neighborhood Housing Reconstruction

Project (PREKAD) and the Urban Community-Driven Development Project (PRODEPUR), each of which included substantial technical assistance components (see the PREKAD and PRODEPUR case study).

United Nations Development Programme (UNDP). UNDP had long-term technical assistance relationships with various government ministries before the earthquake, and this commitment expanded as a result of the earthquake. In particular, UNDP assisted the Ministère de la Planification et de la Coopération Externe (MPCE) (Ministry of Planning and External Cooperation) with urban and strategic planning and with coordination of debris removal, and MICT and the Secrétariat Permanent de Gestion des Risques et des Désastres (SPGRD) (Permanent Secretariat for Disaster Risk Management) on a range of DRM activities.

U.S. Agency for International Development. OFDA financed the Emergency Community Assistance and Planning (ECAP) Program, which was implemented by consortium led by Habitat for Humanity International (HFHI). The ECAP Program mobilized Haitian professionals, mostly from the diaspora, who provided technical support to several agencies, including MTPTC, the Centre National d'Information Geo-Spatiale (CNIGS), CIAT, and the IHRC. USAID also provided extensive support to the IHRC.

Haiti Reconstruction Fund (HRF). The Housing and Neighborhood Reconstruction Support Program (HNRSP) was a $24.4 million multi-agency technical assistance program, funded by the HRF and the Haitian government. Executed as a United Nations (UN) Joint Program led by UN-Habitat, the program collaborated with MPCE, CNIGS, IHSI, MICT, and local governments to improve the management of reconstruction at the municipal and neighborhood levels. By attempting to strengthen government leadership of reconstruction and build capacity for urban development and urban management, the

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[103] UN-Habitat, 2012, "Haïti: Deux années d'appui d'ONU-Habitat aux efforts de refondation territoriale."

HNRSP was a unique attempt to move from a fragmented, project-based approach to a more programmatic approach by addressing the most urgent needs and capacity gaps in government agencies. The project included funding to establish the Systeme d'Information du Logement et des Quartiers (SILQ) (Housing and Neighborhoods Information System) in CNIGs. Delays in IHRC approval, compounded by difficulties with project management and interagency coordination in the first year, undermined the accomplishment of some HNRSP objectives.[104] In addition, by the time implementation got under way, the fragmented approach to recovery had already taken hold to the point that it was very difficult to overcome.

In the survey conducted for this report, both agency representatives and individuals cited policy making as the greatest capacity weakness of the government, followed closely by coordination. Curiously, only about 50 percent of agencies thought that either placing

advisors in ministries or providing funds to hire government staff would have helped address this problem, as shown in Figure 15.

In spite of the consensus on the issues where policy guidance was needed, the demand to the government from agencies seeking guidance on housing reconstruction was not well articulated. Similarly, the guidance from the government to the agencies was not well coordinated within the government or well communicated. But more importantly, the international community neither proposed to the government a joint housing strategy that they would commit to follow nor provided timely technical assistance that enabled the government to coordinate and provide guidance to the agencies.[105]

i. Data for planning and monitoring housing recovery were scarce

To plan recovery, information was needed at a minimum on: the affected population, damaged

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[104] Groupe U.R.D., 2012,"Evaluation du programme d'appui à la reconstruction du logement et des quartiers: Évaluation-phase 2012," http://www.urd.org/IMG/pdf/URD-ONU-Habitat_Evaluation_2012_Synthese.pdf.

[105] In late 2011, the government created the Unité de Construction de Logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Unit), which was charged with policy making for the housing sector and interagency coordination.

SURVEY QUESTION

Figure 15. What could have been done to improve government's capacity to manage recovery and reconstruction?

Better government / recovery partner coordination	71%
Better planning of reconstruction program	68%
Better articulation of government's strategy	68%
Stronger role for mayors	57%
More effective IHRC / HRF	54%
More advisors placed in ministries	50%
More funds to hire government staff	46%
Fewer recovery partners	36%
Better use of sector tables	36%

property and the cost to repair or replace it, risks, and the financial resources available for recovery. To monitor recovery, information was also needed on what projects were being carried out, on their progress and completion, and on their beneficiaries. Almost none of these data were readily available, nor was there any system for accumulating and analyzing the data.

As discussed previously, information on building conditions was collected through the building safety assessments and data on families in camps was collected through the DTM. Beginning in mid-2010, data from both started to become available to agencies. Data on reconstruction costs, other damages at the community level, and households that were affected but not in camps were limited, and coming mostly from community assessments, enumeration exercises, and (in the case of costs) pilot projects. Information on project plans and results was available only anecdotally.

The IHRC attempted to identify and track housing projects, based on its project submission system and other sources. By October 2011, when the IHRC closed, commitments for repairs and new construction had been identified for 58,000 housing units judged to have a high probability of being funded. The need for a more systematic effort to collect and organize damage, household, and project data was a principal motivation for developing the HNRSP.

In January 2012, UN-Habitat and the Camp Coordination/Camp Management (CCCM) Cluster issued a report summarizing data on repairs, retrofits, and new construction, using voluntary reports from 32 agencies including 14 (often small, church-based groups) assisting fewer than 200 households each. The report lacked data from major housing donors, local NGOs, and many religious organizations.[106] A CCCM Cluster

report in April 2012 showed similar results for completed units.

By March 2013, the Unité de Construction de Logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Unit) began monitoring and publishing improved repair and reconstruction activity data that included a larger number of NGOs. UCLBP was assisted by the CCCM Cluster and supported by the HNRSP.

The data from various reports prepared between December 2011 and March 2013 are summarized in Table 6.

The problems with these data are obvious, including different activities being reported on, different groups of agencies reporting, the voluntary nature of the reporting, and no information on beneficiaries. Further, each report is incomplete, since no measures were in place to monitor the most widespread means of housing recovery, which was self-recovery.

3. Findings

The following are findings from the first two years of housing recovery in Haiti.

The government had no policy framework on which to base the housing reconstruction strategy. There was also no agency of government to which this responsibility would have naturally fallen. Nor was there a policy framework for housing or slum upgrading. There was a near consensus among national and international agencies about the issues that the reconstruction strategy needed to address. However, there was no body with the mandate or influence to build on this consensus to develop a reconstruction strategy proposal that could be negotiated with the government and serve as the roadmap for all. Even the IHRC was not capable of serving this role, in spite of the involvement of major donors in the commission.

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[106] Major housing projects and donors not covered included the 16/6 Project, AFD, the World Bank, USAID, the IDB, and other major stakeholders.

Table 6. Reports of T-shelter, Housing Repairs, Retrofits, New Construction, and Rent Subsidies

Date	T-shelter	Repairs/Retrofits		Permanent Construction		Rent Subsidies	Information Source
	Completed	Planned	Completed	Planned	Completed		
December 2011	—	25,472	13,831	15,224	5,189	—	UN-Habitat/CCCM Cluster
April 2012	—	—	13,198	—	4,843	—	CCCM Cluster
March 2013	113,345	—	27,100	—	7,242	45,035	UCLBP/CCCM Cluster

There was incomplete data for planning housing reconstruction. There were eventually fairly good data on building conditions, but no comprehensive registration of affected households except those in camps. While the various situations of households were understood, there was no guidance on which households should be helped first, and in what way. It was not until 2012 that the SILQ was launched by CNIGs with support from the HNRSP.

The lack of an overall reconstruction strategy caused the reconstruction effort to fragment. With or without a strategy, agencies needed to complete fundraising and implement recovery activities. Having no strategy both simplified and complicated agencies' work. It was simpler because there was no need to conform to government standards or priorities, but more complicated because each agency had to find its own place to work and define its own standards and approach. The result was a proliferation of individual housing reconstruction projects with their own standards and approaches and an inequitable distribution of the available resources.

The technical assistance provided to the government was equally fragmented. Not surprisingly, the lack of a reconstruction strategy led to a program of technical assistance to support housing-related decision making by

the government that, while relatively generous, was generally not coordinated, nor strategic in its purposes. The HNRSP, which attempted to overcome the lack of inter-institutional coordination, provided support to key agencies, but its impact was blunted by institutional culture in both the UN and the government.[107]

Household self-recovery was the predominant form of recovery. Large numbers of affected Haitian households displayed their characteristic resilience and found housing solutions on their own. Self-recovery of housing was the principal method utilized by households in the first two years. This included repair and continued occupation of damaged buildings, rebuilding by households with the financial means, and acquisition of owned and rented housing through normal housing market forces. Market-based options grew to include renting out T-shelters and shelters in IDP camps.

Put another way, the informal sector was the biggest player in housing recovery. Housing construction in newly settled informal areas (such as Canaan), housing repair and reconstruction in informal urban neighborhoods, and non-permitted construction of new rental units throughout the country were three major

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[107] In spite of these difficulties, government officials who participated speak well of the program and its impact on agency collaboration in a program video. http://uclbp.gouv. ht/pages/228-programme-d-appui-a-la-reconstruction-du-logement-et-des-quartiers.php.

sources of housing units for those displaced by the earthquake. While agencies aspired to promote higher housing standards and to formalize housing production activities, the existing informal system set about providing housing for the displaced population, with very limited technical support.

4. Recommendations

Develop humanitarian shelter and housing recovery strategies jointly, so that they can reinforce each other.

While the early humanitarian intervention in Haiti was more the result of circumstances than of a plan, subsequent decisions on formalizing camps and providing T-shelters were planned. Better knowledge of the housing culture in Haiti and better analysis of how the shelter strategy would wind down might have contributed to approaches that did not so extensively prolong the humanitarian phase.

This disconnect in thinking reflected gaps in coordination between humanitarian and recovery actors on housing reconstruction, which were reinforced by the funding mechanisms that supported the various agencies. This setup needs to be evaluated at an international level to reduce the differentiation between humanitarian and recovery funding to ensure that recovery can begin earlier after a disaster and can be supported by humanitarian funding.

The difficulty of managing the gap between humanitarian action and recovery for major disasters in weak states like Haiti also deserves to be evaluated by the international community. Once it became obvious that the government would not be ready to assume full responsibility for recovery, or even to oversee the planning, some action needed to be taken to design a system of support and an exit strategy that would accomplish agreed goals.

Ensure early that there is a lead government agency for housing recovery and reconstruction with a clear mandate and the authority and ability to ensure an equitable and rational allocation of housing reconstruction resources.

Housing reconstruction agencies established before or after a disaster should have both the responsibility and the authority to deliver their mandate. This requires that they be able to influence donor and NGO programming and funding.

Technical assistance should support the lead agency and be coordinated among donors.

Even with a lead agency in place, recovery planning for the housing sector should be conservative, taking the legal and organizational context into consideration and carefully analyzing potential risks.

Immediately prepare a recovery plan for housing.

The PDNA should inform a recovery plan or framework that identifies general recovery priorities and strategies. The PDNA needs to be led by the national government. Ownership of the recommended strategies allows a quick transition from assessment to planning.

The recovery plan for housing should be led by the lead government housing agency, developed in consultation with the affected population, and ideally endorsed by the donor and the humanitarian and development communities.

The plan should be specific and strategic about roles and responsibilities and about how available resources are to be allocated. In general, the government should minimize its role as a house builder and focus on enabling others, including households. The government may strengthen regulations, such as those that cover the quality of building materials, or fund strategic investments in infrastructure that support housing recovery.

Putting local agencies at the center of the strategy will help build resilience and ensure capacity exists to manage recovery from the future disasters. An exit plan and schedule for both humanitarian and recovery actors can help ensure that a sense of urgency is maintained.

The housing recovery plan should favor enabling housing self-recovery.

An enabling approach should make available various "shelter solutions" versus "shelter products" for each category of affected households, and should encourage family financial participation and initiative. Subsidies should be structured to incentivize good choices, such as safer reconstruction, without unduly impeding recovery. External financial and human resources should leverage better use of private and local resources.

The housing framework has to balance equity, coverage, and the need for scale. Special consideration should be made in the framework for the rehousing needs of extremely vulnerable populations.

Work is needed in advance of future urban disasters to develop better models for self-recovery in these circumstances.

Use the media and communications to inform and motivate affected households.

A continuous communications strategy about housing strategies and options is needed among the affected population, humanitarian/development actors, and the donor community to ensure that all stakeholders understand recovery policies and the reasoning behind them. For households, the communication should be two-way, and should be designed to encourage self-recovery and to manage expectations.

Housing and neighborhood recovery takes time; the pressure to absorb funds and the reputational risk created by misinformed media can undermine support for the recovery strategy, so a communications strategy for the media is also needed.

Haitians received a lot of communications during the first two years, but much of it concerned public health and safety matters, especially once cholera broke out in October 2010. Communications about housing, safe construction, and related issues were limited, even once the MPTPC repair and reconstruction guidelines were published. By using all available media, and broadcasting repetitive, distinct messages, public health officials involved in managing the cholera epidemic demonstrated how effective public communications can be when the purposes and audiences are clearly defined.

Major localized funding committments should be allowed only after there is minimum assistance for all.

INA strategies help ensure area-based coordination and create synergies and economies of scale. Ideally, this type of project should be based on a strategic plan for development of the area and should use common methods and standards.

The goal for agencies is not necessarily building housing, but ensuring that affected households get properly rehoused. Neighborhood investments that improve the accessibility and safety of neighborhoods and upgrade services may encourage housing investment and self-recovery.

However, if donors stake their reputation on the quality of a particular neighborhood project, they can overinvest and (inadvertently or not) divert funding from providing minimum assistance in other areas, thereby reducing the number of beneficiaries who are assisted. Coordination with local government is critical, but local officials may be subject to the same biases.

If the government is not in a position to regulate INA projects across the disaster-affected area, donors should seek independent advice on the relative value of different types of interventions.

Haiti and other countries should be assisted before the next disaster to put housing recovery arrangements in place.

The creation of the SILQ and the founding of the UCLBP provide good conditions for development of a housing recovery framework that Haiti could apply in the event of future disasters. The

Politique nationale du logement et de l'habitat (National Housing and Neighborhood Policy) developed by the UCLBP in 2013 provides a key element of the framework for this effort.[108] Donors should work with the UCLBP and the other agencies supported by the HNRSP to develop policies, protocols, and information-sharing tools that will allow quicker planning and implementation of future disaster recovery programs in the sector. Similar initiatives are needed in many other countries.

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[108] UCLBP, 2013, "Politique nationale du logement et de l'habitat."

C. Risk Reduction in Post-Disaster Reconstruction

THE CHARACTERISTICS OF SUCCESSFUL DISASTER RISK REDUCTION (DRR) IN RECONSTRUCTION ARE THE FOLLOWING:

- Setting standards for DRR in reconstruction early and communicating them clearly, covering both site risk and building risk, and based on an open and realistic discussion of "acceptable risk"

- Conducting large-scale, repeated, and continual communication on best practices for more resilient reconstruction

- Establishing DRR and reconstruction policies that take into consideration people's perceptions of risk and that address the vulnerability of households over time

- Capitalizing on the short-term awareness of risk created by a disaster to permanently shift the culture of risk

- Recognizing that promoting safe housing does not necessarily mean building safe homes, but rather reducing the barriers to safe construction

- Using pre-disaster risk information presented in a form that is useful for post-disaster planning, complemented by post-disaster risk assessments conducted according to government standards

- Promoting "reformative" processes in reconstruction whenever possible, rather than just "restorative" ones

1. Background

Disasters result from the interaction of hazard, exposure, and vulnerability (see Box 9). Disaster risk management (DRM) is therefore concerned with understanding the hazards to which people and infrastructure are exposed, and reducing vulnerability to them.[109]
Every deadly earthquake is a reminder of how risk and disaster are created over time,

through unsafe construction practices, lack of risk-informed land-use planning, inadequate response and recovery mechanisms, and much more.

Disasters make obvious the need to reduce risk in recovery, so that avoidable calamities are not repeated. Often, however, the demand and need for risk reduction in reconstruction is faced with significant obstacles due to the complexity and constant urgency of post-disaster environments. This section describes some of the fundamental components for risk reduction in the post-earthquake recovery and reconstruction, and specifically how these were addressed or could have been addressed in Haiti following the 2010 earthquake.

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[109] This report uses "disaster risk management" or DRM to mean the systematic process to use strategies, policies, and improved coping capacities to lessen the adverse impacts of hazards and the possibility of disasters. It uses "disaster risk reduction" or DRR to mean the practice of reducing disaster risks through analysis and management of the causal factors of disasters. DRR in reconstruction entails raising awareness and changing construction and land use practices in the course of the reconstruction program.

BOX 9

Constituents and Terminology of Risk

Risk arises from the interaction of hazard, exposure, and vulnerability.

"Hazard" refers to the potential occurrence of an event that may have adverse impacts on vulnerable and exposed elements (people, infrastructure, the environment, etc.). It is described in terms of potential intensity, whose measurement unit depends on the type of hazard in question.

"Exposure" describes the elements that are affected by the hazard due to their spatial and temporal overlap. For example, a large earthquake hazard poses no risk on a deserted island, since there are no elements exposed to it.

"Vulnerability" describes the propensity for adverse effects from exposure to a particular hazard.

Hazard, exposure, and vulnerability are the necessary contributors to disasters, and they serve as the starting point for disaster risk management.

Source: Alanna Simpson, Rick Murnane, Keiko Saito, Emma Phillips, Robert Reid, and Anne Himmelfarb, 2014, *Understanding Risk in an Evolving World*, Washington DC: World Bank.

Haiti currently ranks as one of the countries with the highest exposure to natural hazards, according to the World Bank's Natural Disaster Hotspots study.[110] But this has always been true. Throughout its history, Haiti has experienced significant losses due to multiple hazards (Table 7), and these have affected its long-term development.

The Haitian disaster risk management system is headed by the National Risk and Disaster Management Committee (CNGRD), which is led by Prime Minister (with leadership delegated to the Minister of the Interior and Territorial Collectivities (MICT)) and composed of the signatory Ministers of the National Disaster Risk Management Plan (NDRMP) and the President of the Haitian Red Cross.

At a more operational level, the Directorate of Civil Protection (DPC) and the Permanent Secretariat of Risk and Disaster Management (SPGRD) work to implement the NDRMP.

The SPGRD, led by the Director General of MICT, is composed of technical representatives of the signatory Ministries of the NDRMP and of the Red Cross and is divided into two branches: a disaster management branch consisting of the Emergency Operation Center; and a risk management branch, composed of thematic and sectoral committees.

The principal concern of SNGRD was preparedness for hurricanes and post-hurricane response. Significant efforts by SNGRD in the years prior to the earthquake had led to a notable reduction in mortality linked with hurricane and flood events.

The DPC, established in 1997, is the institution most involved in the implementation of the NDRMP, yet does not have the legal mandate or technical capacity to design national or sectoral DRR strategies, nor does it posess the ability to motivate the design and implementation of sector-level strategies by key line ministries. Further, SNGRD lacked the legal backing, and the financial and administrative autonomy, to effectively fulfill its interministerial coordination role.

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[110] World Bank, 2005, "Natural Disaster Hotspots: A Global Risk Analysis," http://hdl.handle.net/10986/7376.

Table 7. Types and Impacts of Natural Disasters in Haiti since the Eighteenth Century

Hazards	# of Events	%	Fatalities	%	Affected	%
Hydro-meteorological	97	69.3	19,262	7.5	5,363,876	45.6
Drought	20	14.3	–	–	2,668,000	22.7
Seismic	13	9.3	235,952	92.2	3,721,730	31.6
Landslides/Debris Flows	10	7.1	635	0.3	10,509	0.1
Total	**140**	**100.0**	**255,849**	**100.0**	**11,764,115**	**100.0**

Source: World Bank Disaster Risk Management in Haiti - Country Note Report, 2010. Certain time periods are missing.

2. Issues

a. Responsibility for policy making on DRR in recovery was not clearly assigned

Government agencies are expected to carry out a number of key roles to promote DRR in reconstruction immediately following a disaster. These roles include:

- Managing the damage and safety assessment of public and private buildings
- Clarifying the existing legal framework, or developing an interim emergency framework for DRR
- Quickly developing policy and standards for DRR and safe reconstruction, including minimum standards for site-risk assessment and for repair, reconstruction, and retrofitting of buildings
- Ensuring compliance and self-compliance with safe reconstruction standards, including continuous widespread communication with the public
- Setting DRR policy that takes into consideration the multiple priorities and risks faced by households

The Haitian government had mixed success in fulfilling these DRR roles. Problems began when no agency was empowered or appointed to lead these efforts. There was significant confusion over where the responsibility for these activities fell in government, whether to ministries, interministerial entities, the

Interim Haiti Recovery Commission (IHRC), municipal governments, or various presidential committees. This left development partners, implementing agencies, the general population, and government itself unsure who should be providing guidance on DRM policy. In the absence of government direction, numerous (often competing) quasi-policies were established by various agencies.

The Ministry of Public Works, Transport, and Communications (MTPTC) became the de facto lead agency for many reconstruction activities and DRR, as it carried out the building safety (habitability) assessment and debris clearance, and worked to fulfill its responsibility for public infrastructure reconstruction. With financial and technical support from several development partners, MTPTC implemented programs that created standard practices and de facto policies. However, in spite of its authority to set building codes and standards, it lacked a clear mandate to coordinate these aspects of recovery and reconstruction, or to lead policy discussions on them within government, which would have required coordination and support at the cabinet level.

In carrying out its responsibility for reconstruction of public infrastructure, MTPTC was also well positioned to coordinate with municipal governments on reconstruction and DRM. Some attempts were made by MTPTC to strengthen the capacity of municipal government to promote safe reconstruction, but these were not very successful, due in part to the complex

relationship between ministries and municipal governments.

b. New vulnerabilities were created in addressing emergency needs

Following the earthquake, the affected population was in a heightened state of vulnerability. The humanitarian response was remarkably effective in terms of speed and coverage, but agencies often acted without proper consideration for long-term impact on risk and vulnerability. For example, numerous sites selected by agencies for camps were exposed to high levels of hazard, specifically to flooding and landslides.

The scarcity of safe sites for camps was an argument in favor of the "back to neighborhoods" approach to response and reconstruction. Alternatively, rapid hazard assessments could have been conducted by qualified personnel to assess potential camp sites. Humanitarian organizations interviewed generally lacked the technical capacity for such assessments.

c. Building safety assessments had wide-ranging and unanticipated benefits

One of the most important drivers of risk in the months following the earthquake was damaged buildings, which could experience further damage or even collapse in an aftershock or under severe weather conditions. This concern was on the minds of many Haitians after two school buildings collapsed in 2008, one in Pétionville and one in Canapé Vert, killing more than 90 children.

At the same time, buildings providing critical services—hospitals, police stations, municipal buildings, and government offices—needed to be reopened, but traumatized people were nervous about entering them. (An early reconnaissance team led by the Earthquake Engineering Research Institute [EERI] had to reassure

the staff of a hospital that had suffered only cosmetic damage before the staff would return to work.)

Numerous international missions arrived to conduct early damage and safety assessments.[111] In spite of the high level of technical expertise, these initiatives used different assessment methodologies, and those conducting them lacked authority for tagging and often assessed the same buildings. In response, in March 2010, MTPTC launched the "building safety assessment" (sometimes referred to as the "habitability assessment"), a program to assess all buildings in the affected area carried out with funding from the World Bank, the Global Facility for Disaster Reduction and Recovery (GFDRR), and the U.S. Agency for International Development (USAID) Office of U.S. Foreign Disaster Assistance (OFDA) and technical assistance from the World Bank, the United Nations Office for Project Services (UNOPS), and a private engineering firm.

The main objectives of the MTPTC assessment process were to: (i) protect human life by informing users of the potential dangers of occupying a building; (ii) minimize homelessness and loss of economic activity by quickly identifying buildings that were safe to occupy and use; (iii) identify causes of building damage, which would become input for the reconstruction and rehabilitation standards and associated guidance, training, and outreach; and (iv) provide initial data to authorities for such uses as recovery planning, estimating funding needs, and allocating available resources.

The Bureau Technique d'Evaluation des Bâtiments (Building Assessment Technical Office) was established within MTPTC to

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[111] These included the EERI/Pacific Earthquake Engineering Research Center reconnaissance mission of January 2010, the Appropriate Infrastructure Development Group assessment program, and the ARUP earthquake response team, among others.

manage the assessment process. More than 300 evaluators were trained in the assessment methodology and organized into teams. Surveys were conducted with electronic hand-held devices equipped with global positioning system (GPS) and sent daily to a central database managed by MTPTC. In the 15 months from March 2010 to June 2011, over 400,000 buildings were assessed and tagged red, yellow, or green, according to their level of safety as affected by the earthquake.[112] An assessment-on-demand function was set up for buildings missed in the initial assessment process. Some critical conclusions from this program are summarized below.

- The assessment was the first large-scale, visible government program that followed the disaster. In an otherwise skeptical Haitian population, the process was considered authoritative and objective. The leadership of government engineers helped reinforce the legitimacy of the process. Some important lessons were learned from conducting the assessment process.

- An existing international assessment methodology (ATC-20) could be successfully adapted to Haiti.[113] The adaptation was done to reflect Haitian construction types and materials and the most common damage typologies. Using a standard international methodology enabled staff to be trained quickly with existing material and increased the technical legitimacy of the process.

- It was assumed that other assessments would follow this rapid assessment, but that did not occur. As a result, the data from this assessment became the main source of information for a range of recovery planning activities. Had the uses to which these

data would be applied been understood in advance, the assessment could have been designed to better meet the needs of reconstruction planners.

- Agencies and individuals did not understand the meaning of the red, yellow, and green tags. Repeated references were made to the green-tagged buildings as "safe," yellow-tagged buildings as "in need of repair," and red-tagged buildings as "to be demolished." In fact, the tag was meant to convey only the reduction in safety due to the earthquake and was not a judgment about the building's reparability or its capability of withstanding future events. Greater effort should have been invested in communicating the meaning of the tags to agencies and the general population.

- The assessment teams might have provided or collected other information needed for recovery. Given the logistical complexity of sending assessment teams to the affected area, it might have been advisable to combine the safety assessment with, for instance, household enumeration, a reparability assessment, a debris assessment, or a basic site hazard assessment. Teams might also have distributed information on the tagging or on other safety matters. While additional data collection would have required more funding, it could have increased the quality of data collected (since these additional data were eventually collected, sometimes in an ad hoc manner) and the efficiency of recovery planning.

- The program demonstrates that high-quality assessments can be conducted even where existing technical capacity is weak. While all evaluators possessed some form of engineering background, none had received any training in earthquake engineering and few possessed structural engineering training. Even so, training and quality control ensured a rapid, effective, and accurate assessment process.

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[112] The safety assessment labeled all buildings as either "green" (building may be safely occupied), "yellow" (no entry to a portion of the building or some restriction on the use or occupancy of the whole building), or "red" (unsafe to occupy or enter the building for any reason). See Section III C. 2c.

[113] Applied Technology Council, 1989, "ATC-20 Procedures for Post-Earthquake Safety Evaluation of Buildings."

d. Building codes and standards were not well disseminated

Responsibility for building codes were shared by MTPTC and the Ministry of Interior and Local Government (MICT). In the year before the earthquake, the two ministries had started to develop a national building code, with funding from the World Bank.

To provide some guidance for reconstruction, MTPTC issued a press release on February 9, 2010, in which it approved the use of the United States building code, EuroCode, and the Canadian construction code for any building reconstruction activity.[114] MTPTC required that plans for any construction that fell outside these codes be sent to MTPTC for technical review. This information was not widely publicized and most organizations did not make use of these options.

One obstacle to the use of the international building codes was that they required Haiti-specific input related to earthquake and hurricane hazards. The World Bank funded a project to produce an interim document with the requisite hazard maps, to use in combination with the approved building design codes.[115] These rules were not published until February 2011. A more important obstacle in the case of housing was that the building codes did not cover construction of small masonry buildings, like most housing in Haiti.

MTPTC concluded that most reconstruction could not be expected to follow code-based design processes. In the context of the national building code project, MTPTC undertook the development of "construction guidelines" for small residential buildings, aimed at local masons and contractors. The guidelines

were published in January 2011.[116] They were based on construction guidelines prepared by organizations with experience with earthquake-resistant construction based on confined masonry principles. Confined masonry is prevalent in Haiti, although it is often not properly executed.

Guidelines for the retrofitting of small masonry buildings were also developed by MTPTC and issued in 2012. These guidelines were aimed at improving the resilience of buildings and addressed the vulnerability of buildings to earthquake and hurricane hazards. The construction and retrofitting guidelines, along with the repair guidelines discussed below, were well designed, with extensive drawings and text in Haitian Creole. They were made available on MTPTC's website, but were not distributed to the public.

e. Efforts to promote risk reduction in shelter and housing were numerous and successful, mostly in isolation

A number of actions were taken to promote the physical resilience of shelters, housing, and infrastructure. In the case of shelters and housing, these actions tended to be "product-oriented," i.e., focused on how to make an already-chosen solution more resistant. The more fundamental questions about what was "acceptable risk" in Haiti, what risks the affected population itself was concerned about, and what options existed to reduce these risks to acceptable levels rarely took place, and they guided reconstruction policy even less.

Transitional sheltering and DRR. In the weeks following the earthquake, the primary concern of shelter agencies was to secure the population against the impending hurricane season. In that context, transitional shelter was proposed as the

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[114] Le Nouvelliste, 2010, "Les normes de construction en vigueur en Haïti," http://lenouvelliste.com/lenouvelliste/article/80387/Les-normes-de-construction-en-vigueur-en-Haiti.

[115] MTPTC, 2011, "Règles de calcul intérimaires pour les bâtiments en Haïti."

[116] MTPTC, 2011, *Guide de Bonnes Pratiques pour la Construction de Petits Bâtiments en Maçonnerie Chaînée en Haïti.* Guides for repair (2010) and retrofitting (2012) were also prepared: *Guide Pratique de Réparation de Petits Bâtiments en Haïti* and *Guide de Renforcement Parasismique et Paracyclonique des Bâtiments.*

best approach. But while transitional sheltering is more a philosophy than a physical solution, the working group began immediately to focus on developing a T-shelter design.[117]

One engineer who participated in meetings where T-shelter was discussed observed that other transitional sheltering options, design assumptions, and risk were not carefully analyzed. A representative of one international agency revealed in an interview that the decision to build T-shelters to withstand three Level 3 hurricanes was made by him alone.

Another consideration in developing the T-shelter design was indignation on the part of government representatives that Haitians might be sheltered in structures with walls formed of plastic tarps.[118] Eventually, the T-shelter design funded and built by most international donors and nongovernmental organizations (NGOs) was a well-anchored, slightly raised plywood house of at least 32 m² with a corrugated metal roof. The cost exceeded $4,000 per unit.

Repairs and DRR. The need to repair damaged housing was recognized early on, but it took some time before support and funding was mobilized. Repairs were perceived to be complicated and risky, ownership of buildings was sometimes difficult to verify, and expertise in carrying out repairs was limited.

Some partners were concerned about liabilities from making repairs and hoped for government-issued guidelines for repairs that would give them some protection. Until guidelines were issued, the contracting of private engineering firms by some donors helped establish interim technical standards for repairs and cost benchmarks.

MTPTC initiated the preparation of housing repair

guidelines in May 2010, and issued them in November 2010. The repairs described in these guidelines would bring the building back to the previous state, but did little if anything to improve resilience. A concern arose that beneficiaries of repairs did not understand that the vulnerability of buildings as a whole had not been reduced. In addition, the work recommended in the repair guidelines was complex and required engineering supervision, which was infeasible for most households. The guidelines were made available on the MTPTC website and distributed by some recovery partners, but were not widely distributed to the public.

Material supply and DRR. Much of the damage to residential buildings in Haiti, especially those built by low-income households, was due to the use of poor-quality materials. Construction materials were produced mostly by small-scale local businesses who responded to market demand for lower-cost construction inputs. Concrete blocks, for instance, display quality and strength very far below common design standards.

In February 2010, MTPTC banned the use of white limestone powder as an aggregate for concrete frame elements. Previously, the use of smooth river rocks as aggregate was banned, but the ban was not enforced. The limestone ban also did not extend to concrete masonry blocks. Large limestone powder quarries around the city were closed, but because this ban was also not enforced, the quarries soon reopened.

Several offers of assistance were received by the government to improve national materials standards and enforcement, and several small initiatives were launched. But in the first two years after the earthquake, no significant national-level effort was under way to improve the regulation of the quality of building materials.

Several organizations, including the Swiss Agency for Development and Cooperation, the

[117] Shelter Centre and UN Office for the Coordination of Humanitarian Affairs (OCHA), 2008, *Transitional Settlement and Reconstruction after Natural Disasters*.

[118] This is common practice internationally, as is using walls of woven grass mats and other local materials.

Figure 16. How clear were government's goals and standards for DRR and "building back better"?

- Very clear
- Relatively clear
- Unclear
- Not applicable/ don't know
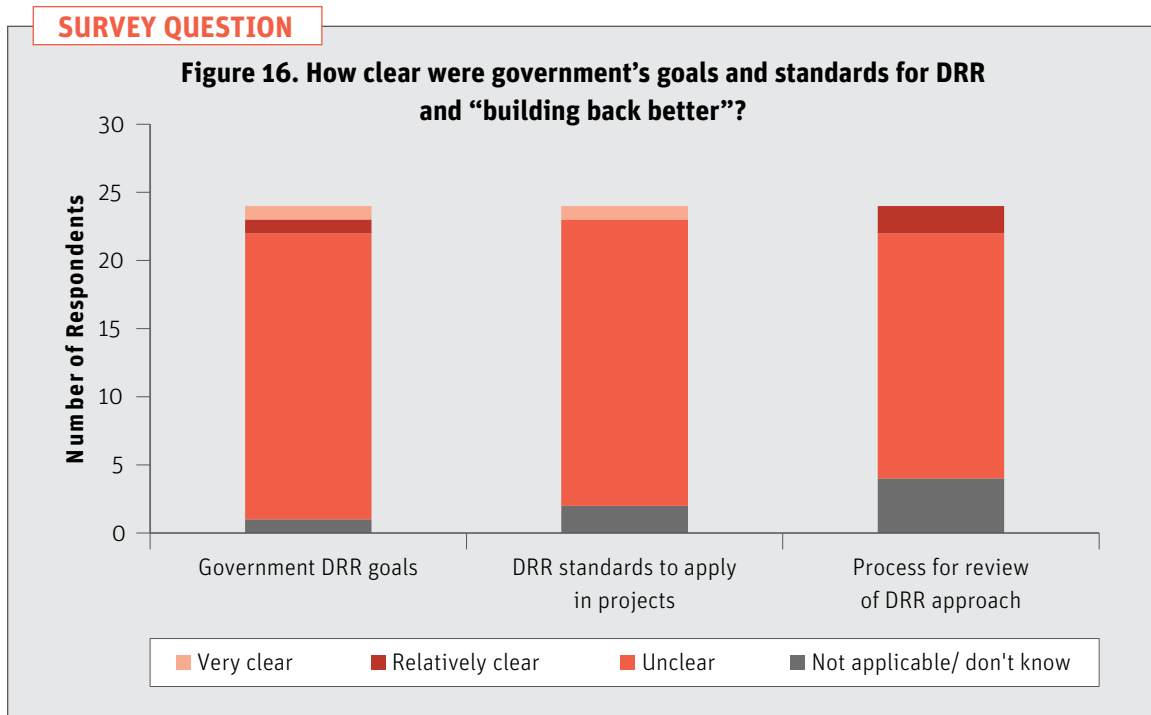
International Labor Organization (ILO), Build Change, Architects for Humanity, and UN-Habitat, collaborated with MTPTC on programs to train masons in safer building methods, which generally included instruction on material quality. In all, hundreds of masons were trained. If these masons convince their future customers to use higher-quality materials, this could potentially affect change in local markets over time.

Reconstruction and DRR. With respect to new construction, little was built in the first two years, except by individual households following the same building practices as before the earthquake. Agencies either consulted with MTPTC on a project-by-project basis or designed projects following the standards that they deemed appropriate. In some cases, these standards may actually have exceeded what was necessary, which raised costs and reduced the coverage of their assistance.

Past experiences with owner-driven reconstruction have demonstrated the effectiveness of paying homeowner reconstruction subsidies progressively, conditioned on the use of

safe construction methods. This method puts the onus for safety compliance on the homeowner, but must include adequate technical assistance. For a number of reasons, some of which are discussed elsewhere in this report, reconstruction was generally managed by agencies rather than homeowners, and only in isolated projects were attempts made to adapt to Haiti what has been a very effective method elsewhere.

Building back better. The phrase "building back better" (BBB) was used widely in Haiti—in reference to policies, programs, and standards. It is mentioned repeatedly in the Post-Disaster Needs Assessment (PDNA), in the IHRC Neighborhood Return and Housing Reconstruction Framework (NRHRF) document, and in countless donor and NGO strategies.

It was apparent, however, that the phrase lacked a common meaning for those using it, which undermined its usefulness as a policy imperative. This confusion is well reflected in the "Building Back Better Communities" Expo event that was launched by the Clinton Foundation in the early months after the earthquake. The event consisted

of several activities, the most ambitious of which was a design competition for private builders of housing and manufacturers of building materials. This initiative promoted an interpretation of BBB that it was about safe buildings as physical products to be delivered, rather than building as a process involving material supply chains, builders, site planning, and other activities. The thinking behind the expo was that if new housing designs could be introduced that were individually more resistant to Haiti's hazards, then people's risk would be reduced.

A more relevant interpretation of the BBB phrase for Haiti would have been that increased safety was about changing practices and policies, not about structures per se, and that knowledge about risk reduction is a public good that needs to be widely disseminated. This understanding motivated many of the risk reduction activities described in this section, including the development of guides and standards, and the implementation of the Plan de Prevention des Risques (PPR) (Risk Prevention Plan). However, delays and shortages of resources for promoting this approach to BBB reduced its impact, highlighting the importance of focusing on risk reduction as a social process and a public good rather than a private benefit.

f. Site-related risks were assessed but not translated to policy

Extreme site-related events were also to blame for destruction from the earthquake. In Port-au-Prince, the collapse of a single house could drive a cascading collapse of numerous others below it. Entire neighborhoods in Canapé Vert and Carrefour-Feuilles were destroyed from slope failure.[119]

In an effort to inform the recovery and reconstruction process, several initiatives were launched to identify and map hazards. These included NATHAT 1 and 2,[120] Seismic Zonation

Mapping by MTPTC, and the PPR prepared for the Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project neighborhoods by the firm Ingénierie des Mouvements de Sols et des Risques Naturels (see Box 10). A number of challenges were confronted in trying to use this information to inform reconstruction.

- **Spatial resolution**. The information collected was designed for strategic decision making at the national level, to guide development and territorial planning policy, but was inappropriate for decision making at a neighborhood scale.

- **Timing.** The time required to acquire information with the correct spatial resolution for neighborhood planning was often at odds with the urgency of the reconstruction process. The microzonation project now under way, led by MTPTC's National Laboratory with funding from the United Nations Development Programme (UNDP), is an important program for land-use planning and policy making in the long term, but it will have limited impact on the post-earthquake reconstruction process. A disaster can increase the demand for initiatives such as the microzonation project, but the results of such a project are rarely available for recovery from the same disaster.

- **Application.** Hazard identification is just one input needed for risk-informed reconstruction policy. The information from the assessment must be formulated so that it can support decision making about specific risk mitigation options and can be used to address questions about acceptable levels of risk. This might include identifying scenarios and analyzing mitigation options, to understand their social and economic implications to arrive at rules. Almost any risk could be mitigated in situ, but the costs were likely to be prohibitive. Relocating households from high-risk

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[119] Soil liquefaction was a lesser issue for residential buildings, but caused significant damage to coastal infrastructure.

[120] World Bank, 2012, "Analysis of Multiple Natural Hazards in

Haiti (NATHAT)."

BOX 10

Risk Assessment in the 16/6 Project in Port-au-Prince: From Risk Information to Risk-Informed Planning

Findings Significant hazard and risk information and products were collected/developed in the aftermath of the earthquake, but there was a significant gap between risk information and risk-informed planning. Very few agencies and institutions had the capacity to use risk maps in an operational sense. The decision was made to use the 16/6 Project as a pilot to develop a PPR.

Recommendations Professionals in various fields should work together: planners to develop risk-sensitive plans (at various scales), civil engineers to develop site mitigation plans, and risk scientists who can evaluate vulnerabilities and exposure.

Risk products need to be operational, rather than scientific, exercises. They should be geared toward decision making and presented in language that is understandable to decision makers. The results should also be communicated to and discussed with the affected population.

Pilot Project: Risk Reduction Plan for the 16/6 Project The unique aspect of the PPR is that it attempted to bridge the gap between risk informationa nd risk-informed planning. Its main objectives were to:

- Develop maps of constructible, non-constructible, and conditionally constructible zones
- Develop rules to mitigate risks for the associated zones

To support risk-sensitive planning, three main steps were involved:
- Risk mapping – based on assessments of hazards, exposure, and vulnerability
- Zone mapping – identify zones as non-constructible, constructible, or constructible conditional on specific mitigation measures
- Mitigation rules – develop prescriptive mitigation rules, in particular for the conditionally constructible zones.

Table 8. Criteria for Mitigation Based on Zoning

Hazards	Prevention measures	Non-urbanized spaces	Urbanized spaces	
			No protection or mitigation measure and/or ineffective mitigation	Protected by an effective protection/mitigation measure
Extreme hazards (4)	Technically impossible	Non-buildable		
Major hazards (3)	Technically difficult or very costly	Non-buildable		Non-buildable except under strict conditions
Medium hazards (2)	Generally costly, requiring construction works (for the collective level)	Non-buildable	Non-buildable (buildable under certain exceptions, after implementation of protection measures)	Buildable under conditions of protection works and their maintenance
Low hazards (1)	Moderate costs, requiring small construction works (at individual level)	Buildable under conditions that prevention measures are considered, unbuildable when there is human danger	Buildable under conditions that individual prevention measures are considered	Buildable under conditions of maintenance of protection works

Sources: PPR, Unité de Construction de Logements et de Bâtiments Publics (UCLBP), UNDP. September 2012.

zones would have serious social impacts. Without a risk mitigation policy, the hazard information did little to provide the rules for reconstruction.

No guidance was provided by the government on site-related risk mitigation. To stimulate discussion of the issue, workshops and training sessions were held by various institutions (Comité Interministériel d'Aménagement du Territoire [CIAT], MICT, Secrétariat Permanent de Gestion des Risques et des Désastres [SPGRD] [Permanent Secretariat for Disaster Risk Management], IHRC, the World Bank, and others). These efforts served mostly to reinforce the need for policy making. In the absence of rules and other guidance, implementing agencies made decisions at the project level using their own criteria. Agencies sometimes relied on community-based risk assessment and mapping.

Community-based risk assessment provides a structure for community members to evaluate hazards and vulnerabilities, judge the community's capacity, and develop plans for mitigation. These assessments are seen to both inform communities and empower them to make decisions to reduce their own risk. However, because the identification of risks can often be highly technical, communities may not always understand the risks that they face. In preparing for some projects, for example Habitat for Humanity's Simon Pelé project, community risk assessment was combined with a formal risk assessment.

g. Enforcement was weak and self-enforcement ignored

Households constantly make tradeoffs among risks that they are aware of. Many households opted to occupy red-tagged buildings, for example, rather than be exposed to security risks in internally displaced person (IDP) camps. In a country where access to both land and employment is difficult, households in Haiti live on high-risk urban sites (on steep slopes and in

ravines) so that they can reduce their economic risk by being closer to employment in the city.

Governments get involved in managing disaster risk because they know about risks that individuals might not, because decisions of one individual or household can affect another, and because bad decisions by individuals or households can create contingent liabilities for government (such as the need to pay for post-disaster housing reconstruction). Government interventions can reduce risk directly, or government sanctions and incentives can change people's tradeoffs among risks and ultimately their behavior. By failing to manage most risks associated with residential land use and building construction, the Haitian government has left management of these risks almost completely up to individuals. The result was seen in the impact of the earthquake.

In sites where agencies intervened with reconstruction projects, they imposed their own risk management regimes. But most of those affected did not benefit from any agency support. The only ways they would have built more safely were if they had received supervision and conditional financing or if they had self-complied to standards.

A recent study on self-recovery processes in Haiti found that most households who reconstructed on their own expressed a willingness to pay more to hire trained masons and obtain better quality materials.[121] However, information and training for the general public on how to do this was largely absent. In the Haitian context, where government capacity to enforce standards is weak, and no universal large-scale intervention was planned, promoting self-compliance to such standards should have been one of the main objectives of the reconstruction process.

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[121] A. Konotchick, 2013, "Reconstructing Risk: Haitian Self-Recovery," USAID/OFDA and Interaction.

Communications were needed to promote awareness of and compliance with resilient reconstruction practices. Messages about how to recognize improperly tied steel reinforcing bars or check the quality of concrete blocks could very easily have been communicated at a massive scale, potentially with significant impact. In situations where the government is not prepared to communicate these types of messages following future disasters, development partners should make this a priority before dedicating themselves to their individual project interventions.

3. Findings

The following are the principal findings associated with DRR from the first two years of the Haiti earthquake recovery.

Leadership to establish DRR as a priority in recovery was missing. Without a lead agency for DRR, government policy on DRR in recovery was unclear and was not addressed, even within the government, in a systematic manner. One result was that no agreement was ever reached on what constituted "acceptable risk" in the Haitian reconstruction context.

The building safety assessment process was successful, although the results were used in unanticipated ways. The building safety assessments demonstrated that, with adequate assistance, a high-quality assessment can be conducted even when technical experience is limited. While the focus was on speed and consistency, greater attention might have been paid to communications and the collection of additional information, given the multiple uses for which the data were later used.

Assistance to the government did not strengthen its regulation of DRR. The government carried out work on critical DRR issues with external assistance, but what resulted was rarely disseminated as guidance or rules. Technical support on reconstruction guidelines,

building codes, training, etc. was welcomed by government agencies and helped build technical capacity, but government's enabling and regulatory roles were rarely strengthened by these efforts. When guidelines were completed, they were not well explained or widely disseminated to the public, for example.

DRR policy was made at the project level. DRR approaches and policies were left to agencies to define at the level of their project interventions. The policies applied, while often based on good international standards, were product driven, not holistic. They benefitted a small percentage of the affected population.

Standards were not explained, nor was self-enforcement promoted. Given the unequal distribution of assistance, much more emphasis should have been put on communicating DRR messages, regulating the quality of construction inputs, and promoting self-enforcement of safe building practices at the household level. These communications could have started with those involved in the building safety assessments, since engineers were sent to every neighborhood. Using conditional financing to incentivize safe construction practices, an international good practice, was barely used in Haiti.

Post-disaster DRR policy needed to have been decided in advance. The post-disaster period is not the right time for DRR research or policy making; it must be done before a disaster strikes. In addition, responsibility for DRR must be clearly assigned. While the disaster motivated donors to provide more support to the SNGRD, recovery policy was not within its mandate. Haiti has established a number of good DRR practices from the earthquake recovery, but most have yet to be codified in national policies or regulations.

The earthquake created a consciousness of the need for reform. While significant work on DRM had taken place in Haiti before the earthquake, the urgency of additional

institutional strengthening became clear to everyone afterward. Areas to strengthen include, among others: (i) the capacity of SPGRD and local governments in risk reduction and recovery (in addition to disaster response), (ii) the engagement of civil society and the scientific community in DRR policy, (iii) the norms and capacity for risk-informed urban planning, (iv) architectural and construction sector capacity for safe building, and (v) enforcement of building codes and construction supervision.

4. Recommendations

The following recommendations are based on the benchmarks proposed at the beginning of this section for successful DRR in reconstruction.

Designate a lead agency for DRR early so it can establish and communicate standards for DRR and coordinate their utilization in recovery.

The agency may be one of the line ministries, and its role may be temporary, but in any case it should be empowered politically, financially, and technically to play its role. The lead agency should coordinate but not usurp the role of ministries and other agencies to promote DRR in their respective sector.

The standards should cover both site and building risk and should be based on an open and realistic discussion of what level of risk is acceptable. Appropriate standards will balance such factors as risk level, costs, timeliness, and familiarity, among others.

The lack of standards early on should not paralyze reconstruction planning or discourage self-recovery. Standards may need to be defined incrementally as an understanding of the damage and its causes grows.

Carry out large-scale, continuous communication to educate the public on best practices for more resilient reconstruction.

Repeated, large-scale communication is critical to inform the public about risks, explain the importance of construction codes and standards, and promote training opportunities.

Where enforcement of construction codes is weak, communications should be used to encourage households to comply voluntarily with safe construction standards.

Set policies for DRR and resilient reconstruction taking into consideration how people perceive risks and how their vulnerability changes over time.

Reconstruction policies and programs should recognize the various risks that households are exposed to (including economic risks and security risks). Policies will be more realistic if they reflect an understanding of these risks and the tradeoffs that households and communities are making. Because not all risk tradeoffs affect just the household, the government should use its resources to reduce public liabilities and to create incentives to reduce its contingent liabilities.

Reconstruction should capitalize on the short-term awareness of risk to permanently shift the culture of risk.

Post-disaster contexts provide a short window of opportunity to permanently shift the awareness and culture of risk. A critical first step is to understand the processes that are interconnected to extreme vulnerability and therefore disaster. Universities and civil society organizations can help promote these discussions. Large-scale communication about risks, safe construction practices, and disaster preparedness is effective and necessary.

Agencies should recognize that promoting safe housing does not necessarily mean building safe homes, but rather removing the barriers to safe construction practices.

Common obstacles to safe construction that the government can address include lack of information on risks, lack of knowledge of safe construction methods by those involved in self-recovery, lack of effective market supply chains for safe materials, the need to improve construction sector methods, and the limited availability of safe sites.

Governments and their development partners often don't have to provide the solution (building the safe house), but should look for opportunities to reduce risk by providing incentives (such as conditional subsidies) or by enabling households or contractors (through training or ensuring access to safer materials).

Develop risk information in advance of disasters and complement it by post-disaster assessments conducted according to proper guidelines.

There is no time after a disaster to gather the high-quality, low-scale hazard and exposure information needed for recovery planning. It should be gathered and analyzed before a disaster.

Formal technical risk assessments should be complemented by site-level assessments, including community-led assessments. Involving the community in assessments also serves to improve its understanding of risks.

Whenever possible, reconstruction should promote "reformative" processes rather than just "restorative" ones.

Addressing the root causes of vulnerability (rather than the symptoms, such as construction quality) may require reform of institutions, legal frameworks, land-use policy, markets, supply chains, and regulatory tools. While these long-term changes cannot be fully addressed during recovery, a commitment to "reformative reconstruction" should be promoted.

It is legitimate to use some recovery funding for reform that supports long-term resilience. This requires engaging the private sector, civil society, educational institutions, and public stakeholders in the policy debate and implementation of reforms.

D. Land and Urban Development Issues

GOOD PRACTICE IN URBAN CONTEXTS IS STILL EMERGING. BASED ON THE HAITI EXPERIENCE, IT SHOULD INCLUDE:

■ Adopting an urban strategy based on timely analysis of urban institutions, conditions, communication tools, and development trends

■ Intervening in ways that revitalize the urban economy and reactivate land and housing markets, since these are key drivers of recovery

■ Developing urban plans and regulations required for reconstruction, including neighborhood plans, when needed, using approaches agreed to with local officials

■ Strengthening urban institutions and supporting household coping and self-recovery

■ Minimizing displacement by prioritizing early expenditures that facilitate neighborhood return, such as rubble removal, risk reduction, and the reinstatement of basic services

■ Encouraging strategic thinking while being cautious about trying to address long-standing urban deficits, particularly if doing so will cause extended displacement

■ Understanding that informal property markets and incremental construction are rational adaptations to conditions that are unlikely to be changed during reconstruction; focus on improving, not eliminating, these practices

1. Background

The earthquake affected the major metropolitan center of Haiti, Port-au-Prince, and the adjacent towns in the urbanizing zone of Axe des Palmes, including Léogâne and Petit Goâve, as well as the secondary city of Jacmel on the Caribbean coast and rural areas surrounding all of these urban areas. This section focuses on land and urban development issues confronted in reconstruction in the metropolitan area of Port-au-Prince, but the findings and recommendations are relevant to all affected urban areas, both in Haiti and other disaster-affected areas.

a. Responsibility for Urban Development

The central government is responsible for urban policy and for planning that is strategic

or that has national or regional development implications. Municipalities have planning responsibility in their territories, as long as their plans are consistent with the national frameworks. But capacity and resource limitations in cities make plans, where they exist, difficult to implement. In the Port-au-Prince metropolitan region, as in capital cities around the world, political considerations, and the proximity of the national government, limit municipalities' autonomy with regard to planning.[122] While the metropolitan region encompasses seven municipalities, it does not have a metropolitan-level governance mechanism of any kind.

Unlike in the housing sector, where no agency

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[122] Interim Haiti Recovery Commission (IHRC) interview with LOKAL, Fall 2010.

was responsible for policy making before the earthquake, there were several agencies with responsibility in specific aspects of urban and regional development.[123] Responsible agencies included: the Ministry of Planning and External Cooperation (MPCE); the Ministry of Public Works, Transport, and Communications (MTPTC); the Comité Interministériel d'Aménagement du Territoire (CIAT) (Interministerial Committee for Territorial Planning); the Ministry of Interior and Local Governments (MICT), and municipalities.[124]

CIAT's mission is to define government policy for land, watershed management and protection, water management, sanitation, urban and regional planning, and infrastructure. Among its functions are to coordinate and harmonize government actions on these topics among the ministries listed above, plus the Ministère de l'Economie and des Finances (MEF) (Ministry of Economy and Finance); the Ministry of Agriculture, Natural Resources, and Rural Development; and the Ministry of Environment.

Many of the laws governing urban development lacked regulations or were poorly enforced.[125] These included the 1937 Decree-law on Housing and Town Planning[126]; the 1971 Decree, Modifying 1937 Law[127]; and the 1963 Subdivision Law, which establishes the requirements for the subdivision of land.[128] The 2006 Decentralization Decree[129] gives municipalities a role in urban planning, but the enforceability of this decree is questioned by some due to its approval during an interim government.

At least 12 major plans were developed for Port-au-Prince between 1974 and 2010. These plans were led by various ministries, generally MPCE or MTPTC, often with the support of outside agencies, such as the United Nations (UN) or the Inter-American Development Bank (IDB). Future development directions and key projects were identified in these plans, and a near-consensus existed among planners regarding certain objectives (such as the need make the downtown waterfront publicly accessible). Even so, there was no legally approved Master Plan for the city or any corresponding development regulations in force at the time of the earthquake.[130]

Development plans had been prepared by some secondary cities, such as Jacmel, which prepared a plan with assistance from the City of Montreal. Urban plans were prepared by several secondary cities in the 1990s, with the support of UN-Habitat. The regulatory instruments, institutional capacity, and funding to systematically implement and enforce these plans was limited, nor was there always sufficient participation to ensure buy-in from key stakeholders. The focus was on identifying priority projects that were implemented as funding became available.

b. Land Tenure System

Haiti's land tenure system is still based on the French colonial system.[131] A notary deed registered in the Direction de la Conservation Foncière (Directorate of Land Conservation) of the Direction Générale des Impôts (DGI) (General Tax Office) in the MEF establishes private property rights, based on a parcel survey conducted by a surveyor.

At independence in 1804, all the territory was declared "state land," except land legally owned by freed slaves. State land in the public domain is managed by the Direction du Domaine of the

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[123] The government reported in 2009 that as many as 50 public agencies had some responsibility related to urban development.

[124] UN-Habitat, 2009, "Strategic Citywide Spatial Planning (full report)," p. 28.

[125] This section is based on: Leah Mueller, Esq., 2011, Haitian Law as it Applies to Housing and Neighborhoods Reconstruction: A Legal Summary, Port-au-Prince: IHRC.

[126] Decree-law of July 22, 1937, arts 22–33, Moniteur No. 63, Aug. 5, 1937.

[127] Decree March 23, 1971, art. 1, Moniteur No. 25, March 29, 1971.

[128] Law of May 29, 1963, arts. 53–57, Moniteur No. 51, June 6, 1963.

[129] Decree of Feb. 1, 2006, Moniteur Special No. 2, June 2, 2006, Chapter I–II.

[130] UN-Habitat, 2009, "Strategic Citywide Spatial Planning."

[131] Based on: IDB, 2012, "Haiti: Land Tenure Security Program in Rural Areas, HA-L1056," Grant Proposal, pp. 2–3.

DGI. State lands in the private domain can be leased, sold, or granted to private persons. Since independence, land transactions have included sales, grants, and leases of state land to private owners; sales and gifts between private owners; and divisions due to inheritance.

Until the middle of the 20th century, most land sales and inheritances were registered and new owners received legal title. After that point, poverty, emigration, and urbanization all increased. As plots became smaller and less valuable, high transaction costs (up to 40 percent of the parcel value, according to one estimate), absence of owners, and long processing times all reduced the proportion of land transactions that were registered. Over time, many forms of property title documentation appeared; in 2001, it was estimated that more than 60 percent of all parcels had no official registered title.

Other characteristics of the existing land system include: (i) less than 5 percent of the country is covered by a cadastre; (ii) survey techniques do not provide georeferencing of parcels; (iii) deeds are manually registered and transcribed into the fiscal land registry and archived in chronological order, making the retrieval of records difficult; and (iv) there is no reliable inventory of state land.

All these circumstances create overlapping boundaries, risks of competing claims over the same parcel, and other conflicts. In addition, the system does not provide public access to information on land ownership or sales, which adds to market inefficiency.[132]

2. Issues

a. There were different visions for urban reconstruction

Recovery documents referenced the urban context from the beginning, but without clearly

identifying the implications for reconstruction strategy. Entities involved in coordination of recovery actors, such as the Logement-Quartiers (Housing-Neighborhoods) working group, pushed for agreement on such tactics as neighborhood return, but did so without reference to an urban reconstruction strategy agreed to with the government.

Behind the lack of a strategy were differences in perspective between local officials, local experts, and international agencies. The thinking of international actors was more about "how to manage a crisis in a city." Humanitarian actors saw a crisis that could be responded to using variations on standard site-specific, sector-oriented humanitarian practices in shelter; water, sanitation, and hygiene (WASH); protection; etc. In addition, those without experience in Haiti had trouble distinguishing between the effects of the earthquake and conditions that existed beforehand, and therefore had difficulty setting limits on their work.

For local authorities, the thinking was more about "how to manage the city in crisis," that is, how to redevelop the city and its neighborhoods in ways that addressed recovery, but also addressed challenges that had existed long before the crisis.

Local planners perceived recovery as an opportunity to "start over": redeveloping downtown, reducing informal neighborhoods, reconstructing infrastructure, and addressing a range of long-developing urban deficits. In this context, the exit of people from Port-au-Prince immediately after the earthquake was seen as something positive that gave some breathing room for redevelopment. The Action Plan for National Recovery and Development of Haiti (APNRDH) stated that 100,000 inhabitants of Port-au-Prince should be transferred to more appropriate sites.

Recovery actors such as the development banks understood that the earthquake was a

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[132] Ibid. In 2012, the government received a $27 million grant from IDB for a rural land reform project, to be executed by CIAT, to pilot activities that could eventually lead to a strategy for modernizing certain aspects of the system.

unique opportunity to think strategically, but also knew from experience that time was of the essence. Before long, people would return to the cities, pressure to show recovery results would increase, and the flow of funding would decline. There was also concern about how long strategic planning activities would take, given the dispersion of planning authority and other institutional issues.

The debate over the recovery strategies in informal neighborhoods in the Port-au-Prince metropolitan area is a perfect reflection of these competing visions. Tensions arose over whether solutions such as the T-shelters promoted by humanitarian agencies were a good short-term solution. They were viewed by local officials as substandard and a problem that would eventually have to be dealt with so that they did not create more slums. Yet donors knew that the organized relocation of large numbers of urban households was infeasible. They could not finance it and knew that most people would choose to remain on their urban plots, near schools and livelihoods.

Agencies had to choose which vision to pursue: helping government remake Haiti (*refondation* as the APNRDH put it), which meant addressing the fundamental urban conditions that had led to the impact of the earthquake, or making practical short-term investments using available funding. Rhetorically, agencies tended to advocate for *refondation*, but, recognizing the difficulty of accomplishing fundamental reforms in practice, they simultaneously promoted projects that could be brought to completion in a time span of one to two years with available funding.

b.   Guidance on urban reconstruction policies and legal issues was limited

Agencies reported that they lacked clarity regarding mandates for urban development and land use in reconstruction. This reflected the impact of the earthquake on the capacity

of government agencies, as well as a lack of consensus within the Haitian government regarding the mandates of ministries. A lead agency was needed for policy discussions and to ensure that key decisions on urban development and land-related issues that would affect reconstruction were made and communicated widely.

Interpreting the existing urban and land-use legal frameworks and their relevance to reconstruction was particularly challenging, and became the focus of numerous government and donor initiatives. Immediately after the earthquake, CIAT disseminated a document in which it pointed out the legal reforms that would be needed to facilitate reconstruction.[133] International agencies sought interpretation of laws from the government and local attorneys, and both national and local governments spent considerable effort responding to these requests. In 2010–2011, Interim Haiti Recovery Commission (IHRC) Housing and Neighborhood team lawyers identified and analyzed laws relevant to housing and neighborhood reconstruction, and issued a report.[134] The team also provided informal advice to agencies.

The Housing Land and Property Working Group (HLPWG) provided guidance on land issues. The group issued a glossary of legal terms in November 2010 and updated it in September 2011.[135] The HLPWG also developed a coordinated response to forced evictions, based on international agreements and the Haitian legal framework, and trained camp management officers and nongovernmental organizations (NGOs) on preventing evictions.[136]

[133] Société d'Aménagement et de Développement, 2010, "Etat des lieux et Analyse des textes applicables en matière d'urbanisme, d'aménagement et de construction: Une évaluation critique," CIAT.

[134] Leah Mueller, Esq., 2011.

[135] "Glossaire Foncier à l'usage des organisations travaillant dans le domaine de logement-foncier-propriété en Haïti – version du 15 Septembre."

[136] HLPWG, 2011, "Procédures opérationnelles standardisées pour une réponse coordonnée aux expulsions forces."

Haitian legal professionals and a group of agencies led by Habitat for Humanity Haiti (HFHH) and Architects for Humanity formed the Haiti Property Law Working Group. The group analyzed laws and procedures related to land purchase, subdivision, titling, and registration, and in 2012 published a guide on property transactions in Haiti.[137] These external efforts helped systematize available information and identify practices, but more leadership on land issues in recovery was needed from the government.

c. International agencies initially lacked urban expertise

Humanitarian agencies initially mobilized relatively few staff with urban experience, whether to inform their own programming or to support government capacity with the response. The unique nature of the disaster and difficult living conditions made recruiting experts a challenge. Efforts to bring international government officials with experience in large-scale disasters to consult with the government were generally unsuccessful. Team profiles adjusted over time, when most agencies mobilized more urban expertise in-house or through partnerships.

A number of agencies had important publications on urban recovery topics in the works that were published immediately before or after the earthquake, but the information contained in these documents was not widely known or easy to disseminate in Haiti.[138]

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[137] Haiti Property Law Working Group, 2012, *Haiti Land Transaction Manual, Vol. 1: A How-To Guide for the Legal Sale of Property in Haiti*. The guide was partially funded by the Digicel Foundation, and the document is introduced by a letter from the Minister of Interior and Local Government.

[138] For example: ALNAP, 2009, "Lessons No. 5: Responding to urban disasters: Learning from previous relief and recovery operations;" Abhas K. Jha et al., 2010, Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters; UN-Habitat and Global Land Tool Network, 2010, Count me in: Surveying for tenure security and urban land management; International Federation of the Red Cross and Red Crescent Societies (IFRC), 2010, "Owner- Driven Housing Reconstruction Guidelines;" UN-Habitat, 2010, *Land and Natural Disasters: Guidance for Practitioners*; and Inter-Agency

As shown in the survey conducted for this study, the majority of international actors recognized that they needed different skills for an urban disaster than for a rural one and that their interventions required different designs than those in rural areas. Key challenges reported by the agencies almost all refer to the urban context, including the complexity of high-density informal settlements; the urban governance context; the preexisting urban vulnerabilities; the lack of clarity on land and property tenure issues; and the high level of urban poverty, precarious employment, and informal economic activity (see Figure 17).

d. Efforts to involve municipal officials started early, but were not systematic

The Directorate of Local Authorities in MICT was charged with managing Haiti's decentralization process and strengthening the role of local authorities. Local authorities were not only used to managing cities in crises, they had practices and skills that could be built on and strengthened through technical support, thereby building longer-term capacity.

The first engagement of local authorities in planning the response to the earthquake took place in March 2010, during a meeting between local authorities and the teams developing the Post-Disaster Needs Assessment (PDNA), organized by UN-Habitat. PDNA sector teams laid out their preliminary findings and recommendations, and local authorities presented their needs, priorities, and proposed approaches.

Local authorities also participated in the International Conference of the Cities and Regions of the World for Haiti, held in Martinique in March 2010. The conference was intended to mobilize donors and local authorities internationally to help strengthen local governance in Haiti and to support local authorities in their recovery work. Various

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Standing Committee (IASC), 2008, *Meeting Humanitarian Challenges in Urban Areas.*

Figure 17. For each type of intervention, which urban challenges did you find the most difficult?
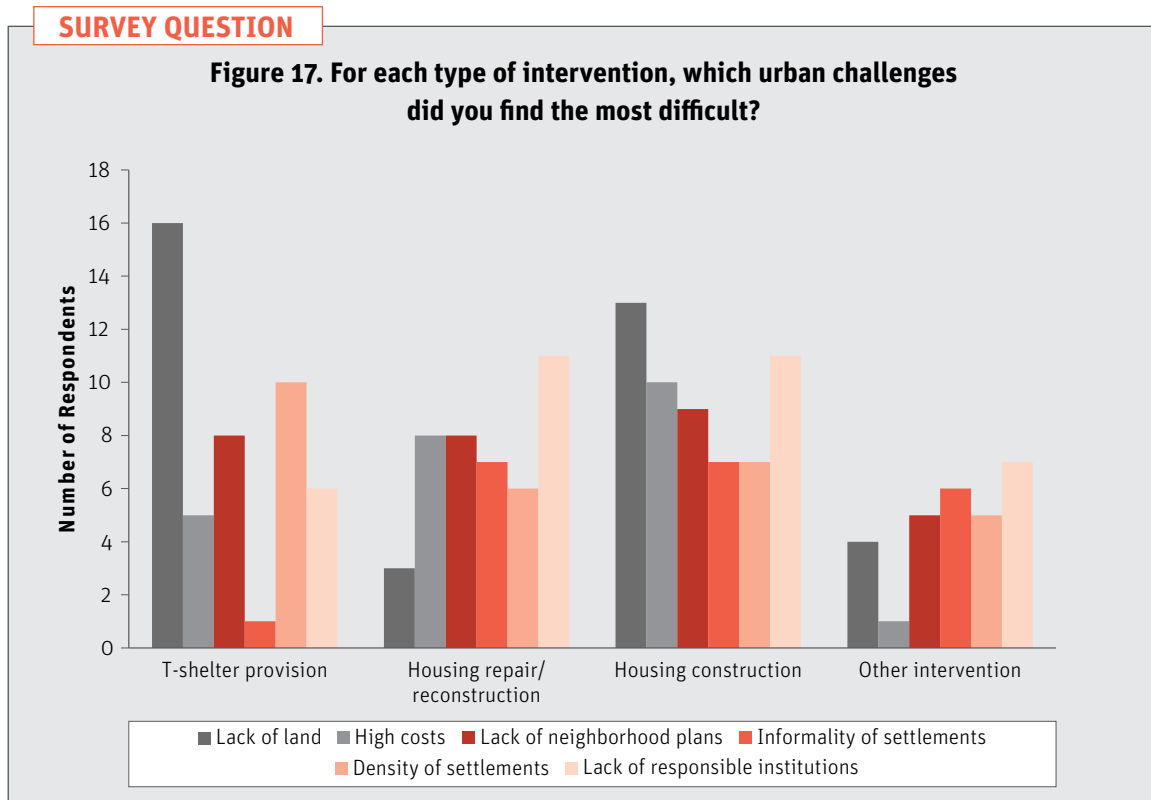
initiatives resulted from the conference, including technical cooperation between the municipalities of Montreal and Port-au-Prince, establishment of a consortium of cooperation in the Axe des Palmes region, and risk mapping in the East Department.

Major towns other than Port-au-Prince planned and managed recovery in processes largely detached from national-level initiatives. Jacmel authorities combined their existing multisector coordination group with the humanitarian clusters, and partnered with government agencies to conduct damage assessments on public and historic buildings. From this, they drafted an earthquake recovery plan with sectoral strategies. Jacmel's Government Delegate also served as a focal point for reconstruction, liaising with other local authorities, UN entities, civil society, and international NGOs. The towns in the Palmes region (Gressier, Léogâne, Grand-Goâve, and Petit-Goâve) worked through the Community

of the Municipalities of the Palmes Region (CMRP) and the Administrative and Technical Directorate of the Intercommunity of Palmes (DATIP) to provide recovery leadership, and received technical assistance from the Canadian Municipal Federation.

Humanitarian agencies, the UN, and donors supported local authorities, through planning of local recovery processes; locating cluster coordination at the municipal level; and creating Agences Techniques Locales and providing other program resources, under the Housing and Neighborhood Reconstruction Support Program (HNRSP).

However, the involvement of and support to mayors was not systematic. Mayoral elections should have taken place along with the 2011 presidential election, but were instead indefinitely postponed. The new administration replaced elected mayors with appointed "Interim Executive Agents," which undermined

democratic governance at a crucial time and weakened the role of local authorities in the response to the earthquake.[139] Weak financial management also made the transfer of resources to the municipalities difficult.

e. Many master plans were prepared, but none helped short-term reconstruction

Major disasters often give rise to new planning exercises, in the belief that the crisis will allow a previously lacking consensus on priorities to emerge and that new funding will be available to carry them out. The City of New Orleans was subject to numerous such exercises after Hurricane Katrina, as was Port-au-Prince after the earthquake. In Haiti, these activities were often time-consuming and extremely ambitious (see Figures 18–20).

Some planning exercises overlapped (various proposals for downtown Port-au-Prince were prepared, for instance), but most had a distinct territorial focus. However, there were critical disconnects between decision making on priorities and the mandate and resources to carry them out, and between planning and the direction of private investment. While downtown Port-au-Prince was being replanned, most reconstruction-related commercial investment was being made in Pétionville. No plan was developed for the Canaan area, even while thousands of households were settling there.

Descriptions of significant post-earthquake planning activities are shown in Appendix 1 to this section.

The sustainability of any planning process depends on the ability of Haitian stakeholders to reach consensus on the direction of development and of the government to approve, regulate, and finance its implementation. While institutional weaknesses remain, and were always the principal constraint on strategic

urban development, a new vision of urban development and a stronger commitment to planning did result from the earthquake.

f. Community planning was an innovation for informal neighborhoods

Informal urban neighborhoods in Haiti are similar to those in many fast-growing cities that lack planning regulation. They often have no agreed boundaries or official names, nor are they identified on maps.[140] Many lack passable streets, which cut them off from services such as ambulances, police patrols, and garbage pick-up.[141] Residents get access to services such as electricity through informal networks and construction is unregulated. Settlements are extremely dense, and plots are small and irregular. To the extent that there are controls, they are the community's own. Environmental conditions create a range of hazards. Urban neighborhoods are diverse and stakeholders have competing interests. Newcomers tend to be located in the most vulnerable sites and often belong to different social networks than longer-term residents.

Numerous community plans were prepared in the context of reconstruction in an attempt to address these conditions. Starting in 2010 with pilot initiatives, by 2013, more than 30 local plans had been developed. While there were no government-sanctioned guidelines for community-level planning, there was significant consultation among sponsoring agencies and government counterparts on how best to approach it, and a guide was prepared.[142]

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[139] Groupe U.R.D., 2013-15, "Evaluation du Programme d'appui à la reconstruction du logement et des quartiers en Haïti."

[140] A participatory exercise to delineate neighborhoods was begun by the IHRC and completed under the supervision of the Centre National d'Information Geo-Spatiale (CNIGS) with the support of UN-Habitat.

[141] Widening and paving streets emerged as a priority in many community planning exercises, and doing so in the Ravine Pintade neighborhood resulted in the first-ever garbage service (see case study 1).

[142] UN-Habitat, 2011, "Initiatives de restructuration des quartiers précaires: Reconstruire mieux et améliorer le cadre de vie." In all, 13 planning initiatives are discussed in this report, some of which began before the earthquake, for instance, in Martissant, led by FOKAL. In mid-2013, UN-Habitat reported 32 neighborhoods where community planning and risk mapping had been carried out.

Figure 18. Downtown redevelopment as envisioned by Duany Plater-Zyberk and the Prince's Foundation for the Built Environment

Figure 19. Neighborhood rehabilitation as envisioned by Caribbean architects

Figure 20. Port-au-Prince reconstruction as envisioned by Centre Haïtien de Recherche en Aménagement et an Développement (Haitian Center for Research in Planning and Development) and Groupe Trame

Community planning engaged local residents and other stakeholders in the preparation of diagnostics, plans, and project identification. Planning processes were often donor-financed and undertaken to identify project-specific investments to be financed by neighborhood upgrading projects, such as the 16 Neighborhoods/6 Camps (16/6) Project or the Port-au-Prince Neighborhood Housing Reconstruction Project (PREKAD). Processes were led by international or national NGOs, sometimes supported by local planners.

Agencies generally aimed to develop stakeholder capacity not only to plan, but also to engage in dialogue with local authorities regarding outcomes. Mayors were often involved in the planning exercises, as were CIAT and MTPTC's Urban Planning Service. For example, when government implemented the 16/6 Project beginning in early 2012, it adopted a participatory model by creating "community platforms" in each project neighborhood (see the 16/6 Project case study). However, mayors had little involvement in the PDNA or recovery planning at the national level, and limited access to reconstruction funds to implement these plans on their own.[143]

The outputs of these community planning activities—as well as the introduction of the practice of community planning itself—could have positive, long-term repercussions for community development and social cohesion in Haiti. The involvement of CIAT and MTPTC's Urban Planning Service, the establishment of Agences Techniques Locales and Community Resource Centers under the HNRSP, and the creation of community platforms in the 16/6 Project were all attempts to institutionalize community planning within the larger urban planning system and to establish the role of neighborhood stakeholders and local authorities

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[143] GFDRR, 2014, " Disaster Recovery Framework Case Study: Haiti Disaster Recovery Framework: Recovery from a Mega Disaster."

in community development and upgrading.

In addition to producing an unprecedented body of data and plans, these initiatives provided an alternative vision of community leadership and engagement in informal neighborhoods. Community leaders played an important role during the Vil Nou Vle A (The City We Want) forum, for instance, where they presented their views and concerns in relation to reconstruction and the future of Port-au-Prince. The government and donors should continue to follow up on these initiatives to capitalize on the experience gained.

g. The land system was perceived as an obstacle to housing recovery

Physical space to manage displaced people is often a critical constraint in urban disasters. In Haiti, access to urban land became a major obstacle to agencies during reconstruction. Large tracts of land were controlled by a few families, many plots within the urban footprint were vacant because of ownership disputes or absentee owners, and so-called "public" land was very limited and also often had unclear title.

Government systems for land registration and titling were affected by the earthquake, but in informal neighborhoods most residents didn't participate in the formal system in any case. Tenure arrangements instead were arrived at through customary practices. Agencies initially hesitated to locate shelters or provide housing assistance if the recipient could not prove ownership of his or her property, but had trouble getting actionable advice from the government regarding tenancy issues.

Government decision makers were skeptical of certain measures, such as community enumeration, that have been used successfully to clarify informal or disputed land rights in other post-disaster situations.[144] In collaboration

with CIAT, the HLPWG organized a series of meetings between 2010 and 2012 to develop a participatory enumeration model that the national government would authorize, but the effort produced no decisions.

Agencies proposing new settlement projects had particular challenges. Some could not legally buy land. Others expected the government or municipalities to supply land for these purposes free of charge and were dismayed at the delays involved. Even those agencies willing and able to purchase land in the private market ran into difficulties. Private owners set unrealistic prices or couldn't prove ownership.[145]

The informal land tenure system was understood better by Haitians who must operate within it than by international actors. Agency unfamiliarity with the system and risk aversion caused delays, as extended efforts were made to resolve problems that Haitians may have been able to solve more efficiently on their own.[146] A successful practice used in other post-disaster reconstruction contexts has been to shift the risks associated with land tenure to beneficiaries who—either individually or collectively—find and negotiate the land for donor projects. The settlement of Canaan suggests that this might have worked in Haiti as well.[147]

Meanwhile, at least 30,000 households were enumerated through various community projects. The enumeration data served various planning purposes and were also seen as providing a minimum of tenure security to those enumerated, in spite of government's skepticism of and

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[144] Participatory community enumeration exercises have been used on a large scale to clarify tenure status after disasters,

most notably in Indonesia after the 2004 Indian Ocean tsunami. The process requires government involvement so that the enumerated parcels can be officially registered or otherwise recognized.

[145] The U.S. Agency for International Development (USAID) worked for more than two years with a landowner to develop one new settlement project that was eventually abandoned when land issues could not be resolved.

[146] Simon Levine, Sarah Bailey, and Béatrice Boyer, 2012. "Avoiding reality: Land, institutions and humanitarian action in post-earthquake Haiti."

[147] See Groupe U.R.D., 2013, "How does one become the owner of a plot of land in Canaan?"

unwillingness to sanction this approach.[148] Where enumeration data were incorporated into a land information system and local government officials were involved, enumeration may have strengthened the tenure security of those enumerated. Otherwise, enumeration may have added another layer of informality to an already complex informal system.

h. Urban camps established a dynamic that was hard to reverse

The spontaneous relocation of families to public squares and other available private and public sites, which began immediately after the earthquake on January 12 and grew during the period of aftershocks through January 27, was quickly formalized into a camp management approach. For residents of neighborhoods with extensive damage and poor access, it was a logical solution. As the Displacement Tracking Matrix (DTM) documented, most people stayed in camps close to their original neighborhoods, allowing them to restore their livelihoods and maintain social relationships. Urban camps became the symbol of the Haiti earthquake, and their continued presence was the principal indicator of the progress of recovery.

Good practice in camp management is to minimize the time people spend displaced, since social networks and family life are disrupted and dependency increases. Even so, the options offered by the urban context and the entrepreneurial capacity of landlords in Haiti were underestimated for an extended period, and people languished in camps years after the earthquake, waiting for support they needed to move out.

The earthquake increased the large existing housing deficit, and in the early months camps offered lower-cost accommodations in conditions sometimes no worse than those in poor neighborhoods and provided free access to services not available in those neighborhoods, including water, sanitation, and health care. The camps quickly became part of the urban fabric: a distribution point for assistance and another option in the "affordable" housing market.[149]

Public perception grew that presence in a camp was the principal criterion for future help (especially when only camp residents were registered or given identity badges), so households were known to maintain a camp presence even after other options opened up. Camps also became a point of arrival for rural migrants seeking livelihood opportunities offered by the humanitarian response. Over time, especially as camp management and services were withdrawn, or the camp population fell, conditions in many camps deteriorated, and risks associated with staying increased.

Neither government nor humanitarian agencies offered compensation to the owners of land where camps were established. Still, in solidarity, landlords generally allowed occupants to stay. But the protracted displacement made these arrangements increasingly fragile, and by mid-2010 forced evictions began (sometimes carried out with support of the police). By May 2011, the Camp Coordination/Camp Management (CCCM) Cluster estimated that of 634,000 people in camps, 133,000 were at risk of eviction and almost 59,000 people at 93 sites had been evicted or "partially evicted." A compensation system might have reduced these evictions and, in cases where risks were manageable and service provision was feasible, might even have allowed more permanent settlements to develop.[150]

Soon after the 2011 presidential elections, the new government established a goal of closing camps in several important public spaces in the

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148 UN-Habitat and Global Land Tool Network, 2012, *Handling land – Innovative tools for land governance and secure tenure*, p. 109.

149 Journalists and others reported on the sublet market for both tents and T-shelters. See: Haiti Grassroots Watch, August 23, 2011, "Transition to What?" Part 2 of 3.

150 A few donors eventually proposed projects to support conversion of specific camps to permanent neighborhoods, such as the USAID POSITEC program.

metropolitan area, including those in Place Boyer, Place St. Pierre, and near the prime minister's office. This decision demonstrated the positive influence of government direction and good public relations, as agencies had official support to facilitate the reinsertion of displaced households in a manner that otherwise might have stirred controversy. (This approach was successfully scaled up in the 16/6 Project and other agency interventions. See the 16/6 Project case study.)

Government and agencies faced challenges addressing and reversing the massive displacement to urban camps. Funding was lacking for priority actions to reduce displacement (in particular, for rubble removal and repairs) and resources such as landowners with buildable space or landlords with available units were overlooked as part of the solution. Agencies may have reduced camp occupation by registering households in neighborhoods earlier (not just in camps), avoiding survey questions that created false impressions about the housing solutions on offer, funding solutions that were more appropriate for the urban context (repairs and rental subsidies instead of T-shelters, although a number of agencies realized this and reoriented their funding with time), and better understanding the mobility of the urban population (less emphasis on return to previously occupied neighborhoods).

i.   Agency interventions affected the urban economy

Rigorous analysis of economic impact is rare for post-disaster interventions, but the practice may need to be better utilized for urban disasters. In cities and towns, people rely on cash to acquire food, transport, housing, and basic and social services. Household savings are very low and households are economically vulnerable, making the shock of the earthquake hard to absorb. The need for cash is also quite variable: Rent in Haiti is generally paid a year in advance, and to pay for education (a high priority) families must

mobilize significant amounts of cash at specific times of the year. Agencies supporting recovery had to operate in this cash economy, without always understanding it or the impact on it of their interventions.

Humanitarian agencies often provided goods in-kind (non-food items, shelter materials, or shelters), rather than cash, fearing that people could misuse the funds or (in the first few months) believing that markets were not functioning. Agencies were sometimes dismayed when recipients sold non-food items to get cash. But as a largely import-dependent economy, markets in Haiti were functioning almost immediately; the main constraint was not goods but disposable cash.[151]

Outside funding had both positive and negative effects on the urban economy. Private health care providers complained that the provision of free health services in camps negatively affected their practices.[152] At the same time, agency demand for higher-quality concrete blocks created economies of scale that supported some production changes. While the T-shelter "philosophy" is to use local materials and local ways of building whenever possible, more than half of the estimated $500 million spent on Tshelters was spent on imported materials and agency costs that contributed little to the local economy.

Job creation for low-income Haitians was identified as a priority by all. Haitians generally expressed a preference for jobs over handouts of relief items. Agencies did their best to engage local firms and hire local labor, including for debris removal, T-shelter construction, neighborhood upgrading, and other activities, although selecting workers could itself create

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[151] See the reports on marketsfor beans, construction labor, corrugated galvanized iron, and rice, available at: EMMA, 2011, "Emergency Market Mapping and Analysis Toolkit."

[152] Rohini J. Haar, Sassan Naderi, John R. Acerra, Maxwell Mathias, and Kumar Alagappan, 2012, "The livelihoods of Haitian health-care providers after the January 2010 earthquake: a pilot study of the economic and quality-of-life impact of emergency relief."

community conflicts. Numerous agencies trained people for in-demand jobs, such as masonry, and some supported the reactivation of small businesses. A few job-creation initiatives, such as paving block production from earthquake debris, may have the potential to be sustainable beyond the recovery period.

Creating sustainable private employment is difficult in Haiti, due to a range of factors well beyond the mandate of international agencies involved in housing and neighborhood recovery.[153] Cash-for-work provided income, but didn't create sustainable jobs. Many government works were implemented by larger firms, including a number from outside the country who imported labor.

Experience in post-disaster housing repair and reconstruction shows that an owner-driven reconstruction approach to housing repair and reconstruction is the most flexible and cost-effective, while contributing to the revitalization of markets.[154] With this model, affected homeowners are provided cash or vouchers, along with technical assistance to ensure safe construction. A 2010 pilot program of cash subsidies and technical assistance by Haven Partnership in Cabaret was successful, but was not replicated by other agencies. The Logement-Quartiers (Housing-Neighborhood) working group, UN-Habitat, the International Federation of the Red Cross and Red Crescent Societies (IFRC), CARE, Build Change, and others encouraged both the government and agencies to use this approach, based on their successful experience with it in other countries, but without owner-driven reconstruction policies or standards, agencies generally opted for either agency-driven or contractor-driven housing reconstruction.

3. Findings

The following summarizes the principle findings of the report in connection with the management of land and urban development issues in the post-earthquake recovery.

The urban nature of the earthquake had wide-ranging effects on recovery. Weaknesses in urban planning, land management, and development regulation; difficulty of removing rubble; lack of space for emergency and transitional housing; and the economic vulnerability of households were all issues specific to the urban context that affected the pace of recovery decision making and speed of implementation.

Agencies and government used reconstruction to improve neighborhoods. Community planning in informal neighborhoods was never carried out before the earthquake, but was carried out by numerous agencies afterward. Early community planning pilots served to help government develop a replicable community planning model in the 16/6 Project. Agencies that were involved in community planning coordinated well and established relatively standard procedures. Many established successful coordination with municipalities. Lacking an institutional framework for these activities, there is a risk that the capacities developed and data and outputs produced will be lost.

Participation of mayors and neighborhood residents in recovery could be the basis for building sustainable local capacity. Resilience means having local systems capable of recovering from future shocks. A goal of recovery should be to strengthen these systems, including the planning and management capacity of the people involved. Haiti has slowly built rural capacity in certain aspects of disaster risk management (DRM), such as preparedness, but building capacities in the urban context is more complex. Efforts were made to engage local actors (mayors and neighborhood residences and groups), including through community platforms and

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[153] World Bank, 2012, *Doing Business 2013: Haiti - Smarter Regulations for Small and Medium-Size Enterprises : Comparing Business Regulations for Domestic Firms in 185 Economies.*
[154] Abhas K. Jha et al., 2010.

BOX 11

Relocation to Secondary Cities

In the wake of the earthquake, as many as 600,000 people reportedly left Port-au-Prince for secondary cities and rural areas. As early as February 9, 2010, it was proposed that the recovery program should include funds for secondary cities, in hopes of relieving the pressure on Port-au-Prince and rebalancing the national urban system. This reflected the thinking in the Strategic Plan for the Development of Haiti (SPDH), which identifies 20 cities with economic development potential and land for urban extensions. It was estimated that these cities could accommodate up to 200,000 people.

The potential of building up secondary cities as a medium-term recovery strategy was limited, for several reasons, including: (i) most people intended to leave Port-au-Prince only temporarily, until normalcy was restored, believing that Port-au-Prince was still the place to find jobs and access services; (ii) even if people were willing to relocate, creating new urban settlements with livelihood opportunities would take longer than they could wait; (iii) humanitarian funding was tied to investments in earthquake-affected areas; and (iv) given the resource constraints, the opportunity cost of pursuing a secondary city approach (while ignoring pressing needs in the earthquake zone) would have been a hard sell politically. Predictably, most of the population that left returned to Port-au-Prince within a few weeks, augmented by newcomers attracted by the possible access to aid and employment opportunities, and the population of the capital continued to grow.

Nevertheless, the need to expand and revitalize secondary cities has gained attention as the result of the earthquake, and investment plans being developed by local governments, CIAT, MPCE, and others for these zones have gained momentum. The industrial park, housing, and tourism investments in the north are examples of this.

Source: Authors' research and interviews.

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committees. These were nascent efforts whose sustainability may depend on continued support.

The timelines for larger-scale planning and urgent recovery were incompatible.
Government and external agencies agreed on the strategic importance of recovery, but disagreed on the cost of delaying recovery to take time for urban planning. Whether the plans that were prepared, such as those for downtown Port-au-Prince, will influence future development remains to be seen. What was missing in the first two years was a planning framework to increase the coherence of planning and interventions at the local level.

Initially, urban economic realities and their impact on recovery were not well understood.

The nature of economic vulnerability and the cash economy, and their implications for recovery, were not well understood by many recovery actors. Agencies were not equipped to handle such situations as families occupying both housing and camps or the exploitation that took place between those with and without income or among gangs. In some cases, these challenges caused the abandonment of projects. An in-depth assessment of the urban economy and its incentives might have been helpful for donors designing urban interventions.

Land-related challenges absorbed enormous resources and greatly affected outcomes. The weakness of land regulation in Haiti may have contributed more to the disaster than poverty.

Not surprisingly, the same conditions (especially informal ownership and lack of records) affected both the quality and the timeliness of housing-related interventions and wasted resources that could have gone to recovery. Addressing this situation should be a national priority, and could be viewed as a DRM strategy.

4. Recommendations

Encourage and incentivize urban problem solving rather than providing solutions.

Because reconstruction will take many years, urban recovery should aim to establish approaches and capacity in government and civil society so resilient development will continue in the future. Projects should improve the resiliency of urban systems and take advantage of their adaptability, not focus simply on the short-term replacement of lost assets or substituting for local capacity.

Governments and agencies should try to play an enabling role, guiding and adding value to the efforts of local actors. To support substantive participation of local governments and local NGOs in recovery, they should provide technical and financial support.

The "learning by doing" approach that international agencies find acceptable in their own projects should be encouraged in local initiatives as well.

Carefully analyze the urban context.

Urban experts should analyze how the physical, social, economic, and institutional situation in the city will affect recovery. The analysis should cover housing, land, and financing systems, both formal and informal, and such topics as livelihoods and household finances, communications media, and the capacity of the construction sector. The urban analysis should also identify assets (systems, skills, institutions) that can be leveraged to make recovery widespread and systematic.

In metropolitan areas and capital cities, recovery will depend on effective relationships between levels of government. Understanding how to optimize these relationships may require outside expertise.

Promote urban recovery approaches that contribute to strategic urban development objectives.

Commit public and donor resources to strategic urban development interventions that will leverage private resources and facilitate future development, such as quality infrastructure projects in low-risk target zones to encourage housing investment there.

Where strategic planning has not been done before the disaster, governments should be somewhat cautious about launching new planning processes. Governments should particularly discourage outsiders from developing complex recovery plans that have no financing and create expectations that local officials will have to manage. New plans are needed for greenfield sites and where damage is extensive. But not all disasters call for new plans; it may be more important to strengthen the regulation of existing plans and to provide frameworks that improve the coherence of reconstruction activities.

The government should also discourage donor projects that create luxury "islands of excellence," but lack replicability. Concentration of assistance in discrete areas reduces equity, coverage, and sustainability. In contrast, area-based interventions led by local authorities or communities can have wide-ranging benefits, and should be encouraged.

Leverage the connectedness and adaptability of urban residents.

In urban recovery, it's important to develop approaches that reflect the distinct dynamics of cities, where people have diverse coping mechanisms and ready access to information. At the same time, diversity—and the demands of

survival—create conflicts and discrimination that agencies may need to address.

More urban recovery approaches are needed that reward the adaptability and resourcefulness of the urban population. In Haiti, there were virtually no "demand-side" approaches that provided people with the resources to solve their own problems, nor any programs that tested one approach against another. Recovery strategies may need to be adjusted if unintended outcomes emerge, because word travels fast in cities, and city dwellers respond quickly to any incentive.

Preference should be given to housing strategies that encourage self-recovery, such as transferring cash to urban households for shelter, repair, construction, hosting, and/ or renting. Urban families can often mobilize matching resources, and should be encouraged to do so. Cash is preferred to in-kind solutions, since cash revitalizes local markets and leads to lower-cost solutions.

Informal property markets and construction practices are rational adaptations to existing conditions. Recovery strategies should improve on these systems, not undermine or seek to formalize them when it is not feasible or necessary, and could delay recovery.

Be aware of the complexity of the urban political economy and how outside agencies affect it.

Agencies should not shy away from participatory approaches in urban areas, but must have an understanding of the political, economic, and social dynamics that may affect them. Agencies must also recognize that urban crises disrupt political systems and create new conflicts of interest and opportunities to gain power, which external actors can inadvertently influence.

While engagement contributes to transparency, accountability, and social cohesion, and builds urban governance capacity, methods used in rural areas may not be appropriate for the more complex, mobile urban environment. If a project will be improved by consultation or participation, agencies should seek out local experts who can advise on communications and engagement strategies for different stakeholder groups.

Avoid massive displacement and facilitate neighborhood return.

People generally don't seek major changes in their housing situation after a disaster, but expect to reenter the housing market that existed beforehand, which is what they are used to and can afford. The sooner they reenter the market, the greater will be the market response to provide new housing.

To reduce displacement, agencies should help reactivate the housing market and people's reentry into it. For renters, agencies and government should consider providing resources on both the "demand side" (rental subsidies) and the "supply side" (landlord subsidies) with associated technical support.

Agencies should use social communications to clarify the rules of the game and dispel rumors about assistance. Assistance should be delinked from presence in camps, by holding eligibility processes in public buildings or former neighborhoods. Use the occasion of the disaster to expand the national identification system.

To keep neighborhoods occupied and safe, priority expenditures should be those that facilitate neighborhood return and reoccupation, such as rubble removal, risk reduction, basic infrastructure, and repairs. At the same time, recognize that urban populations are mobile; returning people to their original neighborhood may not be necessary or advisable if it will impede recovery or if reconstruction should be directed elsewhere.

Appendix 1. Significant Post-Earthquake Planning Activities in Haiti

Urban Initiative	Date presented	Haitian sponsor (cost)	Outside sponsor
Haïti Demain : Objectifs et Stratégies Territoriales pour la Reconstruction d'Haïti (http://www.oas.org/en/ser/dia/docs/ HAITI_DEMAIN.pdf)	March 2010	CIAT (cost unknown)	None
Haïti Demain was a set of proposals for orienting and organizing the reconstruction process. It defined practical approaches and identified key projects for regional development, roads, public facilities, watershed management, urban development, and access to land. Haïti Demain also proposed roles for CIAT in land management and development planning that could have positively affected reconstruction in the urban sector. These roles were either later assumed by other agencies or not assigned at all.			
Action Plan for National Recovery and Development of Haiti (APNRDH)	March 2010	MPCE	Various donors assisted with preparation, led by UNDP
The APNRDH was based on the Strategic Plan for the Development of Haiti (SPDH) (see below) and was intended to serve as a guide to help national authorities and international partners identify emergency measures and key reconstruction projects.			
Workshop on the Reconstruction of Port-Au-Prince, Haiti	July 2010	None (cost unknown)	Various, including Miranda Foundation, Fundación Comunitaria de Puerto Rico, Colegio de Arquitectos y Arquitectos, and Fundación por la Arquitectura
The Coalition of Caribbean Urbanists documented the workshop on the reconstruction of Port-au-Prince, held by the coalition in San Juan, Puerto Rico, in July 2010. The report describes the planning challenges in Port-au-Prince in the form of contexts, development objectives, and institutional options, and proposes a Planning Implementation Framework that includes the creation of four regional Redevelopment Authorities.			
Port-au-Prince Master Plan (http://www. princes-foundation.org/what-we-do/ projects/ht/port-au-prince-haiti-disaster- recovery-regeneration)	January 2011	Prime Minister's Office/MPCE ($295,000)	The Prince's Foundation for the Built Environment
Prepared by Duany Plater-Zyberk and the Prince's Foundation for the Built Environment, this plan envisioned a government center around the presidential palace with civic and administrative buildings, museums, concert halls, schools, and green spaces. The plan envisioned maintaining the street grid and placing small parks on street corners, as well as rebuilding the waterfront and using rubble to improve drainage downtown to protect against future flooding. It also proposes that each residential block be designed to provide its own utilities and parking, with systems owned by a cooperative or condominium.			
Exemplar community (http://issuu.com/ gsdmit/docs/ designingprocess)	June 2011	None (cost unknown)	Harvard Graduate School of Design, MIT School of Architecture and Planning, Deutsche Bank, Clinton Foundation
A team of designers and planners led by professors from the Harvard Graduate School of Design and the Massachusetts Institute of Technology School of Architecture and Planning were engaged by Deutsche Bank and the Clinton Foundation to develop a replicable 125-unit community for resettling internally displaced persons (IDPs) in Zoranje. In June 2011, the team presented its vision, which included a vocational training center and housing, to President Martelly and former President Clinton. At the time, the project did not advance beyond the planning stage.			

Urban Initiative	Date presented	Haitian sponsor (cost)	Outside sponsor
Port-au-Prince Redevelopment Plan	August 2011	Municipality of Port-au-Prince (cost unknown)	None
The result of 14 months of work by 40 Haitian experts, engineers, architects, and planners led by Groupe Trame and the Centre Haïtien de Recherche en Aménagement et an Développement (Haitian Center for Research in Planning and Development), the plan proposed a "futuristic" fully rehabilitated Port-au-Prince, with trams, a zone for public buildings on the Champs de Mars, a financial district, a tourist and leisure area, a redeveloped waterfront, and an artisans village. The estimated budget is $3.3 billion, over a period of 5 years.			
Vil Nou Vle A (The City We Want) (http://www.onuhabitat.org/index. php?option=com_docman&task=doc_ download&gid=846&Itemid=235)	November 2011	MPCE (cost unknown)	UN-Habitat
A forum organized for MPCE with support from UN-Habitat and the United Nations Development Programme (UNDP) to gather stakeholder input on those aspects of the SPDH related to Port-au-Prince. Vil Nou Vle A was preceded by a process involving 600 Haitians in defining visions for the future of Port-au-Prince at the neighborhood, municipal, and agglomeration levels. A brochure was published to summarize the results of the process and to provide inputs from municipalities, the private sector, community leaders, professionals, academics, and civil society to the planning being carried out by MPCE. Similar consultations were held for secondary cities affected by the earthquake and regional development centers identified in the APNRDH.			
Strategic Plan for the Development of Haiti	Version for public comment issued May 2012	MPCE	None
MPCE had begun preparation of the SPDH at the time of the earthquake, with the assistance of a private planning firm. It served as the background for the MPCE's APNRDH as a guide to help national authorities and international partners identify emergency measures and key reconstruction projects beginning in April 2010. The SPDH is meant to guide national and international development partners in the planning and monitoring of future projects that will make Haiti an emerging country by 2030. The plan is not an urban plan, but urban investment projects that vary in scope from strategic to practical (such as the construction of community centers and bus stations) are proposed in each pillar.			

E. Recovery and Reconstruction Finance

GOOD PRACTICE IN POST-DISASTER FINANCING INCLUDES:

- Establishing the means for coordination between donors and government when financial resources are being mobilized and programmed.

- Ensuring that donor programming is consistent with the recovery plan

- Using public and donor funding strategically to leverage private financing, including that of households, and to incentivize good practices, such as safe reconstruction

- Announcing eligibility rules and levels of financial assistances as early as possible, and providing grievance redressal for those who believe that they have not been fairly treated

- Tracking reconstruction resources, programming, and progress centrally, and reporting results regularly to the publicTransferring financial resources for housing directly to eligible households or owners, ideally in tranches and on a conditional basis

- Avoiding unfamiliar construction practices, housing designs, and financing vehicles

- Remembering that the most efficient use of public resources to facilitate housing recovery is probably something other than building housing

1. Background

The objectives of recovery and reconstruction financial management for government are to mobilize funding and to ensure that the available funding is allocated to accomplish the best possible results. Funding is almost always a constraint on recovery, so establishing priorities between sectors and among social groups is critical. Reconstruction policies help clarify these priorities and tell financial managers how to target and program funding to accomplish the greatest impact.

Post-disaster financial management comprises four principal activities, all of which need to be integrated and coordinated—ideally by the government within the context of existing public financial management systems. These activities are:

- Identifying damage, losses, needs, and goals

- Seeking funding commitments and mobilizing and monitoring external aid and other funding

- Programming funding according to agreed-upon goals and priorities

- Implementing financial management and monitoring of results

The Haiti recovery began with the mobilization of more than 100 experts, both Haitian and international, to prepare the Post-Disaster Needs Assessment (PDNA), which was completed in March 2010. Based on PDNA estimates, as well as the goals established in the Action Plan for National Recovery and Development of Haiti (APNRDH) and the results of other assessments, extraordinary funding commitments were made to Haiti recovery at the donor pledging conference at the United Nations (UN) in New York in March 2010 and through other channels.

Damage to housing was the largest damage category in the PDNA, which is not

unusual. While most housing is private, the reconstruction of housing (especially housing for the poor) is often considered an obligation of government following a disaster. This occurs especially where there is no insurance market for residential property, and housing becomes a liability of the government, as is the recovery of agriculture and small and medium-sized business.[155] In fact, government budgeted very little for housing recovery in Haiti, as discussed below, but it was a major concern of donors.

For the housing sector, the financing process in Haiti faltered at both the mobilization and programming stages. Within a few months of the donor pledging conference, it was evident that the institutional arrangements were not in place to mobilize sufficient funding for housing recovery, or to program these resources to address the priorities laid out in the PDNA, the APNRDH, or elsewhere.

a. Estimates of Damage and Losses in the PDNA

As defined in the PDNA methodology, "damage" can be rebuilt. "Losses" are economic effects resulting from additional costs or loss of income that can be compensated for only until the economic flows are restored. "Needs" are the proposed recovery activities (see Box 12).

Housing. Damages include the value of housing that was destroyed and partly destroyed and damage to household goods. According to the Haiti PDNA, housing was the sector most affected by the earthquake, with housing damages estimated at $2.3 billion, out of total damages of $4.5 billion.[156] This was 52 percent of all damages from the earthquake. Losses include the costs of providing temporary

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[155] Olivier Mahul et al, 2014, *Financial Protection against Natural Disasters: An Operational Framework for Disaster Risk Financing and Insurance.*

[156] Government of Haiti, 2010, "Haiti Earthquake PDNA: Assessment of damage, losses, general and sectoral needs: Annex to the Action Plan for National Recovery and Development of Haiti," p. 7.

BOX 12

Terminology of the PDNA

Damage: The replacement value of physical assets wholly or partly destroyed, built to the same standards as prevailed prior to the disaster.

Losses: The change in economic flows resulting from the temporary absence of the damaged assets.

Needs: Takes into account the activities of recovery, reconstruction, and setting up the Haitian state again.

Source: Government of Haiti, 2010, "Haiti Earthquake PDNA: Assessment of damage, losses, general and sectoral needs."

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shelters, the cost of demolition, and the value of rental losses. Losses in the housing sector were estimated at $739 million, which was 23 percent of all losses. Together, damage and losses totaled $3.072 billion, 39 percent of total earthquake damage and losses.

Because housing is a private asset, $459 million of this total amount of damage and losses for housing were classified as public sector losses and $2.613 billion as losses of the private sector, including households. These figures are shown in Table 9.

Urban and community infrastructure.
Damage and losses to urban and community infrastructure were estimated at $412 million (damage) and $184 million (losses), for a total of $595 million. This represented $514 million in public sector losses and $81 million in private sector losses. Damage and losses to housing and community infrastructure were therefore estimated at $3.667 billion. These figures are shown in Table 9.

b. Estimates of Needs in the PDNA

Housing and community infrastructure needs were quantified in two different ways in the

**Table 9. Damage and Losses for Housing and Community Infrastructure
(in US$ million)**[157]

Sector	Damage	Losses	Public	Private	Total
Total all sectors	$4,526	$3,278	$2,075	$5,723	$7,798
Housing	$2,333	$739	$459	$2,613	$3,072
Percent of all sectors	52%	23%	22%	46%	39%
Community infrastructure	$412	$184	$515	$81	$595
Percent of all sectors	9%	6%	25%	1%	8%
Total Housing and Community infrastructure	$2,745	$923	$974	$2,693	$3,667
Total percent of all sectors	**61%**	**28%**	**47%**	**47%**	**47%**

Source: Government of Haiti, 2010, "Haiti Earthquake PDNA: Assessment of damage, losses, general and sectoral needs."

PDNA. PDNA Table 5 showed estimated total housing reconstruction needs for 2010–2013 (four years), but provided no estimate for reconstruction of community infrastructure, and was based on the damage, loss, and needs assessment (DALA) methodology.

PDNA Table 7 showed needs for three years, as defined by the PDNA working groups, for both housing and community infrastructure. This needs figure of $825 million was included in the PDNA estimate of total needs, which came to $12.2 billion.

Detailed tables that show the cost items that support the figures in PDNA Table 7 are included as appendices to this section.

c. Estimate of Needs in the Action Plan for National Recovery and Development of Haiti

The APNRDH was prepared in March 2010. It was organized according to four pillars (territorial rebuilding, economic rebuilding, social rebuilding, and institutional rebuilding) and covered only an 18-month period.[158] Housing is included in the social rebuilding pillar. While the APNRDH referred to the figures on housing damage and losses presented in the PDNA, it presents a significantly reduced funding requirement for housing.

Requirements were identified as costs for setting up five new settlement sites outside of Port-au-Prince, with the assumption that all other housing finance would be borrowed and was therefore accounted for in a section on banking.[159] Of the amounts needed to set up the new sites, (see APNRDH Table 4.3.1), all of it was characterized as being funded from non-APNRDH sources (i.e., from humanitarian and military donations).

In the territorial rebuilding pillar, a number of other land and infrastructure-related costs were budgeted, as follows (see APNRDH Table 4.1.1).

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[157] Ibid., Table 2, p. 7.

[158] Government of Haiti, 2010b, "Action Plan for National Recovery and Development of Haiti: Immediate Key Initiatives for the Future."
[159] Ibid., p. 42.

From PDNA Table 5. Estimated Total for Reconstruction Needs (based on DALA methodology)[160]				
Reconstruction Activity (in US$ million)				
	2010	**2011**	**2012**	**2013**	**Total**
Rebuilding	$500	$500	$500	$444	$1,943
Repairing	$400	$319			$719
Household goods	$350	$235			$585
Housing total	**$1,250**	**$1,054**	**$500**	**$444**	**$3,247**

From PDNA Table 7. Summary of Total Needs (based on the PDNA working groups)[161] (in US$ million)				
	6 months	**18 months**	**3 years**	**Total**
Housing	$5.2	$149.8	$505.0	**$660.0**
Urban and community infrastructure	$0.7	$68.0	$96.6	**$165.3**
Total	**$5.9**	**$217.8**	**$601.6**	**$825.3**

From APNRDH Table 4.3.1. Housing for the Population: Temporary and Permanent[162]	
Budgetary data for 18 months	
Preparation of new sites	$140m*
Funds for reconstruction and other activities	$155m**
Total	**$295m**

* Not accounted for since they have already been taken into account by humanitarian and military stakeholders
** Not accounted for since they are included under "Re-launching economic and financial circuits."[a]

ᵃ The "Re-launching economic and financial circuits" section included funds to guarantee private borrowing.

From APNRDH Table 4.1.1. Reconstruction of Devastated Zones[163]	
Debris management	$265 million (including $50 million of budget support)
Land appropriation	$500 million
Land use plan and urban plan	$5 million
Basic infrastructure	$500 million (including $100 million of budget support)
Total	**$1.270 billion**

Other urban and regional planning activities were budgeted, including:

- 4.1.4 Regional development centres and urban renovation: *$75 million for regional development plans and initial preparation work in three provincial towns at $25 million per town.*

- 4.1.5 National planning and local development: *$50 million to cover (i)*

regional development plans, targeted regional development strategies, local development plans, and urban plans, and (ii) protection, rehabilitation and enhancement of 10 specific zones of interest.

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[160] Ibid., p. 34.
[161] Ibid., p. 36.
[162] Ibid., p. 32
[163] Ibid., p. 13.

Table 10. IHRC Estimates of Funding Needs for Housing and Neighborhood Reconstruction

Cost item	Estimated cost (in US$)
Construction and repair (housing and neighborhood improvements)	$1,063,000,000
Inflation @ 20%	$213,000,000
Administrative overhead @ 35%	$372,000,000
Grand total	**$ 1,648,000,000**
Average cost per household @ 167,000 households	$9,855

Source: IHRC internal calculations.

Both the PDNA and the APNRDH were presented at the donor pledging conference at the UN in New York in March 2010, as a result of which a few donors pledged funds for housing. Pledges to the sector amounted to approximately $260 million.[164]

d. Estimate of Needs by the Interim Haiti Recovery Commission (IHRC)

In 2011, the IHRC developed a set of assumptions and estimated minimum housing and neighborhood reconstruction costs at $1.65 billion, as shown in Table 10.

These costs were based on assumptions about the distribution of red-, yellow-, and green-tagged houses (see Section III.C for an explanation of the building safety assessment) from Ministry of Public Works, Transport, and Communications (MTPTC) data and subsidy amounts for reconstruction ($3,500 per unit), retrofitting ($2,500 per unit), and repairs ($1,500 per unit), including for multifamily structures. A cost per person for neighborhood improvements of $350 was also assumed. The estimate was prepared in an effort to stimulate a discussion on the financial plan for the sector.

e. Funding Raised for Relief and Recovery

The overall funding raised for relief and recovery following the earthquake is difficult to quantify. Figures vary due to the use of different categories (humanitarian versus recovery, official development assistance (ODA) versus special allocations, contributors of funding, recipients of funding, etc.) Variations are also due to the lack of an official tracking and monitoring system that could provide reliable data.

According to the United Nations Office of the Special Envoy for Haiti, multilateral and bilateral agencies allocated $13.3 billion to relief and recovery efforts in Haiti for 2010-2020.[165] This was distributed between $2.6 billion for humanitarian purposes, and $10.8 billion for recovery. Of this $13.3 billion, an estimated $6.4 billion (48 percent) was disbursed by December 2012. Of the $6.4 billion disbursed, $2.4 billion was for humanitarian aid and $4.0 billion for recovery.

An additional $3.06 billion was estimated to have been contributed following the earthquake to UN agencies and NGOs by private donors (foundations, companies, individuals), including $1.4 billion from the U.S.

Three UN humanitarian appeals from 2010 to 2012 raised an additional $1.38 billion out of a total of $2.04 billion requested.

An estimated $300 million of the $2.4 billion disbursed for humanitarian support and an estimated $582.3 million of the $6.4 billion disbursed for recovery between 2010 and 2012 went to the government as budget support. Haiti also benefited from $1 billion in debt relief. Figure 21 shows the flow of funds for humanitarian relief and recovery as of December 2012.

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[164] Data presented to the Interim Haiti Recovery Commission (IHRC) by the UN Office of the Special Envoy for Haiti (OSE).

[165] Office of the Special Envoy For Haiti, 2012, Key Statistics, http://www.lessonsfromhaiti.org/lessons-from-haiti/key-statistics/.

Figure 21. Funds Raised and Disbursed in Support of Haiti as of December 2012

$13.34 billion planned 2010-2020

PUBLIC FUNDING
(Donors: Multilateral and Bilateral Agencies)

Recovery and Humanitarian Funding
(Excluding Debt Relief, totaling $1.0 billion)

$3.06 billion raised (estimated) 2010-2012

PRIVATE FUNDING
(From: Foundations, Companies, and Individuals)
Humanitarian, Earthquake (Estimated)
First Recipients: International NGOs and UN entities
Rate of Disbursement to Second Recipients:
No comprehensive data available

$10.77 billion planned 2010-2020

RECOVERY FUNDING

$2.57 billion planned 2010-2012

HUMANITARIAN FUNDING

8.34 billion pledged 2010-2012

NEW YORK PLEDGES (Recovery)
2010-2012: $5.37 billion
2013-2020: $2.96 billion

$2.43 billion planned 2010-2012

OTHER (NON-NY PLEDGE) FUNDING (Recovery)

$2.37 billion planned 2010-2012

EARTHQUAKE (Humanitarian)

$204 million planned 2010-2012

CHOLERA (Humanitarian)

$3.01 billion DISBURSED 2010-2012

$1.01 billion DISBURSED 2010-2012

$2.23 billion DISBURSED 2010-2012

$191.9 million DISBURSED 2010-2012

$4.01 billion DISBURSED 2010-2012

Total Recovery Funding from Bilateral and Multilateral Agencies

First Recipients: International organizations, Governmentof Haiti, Haitian NGOs

$2.42 billion DISBURSED 2010-2012

Total Humanitarian Funding from Bilateral and Multilateral Agencies

First Recipients: International organizations, Government of Haiti, Haitian NGOs

$6.43 billion DISBURSED 2010-2012

Total Humanitarian and Recovery Funding from Bilateral and Multilateral Agencies

Source: Office of the Special Envoy for Haiti, based on donor reporting and publicly available data.

2. Issues

a. Funding for shelter and housing was significant, but difficult to quantify

Funding for housing reconstruction came from a variety of sources, both local and international, including: (i) international donor funds; (ii) private funds raised by international and local NGOs; (iii) the HRF; (iv) government funds (normal budget and Petrocaribe funds); and (v) private funding, including household private resources, such as savings, insurance proceeds; gifts, especially remittances sent from abroad; and credit (both formal and informal). Presented below are estimates of amounts raised and some issues related to each source.

Humanitarian assistance

The distinction between humanitarian and reconstruction funding was often not very clear in Haiti. Funding was raised for housing reconstruction through the humanitarian appeals. Solutions such as Tshelters and repairs were financed by both funding streams.

The Flash Appeal raised $1.096 billion, of which $201 million went to the three clusters that carried out camp-, shelter-, and housing-related activities. The 2011 CHAP raised a total of $191 million, of which $36.4 went to the same three clusters, as shown in Figure 9.

Some of the additional humanitarian funding raised by the International Federation of the Red Cross and Red Crescent Societies (IFRC) and other agencies outside of the Flash Appeal and CHAP was also earmarked for temporary and permanent housing. The FTS recorded $2.5 billion of additional humanitarian funding in 2010 and $283 million for 2011, which was only a portion of the additional funds donated.[166]

Reconstruction funding from external sources

Normally, bilateral and multilateral investment projects are negotiated and agreed to with governments. Increasingly, they are also accounted for in government financial reporting. However, in 2010, only donor contributions for budget support were included in the national budget in Haiti. Donor investment projects, HRF funding, and funding raised by NGOs were not accounted for in the budget.[167]

Bilateral and multilateral donors. New program funding from international bi- and multilateral donors mobilized as the result of the earthquake included pledges made at the donor pledging conference at the UN in March 2010. In other cases, existing program funding negotiated with the government prior to the earthquake was reprogrammed for reconstruction purposes.

Major housing donors, who met as a group facilitated by the World Bank, maintained a list of committed housing projects. As of March 2012, the group identified 19 major donor housing projects with a total value of $408 million, as shown in Appendix 3 to this section. The number of housing units these projects would produce was difficult to determine. These projects were generally registered with the IHRC and were financed with new or recommitted funding.

International and local NGOs. NGOs raised extensive funding from private sources for housing, some of which was reported to the FTS. For example, the American Red Cross raised $486 million, of which $136 million was committed to housing and neighborhood reconstruction. There was no central reporting system in Haiti for this group.

Haitian NGOs raised resources locally and from diasporta groups, but there are no figures available on the amount of resources raised.

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166 FTS, 2013, "List of all humanitarian pledges, commitments and contributions (2010 and 2011)." Report as of June 17, 2013. Table ref: R10c. http://fts.unocha.org. Non-appeal figures in 2010 include expenditures of $464 million by the U.S. Department of Defense. Agencies voluntarily report humanitarian contributions to the FTS.

167 International Monetary Fund, 2012, "IMF Country Report No. 12/220 – Haiti: Fourth Review Under the Extended Credit Facility—Staff Report and Press Release."

Many local and international faith-based organizations raised funds directly from private sources for housing. There was no system for tracking these funds.

NGOs were often contracted by donors to execute projects, including a number of the projects profiled in the case studies, but this was not additional funding.

Haiti Reconstruction Fund. The HRF was a multi-donor trust fund managed by the World Bank and the UN. In some cases, the funding pledged was already tied to specific projects. In total, $386 million was raised, of which $162 million was committed to housing-related projects by the HRF. This included two projects for demolition and debris management ($42 million), the Housing and Neighborhood Reconstruction Support Program (HNRSP) ($25 million), the Port-au-Prince Neighborhood Housing Reconstruction Project ($65 million), and the Haitian government's Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project ($30 million).

Reconstruction funding from government sources

The government had two principal sources of funding for reconstruction: its own budget and Petrocaribe funds.

Government budget. Government funding used for reconstruction was budgeted within specific ministry budgets and was not possible to track.

Petrocaribe funds. The Petrocaribe Agreement was the principal source of government funding for capital investment projects in 2010–2011.[168] Haiti had borrowed $1.46 billion through May 31, 2013. Venezuela cancelled $395 million of the debt after the earthquake, leaving a balance of $1.07 billion. At this time, Petrocaribe funds

were not accounted for in the government financial statements.

Between 2010 and 2011, the governing body approved $845 million in projects, including five housing and debris management projects. Overall, housing received the second largest share of funding (7.2%), after infrastructure (55.9%). Approved projects were for shelter ($11.6 million approved in February 2010), debris management ($10 million in August 2010 and $15 million in May 2011), Fort National housing ($22 million in May 2011, later reallocated to the Morne a Cabrit development project[169]), and Bowen Field ($22 million in May 2011, later reallocated to other sectors).

Reconstruction funding from households

Insurance proceeds. Neither micro- nor formal insurance proceeds was a significant funding source for reconstruction, particularly in informal neighborhoods. Insurance penetration was extremely low in Haiti at the time of the earthquake—around 0.3 percent of the gross domestic product (GDP).[170] The only micro-insurance program in Haiti, MiCRO, was launched by Fonkoze for its borrowers in 2011. Purchase of insurance has been imposed as a condition of housing reconstruction assistance after other disasters, notably in India and Turkey, but this was not considered feasible in Haiti.

Household savings and remittances. Haitians used their own resources for most housing reconstruction, as observed in all neighborhoods and in new sites such as Canaan. For Canaan, UN-Habitat estimated that as much as $100 million may have been invested through 2012 (see Canaan case study).

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168 Haiti joined the Petrocaribe agreement in October 2007. See footnote 100 for more detail.

169 The Morne a Cabrit development project received a total of $59 million in funding from Petrocaribe, including $22 million reallocated from the Fort National project in September 2011; $10 million for the industrial park, approved in February 2012; and $27 million for housing and site improvements, approved in July 2012. This may be the single largest project undertaken by the government since the earthquake.

170 Property Casualty 360, 2010, "Haiti Quake Loss Has Little Insurance Cover, Modeler Says."

Many low-income households in Haiti depend on remittances sent from abroad to survive. Many remittances are sent informally, due to high transfer costs, making data on remittances reaching Haiti incomplete.[171] In the years before the earthquake, remittances generally exceeded Official Development Assistance. In 2010, $1.971 billion in remittances (over 30 percent of Haiti's 2010 GDP) were sent through formal channels. This represented an increase of 20 percent over 2009.[172] Recorded remittances increased 4.4 percent in 2011 to $2.057 billion.[173] The Haitian community has also organized many hometown associations that pool remittances and contribute them to small development projects. Fonkoze provides financial services to hometown associations, and its directory lists over 300 organizations. Hometown associations in Canada and the United States (U.S.) donate on average $10,000 annually to their communities for social projects.[174]

There was no organized effort in Haiti to work with remittance recipients or senders (including hometown associations) to expand remittance flows, to match remittances with subsidies, or to encourage investment of remittances in safe housing reconstruction, although these types of post-disaster programs have been successful in other countries. If just 20 percent of formal remittances were spent on housing reconstruction, there would have been more than $400 million available for that purpose in 2011 alone.

b. No agency had responsibility for overseeing housing recovery finance

The Haitian government had virtually no role in financing low-income housing development

before the earthquake. As discussed in Chapter I, there was no policy framework for housing, nor any credit or subsidy system in place, either on the demand side (households) or the supply side (builders). As a result, there was no policy "frame of reference" for financing housing and neighborhood reconstruction.

During the first two years, no institution was designated to lead housing recovery. A recovery framework and financing plan were needed for housing, but neither was prepared. Nor was there an international agency significantly involved in housing, slum upgrading, or other related activities who could assume an advisory role to government.

The Entreprise Publique pour le Logement Social (EPPLS) is the sole public institution charged with affordable housing development in Haiti. The EPPLS had built very little housing in the years before the earthquake, and its ranks were depleted due to minimal budgetary support. The EPPLS model (rent to own over a 30-year period) was largely discredited due to its reputed failure to collect rents and to the condition of its properties.

While the law under which the EPPLS operated was relatively wide ranging, permitting the organization to borrow, issue bonds, and take on other financial responsibilities, these options had never been exercised. Its management had proposed legal reforms to modernize the organization, but they had not found traction in government before the earthquake. Nevertheless, the EPPLS became a valuable intermediary for some development partners, due to its ability to carry out a unique range of financial and land operations, although it was not in a position to define housing reconstruction or financing policy.

In the absence of a housing recovery plan, donors decided what projects were needed, sometimes in consultation with the government, but often on their own. When asked what policy

[171] Analysis of World Bank data in: International Migrants Remittances Observatory, 2013, "Assessment of Remittances Policies and Programs in Haiti – Draft Report."

[172] René Maldonado, Natasha Bajuk, and Marie Luisa Hayem, 2011, "Remittances to Latin America and the Caribbean in 2010: Stabilization after the Crisis."

[173] Ibid.

[174] United Nations Conference on Trade and Development, 2012, "Maximizing the Development Impact of Remittances."

framework guided their housing reconstruction-related decisions, agencies named everything from their own internal policies to guidelines issued by clusters (see Figure 4).

c. Reconstruction funds were not regularly tracked, nor were projects monitored

"Tracking" in the recovery context generally refers to a system for following up to ensure the delivery of external pledged funds. Tracking in this sense may include both external funds and government recovery funds. "Monitoring" more often refers to the collection and analysis of data on project expenditures and physical execution. Both are necessary to ensure the effective use of recovery funds, timely delivery of results, and accountability to stakeholders. The use of both in Haiti was less than systematic.

Tracking

The Indian Ocean tsunami and other large-scale disasters have demonstrated the importance of tracking aid and coordinating finance in reconstruction programs, especially those where numerous development partners are present. No unified aid tracking system was established in the first two years in Haiti. A number of agencies had some role in tracking earthquake-related funding and projects. These are described below.

The UN Office for the Coordination of Humanitarian Affairs (OCHA). Through the Financial Tracking Service (FTS), OCHA monitored the collection of the humanitarian pledges made by governments and others to the Flash Appeal and the Consolidated Humanitarian Appeal (CHAP) processes. This was largely funding for humanitarian activities, not accounted for in government systems, as discussed in Section III.A.

The UN Office of the Special Envoy for Haiti (OSE). The OSE tracked and monitored donor funding commitments on behalf of the government and the IHRC, particularly the

pledges made in connection with the donor pledging conference at the UN in March 2010.[175] The last tracking report was issued in December 2012. The OSE reported by sectors, in theory using the 18-month budget shown in the APNRDH, for which housing had no budgeted amount. The $180 million in allocations for housing identified by the OSE were shown as being in excess of that requested by the government.

The Interim Haiti Recovery Commission (IHRC). The IHRC established a project registration and approval system in 2010, with the objectives of identifying projects and tracking their progress, whatever their funding source. Unless the sponsor was seeking funding from the Haiti Reconstruction Fund (HRF), there was no incentive for a project sponsor to register its project. For this reason, the project registration system did not cover all reconstruction activities. Even government-led housing reconstruction proposals, such as those for the Fort National neighborhood and the old military airport (La Piste), which were receiving Petrocaribe funding allocations from the government, were not registered with the IHRC. For housing and neighborhoods reconstruction, a total of 66 projects were registered in the IHRC projects system.

Ministère de la Planification et de la Coopération Externe (MPCE) (Ministry of Planning and External Cooperation). Even when their funding did not flow through government systems, bilateral and multilateral donors were required to establish an agreement with the MPCE to report on the progress of their programs. MPCE and the IHRC began coordinated project tracking and review in 2011, and records on registered projects were turned over to MPCE when the IHRC closed in October

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[175] The OSE was created in May 2009 by the Secretary General of the United Nations to "assist the Haitian government and people in implementing their vision and priorities by engaging with the international community, government donors, UN funds and programmes, and other non-state stakeholders."

2011. Whether MPCE continued to monitor these projects is not known. No reports were made publicly available.

Unité de Coordination des Activités des Organisations Non-Gouvernementales

(Unit for the Coordination of the Activities of Nongovernmental Organizations). Certain nongovernmental organizations (NGOs) were required to register in this special office within MPCE and to report their program activities. Many of those required to register never did. In July 2010, the NGO activity coordination unit published a list of 160 registered NGOs for the entire country, when it was estimated that more than 1,000 such organizations were operating. NGOs submitted progress reports voluntarily; the unit did not have an active monitoring function.

Monitoring

The lack of agreed, explicitly stated housing recovery goals and objectives (Who gets new housing? What should it cost?); of output and outcome indicators; of an obligation on the part of partner agencies to report on the progress of their projects; and of a centralized monitoring system made monitoring the Haiti housing recovery process impossible. Without these elements, tracking the actual delivery of outputs to affected households could also not take place.

The ability to analyze results and improve on the recovery and reconstruction effort as it progressed was also lost. The Unité de Construction de Logements et de Bâtiments Publics) (UCLBP) (Housing and Public Building Construction Unit) and the Camp Coordination/ Camp Management (CCCM) Cluster reported aggregate data on housing solutions delivered, but comparative, objective data on outputs and outcomes were not available. Information on results was provided mostly by executing agencies for promotional purposes.

Governments and international agencies would benefit from dedicating more resources to

information management and from working with an agreed set of characteristics or goals (and corresponding indicators) against which reconstruction programs can be monitored and evaluated. These indicators could be based on a pre-established set of universal goals, such as the quantity, quality, and cost-effectiveness of outputs; the efficiency, equitability, and transparency of the recovery program; and the satisfaction of affected households and other stakeholders with the results.

d. Housing subsidies were a challenge for agencies to design and implement

Government and development partners were providing subsidies to households any time that they supplied free houses, rent, repairs, or other forms of housing assistance.[176] Targeting of subsidies ensures that limited funds go to priority recipients and that all recipients meet the eligibility criteria. When many agencies are involved in recovery, governments should provide policy guidance to set priorities (elderly or handicapped households, for instance) and to suggest maximum and minimum subsidy amounts. No such guidance was given to agencies in Haiti.

Targeting subsidies

Targeting housing assistance requires a system for verifying eligibility. Both formal and community-based verification processes can be used.

In existing sites, partners worked with communities and municipal officials to identify those most in need of assistance.[177] For projects

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[176] The definition of subsidies used here excludes "cash for work," because these transfers compensate the recipient for the value of his or her labor, whereas housing subsidies represent a windfall to the household.

[177] For example, the Fund for Economic and Social Assistance and the International Organization for Migration collaborated to select beneficiaries for the Inter-American Development Bank-financed Oranger project, based on a carefully defined set of criteria and the camp registration data. The American Refugee Committee helped the U.S. Agency for International Development select beneficiaries for its Haut Damier project

in new sites, selection was more complicated. For the Fund for Economic and Social Assistance (FAES)/Inter-American Development Bank (IDB) "400/100" project in Oranger, the International Organization for Migration (IOM), FAES, and IDB developed a multi-stage screening, application, and selection process using Displacement Tracking Matrix (DTM) data, although some of those selected ultimately declined to be relocated to the site. The U.S. Agency for International Development (USAID) worked with the IFRC to carry out the selection process for its Haut Damier project (see Haut Damier case study).

Over time, it became increasingly difficult to distinguish earthquake-affected households from the chronically vulnerable. Some donors revised their targeting to include non-earthquake-affected households. As a result, it is impossible to say whether all those who received housing assistance were the most needy among the earthquake-affected, or were even earthquake-affected at all.

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from a pool of households known to the committee as "earthquake-affected."

Channeling subsidies

Most donors decided to forego owner-driven approaches to housing reconstruction that required sizable transfers of funds to individuals or neighborhood groups. Subsidies for housing repair and reconstruction were largely provided "in kind."

Figure 22 shows the organizational survey responses to a question about providing direct subsidies (excluding fully constructed houses). The two most prevalent subsidies were cash for work (40% of agencies) and rental subsidies (36% of agencies). Five organizations (1%) offered subsidies for repair and reconstruction.

This compares to 27 organizations (64%) carrying out repairs, 26 (62%) carrying out housing reconstruction, and 22 (52%) carrying out retrofitting (as shown in Figure 12).

Rental subsidies had injected at least $5 million into the housing market as of October 2011. They were paid partly to landlords and partly to families. Seventy-four percent of landlords

SURVEY QUESTION

Figure 22. For what purposes were funds channeled directly to beneficiaries or host families by your organization?

Category	Number of Agencies
Cash for work	11
Rental subsidies	10
No transfers to beneficiaries	9
Cash transfers / other expenses	5
Reconstruction/ repair subsidies	7
Other	4
Grants to host families	2

Number of Agencies
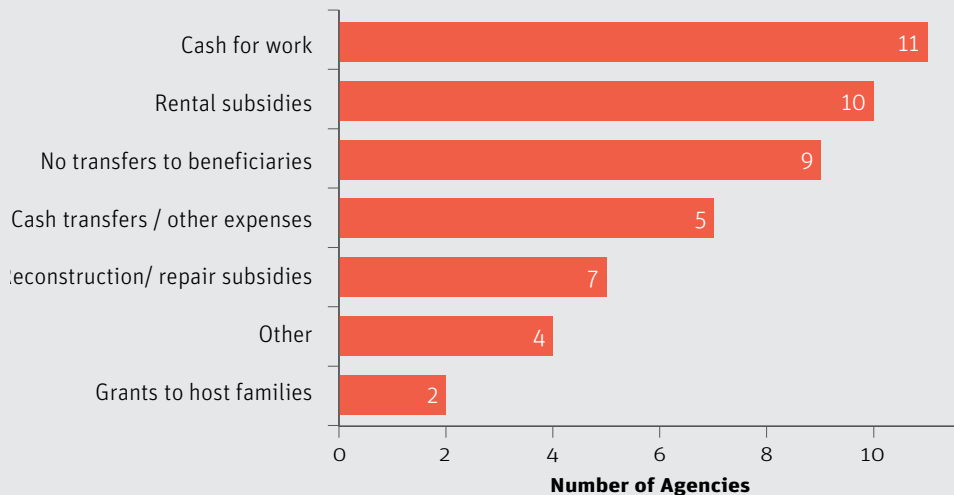
receiving these subsidies reported that the payments were being used for housing repair.[178]

e. Numerous efforts were undertaken to provide housing credit

Haiti had extremely limited formal housing credit before the earthquake. Despite liquidity in the banking system, risks associated with imperfections in the judicial, legal, and regulatory environments, and the difficulties of enforcing property rights and contracts, have constrained the development of the credit market.[179] As a result, most household borrowing by low-income households takes place outside of the formal banking system, making it difficult to quantify the extent to which credit has been used for reconstruction.

Haitian respondents to a USAID survey expressed interest in borrowing for housing, even though only 20 percent of the households reported ever having borrowed for any purpose.[180] Most borrowing took place for business purposes from microfinance institutions or through informal arrangements. Only 6 percent of borrowing was for housing-related purposes.

Establishing credit programs for low-income households for reconstruction is very difficult; virtually no new housing finance programs at scale have been successfully established in a post-disaster environment.[181] Households are generally reticent to borrow in a post-disaster environment due to loss of livelihoods and other uncertainties.

Nevertheless, numerous efforts were undertaken soon after the earthquake to establish new credit programs for housing reconstruction by low-income households, and it will be important to monitor the results of these initiatives.

The government's Kay Pam program (see Box 13) was launched in July 2011 by the Bank Nationale de Crédit, supported by the Banque Populaire d'Haïti. The 500 million gourde ($12.5 million) program was designed to provide 30-year housing loans to public employees and other customers of the Bank Nationale de Crédit with land titles to help repair or build their homes. As of early 2013, the program had extended only a few mortgages.

Several international financing initiatives were undertaken.

- The UN Office for Project Services (UNOPS) attempted to develop a housing lending program that would complement its investments under the Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project, but did not identify a scalable solution (see 16/6 Project case study).

- USAID ($6 million), the Clinton Bush Haiti Fund ($3 million), and the Overseas Private Investment Corporation ($17 million) supported "Rebati," a credit program developed by a U.S.-based nonprofit with connections to Haiti to provide funds for housing microfinance and small and medium enterprise repair and construction.

- The International Finance Corporation launched an advisory program with SOGEBANK and CEMEX to provide housing credit and oversight of housing repairs and reconstruction.

- Leopard Haiti Fund LP launched the first private equity fund for Haiti in July 2012, initially raising $20 million from the International Finance Corporation, the Netherlands Development Finance Company,

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[178] Cash was provided to households and landlords under the rental subsidy program. For a description of the measures taken, see: Jeremy Condor, Charles Juhn, and Raj Rana, 2013, "External Evaluation of the Rental Support Cash Grant Approach Applied to Return and Relocation Programs in Haiti."

[179] Carl F. Braun, 2011, "Pour dynamiser l'offre de financement de l'immobilier en Haïti," PowerPoint Presentation, Mercredi de Réflexion, IDB/World Bank, Port-au-Prince.

[180] University of Chicago, 2011, "Housing Demand in Port-au-Prince," Financial Sector Knowledge Sharing Project. The primary data were collected by Bureau de Recherche en Informatique en Développement Economique et Social.

[181] Abhas Jha et al., 2010, "Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters."

BOX 13

Haiti – Economy: The project "Kay pam" increases from 30 million to 500 million gourds

The projet "Kay pam" a major program of mortgage for the purchase of housing, which was to be launched by the National Bank of Credit (BNC) on Tuesday June 14 had been postponed, following the assassination of the President of the Board of Directors of the BNC, Guiteau Toussaint on June 12 [2011].

The project "Kay pam" will finally be officially launched on Friday, July 22, had announced last Saturday the President Michel Martelly. This large mortgage program aims to help people of the middle class to buy decent homes.

Initially provided with an amount of 30 millions gourds, the Head of State has indicated that the funds available for this program were increased to 500 million gourds, available at the beginning of the program.

Source: Haiti Libre, September 7, 2011.

and the IDB, with affordable housing among its target sectors.

■ The Haitian microfinance institution Fonkoze piloted a housing-related lending program with support from Habitat for Humanity Haiti (HFHH), but had closed the program before the earthquake. It launched no new housing lending program afterward.

Providing housing credit to low-income families at scale in Haiti will require a commitment by the nation to provide widespread access to capital through formal channels, followed by fundamental reforms related to land tenure, income documentation, and banking.

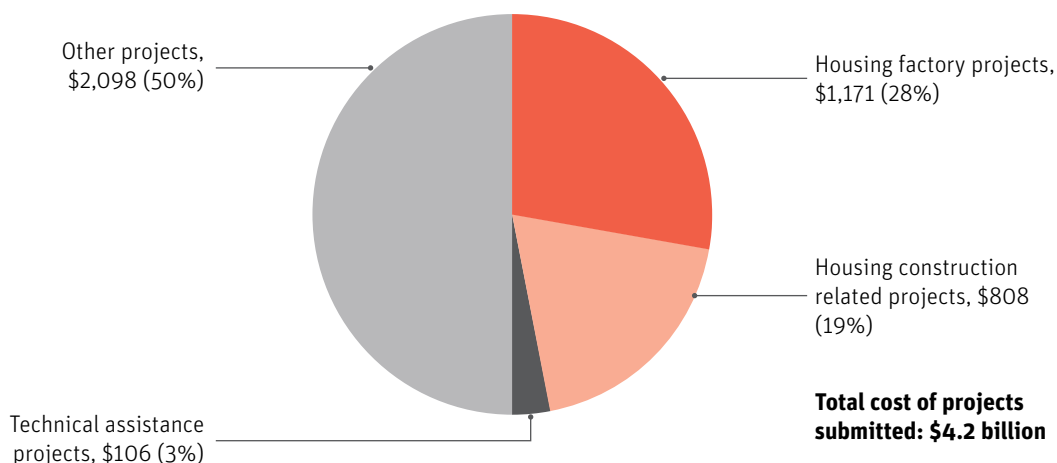**f. Many projects registered by sponsors with the IHRC had no funding**

The IHRC Housing and Neighborhoods team reviewed 66 projects submitted to the IHRC between July 2010 and October 2011 through the normal IHRC project submission system. These were submitted by government agencies, multilateral and bilateral agencies, international organizations, and NGOs (both international and local). The projects ranged in size from under $1 million to $930 million. The total value of submitted projects was $4.2 billion. Not all were directly housing related; for instance, debris management and disaster risk management (DRM) projects were assigned to this team.

For a number of projects, the funding source was already identified, including funds committed at the donor pledging conference at the UN in New York. The registration system also revealed funding sources that were not previously known, such as funds raised by NGOs. Many project sponsors registered projects without funding because they were seeking funding from the HRF, for which registration was a prerequisite.

Many of the housing project submissions were not suitable or feasible, which in some ways reflected poor communications by the IHRC regarding the project submission process. As shown in Figure 23, only 19 percent— $808 million—of the proposed projects entailed construction, reconstruction, or repair of housing, and were deemed to be feasible. Approximately 35 percent of the costs of these feasible projects had funding when they were registered. With full funding, these housing-related projects would have created more than 88,000 units of housing, at an average cost of $9,150.

A large number of private manufacturers submitted projects based on the erroneous impression that government would be issuing large-scale orders for housing units or housing materials, or setting up factories to produce them. These projects are included in the

Figure 23. IHRC Regular Housing Project Submissions 2010-2011, in US$ million

Other projects, $2,098 (50%)

Housing factory projects, $1,171 (28%)

Housing construction related projects, $808 (19%)

Total cost of projects submitted: $4.2 billion

Technical assistance projects, $106 (3%)

Source: Priscilla Phelps, 2011, "Haiti Housing and Neighborhoods Reconstruction: Building the Bridge While We Walk On It." IHRC end-of-mandate report.

"housing factory projects" category. "Other projects" included items such as temporary shelter, debris management, and activities unrelated to housing or neighborhood rehabilitation included in housing projects. A small number of project proposals (3%) were to provide technical assistance.

In response to a more specific call for projects in August 2011, the IHRC received 28 additional housing-related project proposals. Approximately 15 percent of the costs of these projects were already funded, and the average unit cost was just over $6,000. When the IHRC closed in October 2011, none of these projects had received funding. It is not known how many of the housing-related projects submitted to the IHRC without funding were later built.

g.   Without policy direction, financing went to projects, not programs

With no government housing policy or standardized program parameters, donors were left to identify a particular neighborhood or community to assist and to design a project for and with the residents. Donors generally defined their commitments by the number of houses or housing units that they would build or repair,

although most projects included other types of investments.

Estimating project costs was difficult and a number of agencies had to increase project funding or reallocate funding as the project progressed. Even experienced agencies faced daunting challenges. Of the 13 organizations responding to a survey question regarding project changes during implementation due to financial issues, 55 percent said costs increased, 50 percent said the number of beneficiaries decreased, and 80 percent said execution took longer than planned.[182] For example, the World Bank revised its Port-au-Prince Neighborhood Housing Reconstruction Project (PREKAD) in 2012 to reallocate more investment to infrastructure and rental subsidies. Housing unit costs on USAID's Haut Damier New Settlement Project increased by more than 250 percent (see case studies 7 and 6).

A few high-quality, high-cost reconstruction projects resulted and will result from this model of housing recovery model. If these projects set new standards for future housing and upgrading, that will be a positive outcome. For example, the

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[182] World Bank, 2013, "Haiti Shelter and Housing Survey."

16/6 Project demonstrates the improvements that can be made in informal urban neighborhoods, and created a replicable model.

Most households received no financial assistance for recovery. They recovered using their own resources. Many are likely living in conditions that are no safer than those they were living in before the earthquake. Had housing recovery been carried out with the goal of using available funds to "acquire" the most safety overall and an equitable distribution of benefits, the outcome might have been quite different. How to accomplish recovery that focuses on safety and distributes benefits more equitably are the key challenges for future disasters in similar contexts.

3. Findings

Confusion on housing financing strategy began with the PDNA. The donor-led PDNA and the government-led APNRDH reflected significantly different ideas of what government's role would be in financing housing recovery. The former assumed government would finance much of the contingent liability of housing reconstruction for low-income Haitians, whereas government assumed a combination of humanitarian funds and credit would be used.

A housing sector recovery framework and financial plan were sorely needed. The APNRDH was not translated into a recovery plan by either the government or the IHRC. Because no housing recovery plan was developed, no strategy was agreed on and the differences between the PDNA and APNRDH were never reconciled. A financial strategy for housing recovery could not be developed in the absence of a framework.

The IHRC and the HRF provided only limited guidance to project sponsors seeking financing. Early on, the IHRC and the HRF were viewed as a system for approving and financing projects. But most projects submitted lacked financing and many were not financeable, due to poor design,

the lack of experience of sponsors, or both. Enormous effort was spent reviewing infeasible projects that would have been better used helping the government develop a strategy and design more suitable, financeable approaches.

Agencies needed more direction on programming their own reconstruction funds. Without a housing recovery framework, agencies with funding were on their own to design housing interventions and program their funds. Many found costs rising as projects progressed, so the number of housing units declined, reducing the number of beneficiaries.

Tracking of financial commitments and project outputs was not systematic. While various tracking initiatives were carried out at the beginning of the recovery period, they were not coordinated and were too focused on monitoring the mobilization of funds, while ignoring expenditures and outputs. With no systematic tracking, the opportunity to learn from project experiences was lost, as was all accountability to the Haitian people for the use of these funds.

Agencies downplayed the context and experience from other disasters in pursuing housing credit. None of the conditions for success existed in Haiti for developing new credit programs for housing reconstruction. Worldwide post-disaster experience also discouraged such initiatives. Nevertheless, time and money were spent by numerous agencies attempting to set up credit programs. The results of these initiatives should be analyzed as guidance for future recovery programs.

Public and donor funds could have been better used to leverage private investment. Co-financing of housing construction with households or neighborhood groups or of projects with NGOs (including local NGOs or diaspora groups) and private sponsors was not pursued in the housing sector. Most public funds (including HRF funds) went to completely publicly funded projects, leaving aside interesting opportunities for

collaboration and leveraging. No known efforts were made to mobilize or channel remittances or funds from diaspora groups.

Project-based recovery made the result of housing recovery more inequitable. When Haiti housing recovery devolved into a project-based program without a plan or coordination, it increased the likelihood that many households would not get assistance, among them many highly vulnerable households. Donor projects set new standards for housing recovery and slum upgrading that will hopefully be replicated in the future. At the same time, this approach left the majority of households to recover with their own resources, many in conditions no safer than those they were living in before the earthquake. While it would have been challenging to accomplish and to measure, providing safety to the largest possible number of households and an equitable distribution of benefits should have been goals that guided the entire housing recovery effort.

4. Recommendations

The recommendations that follow are associated with the good practices that introduce this section for a large-scale reconstruction effort in a poor country with a weak state, such as Haiti.

Ensure that donors coordinate with government on programming of financial resources, and that programming is consistent with the recovery framework.

Following the PDNA, ensure that a recovery framework or reconstruction plan is developed, and is used as the basis for financial planning. Use the financial plan as a reality check, to ensure that the goals of the recovery framework are attainable.

In future disasters, development partners must remember that this planning is essential if limited funds are to be used effectively, and should support their preparation before project development begins.

Track all reconstruction resources, programming, and progress centrally, and report results regularly to the public.

Even if many agencies control their own funds, the financial plan should include them. Public communications on the use of reconstruction funds should be continuous and substantive; otherwise, suspicions will arise about whether or not funding is not being properly used. Such suspicions undermine governance at a crucial time. In some reconstruction programs, monitoring is necessary down to the household level.

Use public and donor funding strategically to leverage private financing, including that of households, and to incentivize good practices like safer reconstruction.

The financial plan should identify both public and private sources and establish transparent financial policies and rules. It should be standard practice that household and private sector input is sought in developing the plan, so that it reflects private financing plans and identifies where public investment is needed to leverage it. For instance, a basic housing subsidy can be matched with remittances or private property owners may agree to co-finance extra rental units with government. Requests for proposals for repairs or reconstruction can require a private funding match.

Transfer more financial resources directly to eligible households or landlords, ideally in tranches and on a conditional basis, and support the expansion of the owner-driven reconstruction model.

Owner-driven reconstruction with agency supervision is a best practice in housing recovery programs, since owners rebuild more quickly than agencies, better understand their housing needs, and have more concern for quality. Training associated with owner-driven reconstruction raises both contractor and homeowner knowledge of improved building practices.

This model needs to be updated to keep it relevant in contexts like Haiti, where ownership was difficult to verify, reconstruction and repair were complex and unique, housing was dense, and much of the damaged housing was multifamily rental.

Use funding to recreate pre-disaster housing status and improved housing construction practices, while avoiding unfamiliar designs and financing vehicles.

Experiments, such as the establishment of new credit programs for reconstruction by low-income borrowers or innovative housing designs, can absorb enormous resources of multiple agencies and produce few results. Disaster recovery is not when agencies should be working outside their areas of expertise, especially on complex topics such as housing credit.

Agencies should share knowledge to avoid duplicating efforts and bring in appropriate expertise. They should also realize that households are likely to be risk-averse after a disaster due to economic uncertainties and trauma, and prefer the old ways. It is better to build on financial practices familiar to affected households than to expose them to additional risk.

Seek uniformity in eligibility rules and levels of housing financial assistance.

Government rarely controls all financial resources for housing recovery, but those who raise funds for recovery on behalf of an affected population can be asked to use them in conformance with policies that aim for equity and minimum and maximum standards. At the same time, this conformity should not be seen to contradict the idea that households should be given choices and encouraged to contribute to the design of their own recovery.

Housing recovery should contribute to shared prosperity, rather than foster resentment and further inequity among social groups.

In programming financial resources, government and agencies should analyze cost-effectiveness and consider the long term.

In future large-scale disasters, donors should consider offering multiple options, especially on short-term solutions, such as rental subsidies or hosting, and compare the results (e.g., more people safely rehoused) for a given level of expenditure. A program to evaluate the cost-effectiveness of various solutions in Haiti should be undertaken.

Many large-scale post-disaster housing projects built with public funds are abandoned over time or never occupied. Private builders rarely make the same mistakes because they conduct market studies before deciding to build. Government and agencies should also recognize that the difficult part of housing recovery is not building the house, but providing solutions that are valued by beneficiaries and that are financially and operationally sustainable over time, especially for multifamily housing or large developments.

Appendix 1. Excerpts from the Haiti PNDA

Haiti Earthquake Post-Disaster Needs Assessment: Housing Needs

Matrix of results, rebuilding and recovery support ($ millions)

Aims	Activities	Expected results	Indicators	0-6 months	6-8 months	Long-term 3 years	Total years 1-3
Housing rebuilding fund (1)	Setting up financial transfer mechanisms Establishment of the beneficiaries database Transfers of funds to the beneficiaries.	Financial assistance is transferred to the beneficiaries	% of beneficiaries receiving financial assistance		100,000,000	400,000,000	500,000,000
Security provision funds	Setting up security fund mechanisms Transfer of funds to the communes and communities Seismic microzoning	Areas benefit from better risk protection	% of reconstruction meeting building standards		35,000,000	65,000,000	100,000,000
Training in reconstruction and security provision	Preparation of training courses Training of trainers Training those involved in construction	All the players involved in housing reconstruction are trained in risk-resistant construction techniques	Number of persons trained	3,000,000	10,000,000	29,000,000	42,000,000
Public information campaign	Identification of messages Preparation of the mass media Dissemination of messages	The individuals and groups have received continuous information about reconstruction policy and risk assessment	Coverage of the information campaign	200,000	300,000	500,000	1,000,000
The communes	Planning and housing	Management functions	Planning and housing	1,000,000	3,000,000	8,000,000	12,000,000
General technical assistance, coordination and monitoring	Reinforcing national monitoring and testing structures Devising of construction techniques and standards Strengthening town coordination capacity Establishing a reconstruction inspection system Establishing monitoring and assessment mechanisms	Appropriate construction techniques and standards are adopted All affected areas receive fair financial and technical assistance The financial assistance is released on the basis of the assessments made Progress is duly monitored	% of cover of the financial and technical assistance Regular monitoring of training activities, flow of financial assistance and quality of reconstruction				
Total				5,200,000	49,800,000	505,000,000	660,000,000

The total estimate for the housing reconstruction fund was based on a financial assistance of: (a) 500 USD per partially damaged dwelling, (b) 1,000 USD per damaged dwelling, and (c) 3,500 USD per welling damaged beyond repair or destroyed dwelling.

Haiti Earthquake Post Disaster Needs Assessment: Urban and Community Infrastructure Sector

Summary of recovery and reconstruction requirements in US$

Aims	Activities	Expected results	Indicators	V. Short term 6 months	Short term 18 months	Medium-term 3 years	Total years 1-3 (US$)	Long-term 10 years	Total (US$)
Reconstruction fund	Setting up financial transfers and expert support mechanisms; Establishing a beneficiaries database Transfers of funds to the beneficiaries. Reporting to sponsors	Financial assistance is transferred to beneficiaries; Transparency in the allocation of financial resources	% of the financial assistance received by the beneficiaries		53,000,000	93,000,000	146,000,000	134,000,000	280,000,000
Technical assistance to national authorities	Creating a team to support the national government; Setting up a Liaison mechanism with the local authorities.	Monitoring and control of the progress and results of the reconstruction process; Transparency in the allocation of financial resources	% of managers trained Reports produced on the progress of national and local works	700,000	6,500,000	2,000,000	9,200,000	800,000	10,000,000
Technical assistance to towns	Creating technical support teams; Supporting municipal functions involving town planning	Towns are capable of monitoring the progress of reconstruction work.	Number of local managers trained		3,300,000	300,000	3,600,000	400,000	4,000,000
Strengthening of local community and civil society organizations	Creating technical support teams for local NGOs	Local NGOs are capable of ensuring cohesion in their actions	Number of local NGO officials trained		1,900,000	300,000	2,200,000	300,000	2,500,000
Technical assistance and training of public and private businesses	Providing technical assistance and training for public and private businesses; Establishing mechanisms for recapitalising businesses and providing expert support; Strengthening subcontracting for SMEs in the construction sector	Boost the construction sector with the appropriate resources	Number of national and local companies involved in construction		2,100,000	700,000	2,800,000	700,000	3,500,000
Technical assistance for the definition and monitoring of risks	Establishing a legal framework for construction standards; Establishing a reconstruction inspection system; Establishing monitoring and assessment	A legal framework that is appropriate and respected; The financial assistance is released on the basis of the inspections; Progress is duly monitored	Publication of legal standards; Site reports and progress statements		1,200,000	300,000	1,500,000		1,500,000
Total				700,000	68,000,000	96,600,000	165,300,000	136,200,000	301,500,000

Appendix 2. Larger Housing-Related Projects including Permanent Housing Commitments

Commitments Identified as of April 2012

	Name of project	Financial partner	US$ m	Results expected	Start	Finish	Location	Executing agencies
1	Rehabilitation of 16 Neighborhoods and Voluntary Return from 6 Camps (16/6) Project	Haiti Reconstruction Fund (HRF)	$30.0	144,000 beneficiaries	9/1/2011	8/31/2013	16 neighborhoods, Port-au-Prince metropolitan area	UNDP, IOM, ILO, UNOPS (16/6 Team)
2	Urban Community-Driven Development Project (PRODEPUR)	World Bank	$30.0	D, HRE, HRC, I, TA, UP, E, M	2/21/2011	12/31/2014	Delmas 32, Carrefour-Feuilles	MEF, Bureau de Monetisation des Programmes d'Aide au Développement (BMPAD)
3	Port-au-Prince Neighborhood Housing Reconstruction Project (PREKAD)	HRF and World Bank	$65.0	D, HRE, HRC, I, TA, UP, E, M	5/31/2011	12/31/2014	Nazon, Simon Pelé, Delmas, Port-au-Prince	BMPAD
4	Support for the Reconstruction and Development of Neighborhoods	EU, Agence Francaise de Developpement, UN-Habitat	$45.0	HRE, HRC, I	7/12/2011	7/12/2015	PAP (Baillergeau et Martissant)	MTPTC, AFD, UN-Habitat
5	Les Orangers : Support for the Shelter Strategy	IDB, Food for the Poor	$30.0	400 HC (Orangers), 750 HC (Other)	12/2010	6/2014	Les Orangers, Northeast and North Departments	Fonds d'Assistance Économique et Sociale (FAES)
6	Urban Shelter Programme Haiti in Port-au-Prince and Carrefour	Samenwerkende Hulp Organisatie' (SHO)	$14.5	TH, HRE, DR	11/2010	6/31/2012	PAP (6th Turgeau, Villa Rosa, Saint Marie, Ravine Pintade, Carrefour)	CORDAID, Build Change
7	Ann Ale Lakay!	OFDA, Caritas, Croix Rouge Américaine, Catholic Relief Services	$0.6	250 RS	8/15/2011	1/15/2012	PAP (Carrefour, Solino, Christ-Roi, Delmas 62, Maïs Gate, de Toto)	Catholic Relief Services
8	Rehabilitation of the Champs de Mars zone	Canadian International Development Agency (CIDA)	$19.8	5,000 RL, 750 HRE, I,	12/23/2011	12/31/2013	PAP (Champ de Mars) and other neighborhoods to be determined	MEF, PNUD, OIM, UNOPS, BIT
9	Camp Transitions Program	CIDA, DEC, SHO, Donateurs Privées		RS	4/2011	9/2012	11 IDP camps in PAP	World Vision
10	New Settlements project	USAID	$57.0	HC	10/12/2011	12/31/2014	PAP metro; Cap Haitien-Ouanaminthe corridor	TBD

	Name of project	Financial partner	US$ m	Results expected	Start	Finish	Location	Executing agencies
11	Yellow House Repair and Building Safety Assessments	USAID	$12.6	5,500 HRE	2/1/2010	12/2011	Delmas 32, Nazon, Simon Pelé, Carrefour-Feuilles, Bel-Air, Ravine Pintade, Delmas	PADF and WCDO
12	Morne a Cabrit	Government of Haiti		1,200 HC (Ph I)			Morne a Cabrit (Port-au-Prince)	Government of Haiti
13	Duvivier	Government of Haiti		1,000 HC			PAP, Duvivier	Government of Haiti
14	Enhancing Community Resilience	Red Cross Red Crescent Societies	$66.0	5,000 HRE, 1,500 HC, TR	6/1/2011	12/1/2014	Carrefour-Feuilles; Delmas 9, La Vallée, South West department	IFRC and partners
15	Neighborhoods Returns Pilots for Place St. Pierre and Place Boyer	USAID/Office of Transition Initiatives	$1.5	1,327 RS	8/15/2011	3/31/2012	PAP (Place Boyer and Place St. Pierre)	IOM
16	Enabling neighbourhood revival	CIDA and Habitat for Humanity Haiti	$1.7	125 HRE, 50 HRT	5/31/2011	8/31/2012	Simon Pelé (Delmas)	Habitat Haiti
17	Sustainable Rebuilding of 400 permanent houses in Petit Boucan, Gressier	CIDA and Développement et Paix	$6.7	400 HC	1/1/2012	12/31/2012	Petit Boucan, Gressier	Développement et Paix
18	Haut Damier Housing and Livelihoods Project	CIDA and Mennonite Central Committee	$1.9	100 HC, I	9/3/2011	12/31/2011	Haut Damier (Cabaret)	Mennonite Central Committee
19	Earthquake Relief Village Housing Project	Mission of Hope	$2.5	500 HC, I	10/1/2010	31/09/2011	Cabaret (West Department)	Mission of Hope Haiti
20	Jalousie: Neighborhood Rehabilitation	Venezuelan Government	$30.0				Jalousie	16/6 Team
Total			**$414.9**					

Source: Based on table prepared by World Bank Haiti, dated April 17, 2012. Information provided by donors and UNDP.

Key: D: Debris, DRR: Disaster risk reduction, E: Enumeration, HC: Housing construction, HRC: Housing reconstruction, HRE: Housing repair, HRT: Housing retrofitting, I: Infrastructure and services, M: Mapping, RL: Relocation, RS: Rental subsidies, TA: Technical assistance, TH: Transitional housing, TR: Training, UP: Urban planning; PAP: Port-au-Prince.

IV. Conclusions

A. Summary of Findings

The findings in this report are intended to identify experiences that, while specific to Haiti, may have relevance to future major disasters with significant involvement of humanitarian and donor agencies. They provide the basis for the recommendations made in the final section. The findings relate to the technical topics explored in this report, as well as to two cross-cutting topics: accountability and institutional frameworks.

The Shelter Response

The 2010 post-earthquake emergency response was successful. There was a strong mobilization effort and good implementation capacity, a coordination framework was designed early on, and agreement was reached on clear benchmarks. The "Shelter Sector Response Plan" that was drawn up was supported by both the Haitian government and the international community. The plan had three clear objectives, including providing emergency shelter within three months, a goal that was largely met.

Soon after the initial emergency phase was completed, it became evident that Haitians and international actors were not working in concert. There was lack of familiarity with the cluster system by Haitian actors, a failure to adapt it to Haitian requirements, and friction from language and cultural differences. Government was not successful at coordinating the international actors and there was turnover and instability in the cluster system. A further difficulty was maintaining continuity during the nearly year-long election and early post-election period.[183]

As the transition from shelter to housing programming lagged, a fragmentation of effort became evident. Significant differences in capacity from one cluster to another and weak inter-cluster coordination contributed to the

fragmented response. Clusters, which operated relatively well in the emergency phase, had no mandate to plan housing recovery and reconstruction and no way to wind down. Work in specific sectors advanced, including with government agencies, but a mechanism for inter-sector coordination was lacking. The government, for its part, had no platform ready to assume these responsibilities.

Several factors undermined the transition from the emergency phase to recovery. These included the absence of shelter or housing sector policies prior to the disaster; the lack of a reconstruction framework and common, clearly defined goals; wrong assumptions about reconstruction funding; and the failure to define an exit strategy from the emergency phase.

Ultimately, the shelter response consisted almost exclusively of camp support and a massive T-shelter program. The T-shelters supported property owners more than renters, by committing disproportionate funding to T-shelters, which required access to land, and alternatives, such as rental subsidies and hosting arrangements, were underfunded.

Housing Recovery

Government had no housing policy framework on which to base the housing reconstruction strategy. There was also no agency of government responsible for defining housing recovery policy. Among national and international agencies there was near-consensus

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[183] The general election was held in November 2010 after months of campaigning. Michel Martelly won the March 2011 runoff and was inaugurated in May 2011. President Martelly's first prime minister was approved by parliament in October 2011.

on the issues that the reconstruction strategy needed to address. However, no individual agency or group felt it had the mandate or influence with government to help develop a strategy that could be promulgated as the roadmap that all should follow. Even the Interim Haiti Recovery Commission (IHRC) was not capable of serving this role, in spite of the involvement of major donors in the commission.

Data for planning housing reconstruction were also lacking. Systematic data collection in affected neighborhoods did not begin until late 2010. Creation of a government platform for sharing data took well into 2011. Census data were out of date and didn't cover most informal settlements. Agency-collected enumeration data from neighborhoods were essential for local planning, but difficult to aggregate in a useful way. In the absence of other information, internally displaced person (IDP) camp tracking data and the building safety (habitability) assessment became the two principal sources of information for decision making. Even so, it was more than a year before it became clear that access to safe rental housing would be the principal constraint on reducing urban displacement, and that access had both physical and economic dimensions.

The lack of an overall reconstruction strategy caused the reconstruction effort to fragment. Having no strategy both simplified and complicated agencies' work. While there was no need to conform to government standards or priorities, each agency had to find a place to work on its own and define its own approach. The results were a proliferation of unique projects and an inequitable distribution of the available resources.

The lack of a reconstruction strategy and a housing sector reconstruction lead agency also meant that the technical assistance to support government's housing-related policy and decision making was not well coordinated,

nor strategic in its purposes. The Housing and Neighborhood Reconstruction Support Program (HNRSP) provided support to key agencies, but its impact was blunted by institutional culture in both the United Nations (UN) and the government.

Disaster Risk Reduction

Most rebuilding in the first two years was done informally, with no building permit or inspection, using the materials and practices that led to the damage and mortality from the earthquake. Guidelines for repair and construction were developed, but not very widely distributed. Efforts to improve the quality of construction materials were limited. Training became widespread later, but did not affect most of what had been rebuilt early on.

An agency that could lead the effort to establish disk risk reduction (DRR) as a priority in recovery was never designated. Without this, government policy on DRR in recovery was unclear in the first two years, even within the government, and the all-important agreement on what constituted "acceptable risk" in the Haitian reconstruction context was never reached.

The building safety assessment process demonstrated that, with adequate assistance, a high-quality assessment process can be conducted even when technical experience is limited. While speed and consistency were the priorities, social communication and the collection of additional information would have been useful additions to the process, given the multiple uses for which the data were later used.

The government carried out work on reconstruction guidelines, building codes, and training with external assistance during recovery, but what resulted was rarely disseminated as guidance or rules. Government's technical capacity improved, but its enabling and regulatory roles were not strengthened by these efforts.

DRR approaches and policy were determined at the project level. These were generally based on good international standards, but they were product driven, not holistic, and benefitted only a small percentage of the affected population. Much more emphasis should have been put on activities with a multiplier effect, such as communicating DRR messages, regulating the quality of construction inputs, and promoting self-enforcement of safe building practices.

Significant work on disaster risk management (DRM) had taken place in Haiti before the earthquake, but the sense of urgency grew to increase capacity in areas such as: (i) risk reduction and recovery (in addition to disaster response); (ii) civil society and scientific community engagement in DRR policy; (iii) norms and capacity for risk-informed urban planning; and (iv) safe building practices, enforcement of building codes, and construction supervision.

Ultimately, post-disaster DRR policy needed to have been decided in advance. The post-disaster period is not the right time for DRR research or policy making; it must be done before a disaster strikes. In addition, responsibility for it must be clearly assigned. While the disaster motivated donors to provide more support for DRR, there is still no agency that has the mandate for recovery policy. Haiti accumulated some good DRR practices from the earthquake recovery, but these need to be codified in national policy and regulations.

Urban Development and Land Regulation

Weaknesses in systems for urban planning, land management, and development regulation became strikingly evident as a result of the earthquake. These gaps, as well as the urban nature of the earthquake, had wide-ranging effects on the pace of recovery decision making and implementation.

At first, urban economic realities and their impact on recovery were not well understood. Agencies were not initially equipped to handle such situations as the vulnerability of many urban families, their dependence on the cash economy, and the prevalence of crime and intimidation. In some cases, these challenges caused the abandonment of projects. The need for urban assessments was not recognized until donors were already designing interventions.

Larger-scale planning and urgent recovery timelines were incompatible. Government and external agencies agreed on the strategic importance of recovery, but not necessarily on the cost of delaying recovery for planning. Many plans were prepared, such as for downtown Port-au-Prince, and old ones were resurrected. Disagreements also resurfaced on who had planning responsibility. The most important gap in the first two years may have been a planning framework that could have increased the coherence of planning and interventions at the community and local levels. Unfortunately, this was never developed.

Community planning in informal neighborhoods was carried out for the first time ever in recovery projects. Early pilots provided a replicable community planning model that was used in the government's Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project. Agencies involved in community planning coordinated well among themselves and with municipalities, and established relatively standard procedures. An institutional framework is needed for these activities, so that the capacities developed and data and outputs produced are not lost.

The weakness of land regulation in Haiti may have contributed more to the disaster than poverty. Dealing with informal ownership and lack of records also affected both the quality and the timeliness of housing-related recovery

interventions and wasted resources that could have gone to affected households. Addressing this situation should be a national priority, easily viewed as a disaster risk mitigation strategy.

Recovery Financing

Confusion on housing financing strategy began with the Post-Disaster Needs Assessment (PDNA). The donor-led PDNA and the government-led Action Plan for National Recovery and Development of Haiti (APNRDH) reflected radically different ideas of what government's role would be in financing housing recovery. The former assumed government would take responsibility for much of the contingent liability of housing reconstruction for low-income Haitians, whereas government assumed a combination of humanitarian funds and credit would be used.

The APNRDH was not translated into a recovery plan by either the government or the IHRC. Because of that, no strategy was agreed on and the differences between the PDNA and APNRDH were never reconciled.

The IHRC and the Haiti Reconstruction Fund (HRF) provided only limited guidance to project sponsors seeking financing. Early on, the IHRC and the HRF were viewed as a system for approving and financing projects, but HRF resources were very limited ($386 million out of an estimated $10.8 billion committed to recovery, approximately 3.6 percent). Rather than passively reviewing all submitted projects, the IHRC should have worked to improve housing projects and to find financing for those that were feasible.

Agencies needed direction on programming their own reconstruction funds. They should also have been obligated to report their progress. Without a housing reconstruction policy or recovery plan, agencies designed housing interventions and programmed funds using their own criteria. Agency

costs often rose significantly, so the number of potential beneficiaries declined, but these changes were not registered or responded to.

Systematic tracking was carried out only until the beginning of the recovery period. This tracking was focused mainly on monitoring T-shelter production and the mobilization of recovery funds. With no systematic tracking of expenditures or outputs, local accountability for the use of these funds was lost, as was the opportunity to learn from project results. National audit agencies such as the Government Accountability Office and Cours des Comptes reported to legislatures and taxpayers, but in Haiti reporting was ad hoc and, in the press, oriented toward pointing out donor and government failures.[184]

None of the conditions for success existed in Haiti for developing new credit programs for housing reconstruction. Worldwide post-disaster experience would discourage such initiatives, especially for very low-income households, but this did not keep numerous agencies from trying to create such programs. The results of these initiatives should be analyzed as guidance for future recovery programs.

The leveraging of private investment was minimal in the housing sector. Little effort was made to co-finance housing reconstruction with households or neighborhood groups or to co-finance projects with nongovernmental organizations (NGOs) (including local NGOs or diaspora groups) or private sponsors. Most public funds (including HRF funds) went to projects that were completely publicly funded.

Housing recovery became project-based, rather than programmatic, guaranteeing that the results would be more unequal. A few high-quality, high-cost reconstruction projects resulted and will result from the housing recovery model utilized in Haiti. Some set new

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[184] Cour des Comptes, 2013, "L'aide française à Haïti après le séisme du 12 janvier 2010. Rapport public thématique."

standards that may be applied in the future. For example, the 16/6 Project demonstrates for the first time the improvements that can be made in informal urban neighborhoods, and created a replicable model. Others were much too costly to ever be replicable.

While some households benefited from the windfall that these high-priced projects represent, most received no financial assistance for recovery. Households receiving no assistance recovered on their own, often returning to housing no safer than where they lived before the earthquake. Had housing recovery been carried out with the idea that available funds should be used to "acquire" the most safety overall and an equitable distribution of benefits, the outcome might have been quite different.

Capacity, Coordination, and Accountability

Institutional issues are often blamed for many of the challenges encountered in the recovery process in Haiti. This included not just shortcomings in organizational capacity, but lack of clarity about or gaps in laws, policies, regulations, and governance. Because the existing sector frameworks were incomplete (for example, in the case of the housing sector, there were no parameters for slum upgrading), there needed to be a unified recovery framework composed of a mixture of existing and stop-gap elements. But without any prevailing institutional framework to guide recovery, various frameworks coexisted and the differences among them created confusion and slowed decision making.

Humanitarian principles. Humanitarian agencies promote a "rights-based approach to disaster relief," with a "protection perspective." During an emergency, humanitarian agencies operate under a set of rules based on humanitarian principles drawn from international humanitarian and

human rights law, including the Universal Declaration of Human Rights and codified in the Inter-Agency Standing Committee (IASC) Operational Guidelines on the Protection of Persons in Situations of Natural Disasters.[185] These guidelines emphasize that the state has the primary duty to provide assistance and protection to persons affected by natural disasters, but that humanitarian organizations will offer their services to those in need when the state is unable or unwilling to do so. In the absence of state cooperation, the imperative remains to protect those affected.

Haiti is a signatory to the Universal Declaration of Human Rights and the country's constitution lists a wide range of human rights. Nevertheless, the rights-based approach would have set an unattainable standard for recovery. A significant gap existed between the quality of housing and basic services of average low-income Haitians before the earthquake and the minimum standards (such as the Sphere standards) promoted by the humanitarian sector. Haitian authorities, being fiercely protective of their sovereignty, at times resisted the "rights-based" debate and the expectations it created in recovery. A debate also arose within the international community, since not all development agency interventions are equally oriented by the humanitarian principles. With no consensus on the relevance of humanitarian principles, reaching agreements among agencies on certain standards was nearly impossible.

Governmental framework. The Haitian government confronted institutional challenges in recovery overall and at the sector level. These included, in particular: (i) defining sector recovery policies and standards, including for housing where no sector framework existed, and (ii) deciding how to manage and coordinate the entire recovery process. Partner agencies

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[185] IASC, 2011, *IASC Operational Guidelines on the Protection of Persons in Situations of Natural Disasters*.

sought government guidance to clarify policies, regulations, and enforcement under existing laws, and institutional roles and responsibilities. Partners also needed government to either support decisions made by special entities (such as the Interministerial Housing Commission [IHC] and the IHRC) or provide alternative leadership. Government did its best to be responsive, but the guidance it provided did not comprise an adequate policy framework, and special entities operated to limited effect.

Close coordination of agency actions, whether by ministries or special entities or through government chairmanship of coordination bodies created within the humanitarian structure, would have mitigated some of the risks associated with the lack of a recovery framework. For the first two years, this did not take place.

International system. Shortcomings in coordination by government were mirrored in the donor community. International donor support was called on to help finance recovery, and the response was generous. But donors in the housing sector were not effective at working together with the government to coordinate the recovery effort so that it reflected good practice and produced the results sought by Haitian society. Bilateral agendas, rigid rules governing funding, the need for quick results, and especially the inability of donors to speak with one voice to the government and to advocate for good humanitarian and recovery practices all conspired to undermine this effort. In many ways, the organizational weaknesses of the donor community, which was present to help ensure a successful recovery, were not that dissimilar to those of government.

Informal systems. Informal systems are the principal institutional framework in which lower-income households survive in Haiti. Informal land titles, contracts, and lending arrangements fill gaps created when access to formal systems is blocked.

The earthquake revealed both the strengths and weaknesses of this bifurcated institutional framework. Without an enforced building code (formal system) and little memory of prior earthquakes to affect behavior patterns (informal system), there was little incentive to build seismically resistant housing. Yet without an accessible land market, a regulated urban plan, or enforcement against land invasion (formal systems), people acquired land in the land market that exists in the metropolitan area and emerged at Canaan (informal system).

External agencies became overly concerned about eliminating informality. They felt more formality would provide more certainty to affected households, even though the agencies themselves were frequently stymied by the formal systems that could not respond or adapt to the emergency. Agencies also developed quasi-formal mechanisms such as enumeration that may add to uncertainty in the long run.

Accountability framework. Ultimately, the imperative to account to the Haitian people should have motivated a more disciplined approach to managing the recovery process, but accountability mechanisms were lacking. This was due partly to the lack of a recovery framework and of the recovery principles and benchmarks it should have contained. But it was also due to the fact that the practice of accountability was largely missing in Haiti, and agencies did very little to strengthen it.

Civic engagement was low before the earthquake, as was a relationship of trust between government and the general public. Accountability between government and citizens functioned only at the local level, and even there in extremely limited ways, given the lack of municipal resources. Mechanisms that bolster accountability, such as consultation, polling, referenda, and the press, were present to some degree (especially during the election period), but had little effect on official decision making.

Accountability was further weakened when elected mayors were replaced by appointees of the Martelly administration, and municipal elections were continuously postponed.

Governments often make exaggerated promises following major disasters, from which they may backpedal once the recovery plan is prepared. In Haiti, the government made no such commitments, to no surprise of its citizens (especially the low-income population), nor did it present a recovery plan. Agencies made project-specific commitments that were frequently not met, but neither were those agencies held responsible for not meeting them. Government monitoring was minimal. Reporting on recovery progress was localized, sporadic, project-specific, and rarely included comparisons to original commitments. The affected population lacked benchmarks against which to hold government and agencies accountable, nor did the citizenry have the motivation or the means to do so. As a result, the citizenry knew only what they read in the paper, saw with their own eyes, or "learned" through rumors. Accountability in any formal sense was largely absent.

Strengthening resilience was established as a goal by many agencies in Haiti. Resilience in this context means having the resources, systems, and governance mechanisms that increase a society's capability to recover from shocks, at both the local and national levels. Whether this happened, and the degree to which the systems built up during recovery are sustainable, is difficult to measure.

Diverse efforts were made to engage local actors (mayors and neighborhood residence and groups) and to build local capacity, including through community platforms. Until decentralization advances considerably, the sustainability of these efforts will depend on continued external support.

A system that provides accountability between the government and the Haitian citizenry may be the most important tool needed to build resilience. Had citizens been empowered to demand better living conditions and risk reduction measures as the urbanization process took place over the last 20 years, the earthquake might have had much less impact.

To fully recover from the earthquake, and to address the conditions under which urbanization is occurring, will require a level of citizen engagement and government accountability that is hard to imagine for Haiti, but which must be aspired to, as some leaders in Haiti do. Some partners recognized this, and incorporated engagement activities (community planning and community platforms were good examples), but they must be plugged into a larger engagement system.

As a group, however, development partners did not recognize the importance of institutional weaknesses related to accountability and engagement, felt that addressing this situation was outside the realm of their projects, or realized that they did not have the resources to build these capacities. Nor did they model good accountability by stepping in when government failed to monitor and report on donor and government activities. Agencies instead concentrated on implementing their own interventions, while working around the underlying political conditions that in many ways led to the disaster and the demand for their assistance.

B. Recommendations from the First Two Years of Response and Recovery in Haiti

Haiti embodies many of the factors that contribute to global vulnerability: It is rapidly urbanizing, low-income, hampered by fragile governance mechanisms and institutions, supported by an economy that is largely informal and that exhibits extreme disparities, and highly dependent on its external partners for both social and economic support. But it is not unique. Worldwide, population growth and unplanned urbanization in the fragile cities of developing economies, combined with the impacts of climate change, are causing a concentration of urban risk.

The Haiti earthquake may have been a harbinger of the crises countries will face as disaster risks increase in parallel with this rapid urbanization. The shelter response and housing recovery experience in the first two years provide fertile ground for considering what may or may not work in future large-scale, urban housing recovery programs, remembering that what was successful in Haiti may not successful elsewhere, and vice versa.

This section is an attempt to universalize the Haiti experience into recommendations that will help countries most at risk and their partners identify what they can do before disasters to develop recovery arrangements and after disasters to ensure that each recovery experience leaves vulnerable countries and cities increasingly more resilient.

Recover resiliently

Plan recovery so that it serves as a bridge between humanitarian action and development and accelerates this transition. Maintain social capital and minimize urban displacement by reopening neighborhoods and adapting to informal systems. Commit to a goal of strengthening resilience through recovery and give preference to approaches that accelerate recovery from the current disaster while leaving central and regional governments, local governments, and communities more capable of coordinating with each other and managing future events.

- Base shelter and housing strategy on the concept of a "one housing sector approach" to reinforce the link between relief, rehabilitation, and development.

- Develop humanitarian shelter and housing recovery strategies jointly, so that they can reinforce each other, and address gaps in coordination and funding between humanitarian and housing recovery actors.

- Strengthening problem solving capacity is key to building resilience. Reconstruction can take many years, so building capacity in government and civil society helps ensure that resilient development continues in the future.

- To reduce displacement, help households reenter the housing market that they are familiar with and can afford. For the rental market, it may be necessary to support both the "demand side" (rental subsidies) and the "supply side" (landlord subsidies) and provide technical assistance.

- Consider registering affected households in public buildings or former neighborhoods, not in internally displaced person (IDP) camps, since some who are affected are not displaced. Put a priority on expenditures that maintain social capital and facilitate safe return and reoccupation of neighborhoods, such as rubble removal, risk reduction, basic infrastructure, and repairs.

- The plan for housing recovery should offer multiple shelter options, especially in the urban context, and favor enabling housing self-recovery. Funding and management systems must provide the flexibility needed to implement this approach. Subsidies should be structured to incentivize good choices, such as safer reconstruction, and to leverage private and local resource mobilization.

- Households attempting self-recovery should not be left completely to their own devices; they should be supported and monitored to ensure that they succeed. Transfer more financial resources directly to eligible households or landlords, ideally in tranches and on a conditional basis, and support the expansion of the owner-driven reconstruction model.

- Projects should take advantage of the adaptability of urban systems, and avoid simply replacing lost assets or substituting for local capacity. Governments and agencies should try to play an enabling role, guiding and adding value to the efforts of local actors.

- The "learning by doing" approach that international agencies practice should be encouraged in local initiatives as well. Put local agencies at the center of the housing recovery strategy to help build resilience and ensure capacity exists to manage recovery from future disasters. Work is needed in advance of future urban disasters to develop better models for urban self-recovery.

- The international community may need to consider how to better manage the transition between humanitarian action and recovery for major disasters in weak states like Haiti. The cluster system may also need to be evaluated so that incentives between humanitarian and recovery agencies can be better aligned and funding mechanisms can be rationalized.

- Building resiliently means, among other things, strengthening systems of engagement and accountability between the government and the population. Agencies should work with government to identify whether weaknesses in these systems contributed to the disaster and how to strengthen them and model good accountability during the course of the recovery effort.

Recover strategically

Clear government direction on recovery both informs the affected population and ensures that partner investments contribute to strategic housing and urban development goals. Early designation of a lead agency for housing and urban recovery is key. A housing recovery plan provides a necessary framework for collaboration between central and local governments and partners. Recovery policies and arrangements established before a disaster make strategic recovery more likely.

- Ensure that a lead government agency for housing recovery and reconstruction is designated early on, with a clear mandate and the authority and ability to ensure delivery of an efficient, effective, and equitable housing recovery program. Technical assistance to support the lead agency should be coordinated among donors.

- The lead agency must immediately prepare a recovery plan for housing, informed by post-disaster assessments. The plan should be realistic, take the legal and organizational context into consideration, and identify potential risks and mitigation measures. The plan should be developed in consultation with the affected population and be endorsed by donors and the humanitarian community, in situations where they will have a significant role.

- The housing recovery plan should be specific and strategic about roles and responsibilities and about how available resources are to be allocated. An exit plan and schedule for humanitarian and recovery actors can help ensure that a sense of urgency is maintained.

- The success of recovery may depend on the capacity of levels of government to work together. Understanding how to optimize their roles may require outside expertise.

- Coordination can make recovery more efficient, but only if coordination entities have the leadership, expertise, and systems to function effectively. Coordination entities can help integrate cluster and other agency interventions; manage cross-cutting issues; and address common recovery impediments, such as debris management and land issues.

- In the case of urban disasters, engage urban experts to analyze how physical, social, economic, and institutional factors will affect recovery. The analysis should cover housing, land, and financing systems, both formal and informal, and identify assets (systems, skills, institutions) that can be leveraged.

- Governments should exercise caution before launching ambitious physical planning exercises for recovery; it may be more useful to strengthen the regulation of existing land-use plans or to provide frameworks that improve the coherence of reconstruction activities on the ground. However, new plans are needed for greenfield sites and where damage is extensive.

- Promote urban recovery initiatives that contribute to strategic urban development objectives. Strategic interventions are those that facilitate future investment and contribute to desired development goals, such as quality infrastructure in low-risk target development zones.

- In programming funds for housing, agencies should analyze demand and consider long-term outcomes. Many larger-scale post-disaster housing projects built by government are abandoned over time or never occupied because they don't satisfy beneficiaries' needs. The challenge is not to build houses, but to provide housing options that are economically and socially sustainable for both owners and occupants.

- Social media and other information tools should be used by governments to inform the housing strategy, to monitor the quality and acceptability of the housing solutions produced, and to ensure that the intended beneficiaries are assisted. The international community should analyze how humanitarian and reconstruction planning tools, such as the Post-Disaster Needs Assessment (PDNA) and the disaster recovery framework, can be used to help governments plan recovery programs that also contribute to national development goals.

- Haiti and other countries should receive technical assistance to codify pre-disaster housing recovery arrangements, including policies and protocols, and to maintain data, systems, and tools that will allow more effective planning and implementation of future disaster recovery programs.

- There is a pressing need for an agreement on protocols or minimum standards for recovery planning and national-level coordination. The potential for the Shelter Cluster Strategic Advisory Group (SAG) to play an integrating policy role in those instances where government is unable to do so should be assessed by international agencies. Initiatives such as the disaster recovery framework, a joint European Union (EU)/United Nations Development Programme (UNDP)/Global Facility for Disaster Reduction and Recovery (GFDRR) effort to improve the planning and management of individual recovery programs and establish policies and organizational arrangements in advance of a disaster, should continue to advance and become international standards.

Recover equitably

Governments should seek equity in recovery programs and favor approaches that encourage self-recovery and build up local institutions and solutions that can reach scale. This may mean

discouraging "showcase" projects until minimal assistance for priority affected households is fully funded. Empower households and local actors by supporting informed problem solving instead of providing ready-made solutions that limit options.

■ Use funding to recreate pre-disaster housing status and improve housing construction practices, while avoiding unfamiliar approaches. Governments should not promise that recovery will make everyone a homeowner, or let donors do so; the goal should be to restore housing status.

■ Before piloting innovative housing designs, construction methods, or credit mechanisms for low-income households, donors should make sure they will not greatly increase costs or draw agencies or government outside their fields of expertise. Minimal modifications to existing practices are more likely to be replicated and create less risk for affected households.

■ Avoid recovery projects that create "islands of excellence," but are too costly to reproduce without high subsidies. Concentrating assistance reduces equity, coverage, and sustainability. In contrast, area-based interventions led by local authorities or communities produce economies of scale and create synergy among sector-specific interventions on the ground.

■ Leverage the distinct dynamics of cities, where people have diverse coping mechanisms and ready access to information, while being alert to conflicts and discrimination and the situation of vulnerable groups. Cities operate on cash; create incentives for families to mobilize their own resources for recovery.

■ Housing recovery should contribute to shared prosperity, rather than foster resentment and further inequity among social groups. Seek a measure of uniformity in eligibility rules and levels of housing financial assistance.

■ Even where government does not control all the financial resources for housing recovery, it should promote equity with partners and establish minimum and maximum standards. However, uniformity should not be equated with lack of choice or involvement of households in their own recovery.

■ Use the media and communications to inform and motivate affected households. Communications should be two-way so that the government can receive feedback. Messages should effectively explain recovery policies, help manage expectations, and encourage self-recovery. Because ill-informed media can undermine support for the recovery strategy, develop a communications strategy for the media as well.

■ Communications should also be used to promote better recovery practices. Where building standards are not widely enforced, or many households will not receive assistance to rebuild, use communications to promote self-enforcement of good building practices. Avoid turning information on disaster risk reduction (DRR) into a "private good" available only in donor-sponsored projects. Instead, make DRR a "public good" widely accessible to all.

■ The global humanitarian community should work to reach a common understanding of urban shelter options and standards, including the applicability of the Sphere standards. An agreement is needed within the humanitarian response framework on a clearer set of shelter options or approaches for urban settings and on the country level in the context of the pre-disaster recovery framework.

Recover safely

Understand the urban context and build on its dynamism. Promoting safe construction when most housing is provided by the market does not mean government becoming a homebuilder, but rather government focusing on removing barriers

to safe construction practices. Disseminate guidance on reducing risk to acceptable levels widely and, if regulation is weak, encourage self-enforcement.

- Designate a lead agency for DRR early so it can establish and communicate standards for DRR and coordinate their utilization in recovery. The lead agency should coordinate but not usurp the role of ministries and other agencies to promote DRR in their respective sectors.

- The lack of standards early on should not paralyze reconstruction planning or discourage self-recovery. Define standards incrementally as an understanding of the damage and its causes grows.

- Carry out large-scale, continuous communication to educate the public on best practices for more resilient reconstruction. Repeated, large-scale communication is critical to inform the public about risks, explain the importance of construction codes and standards, and promote training opportunities.

- Set policies for DRR and resilient reconstruction taking into consideration how people perceive risks and how their vulnerability changes over time.

- Households are exposed to risks other than natural hazards (economic, security, etc.). The government must understand the tradeoffs that households and communities make and use its resources strategically to reduce risks associated with both its direct liabilities and contingent liabilities such as housing.

- Reconstruction should capitalize on the short-term awareness of risk to permanently shift the risk culture. Engage universities, the private sector, and civil society organizations in identifying how to reverse the processes that lead to extreme vulnerability.

- Agencies should recognize that promoting safe housing does not necessarily mean building safe homes, but rather removing the barriers to safe construction practices.

Governments should focus first on providing information on risks and safe construction, regulating market supply chains, and ensuring the safety of sites.

- Develop risk information in advance of disasters and complement it by post-disaster assessments conducted according to proper guidelines. While involving communities in risk assessments improves understanding of risks, the high-quality, low-scale hazard and exposure information needed for recovery planning needs to be gathered and analyzed before the disaster.

- Use reconstruction to promote "reformative" processes rather than just "restorative" ones. Addressing the root causes of vulnerability may require reform of organizations, legal and regulatory frameworks, land-use policy, markets, and supply chains. While these institutional changes cannot be fully addressed during recovery, a commitment to "reformative reconstruction" by all stakeholders should be promoted.

Recover (cost) effectively

Think holistically about recovery financing and use scarce public and donor resources in ways that leverage private investment, including that of households. Public investments in risk reduction and basic infrastructure are often enough to encourage private investment in housing, for example. Seek consistency in eligibility rules and levels of financial assistance. Encourage all funding sources to align programming with the recovery plan, and—to ensure accountability—track and report on results.

- Donors must coordinate with the government on programming financial resources for recovery and ensure that their programming is consistent with the recovery framework. This may mean helping prepare the recovery framework or reconstruction plan, which must be done in a neutral manner, without favoring to any particular partner.

- Use the financial plan as a reality check, to ensure that the goals of the recovery framework are attainable. The tracking system should use feedback loops, including with beneficiaries, to adjust activities, costs, and projection of disbursements over time.

- Recovery resources are a gift to the affected country; even if many agencies control their own funds, they should report them to the government and financial tracking should include them.

- Track all reconstruction resources and progress centrally, and report results regularly to the public. Evaluate whether existing public financial management systems are adequate or a specialized monitoring or tracking system is required. Consider the option of hiring a third party to conduct monitoring.

- Public communications on the use of reconstruction funds should be continuous and substantive so that the public knows funding is being properly used. This helps avoid suspicions about misuse of funds, which can undermine governance at a crucial time.

- Avoid financial experiments, such as creating new credit programs for reconstruction by low-income borrowers, in the early stages of recovery. Realize that households are more risk-averse after a disaster due to economic uncertainties and trauma, and agencies are better off dedicating their efforts to their core areas of expertise.

- The recovery financing framework has to balance equity, coverage, and the need for scale. Rehousing extremely vulnerable populations is likely to cost the most, so identify options and compare their cost-effectiveness. Engage the affected population in this analysis. Governments should accumulate information over time that will allow them to evaluate the cost-effectiveness of alternative post-disaster housing interventions and prepare disaster risk financing and insurance strategies to prepare for future disasters.

- Use public and donor funding strategically to leverage private financing, including that of households, and to incentivize good practices like safer reconstruction. Seek household and private sector input to the financial plan to identify how these funds will be spent and where public sector leveraging is really needed. Full public financing is often not required.

C. Final Questions

There is a risk that this report presents a series of recommendations for action in future disasters that are already fully understood yet are as equally difficult to implement in new situations as they were in Haiti. This does not invalidate the recommendations, but may not help government officials and experts decide how to prioritize their policy making, decision making, and coordination efforts in a disaster context.

It is heartening to see significant improvements in institutional approaches and recovery strategies in certain aspects of disaster response and recovery since the Haiti earthquake. It demonstrates that while the "international community" does not always act in concert, as a community, member organizations do apply what they have learned from their own interventions and those of other agencies over time. What is important is that this new knowledge be tested, validated, and incorporated into standard operating procedures.

Many questions arise from the Haiti experience that are worthy of debate. A few critical questions are posed and answers proposed below, to conclude this recommendations section.

Is there a minimum standard for government participation or ownership of an effort such as the Haiti reconstruction effort?

The findings from this analysis suggest that there should be minimum standards in order for the international community to provide significant support to a recovery effort. These standards could include:

1. Involvement by the government in developing a recovery framework or plan that provides guidance on policy, financing, and implementation, and a commitment from the government to oversee its implementation.
2. Agreement with the government on an equitable assistance strategy, at a minimum for the vulnerable population.
3. Action by the government to address, at least in an interim manner, key recovery impediments, such tenancy issues, access to land, and defining what is acceptable risk.
4. Agreement on and participation in an accountability framework to engage and communicate honestly and in a timely manner with the affected population.
5. A presumption of good faith, and a willingness by government to provide reasonable accommodation to the pressures international agencies themselves are under, in particular, to program their resources in a timely manner and to show results.

What is the minimum standard of performance that governments should require of the humanitarian agencies and international community?

It is reasonable for governments to expect a standard of performance from international agencies, which may vary between humanitarian and recovery activities. These standards could include that:

1. Agencies provide adequate, coordinated support to the government so that it can exercise its due leadership to develop and oversee the recovery framework. Agencies should avoid creating expectations in the affected population that governments will later have to fulfill.

2. International agencies provide financial support to the recovery plan, or at a minimum to align their interventions with the recovery plan, and to participate in coordination and accountability mechanisms. Agencies should consider accountability to the government and the affected population to be at least as important as accountability to their funding sources.

3. Agencies work collaboratively, are well informed of the context and relevant good practices, and avoid competing with one another or giving conflicting policy advice.

4. Agencies maintain an adequate level of continuity and professional capacity in agency staff.

5. With the government, agencies agree how they will use their interventions to build sustainable local capacity and engage local governments and the local private sector, and define the timing of and conditions for the winding down of international assistance.

6. Donors give deference to national sovereignty and provide reasonable accommodation to the political pressures governments are subjected to, including at times having to respond to regional and partisan interests.

What is the minimum owed to the affected population?

The affected population deserves the consideration of both the government and international agencies with respect to the following:

1. The affected population deserves to be informed about what they can expect in terms of assistance and what is required of them, through regular, authoritative communications. Communications with the affected population should be two-way, so that their questions and grievances can be addressed and so that government and agencies have feedback on the impact of their interventions.

2. The population should have the accountability system agreed with the government explained to them, including how it will be administered and accessed.

3. Assistance should not contribute to existing social inequities. The more vulnerable within the affected population deserve preferential treatment. Identification of these individuals should be carried out in a culturally knowledgeable manner.

4. If the recovery program creates opportunities for funding, employment, training, or other forms of involvement, the affected population, existing local organizations, and/or groups formed by or for the affected population should be given preferential access. Outside agencies should not do for people things that they can do for themselves.

Should conditions ever be put on humanitarian or recovery assistance?

Post-disaster interventions are rarely subject to the same types of conditionality as development projects, that is, that the funding is provided once certain conditions are met by the government. The need for urgent action, and the humanitarian imperative itself, generally makes it infeasible and even unethical to do so.

At the same time, the response in Haiti demonstrated that the timeliness, effectiveness, and sustainability of recovery interventions in particular can be seriously undermined by the failure to make specific policy decisions or to put in place interim measures that address critical bottlenecks.

Even when the need is obvious, it can be very difficult for governments to make important policy or regulatory decisions in the post-

disaster context. The international community should perhaps consider whether there are any situations in which relief and recovery assistance would be held back until key government decisions are made.

A more constructive approach is to work with governments before a disaster to develop recovery policies and strategies that provide a framework for post-disaster planning and implementation. Pre-disaster recovery planning and arrangements are essential elements of the recovery framework concept.

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) is promoting the development of pre-disaster arrangements for humanitarian interventions through its Minimum Preparedness Package initiative and other activities. Ample opportunity also exists for international agencies to work together with governments to support the design and implementation of recovery frameworks that include pre-disaster arrangements for recovery, as a way to encourage more efficient, effective, and resilient recovery programs in the future.

Annex I
Haiti Housing Recovery Case Studies

Case Study 1:

Katye Neighborhood Upgrading and Recovery Program in Port-au-Prince

Well-planned investments in planning, site infrastructure, and disaster risk reduction (DRR) have both immediate and longer-term benefits at the neighborhood level.

Background

The Katye Neighborhood Upgrading and Recovery Program (Katye means "neighborhood" in Haitian Creole) was a U.S. Agency for International Development (USAID) Office of U.S. Foreign Disaster Assistance (OFDA)-funded effort that aimed to meet the basic humanitarian needs of earthquake-affected households in Ravine Pintade by providing a safe, habitable neighborhood and creating the conditions for the upgrading of essential services. OFDA has promoted neighborhood-level interventions in post-disaster response worldwide. The program was implemented by Global Communities (GC) (formerly known as CHF International) and Project Concern International (PCI).[186]

Ravine Pintade is situated between downtown Port-au-Prince and Pétionville. The primary area of implementation was about seven hectares bound by Rue Nord Alexis (west), Avenue Martin Luther King (east), Avenue Poupelard (north), and Ravine Pintade (south). The land slopes steeply toward the ravine (see irregular line on map). An estimated 574 households lived in the primary area, and an estimated 2,000 households lived in the extended impact area.[187]

About 90 percent of the Ravine Pintade population was displaced by the earthquake, most to the Champ de Mars camp 2 km away and others to informal camps along Avenue Poupelard. The building habitability assessment designated 56 percent of homes as "red" and 37 percent as "yellow."[188]

GC and PCI had both worked in Haiti previously. Since the early 1990s, GC had worked on urban redevelopment and reconstruction, community-based infrastructure, waste management, employment generation, and emergency response. GC's practice was to partner with municipalities, governments, communities, and the private sector. At the request of OFDA, GC began working in Port-au-Prince immediately after the earthquake to clear roads and carry out demolition.

Location of Ravine Pintade

PCI, which implements humanitarian and disaster risk management (DRM) programs in Asia, Latin America, and Africa, also responded to the earthquake with funding from OFDA. Before Katye, PCI had already worked for nine months in Ravine Pintade and surrounding areas.

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186 Other Katye partners included Cordaid, PADF/Miyamoto, and J&J. See Table CS1.1 for a full accounting of partner contributions.

187 The extended impact area was bounded by Rue Nord Alexis, Avenue Martin Luther King, Avenue Poupelard, and Avenue John Brown. Enumeration, mapping, DRR, and shelters were not provided in the extended area.

188 The Ministry of Public Works, Transport, and Communications (MTPTC) program for assessing the habitability of houses and coding them by color is described in Section III.C.

Approach

The Katye program combined humanitarian response with the establishment of a platform for longer-term recovery. Katye's neighborhood approach to internally displaced persons (IDP) return reflected the following principles:

■ Use a community-driven, neighborhood-level approach to providing earthquake-affected households with healthy, habitable, and secure living space

■ Recognize land-use norms and the "law" of communities, even if they are informal

■ Decrease vulnerability to natural hazards and water-borne disease

■ Involve and reinforce the local government and the Ministry of Public Works, Transport, and Communications (MTPTC) and link them with community leaders

■ Prioritize the most vulnerable and integrate protection principles in settlement planning and management[189]

Katye employed a participatory process to plan and rebuild the project area, providing investments in improved services and risk reduction. The program also provided jobs and other economic benefits, clinical health services, cholera prevention and referral, and protection. In all, 1,984 families were directly assisted by Katye. The project components were the following:

Component	Description
Enumeration	Land-use maps were developed and demographic information was collected. (This information passed to the municipality at the end of the project.)
Participatory planning and engagement of property owners	Community members participated in mapping, enumeration, planning, and making decisions about placement of shelters, retaining walls, footpaths, drainage lines, and lighting, among other issues.
	Planning included negotiation of concessions from nearly 400 individual property owners, which resulted in:
	Reconfiguration of property boundaries and creation of easements to accommodate septic tanks, DRR infrastructure, expansion of plots that didn't meet minimum requirements, and wastewater and drainage lines
	Donations of land to enable widening of footpaths, and installation of communal sanitary blocks and water points
Rubble clearance	Both heavy machinery and manual labor were used.
Terracing and retaining walls	About 2.5 km of retaining walls were built to stabilize and redefine the landscape. Terracing converted slopes into stable platforms for residential uses, footpaths, benches, solar lighting, sanitary facilities, community water points, and vending/market space.
Storm drainage	Underground drainage lines that emptied into the ravine were installed to prevent standing water and stabilize land, as recommended by a geotechnical survey conducted for the project.
Footpaths, steps, and footbridges	Footpaths and stairs were built to improve interior circulation in the neighborhood.

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[189] According to the Inter-Agency Steering Committee, Protection in the humanitarian context refers to activities aimed at obtaining full respect for the rights of all individuals in accordance with international humanitarian, human rights, and refugee law, regardless of their age, gender, social ethnic, national, religious, or other background.

Component	Description
Neighborhood access	Five city streets that entered the neighborhood were rehabilitated (a high priority for the community), providing escape routes, storm drainage pathways, and access for services such water delivery and rubbish collection. (Weekly trash collection began within one month of completing the project.) These investments were also expected to increase property values.
Shelter solutions	Two hundred "yellow" houses were repaired.
	Two hundred sixty one-story T-shelters designed by the Dutch nongovernmental organization (NGO) Cordaid were installed, with enclosed areas that ranged from 12 m^2 to 24 m^2.
	Seventy-five two-story metal-framed T-shelters were built with exterior staircases and a floor area of 11.9 m2 on each floor (24 m^2 of total interior livable space). Two-story shelters allowed families to combine very small parcels and receive a larger living area.
Water, sanitation, and hygiene (WASH)	Five permanent water points were installed, and community water committees were establishment and trained. (Water price from the points was 20 percent below retail price.)
	A sanitation system with 100 bucket flush toilets was installed and connected to septic tanks and soak pits.
	Rainwater harvesting was installed to provide low-cost, non-potable water.
Protection	The short-term needs of vulnerable populations were addressed.
Health	A primary care clinic was rehabilitated and staffed with Haitian doctors and nurses and community health workers.

Project Costs

Table CS1.1 shows the contributions of all partners by component. The shelter and settlements component included costs for mobilization, enumeration and mapping, site reconfiguration, geotechnical survey, and shelter solutions.[190] The average direct shelter solution cost per beneficiary household in the primary impact area was $2,575.

Table CS1.1. Katye Program Costs by Component and Partner, in US$ million

Intervention	Partner	Shelter and settlements	Rubble removal	DRR infrastructure	WASH	Protection	Health	Total
Multiple interventions	USAID/OFDA	2.07	1.15	2.50	1.50	0.75	0.63	8.60
Single-story shelters	Cordaid*	0.60						0.60
House repairs	PADF/ Miyamoto*	0.30						0.30
Impasse 138 neighborhood	Office of Transition Initiatives (USAID)*			0.09				0.09
Sanitation	J&J				0.07			0.07
Total investment		**2.97**	**1.15**	**2.59**	**1.57**	**0.75**	**0.63**	**9.66**
		31%	12%	27%	16%	8%	7%	100%

* Numbers were provided by partners and do not include overhead.

[190] Site preparations for shelters, including retention walls, leveling, drainage, and 75 foundations, are included in DRR costs.

The Katye program served as a successful proof of concept of the integrated neighborhood approach (INA) to IDP return. At the same time, there are important cost management issues that should be kept in mind when considering project replication.

■ In analyzing the cost-effectiveness of a project such as Katye, full opportunity costs should be considered, including transaction costs associated with having separate agencies implementing project components. GC and PCI took advantage of partnership opportunities, while maintaining the integrity of the overall process. (It should be noted that Table CS1.1 does not include all overhead costs of partner organizations.)

■ Project costs should be compared to the full cost of keeping these families in camps, including both the out-of-pocket costs of service provision in camps and camp management plus the opportunity costs for the family of living in a camp. Project costs are likely to be much lower, especially over the medium term.

■ Lastly, the Katye model's costs and benefits could be benchmarked against other slum upgrading initiatives, which are often much more expensive and time-consuming.

At the same time, there may be opportunities for cost management in this type of project, such as the following:

■ Putting more emphasis on leveraging community resources, through technical assistance and housing finance, although timeliness of results might be compromised.

■ Limiting the number of organizations intervening in a particular neighborhood, or at aminimum sharing certain tasks. For example, at least four other organizations worked in Ravine Pintade in activities unrelated to Katye, each collecting data on the population.

■ Avoiding subdividing infrastructure projects by neighborhood. Working with one construction firm over a larger area would have reduced costs significantly.

■ Realizing that the most vulnerable populations live in the densest areas with the highest slopes. Mitigation in these areas is more costly, especially if relocation is not an option, but these interventions also have the greatest impact in terms of risk reduction.

Accomplishments

Among the most successful aspects of the Katye program were the following.

■ **Reconfiguration of neighborhood.** Land concessions provided 1,892 m2 of space for drainage, pathways, cooking, washing, and other uses. Retaining walls increased available land by 17 percent. Reconfiguration provided space for additional rental structures. A previously chaotic settlement was provided with identifiable streets and plots, which should facilitate future efforts to regularize property.

■ **Infrastructure improvements.** Retaining walls, stairs, and drainage canals provided safe living spaces and increased resiliency to future disasters. Investments in water quantity and quality provided nearly universal access to potable water. The sanitation system enables access to latrines and disinfection of waste in a community that previously relied on open defecation. Footpaths and alleys facilitate the provision of public services, including solid waste removal, water delivery, and law enforcement.

Corvington Neighborhood of Ravine Pintade During and After Reconfiguration Process

Photo cedit: Global Communities

- **Public health improvements.** In addition to providing primary health care locally, community-based behavior change models led to adoption of healthy practices, such as hand washing. Cholera incidence in the community was minimal, with no fatalities during the nationwide epidemic.

- **Increase in livelihood opportunities.** Improved access and neighborhood safety increased economic activity. Public investments stimulated household investment in housing and businesses.

- **Community, local government, and MTPTC involvement.** MTPTC provided input on all plans, the municipality of Port-au-Prince received enumeration data for the neighborhood, and the project led to a strong sense of community ownership and positive recognition.

- **Serving as a demonstration area-based project.** Through site visits, and sharing of methodologies and cost information, the project served as a demonstration site for donors and practitioners in the sector. Subsequent projects by the International Federation of the Red Cross and Red Crescent Societies (IFRC), the American Red Cross, the World Bank, and the United Nations Office for Project Services (UNOPS), among others, cited the guidance provided by Katye.

Lessons Learned

Rely on informal practices in the absence of formal law or documentation. Given the lack of cadastral data and documentation of residents, and a vague legal framework, and after a previous attempt at mapping the neighborhood by a local company had failed, Katye opted to verify land ownership through participatory mapping and consensus when ownership documentation was inadequate. Community familiarity with the area and careful removal of rubble enabled Katye to efficiently reestablish land claims with a high degree of accuracy.

Build trust by demonstrating immediate results. The relationships and bona fides of the project team (due especially to PCI's previous work in the neighborhood), and the rapid start-up of the first phase, provided early tangible examples of what residents could expect from the project.

Have zero tolerance of manipulation by community members. When beneficiaries tried to pit agencies against each another, and even used threats or acts of disruption, to exact more assistance, a policy was established that work would stop in any sub-neighborhood where threats or extortion were

experienced, while activities in other sub-neighborhoods would continue. Residents in the affected neighborhood were responsible for managing these situations before work could restart.

Be flexible. Katye technical staff, contractors, and community leaders made modifications when rubble removal and construction exposed previously hidden features and issues. OFDA also remained flexible, which provided significant room for GC and PCI to respond to the realities on the ground.

Crowd-source the community for solutions. Knowing that the construction would temporarily displace families as their plots were under construction, the project proposed creating on-site "hotels." When it was not viewed as a viable solution, Katye "crowd-sourced" the relocation task to community members, who made arrangements with friends, family, and each other for temporary housing at no cost to the program. Temporary relocation proved to be easily handled when done in partnership with community leaders.

Don't expect existing norms, standards, or "best practices" to provide guidance in a densely populated urban area. Plot sizes in Ravine Pintade ranged from 8 m2 to 40 m^2. The smaller plots, where the majority of the neighborhood's most vulnerable population resided, compelled the readjustment of shelter designs below the 3.5 m2 per person reference provided by Sphere standards.

Conclusion

Although post-disaster humanitarian assistance necessarily focuses on immediate needs, the Katye experiences suggests that the definition of a humanitarian intervention should be expanded in urban settings to include area-based disaster risk reduction and mitigation through strategic investments in infrastructure. The Katye program also demonstrates the value of taking a comprehensive, participatory approach that creates the conditions for longer-term, community-driven, sustainable neighborhood recovery.

Material for this case study was contributed by Ann Lee, who worked for Global Communities in Haiti as the Program Director of the Katye program from 2010 to 2013.

Case Study 2:
Experience with Rental Assistance Programming

A delayed but coordinated effort between the government and the humanitarian community that successfully reintegrated thousands of camp residents

Background

Rental assistance was included as an emergency sheltering option in the Shelter Cluster Response Plan for Haiti distributed in January 2010, but was not implemented in earnest until July 2011.

Based partly on experience in other humanitarian responses, some humanitarian organizations voiced concerns that promoting this option created risks that were not easily mitigated, including:

- Price pressure on the rental market
- Lack of sustainability
- Difficulty of ensuring the safety and decency of rented accommodations
- Contribution to the rise of new informal settlements

Despite these concerns, it became evident over time that rental assistance programming would be an essential and necessary tool for helping families move out of unsafe emergency shelter conditions in internally displaced persons (IDP) camps.

Approach

First 18 months. Rental assistance was first implemented in mid-2010, following a request from the government to the Haitian Red Cross and the International Federation of the Red Cross and Red Crescent Societies (IFRC) to help households in the Carradeux and Terrain Toto camps find better housing options.[191] A series of options were identified from which families could choose, depending on their preferences and situation.[192] These options included: (i) the construction of a Tshelter on their own land and/or land made available to them for a minimum period of two years, (ii) repairs to make their previous living quarters habitable, (iii) return to their province of origin outside of Port-au-Prince, and (iv) one year of rental support in Port-au-Prince.

Each household was also offered a modest resettlement grant to help them address their most pressing needs, such as the purchase of furniture, payment of school fees, or paying off debts.

In recognition of the fact that restoring housing and livelihoods go hand in hand, a livelihood grant was also provided to help people establish or reestablish a livelihood activity, so that they would be able to pay the next year's rent.[193]

Households were asked to arrange their preferred shelter solution, whether finding a rental unit and negotiating the rent with the landlord or arranging to move in with a family member. A monitoring

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[191] IFRC, 2013, "Return and Relocation Programme: Study of the programme's impact on the lives of participating families opting for cash grant rental support, 12 months after moving out of internally displaced persons camps," http://www.eshelter-cccmhaiti.info/2013/download/Final_Return-Relocation-Impact-study-2(1).pdf.

[192] Alternative Shelter Solutions video explains IFRC's self-sheltering program in Haiti, http://www.youtube.com/watch?v=ktoCRc-iqqg.

[193] Rental payments in Haiti are normally made in advance for a 6- or 12-month lease period.

program was set up, from which teams were dispatched to check on building safety and to ensure access to sanitation in the rental locations identified by the households. Regular follow-up visits were scheduled during the first year after the household relocated to the housing unit.

The IFRC expanded this approach to other camps and informally helped other agencies define their own rental subsidy strategy. By the end of the first 18 months, fewer than 2,000 households had been relocated to durable solutions in this way.

Second 18 months. Beginning in mid-2011, rental assistance started to be recognized as an effective strategy for helping families move out of IDP camps. The new Martelly administration took an interest in the approach, and, in July 2011, the Interim Haiti Recovery Commission (IHRC) approved and the Haiti Reconstruction Fund (HRF) funded the government-led Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project that scaled up the use of rental subsidies to six camps.

In October 2011, the Inter-Agency Return Working Group was established in Port-au-Prince to provide a forum where agencies implementing camp closure programs could discuss the challenges they were encountering and work together to establish good practices.[194] Once the Unité de Construction de Logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Unit) was created in late 2011, it jointly chaired the Return Working Group with the Camp Coordination and Camp Management Cluster. A toolkit was developed to guide efforts to scale up rental subsidies. Nearly all agencies provided a $500 grant to cover one year of rent and other incentives.[195] The use of a "keep the change" policy for the rental grant created an incentive for households to negotiate the lowest possible rent with landlords.

Through this coordinated effort, rental subsidy and camp closure initiatives were implemented in the camps targeted by the 16/6 Project and others, particularly those identified as priorities by the new administration, such camps located in the Champs de Mars in downtown Port-au-Prince.

Accomplishments

While the rental assistance programming was aimed principally at helping IDPs move from emergency shelters in camps to durable housing solutions in urban neighborhoods, it also helped support the upgrading of the rental housing stock, by serving as a demand-side subsidy to the rental housing market. The external evaluation of the program found that 77 percent of the landlords had made upgrades and investments in their property to comply with rental subsidy program requirements. According to the evaluation, this showed that the program had economic, safety, and quality of life impacts.[196]

As of early 2013, more than 30,000 households had benefited from rental subsidies and left the IDP camps.[197] At that point, funding was committed to support more than 25,000 additional subsidies.

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[194] Catholic Relief Services, Concern Worldwide, IFRC, the International Organization for Migration (IOM), J/P Haitian Relief Organization, and World Vision were the key agencies in the Return Working Group.

[195] Fitzgerald, Emmett, 2012, "Helping Families, Closing Camps – Using Rental Support Cash Grants and Other Housing Solutions to End Displacement in Camps. A Tool Kit of Best Practice and Lessons Learned Haiti 2010–2012."

[196] Jeremy Condor, Charles Juhn, and Raj Rana, 2013, "External Evaluation of the Rental Support Cash Grant Approach Applied to Return and Relocation Programs in Haiti."

[197] UCLBP and Shelter and CCCM Clusters, 2013, "Fact Sheet," http://www.eshelter-cccmhaiti.info/jl/pdf/2013/Cluster-CCCMShelter_Avril-2013.pdf.

Findings

The rental assistance programming was one of success stories of the Haiti earthquake response, despite its late launch and slow start-up. Below are some of the findings from the first 36 months.

Strength and opportunities

- Rental subsidies were effective at reaching some of the most vulnerable households, that is, urban renters who lived in informal neighborhoods at the time of the earthquake.[198]
- Rental subsidies helped families find safe and dignified housing solutions of their choice outside of IDP camps, whether in their prior neighborhood or in another part of the city or country.
- This option helped reintegrate households into the preexisting rental housing market with which they were familiar.
- Rental subsidies treated affected individuals as agents in their own recovery, able to make realistic decisions about "acceptable risks," and thereby supported self-recovery.
- Rental assistance also injected cash into local markets, and created a powerful stimulant to private investment in construction and rehabilitation in affected neighborhoods.

Threats and weaknesses

- The rental subsidy program couldn't guarantee that people were rehoused in safe housing. There was evidence that some renters occupied yellow- or red-tagged houses with painted-over Ministry of Public Works, Transport, and Communications (MTPTC) safety tags, but reinspecting houses as part of the program was not feasible.[199]
- The program also couldn't guarantee that people stayed in the homes where they were rehoused. After one year, 75 percent of the families were not in the rental accommodation approved under the subsidy scheme.[200] (On the other hand, once the year ended, families were free to move.)
- Rental subsidies may have contributed to the creation of new informal settlements, when beneficiaries used the cash to acquire housing or land in settlements such as Canaan. A related but unsubstantiated concern was that existing renters were evicted because subsidy recipients could pay more.
- Because much had happened during the first 18 months with T-shelters, rental subsidies became almost the only rehousing solution offered during the second 18 months.
- There was no technical assistance on the "supply side," that is, to optimize the use of subsidy funds by landlords or to encourage investment in repair or construction of rental units to absorb the new demand. Delays in starting the program likely created excess rental supply, but there probably should have been an effort to support the production of new rental housing stock.
- The program had high transaction costs, including from inspections and monitoring, which were necessary to address the requirements of donors.[201]

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[202] CARE Shelter Need Evaluation, 2010.
[199] Fitzgerald, Emmett, 2012, "Helping Families, Closing Camps – Using Rental Support Cash Grants and Other Housing Solutions to End Displacement in Camps," p. 52.
[200] "External evaluation of the Rental Support Cash Grant Approach Applied to Return and Relocation Programs in Haiti."
[201] Ibid.

Conclusion

Rental subsidy programming was slow to evolve into a viable, scalable approach to rehousing displaced households in Haiti, but once launched, demonstrated the power of cash programming in an urban environment. At the same time, the implementation delay may have been necessary to allow the rental market to revive. Future recovery programs should investigate whether the revival of the rental market can be accelerated and how assisting the supply side (rental unit owners) can be helpful.

Material for this case study was contributed by Xavier Genot, consultant to the IFRC in Haiti from 2010 to 2011.

Case Study 3:
The Canaan Settlement in Croix-des-Bouquets[202]

The spontaneous development of a new Haitian town

Zone Covered by the Declaration of Public Utility

Background

In 2010, Croix-des-Bouquets was home to the largest not-yet-urbanized zone in the vicinity of the Port-au-Prince metropolitan area and probably the area that experienced the greatest changes following the January 2010 earthquake. This happened when the new city of Canaan arose from the dry, vacant cul-de-sac plain over a period of less than two years.[203]

Following the earthquake, the government was pressured to identify land where displaced urban households from Port-au-Prince could be relocated. The United States (U.S.) military and the U.S. Agency for International Development (USAID) were involved in the decision making, along with the Interim Haiti Commission for Shelter and Reconstruction, a Haitian committee created by then-President Préval in January 2010. An agreement was reach that the government should take a zone of private land that had been envisioned as a tourist area (in 1971) and later as a modern mixed residential and industrial area (circa 2000), but which had never been developed.

On March 22, 2010, the government issued a Declaration of Public Utility (equivalent to a declaration of eminent domain) over 7,450 hectares of private land between Bon Repos and Cabaret, along National Route 1. The next month, the "official" Camp Corail opened in a portion of this land.

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[202] This case study is based on: Noël Richener, 2012, "Reconstruction et environnement dans la région métropolitane de Port-au-Prince: Cas de Canaan ou la naissance d'un quartier ex-nihilo."

[203] For the purpose of this document, "Canaan" refers to the area encompassing Canaan, Jerusalem, Onaville, and Saint Christophe.

Approach

Camp Corail-Cesselesse, conceived originally as a temporary settlement for 5,000 people including many who needed to be evacuated from unsafe conditions at the Pétionville Club, was the first sanctioned occupation of the public land.

Camp Corail originally offered shelter in tents and basic temporary services. Over time, just over 2,100 Tshelters were constructed, as were facilities for more permanent services, including schools and a market. United Nations (UN) agencies (UNICEF, the International Organization for Migration [IOM]) and international nongovernmental organizations (NGOs) (Oxfam, World Vision) delivered this construction. The availability of services and the presence of international agencies attracted a population to the zone other than the households officially selected to live there. Initially, informal settlers located just outside the formal camp and were able to access some of the camp's services.

Canaan, in contrast, was a spontaneous appropriation of space. Similar in many ways to informal permanent settlements throughout the metropolitan area, it was settled originally with tents and temporary structures built with tarps, which were slowly replaced using the normal Haitian version of confined masonry construction. Unlike those living in Camp Corail, however, the residents of Canaan understood it was a "neighborhood in the making." Even though occupancy in Canaan was not formally recognized by Haitian authorities, there was safety in numbers and therefore a low probability that anyone would be evicted from the area.

The settlement of Canaan was driven by both the need for relocation after the earthquake and opportunism. Some settlers were fleeing internally displaced person (IDP) camps and chaotic post-earthquake conditions in Port-au-Prince and were willing to settle in Canaan even though it lacked formal infrastructure, since the conditions were not that different from those in many informal neighborhoods in the metropolitan area. Forced evictions from camps contributed to Canaan's growth. For renters (including some who anecdotally bought the land with their rental subsidies), Canaan offered an unprecedented opportunity to become property owners.

Some of those who have constructed in Canaan never intended to live there, but came looking for a speculative investment and had the means to mobilize resources for construction, allowing them to become home "owners" and possibly to rent out the house. Shortly after the land became public domain, areas were marked out by people most likely not from camps. Gangs took over zones, which they then "resold" to people looking for single plots. There was speculation that some of these groups were raising funds for political candidates during the 2010–2011 campaign period. In 2012, the cost of a plot was reported to range between 1,500 and 150,000 Haitian gourdes (approximately $37 to $3,700 at that time). One buyer paid $2,440 for 400 m² (one-tenth of an acre).[204] Of the 28,500 plots counted in October 2013, approximately 50 percent were occupied. All but a few were considered "sold."

Accomplishments

In February 2011, an inter-cluster report estimated that 10,000 households, over 100,000 people, were estimated to be living in Canaan. In addition, the Corail Camp housed 8,900 people in 2,100 households. (Although when Canaan, Onaville, and Jerusalem were removed from the IOM

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[204] Groupe U.R.D., 2013, "How does one become the owner of a plot of land in Canaan?"

displacement report in October 2013, a census of these three areas in September 2013 counted more than 64,000 individuals in just over 14,000 households.[205])

Plans for the development of the northern edge of the city had been proposed for years before the earthquake; however, the location, scale, and speed of development outpaced the government's ability to either respond to the uncontrolled land grab or frame the growth that was taking place. No part of the Haitian government—not Ministère de la Planification et de la Coopération Externe (MPCE) (Ministry of Planning and External Cooperation), not the Comité Interministériel d'Aménagement du Territoire (CIAT) (Interministerial Committee for Territorial Planning), and not the Municipality of Croix-des-Bouquets—intervened in a substantive manner in the first two years after the earthquake. The most forceful, and necessary, response from the government was the establishment of a police station near the site.

While the international community recognized what was happening at Corail, no donor proposed an intervention strategy for the zone, nor effectively supported government to do so. (Agencies could not have intervened without a mandate from the government.) The focus of donor interventions after the earthquake was on either repair and reconstruction in damaged neighborhoods or development of proprietary small-scale new settlement projects (20–200 houses). While the informal urbanization of Canaan met some conditions of effective recovery (having been financed exclusively by households and reaching significant scale, for example), and would have benefited from technical assistance on planning and disaster risk reduction (DRR) and from public investment in basic services, such interventions did not fit easily into the assistance plan of any donor or group of donors.

At Canaan, local organizations arose to fill a range of functions. They controlled and facilitated the distribution of land and carried out such functions as water management, road "design" and rehabilitation, conflict management, sanitation, and reforestation. They also fought against densification of the site and for the protection of the environment. Basic services provided by communities or through private initiatives included electricity distribution, water kiosks, and markets.

Canaan quickly became a new city, unregulated by any urban development or construction norms, with a mix of shelter and housing types ranging from temporary shelters to permanent construction. By late 2011, over half the sites had at least started permanent construction. By October 2013, the census counted 134 churches, 126 schools, and 242 wholesale and retail locations.

Findings

Canaan symbolizes both the ability of a population "to build the city on its own" and the disappointments of the reconstruction process. The new city provided the opportunity of land occupation to tens of thousands and they have taken up the offer. However, the city was created without prior planning; offers no security of tenure; lacks water, sanitation, and other public services; exists on an environmentally fragile site with significant disaster risks; offers limited opportunities for livelihood; and is accessible to Port-au-Prince only by expensive motor vehicles operating on imported leaded gasoline. While Haitians will mobilize when opportunities are presented, what they have created demonstrates almost none of the characteristics of a good urbanization site.

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[205] IOM, 2013, "Displacement Tracking Matrix, V2.0 Update, 30 September 2013."

Canaan, with Corail Camp on Horizon, 2013

Photo credit: UN-Habitat

The future of Canaan is still in flux. Government authorities are well aware that it is not possible to go back, but they are also aware that any movement forward could serve to legitimize future illegal occupations.

The cost of a proper urban development program on the site is estimated at more than $50 million. Given the cost, and the fact that the site is now occupied and is being managed by those who have settled there, it is clear that establishing an effective and sustainable development process for Canaan will require broad consensus on objectives by a range of national and local authorities, as well as by potential donors and assistance agencies.

The development of Canaan reveals the strengths and weaknesses of the informal system in Haiti, including the ability to organize and mobilize resources. Understanding what has taken place there provides useful insights on informal recovery and development processes in Haiti and elsewhere. In a country frequently described as aid dependent, it demonstrates that much happens without external assistance, based solely on choices made by individuals and groups. It also demonstrates the limits of what people can do for themselves. Certain responsibilities necessarily fall to the public sector, such as the ordering of public space, the provision of standards, and the construction of public infrastructure.

Conclusion

Canaan's development is both the unintended consequence of a hasty decision made in a post-disaster environment and a missed opportunity for government and donors, once set in motion. While government intervention has been almost nonexistent in most areas of the country undergoing incremental urbanization, Canaan presented a clean slate. Yet even though all donor post-disaster housing reconstruction efforts combined probably do not equal the number of housing units built at Canaan, neither the government nor donors were able to redirect their efforts to provide support to the Canaan project.

Material for this case study was contributed by François Grünewald, Executive and Scientific Director of Groupe U.R.D. Groupe U.R.D. ran the Observatoire Haïti from 2011 to 2015.

Case Study 4:
The Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps Project

The Government of Haiti's successful multi-agency experiment in post-disaster urban slum upgrading

Before and After Circulation Improvements in 16/6 Neighborhood

Photo credit: UNOPS

Background

The Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project was the first and largest government-led post-earthquake neighborhood reconstruction project in Haiti. The first phase of the project was originally funded by a $30 million grant from the Haiti Reconstruction Fund (HRF). A second phase was funded with a $8 million grant from the Canadian International Development Agency (CIDA). Planning for the project started in August 2011; completion was scheduled for December 2013.

Four agencies assisted the Haitian government in the implementation of the project: the International Organization for Migration (IOM), which managed camp closure and relocation; the United Nationsl Development Programme (UNDP), which focused on local economic development; the International Labor Organization (ILO), which provided vocational training in construction practices; and the United Nations Office for Project Services (UNOPS), which was in charge of housing repair and reconstruction and the rehabilitation and construction of infrastructure. Other partner agencies included UN-Habitat, Chemonics, the U.S. Agency for International Development (USAID), Architecture for Humanity, GOAL, and Emergency Architects.

The target areas were the neighborhoods of origin of the occupants of the six target internally displaced person (IDP) camps in the Port-au-Prince metropolitan area. These neighborhoods were heavily damaged in the earthquake, and contained a mixture of building types and income levels, with the lowest-income residents generally living in informally built slum dwellings. Many of these dwellings were located in high-risk areas, such as ravines prone to landslides and flooding. Little or no urban planning had preceded the settlement of these neighborhoods, and infrastructure and services were deficient or nonexistent. Much of the damage from the earthquake was due to poor construction materials and practices.

UNOPS was allocated $16.35 million of the initial $30 million budget, and this case study focuses principally on its work.

Approach

The goal of UNOPS's work in the 16/6 Project was to provide safe, sustainable, and replicable housing solutions in neighborhoods. Yet housing in an urban context cannot be viewed simply as shelter; it needs to be seen as a dynamic process involving infrastructure, basic services, mobility, public space, and social services (education, health, etc.), as well as employment, tenure security, and finance, among others elements.

Housing. UNOPS saw "housing construction" as an opportunity to generate productive, self-sustainable environments and communities. To this end, it used a flexible approach that incorporated urban planning and explored the use of alternative technologies relevant to Haiti. UNOPS employed four housing strategies:

- Rehabilitation and repair
- In situ reconstruction on individual sites
- Reconfiguration and development in collective sites (where adjacent houses were destroyed and could be redesigned and rebuilt collectively with infrastructure and urban amenities)
- Densification and development (mid-rise developments on adjacent, vacant land)

Infrastructure. In neighborhoods, infrastructure priorities were determined through a community planning and evaluation process. For collective sites, the infrastructure was part of the site design.

Investments were aimed at improving living conditions, basic services, connectivity, and safety, and reducing risk, and included:

- Road infrastructure and drainage (including roads, trails, stairs, sidewalks, and retaining walls)
- Recreational areas
- Electricity
- Public lighting
- Potable water (installation and rehabilitation of water fountains)
- Sanitation (latrines, or a septic system and sump in the case of new construction)

Site and beneficiary selection. The Risk Prevention Plan prepared for the 16/6 Project neighborhoods by the engineering firm Ingénierie des Mouvements de Sols et des Risques Naturels, as well as geotechnical and soil studies, were used to define safe zones for intervention and to design intervention strategies. Preliminary selection was based on possession of a red-tagged house.[206] Sites were further screened based on lot size (over 22 m^2), location, accessibility, and the tenure and occupation status of the occupants.

Government involvement. UNOPS worked closely with the Unité de construction de logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Unit) and ensured that the Ministry of Public Works, Transport, and Communications (MTPTC) validated construction practices.

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[206] See Section III.C for an explanation of the MTPTC tagging system.

Progress and Completion of Mont Hercule Pilot Project

Photo credit: UNOPS Nadon and Navarro

DINEPA, municipalities, and the Boards of the Communal Sections were also involved. As a result, the 16/6 Project method is fully understood and has been appropriated as a government strategy, which provides greater likelihood that it will be replicated in the future.

Joint monitoring and evaluation. UNDP established a centralized monitoring system to share project data and other information and to coordinate work among the agencies.

Other project activities. A number of ancillary activities that helped ensure delivery of project objectives are described below.

Other Project Activities

Activity	Implementation
Addressing land tenure	In an effort to provide security of tenure to beneficiaries, UNOPS investigated the tenure situation of neighborhoods, in collaboration with a local law firm, Juris Excel.
Beneficiary communication and participation	UNOPS and its partners used surveys, focus groups, a call center, an information center, and a social mobilization team to involve beneficiaries and residents. Beneficiaries were required to provide sweat equity, assist in carrying out tenure investigations, and participate in focus groups and training sessions. UNOPS trained community committees in each neighborhood to maintain infrastructure.
Housing finance	A 3–5 year grant-loan scheme was designed, but was not launched in time to finance housing units supported by the project.
Improving construction skills and materials	All bids for construction services and materials purchase were carried out through formal UNOPS procurement guidelines. Winning bidders participated in UNDP's Private Company Training Program, which provided support during project implementation. UNOPS, ILO, and the government trained more than 150 construction workers. UNOPS technical teams worked with local suppliers to ensure the quality of materials and conducted materials inspections. UNOPS engineers developed a guideline on building inspection and oversaw work carried out by subcontractors. Final construction inspections were conducted by government authorities, especially MTPTC.

Project Accomplishments

The first phase of the project activities managed by UNOPS benefited more than 1,600 households. Project accomplishments by component and phase are summarized below.

Summary of Accomplishments of the 16/6 Project

	Housing Reconstruction, Phase I	Housing Repair, Phase I	Housing Reconstruction, Phase II
Duration	24 months	15 months	24 months
Location	Morne Hercule, Nérette, Morne Lazare, Bois Patate, Morne Ebo, Jean-Baptiste	Morne Hercule, Nérette, Morne Lazare, Bois Patate, Morne Ebo, Jean-Baptiste	Fort National
Unit cost	$6,000 per household for core house and basic site preparation	$1,500 per housing unit	TBD
Number of houses	350 individual expandable core houses and 50 houses in collective sites	729 houses. Every house in these neighborhoods that could be was repaired and reinforced.	Integrated collective sites and/or multifamily housing and services, to optimize space and infrastructure investment
Beneficiaries	400 households	1,209 households, often in multifamily housing. 10% of houses were green-tagged, 63% yellow-tagged, 27% red-tagged.	Many are previous occupants of Champs-de-Mars IDP camp
Other	Establishment of community committees that will be in charge of maintenance and repairs 74 focus groups in four districts	Households received basic training on good construction practices. Six local construction companies hired and given training and support.	Due to extensive damage in this zone, most buildings were demolished and cleared soon after the earthquake
Total project cost	$5,796,671 (HRF, Paroles et Action)	$3,006,748 (HRF)	$8,145,837 (CIDA)

Job creation. 16/6 Project activities led by UNOPS created more than 15,000 working days for local communities and helped develop local capacity by training construction workers and contracting local companies. Local construction firms hired 75 percent of their staff from the local neighborhoods. UNOPS itself hired 95 percent of its workforce from the local neighborhoods, 45 percent of whom were women. More than 150 construction workers were trained.

Lessons Learned

Importance of having a master plan, overall vision for the city, and coordination. The project sought to engage at different levels (city, neighborhood, clusters, unit), but the lack of a master plan for the city limited the impact of interventions, leaving them fragmented and without external reference points. Similarly, when efforts are dispersed, a system is needed to share approaches and strategies.

Need for diverse options and models. Households in urban neighborhoods are diverse and have differing resources and aspirations. For example, projects should provide options not just for homeowners but for renters (who may predominate) and landlords as well. Some residents may need to be moved, so having support for relocation is important (whenever possible, within the same neighborhoods).

Need for a balance between providing and enabling. Sustainability requires that households continue replicating recovery on their own, rather than expecting the solutions to be provided. Pilot projects help create a vision of what can or should be done. Strategies are needed that encourage self-regulation and provide incentives rather than policing and reprimanding.

Usefulness of both enhancing existing practices and innovating. UNOPS emphasized improving existing systems and skills by using mostly confined masonry construction in the 16/6 Project, but also introduced bamboo in windows, awnings, and verandas. Innovation needs to be appropriate and timely.

Aiming for improved security of tenure, not legal title. The lack of clear and efficient regularization procedures and support for them from the government was a major impediment. Discussions about the need for a complete reform of the regularization process served as a diversion from what was needed for the reconstruction process. Significantly more leadership was needed on this matter from the government.

Need for flexibility as local realities are understood. It is critical to assess behaviors and understand the logic and the socioeconomic realities behind them before finalizing criteria or operational approaches. When local construction contractors submitted very high bids to adapt housing designs to diverse sites, designs for contractors were substantially simplified, and UNOPS undertook direct implementation on sites with complex problems.

Need to address issues that discourage private housing finance. Traditional credit and microcredit programs were not accessible to the majority of the target population. Yet delivering highly (or fully) subsidized housing solutions disrupts local housing markets and is impossible to carry out at scale. It is critical that Haiti resolve its land regulation problem, understand strategies adopted by other countries to provide social housing, and put policy and institutional changes in place that would support development of credit instruments for low-income families.

Changing behavior through communications, repetition, and incentives. Communication is key to including and informing beneficiaries, as well as the general population. It helps control rumors, manipulation, and misunderstandings. Messages need to be repeated in different ways and at different times. Better construction practices were promoted through a redundant system that included focus groups, training, flyers, graphic displays, and participation in house construction, among other strategies.

Conclusion

The 16/6 Project is one of the success stories of Haiti post-earthquake recovery. It represented a radical shift in the thinking by the government and Haitian civil society about what to do with the Port-au-Prince slums. It successfully demonstrated that quality of life and safety could both be significantly improved, making these informal neighborhoods more attractive, safe, and viable places for low-income families. However, the fully subsidized approach was a luxury that is not usually available through post-disaster recovery funding. The challenge for Haiti is to adapt the 16/6 model over time so that it is more financially sustainable and can be expanded into the hundreds of other neighborhoods that deserve similar treatment.

This case study was contributed by Claude André Nadon, Senior Project Manager, UNOPS, and Adriana Navarro-Sertich, Housing Advisor, UNOPS.

Case Study 5:

The Logement-Quartiers (Housing-Neighborhoods) Working Group

An experiment in housing sector coordination for reconstruction, within the cluster framework

Background

The Logement-Quartiers (Housing-Neighborhoods) working group was created in April 2010 by UN-Habitat under the Early Recovery (ER) Cluster in agreement with the Shelter Cluster. The working group's objectives, as stated in its terms of reference, were to promote and coordinate actions to enable affected populations to return to their homes and neighborhoods and to ensure that reconstruction improved living conditions and reduced risks in informal and squatter settlements.

The working group's activities were guided by certain principles, specifically to:

- Promote equity
- Focus on urban poverty and the most vulnerable populations
- Empower individuals and communities to be the principal agent of the rehabilitation and reconstruction process
- Work at the neighborhood level (and primarily in precarious and informal settlements)
- Contribute to establishing or strengthening relationships between communities and municipalities and between municipalities and the central government

Accomplishments

The working group met every two weeks until mid-2011. Generally, between 50 and 80 participants took part. Those attending included representatives of a large number of international nongovernmental organizations (NGOs), some national NGOs, bilateral donors, international finance institutions, and other United Nations (UN) agencies and clusters (mainly Shelter and ER). Some meetings were chaired by government officials (e.g., the Ministère de la Planification et de la Coopération Externe [MPCE] [Ministry of Planning and External Cooperation]).

The working group discussed such topics as:

- Return initiatives by government and partners
- Reconstruction experiences from other countries
- Use of local building material and promotion of vernacular architecture
- Guidelines and approaches for housing repair programs
- Approaches for housing reconstruction support, including owner-driven reconstruction
- Disk risk reduction (DRR) in reconstruction
- Roles and involvement of major groups (youth, disabled, women) in reconstruction
- Community contracting
- Urban planning efforts at city and metropolitan levels

UN-Habitat coordinated the working group, but had no dedicated resources. As a result, the working group operated principally as a platform for exchanging information, experience, and expertise.

Nevertheless, the working group strengthened UN-Habitat's standing as a convener in the sector and facilitated its efforts to provide policy advice to government and support to strategy development. Government agencies supported by UN-Habitat included, among others, the Ministry of Sociual Affairs and Labor (MAST); the Ministry of Interior and Local Government (MICT); the Ministry of Public Works, Transport, and Communications (MTPTC); and MPCE; the governments of Presidents Préval and Martelly; the Comité Interministériel d'Aménagement du Territoire (CIAT) (Interministerial Committee for Territorial Planning); the Interim Haiti Recovery Commission (IHRC) and the Haiti Reconstruction Fund (HRF); and local governments.

The working group also played a significant role in promoting the "return strategy" and the "neighborhood approach." The information gathered from the meetings was used by various agencies to design and implement neighborhood projects, including Ravine Pintade (Global Communities [GC]/ Project Concern International [PCI]), Villa Rosa and Ti Souce (Cordaid), Bristout Bobin (Emergency Architects), and Simon Pelé (Habitat for Humanity International [HFHI]).

Findings

Despite extensive efforts, the working group did not have the necessary convening power to bring together all the main partners to define joint approaches, develop an overarching program, or agree on an efficient coordination mechanism. In particular, the main housing donors did not participate. In retrospect, it might have been advisable to create a strategic advisory group (SAG) for the working group, led jointly by the Haitian government and a strong international agency. The SAG might have been more successful at establishing a coordinated dialogue among the main international partners and the government. It was not until early 2011 that a housing donor group was created, under the leadership of the World Bank.

The lack of funding to monitor housing and neighborhood initiatives, as well as self-recovery efforts, was another major weakness in the recovery effort. As a result, information was exchanged, but it was difficult to objectively measure the relative effectiveness of return, recovery, and reconstruction approaches, or to evaluate the relative equity of their impact.

Conclusion

The Logement-Quartiers working group was an outgrowth of the cluster system, but operated somewhat outside of the formal institutional structure. In one respect, this was logical, given the humanitarian purposes of the cluster system. At the same time, the experience demonstrates the need for official mechanisms that support government efforts to coordinate and ensure effective engagement of local and international agencies during the recovery period, particularly for large-scale disasters. Ideally, such a mechanism would support the implementation of the recovery plan or framework. In the case of Haiti, UN-Habitat's efforts to create this mechanism were hampered not only by the lack of an agreed concept of the recovery coordination function, but also by the lack of a recovery plan.

This case study was contributed by Jean-Christophe Adrian, Program Coordinator for UN-Habitat in Haiti from 2010 to 2013.

Case Study 6:
Haut Damier New Settlement Project in Cabaret

A high-quality suburban rent-to-own development project

Background

Immediately after the earthquake, the U.S. Agency for International Development (USAID) committed to building 15,000 new housing units for earthquake-affected families. USAID's "New Settlements Project" was registered with the Interim Haiti Recovery Commission (IHRC) in early 2011 for $53.3 million, which was later increased to approximately $90 million.

Projects in the program included the 750-unit Caracol-EKAM site near the Northern Industrial Park, as well as projects in the municipalities of Cabaret, Quartier Morin, Terrer Rouge, and Titanyen.

Approach

USAID partnered with the Haitian government and the International Federation of the Red Cross and Red Crescent Societies (IFRC) to develop the Haut Damier project in the commune of Cabaret, along National Route 1. The development includes 156 housing units for displaced families and other vulnerable households.

The land for the community was provided by the government, and both national and local officials were extensively consulted during the siting and design of the project.

Each house is built on a 112 m^2 plot, has a gross area of 42.8 m^2, and can be expanded with another room and a second floor. The site includes flush sanitation, piped water into each home (serviced by an on-site well and water tower), solar street lighting, electrical infrastructure to facilitate household-level electrical connections, and roads and footpaths.

The houses were occupied beginning in September 2013. The residents of the Haut Damier project include former residents of internally displaced person (IDP) camps managed by the IFRC and earthquake-affected families living in the vicinity of the site. The IFRC, in conjunction with Entreprise Publique pour le Logement Social (EPPLS), assisted with final beneficiary selection and provided social, economic, and governance support to the families for approximately 18 months after they moved in. Together, EPPLS and the IFRC ensured that residents understood and complied with arrangements for payment of rent and utilities.

EPPLS is charged with collecting rents and providing maintenance on the site until residents become homeowners (currently proposed to take place after five years). The arrangement is similar to the "rent-to-own" scheme in other EPPLS projects.

Findings

In June 2013, the United States Government Accountability Office reported that the projected number of houses to be built under the New Settlements Project had decreased by over 80 percent, from 15,000 to 2,649. Average cost had increased from USAID's original estimates of $1,800 per plot and $8,000 per house to $9,598 per plot and $23,409 per house, for a total unit cost increase from $9,800 to $33,007.[207] These cost differences stem from various factors, including underestimating the costs associated with the original project design and responding to Haitian government requests for design changes.

The Haut Damier site layout and house elevation are shown below. The photographs below show houses at the Haut Damier site.

Conclusion

Haut Damier is a successful new settlements project that was complicated to implement and costly relative to initial estimates. Yet because it was designed specifically to encourage owners to invest in the expansion and maintenance of their homes, it is likely to be a relatively stable project over time.

Haut Damier Housing Units

Photo credit: USAID Haiti
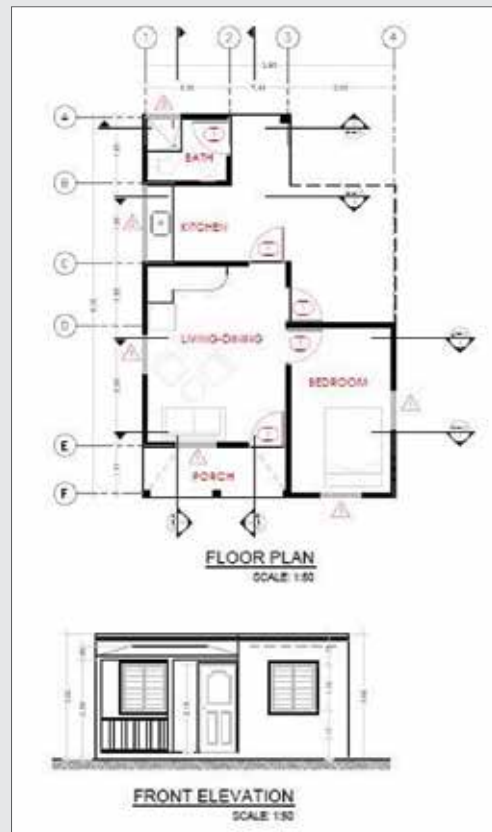
This case study was contributed by Christopher L. Ward, Shelter Team, USAID.

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[207] U.S. Government Accountability Office, June 2013, "Haiti Reconstruction: USAID Infrastructure Projects Have Had Mixed Results and Face Sustainability Challenges."

Case Study 7:

Urban Neighborhood Upgrading Projects PRODEPUR and PREKAD

World Bank urban projects in post-earthquake Haiti: the need to be flexible in an evolving environment

Background

The World Bank funded two urban projects in Haiti: the Urban Community-Driven Development Project (PRODEPUR) and the Port-au-Prince Neighborhood Housing Reconstruction Project (PREKAD).[208] The projects had some common objectives and implementation arrangements, but differed in their origins, funding sources, and locations. Both projects were complex and combined "soft" activities, such as community mobilization, with "hard" interventions, such as housing and infrastructure construction.

Both PRODEPUR and PREKAD were restructured during implementation to ensure that the projects' objectives were met in a timely and cost-effective manner, to take advantage of new developments in the Haitian housing sector, and to incorporate lessons learned on the ground. The World Bank's experience illustrates the complexity of community-driven projects in Haiti and the need to be flexible in an evolving environment.

Financing Mechanisms

The financing approaches of the World Bank's two urban projects were different. PRODEPUR provided additional financing to an existing project. Initially, PRODEPUR was funded at $15 million that was approved by the World Bank Board on June 3, 2008, with a completion date of March 31, 2014. The initial objective of PRODEPUR was to improve the access of impoverished populations in targeted urban neighborhoods to infrastructure, basic social services, and income-generating activities.

When PRODEPUR was restructured, its activities were funded by $30 million in additional grant financing and included housing repair and reconstruction. The additional financing approach was used to accelerate approval. The additional financing was approved on October 26, 2010; was signed with the government on November 23, 2010; and became effective for disbursement on February 21, 2011.

PREKAD is a new $65 million project financed from a contribution of the United States to the Haiti Reconstruction Fund (HRF) earmarked for in situ housing reconstruction. Like all projects funded by the HRF, it required a "partner entity," as stipulated in the HRF bylaws. The World Bank agreed to serve as the partner and to implement the project in a manner similar to PRODEPUR. It was approved by the World Bank on May 4, 2011; was signed with the government on May 10, 2011; and became effective on July 28, 2011, with a closing date of July 30, 2015.

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[208] The operational documents for PRODEPUR and PREKAD on which this case study is based are located at http://www.worldbank.org/en/country/haiti/projects/all.

Project Objectives and Costs

With the additional financing, PRODEPUR objectives were modified to: (i) basic and social infrastructure and services, including housing repair, reconstruction, and community infrastructure improvement needed as a result of the earthquake; and (ii) income-generating opportunities for residents of selected disadvantaged urban areas. The locations for the post-earthquake activities were Delmas 32 and Carrefour-Feuilles.

The PRODEPUR budget increased from $15.7 million to $45.7 million with the addition of a new component that covered housing repair and reconstruction (35%), community infrastructure repair (24%), debris removal (9%), advisory services (25%), and government operating costs (3%).

PRODEPUR Original and Additional Financing Project Cost, in US$

Project Components	Original Financing	Additional Financing	Project Cost
1: Community subproject funds, management and support	12,700,000		13,500,000*
2: Capacity building and technical assistance	900,000		900,000
3: Project administration, monitoring and evaluation	2,100,000		3,000,000
Incremental Project Coordination Unit/Bureau de Monétisation des Programmes d'Aide au Développement (BMPAD) (Office of Monetization of Development Aid) operating costs		900,000	
4: Housing repair and reconstruction		29,100,000	29,100,000
(a) Debris removal		2,600,000	
(b) Housing repair and reconstruction		10,560,000	
(c) Community infrastructure repair		7,300,000	
(d) Advisory services		7,640,000	
(e) Unallocated		**1,000,000**	
Total Project Costs	**15,700,000**	**30,000,000**	**45,700,000**

* Includes $800,000 of in-kind contributions by beneficiaries.

The objective of PREKAD is to help residents of selected Port-au-Prince neighborhoods severely affected by the earthquake return to their communities by supporting them to repair and/or reconstruct their houses and improving basic community service infrastructure.

The components were similar to those of the PRODEPUR after the additional financing and included: housing repair and reconstruction cash grants (37%), repair and improvement of community infrastructure (31%), social mobilization and technical support (14%), debris removal and demolition (8%), institutional support and studies (8%), and project management (3%).

PREKAD Project Cost

Project Components	Project cost (US$ million)*
1: Financial Support for Debris Removal and Housing Repair and Reconstruction:	38,000,000
1.1 Debris Removal and Demolition	5,000,000
1.2 Housing Repair and Reconstruction Cash Grants	24,000,000
1.3 Social Mobilization and Technical Support	9,000,000
2: Repair and Improvement of Community Infrastructure	20,000,000
3. Institutional Support and Studies	5,000,000
4. Project Management	2,000,000
Total Project Costs	**65,000,000**

PREKAD could be implemented in any area affected by the earthquake where there were strong and efficient community organizations, including the target neighborhoods of PRODEPUR, or those supported by other donors. The neighborhoods eventually selected for implementation were Simon Pelé and Nazon-Christ Roi-Pouplard.

Management and Implementation Arrangements

PRODEPUR with its additional financing and PREKAD had implementation arrangements that are participatory at the community level and incorporate the local authorities, while ensuring that safeguards and other rules and regulations are understood by all the parties involved and included in all project activities.

Both projects were implemented on behalf of the government by BMPAD under the Ministère de l'Economie and des Finances (MEF) (Ministry of Economy and Finance) through a dedicated Project Coordination Unit. BMPAD is responsible for overall project coordination and oversight and delegates project execution to the Maîtres d'Ouvrage Délégué in PRODEPUR and Project Management Contractors (PMCs) in PREKAD.

PRODEPUR's structure includes community-based organizations (CBOs) and Project Development Councils whose purpose is to identify, select, implement, and manage priority development subprojects. Municipalities occupy seats on each council and can submit project proposals in association with a CBO.

PREKAD was designed to include a steering committee of ministries, but, instead, Neighborhood Development Councils (NDCs) became the primary interlocutors for the coordination of project activities with neighborhood residents. Project implementation included households, NDCs, community organizations, municipalities, PMCs, government agencies, and other entities whose involvement was required, depending on the project. The responsibilities and administrative arrangements with these entities were similar to those of PRODEPUR, including the contractual arrangements with BMPAD.

PREKAD included a new mechanism that allowed BMPAD to transfer funds directly to the NDCs for debris removal, housing repair and reconstruction, and advisory services, based on signed contracts. The PMCs transferred grants directly to beneficiaries whose housing reconstruction projects had been approved.

PREKAD also financed Community Reconstruction Centers in project neighborhoods, which served as one-stop shops for project-related consultation and training. They were staffed by experts seconded by the PMC and the municipality, and carried out the following functions: (i) provision of technical advice on housing repair and reconstruction, (ii) identification and preparation of community infrastructure improvements, (iii) planning and coordination of debris removal, (iv) implementation of urban planning and community mapping exercises, and (v) responses to social and legal issues related to the project.

Project Restructuring

The World Bank made an ongoing effort to support and align its projects with evolving reforms and with new actors in the housing sector. For example, it supported the Unité de Construction de Logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Uniot), when it was established with the mandate to guide reconstruction policy and create norms and guidelines for implementing agencies.

Studies began to show that renters represented at least 50 percent of the affected population, depending on the neighborhood, and, as of January 2012, made up 78 percent of those still registered in camps.

As a result, the government asked the World Bank and other donors to increase support to renter households that would accelerate return to neighborhoods and safer housing. PRODEPUR and PREKAD were restructured to reflect this and other changes in national housing policy, to capture lessons learned, and to align financial incentives in housing interventions in the Port-au-Prince metropolitan area.

In particular, PRODEPUR was modified to include rental and relocation grants in the project's definition of "cash grants." PREKAD was restructured to allow the financing of "reconstruction and return cash grants" and to reallocate $4.8 million from other components to neighborhood investments, to reflect the increased need for neighborhood investments.209 The PREKAD modifications were approved in October 2012.

Conclusion

The success of the PRODEPUR and PREKAD projects depended on policy and operational support from the government. As a result, they contributed to the institutional strengthening of the central and local governments and to the establishment of new policies and methods for reconstruction and community redevelopment in informal neighborhoods. PRODEPUR and PREKAD also demonstrate both the challenges and the significant rewards of using community-driven development approaches in the urban post-disaster context.

This case study was prepared by Sylvie Debomy, Lead Urban Development Specialist, World Bank.

[209] Return cash grants include a rental subsidy; livelihood subsidy and transportation assistance; and an associated package of services, including health, psycho-social, protection, water, sanitation and hygiene assistance, and vocational training.

Case Study 8:
Santo Development Project in Léogâne

Providing core houses and community opportunities in a greenfield site

Santo Development Project, Léogâne, Haiti

Photo credit: Habitat for Humanity International

Background

Following the 2010 Haiti earthquake, Habitat for Humanity Haiti (HFHH) initiated a core house reconstruction program for 300 families within the peri-urban community of Santo in Léogâne. This project took a community-based approach, through active participatory engagement and development processes, to construct a model sustainable community that included of housing, water, sanitation, and social and economic facilities on a greenfield site.

While the project successfully provided new livelihood and economic opportunities to more than 1,500 beneficiaries, the experience provides lessons about developing housing and community recovery projects that aim to achieve broad development objectives in a developing country context and within the post-disaster time frame.

The epicenter of the earthquake was located in the area of Léogâne, 18 miles southwest of Port-au-Prince, and consequently a large number of residents in this rea were displaced. The Santo community is situated just outside of Léogâne, and it was here that HFHH was provided a 14 hectare site to develop a core house project. Given its location close to the internally displaced person (IDP) camps of Modsol, Parc Mont Pelier, and La voix des sans voix, and to various T-shelter settlements, the site was subject to significant development pressure from surrounding areas. However, the size of the site and its proximity to the city center and national highways made it an ideal location for a new settlement-type reconstruction project for displaced, landless Léogâne families.

Approach

HFHH initially envisioned the Santo Development project as a 500-unit project, with core houses, water and sanitation infrastructure, and facilities for social and economic activities. While community development was the ultimate objective, a funding gap converted this long-term goal to development of a community vision and plan that could evolve and develop over time as resources permitted, referred to as an "upgradable settlement."

To build a long-term community vision for the settlement, HFHH actively engaged the local community through participatory processes and design workshops. In addition to project design, participants considered beneficiary selection criteria and discussed water, sanitation, and community management structures. These activities focused on both the technical and social aspects of the project.

While community engagement and participation began early in the development of the project, rumors that a large-scale housing project was to be built catalyzed the migration of potential beneficiaries to the site. This influx undermined local governing structures within the Santo community, complicated beneficiary selection, and led to invasions of demarcated land, all of which caused logistical and financial setbacks. Faced with the challenges of increased construction material costs, the encroachment of new settlers, and the difficulty of finding common ground among new and old community residents, HFHH decided to reduce the first phase of the program from 500 to 300 households.

Accomplishments

Community engagement and planning began in early 2011, and construction of the first 160 houses was completed by May 2012. By February 2013, all 300 houses and latrines were completed, and the Santo Development project was occupied by 1,500 beneficiaries.

The 300 expandable core houses measured 26 m2 and had an open floor plan with a single, enclosed bedroom and space for another. They were built to withstand hurricane force winds from a mixture of masonry and timber. A significant effort was made to provide families with floor plans that could be expanded later as their needs evolved. The covered front porches have already been converted by beneficiaries to additions or to business locations. Each house included a latrine and space for a toilet and bathing. Both latrines and houses were supplied with rainwater harvesting systems.

HFHH also dug 29 water points and installed 32 solar-powered street lamps. In an effort to provide economic opportunities and skills needed to earn an living, HFHH trained 100 local construction contractors as team leaders and hired more than 400 temporary laborers throughout the construction process. It also built a community market for more than 120 vendors, including individual storage lockers, permanent tables, and public latrines; established livelihood programs; and set up an agricultural co-op called "Bon Jaden" ("Good Garden" in Creole) implemented through a Habitat partnership with TBT/IsraAID to grow high-value cash crops. Importantly, an elected council was also created to govern the project's activities.

Lessons Learned

The decision to build core houses on a peri-urban greenfield site produced a housing settlement built at scale close to a disaster location, rather than in a distant relocation site. But this required extra

efforts to acquire land and to ensure the project's sustainability. These challenges are not unique to the Santo Development project, and may offer useful lessons for other similar efforts.

Obtaining land. Acquiring land in Haiti is complicated by the difficulty of determining ownership and defending boundaries. The mayor of Léogâne played a major role in helping HFHH identify and survey the Santo site. But once transferred through proper procedures, the land became subject to other land claims that had to be resolved. Site encroachment, which eventually reduced the size of the project, also required extensive intervention by community engagement teams to determine the eligibility of those involved and to address the concerns of other displaced families.

Community conflicts. Encroachment also affected community governance and social structures and produced conflict between old and new members. New local leaders mobilized community support, sometimes using threats of violence. Protests, which arose without notice from local leaders and gangs, affected project milestones and caused concern for staff and contractors. This necessitated the establishment of new conflict mitigation and mediation measures.

Sustaining off-grid services. Public services for water, sewage, and electricity were not available at the Santo site, so off-grid solutions had to be developed. Among these were rainwater harvesting, solar installations, and composting of human waste. While these systems offer the Santo community sustainable hygienic solutions and new livelihood opportunities, they require management and governance capacity. A particular challenge is the need to collect and manage user fees. Extensive training and support were provided to the governing council and the wider community, but managing community expectations, defending against negative influences, and keeping the community united are ongoing challenges.

Creating employment. Ensuring the availability of livelihood opportunities is one of the biggest challenges of sustaining a peri-urban community. A portion of the population was temporarily employed in construction, but unemployment increased once internationally funded construction activities ramped down. Lack of employment increased the risk that homeowners would leave or rent out their homes, thereby undermining the stability of the community. HFHH incorporated income generation throughout the project, including livelihood and training programs, construction of a market, and establishment of the agricultural co-op. Whether stable employment has been provided is a question that should be monitored in the years to come.

Conclusion

The Santo Development project provided more than 1,900 local beneficiaries with quality housing, basic services, and employment opportunities. To overcome the constraints of the site and address the needs of the population, it also followed a development model that depends on a level of community collaboration rarely encountered in Haitian urban and suburban neighborhoods. Ultimately, HFHH found that the resources to continue to support this community-building experiment were extremely limited. This seems to illustrate that housing and community development projects built in a post-disaster context, to the extent that they attempt to offer better living conditions to affected households, may create obligations for implementing agencies and funders that extend well beyond the normal timeline of disaster recovery.

This case study was prepared by Jared Mercadante, consultant to HFHH on the Santo Development project in Haiti during 2014, and Mike Meany, Chief Operating Officer, HFHH.

Case Study 9:
Simon Pelé Project in Port-au-Prince

The neighborhood approach in a complex, informal urban settlement
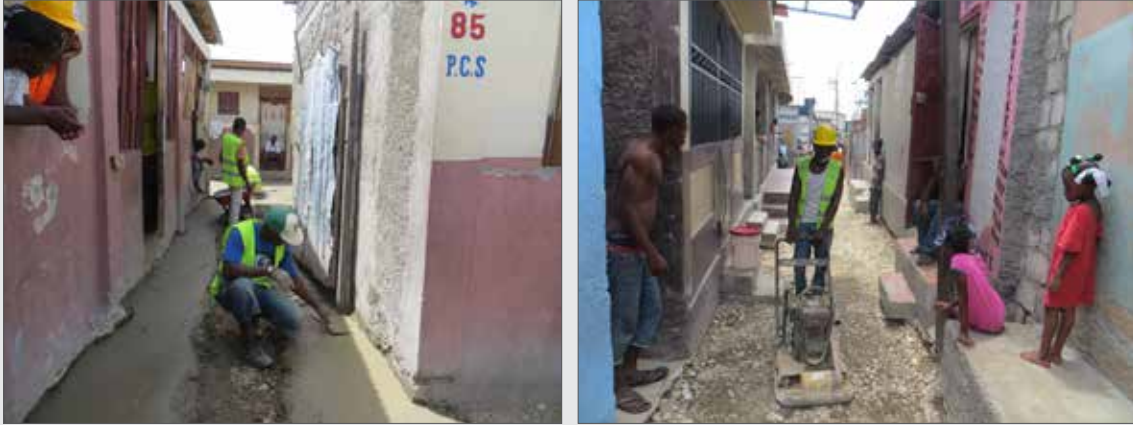
Simon Pelé Project, Port-au-Prince, Haiti

Photo credit: Habitat for Humanity International

Background

Over the past 28 years in Haiti, Habitat for Humanity has concentrated its efforts in rural communities. But after the January 2010 earthquake left Port-au-Prince nearly destroyed, Habitat shifted its focus to informal settlements in a dense, urban environment. This context required a different approach. Simon Pelé, an informal, densely populated settlement with approximately 30,000 people, was selected as the target community.

Approach

Community-based enumeration, as this term was used by Habitat for Humanity Haiti (HFHH), is a participatory planning process that entails mobilizing members of the community to collect data about themselves and then using the data to develop a community action plan. The entire process is participatory, from inception through design, management, and implementation to analysis and use of the data. As a community-based process, it can gain transparency and trust, improve the data gathering, empower the community, and ensure that all segments of vulnerable groups are included. In Haiti, this was the best way to ensure security for the staff and reduce risks to the project. The community-based enumeration process included the steps shown below.

Activity	Description
Building a team	A local enumeration team is selected through engagement with community representatives, community-based organizations (CBOs), and camp committees. This team includes members of the target community, local authorities, academics, and support professionals.
Rough mapping	The enumeration team meets with local community leaders and city officials to "rough map" the settlement, identifying toilets, water taps, public services, and transport systems. This exercise provides a general sense of issues to be addressed by the enumeration process and informs the preparation of a questionnaire.
Training	Community members build their skills and capacity to complete the survey form by conducting a trial run in a sample section of the settlement.
Launch	The enumeration exercise is launched at a public ceremony. Ministers, mayors, and local leaders attend to add political credibility.
Household survey	A survey of each household is carried out, and staff members begin to assess and compile the data. A verification process enables areas of disagreement to be identified and mediated by community members. Detailed documentation—graphs, charts, and narratives—is prepared by the support organization and given to the community, city officials, and other stakeholders. The data are then used by the settlement in future negotiations for resources.
Household mapping	With clipboards, pencils, tape measures, and global positioning system (GPS) units, enumerators create a qualitative and quantitative map of their settlement. Their work is twofold: first, to survey each household, and then to number and measure every structure. This information gathering underpins the development of a physical and narrative picture of community-level challenges.
Community mapping	Community mapping sessions further develop the initial rough mapping of the neighborhood. The focus remains on the bigger-picture elements of physical mapping, such as the mapping of social services or water and sanitation facilities. Several iterations of community mapping take place, creating a more comprehensive view of the neighborhood, and different versions of a community map are produced that highlight different key themes within the community. Each map may be laid over another as required to build up a fuller picture of the neighborhood as a whole.
Community master planning	Elements of (i) the household and (ii) the cadastral survey are combined with (iii) the community mapping to provide a more in-depth and comprehensive view of the neighborhood. From these three elements, the community makes informed decisions on what is needed and desired in the community, how these things can be prioritized, and what can be sacrificed. Through further community workshops, this is worked into a physical and spatial master plan developed by the community.
Reporting back	The results of the enumeration are tabulated and presented to the community in a "validation" event designed both to test whether the results seem plausible to community members and to cement relationships with politicians and others initiated during the launch event.
Action planning	The main goal of this process is to get to a position in which the community has an action plan that has been developed through its own participation. This allows it to advocate for members' rights, to invite investments into the community, and in many cases to use their members' skills and capacities to address the issues identified.

Accomplishments

With financial support from UN-Habitat, the Canadian International Development Agency (CIDA), Habitat for Humanity Canada, and the World Bank, the Simon Pelé Project mobilized the community to:

- Train 30 engineers to conduct 625 detailed damage assessments, giving guidance to families on house repairs
- Hire 40 enumerators from the community (65 percent of whom were women) to complete more than 6,500 household surveys and map 2,700 houses and land boundaries
- Complete 36 detailed maps of the community, representing such topics as security risks (for men and women), community capacities, critical infrastructure, flooding risks, and fire risks
- Draw up a community action plan prioritized by the community
- Train 50 certified masons in disaster risk reduction (DRR)/construction techniques providing private sector consultancy, 35 DRR trainers deployed through the local civil protection system, and 277 households in technical construction best practices
- Provide repair and retrofitting to more than 200 households and install community sanitation systems
- Issue 10 community contracts managed by a committee to address the critical issues identified in the action plan, including street lighting, drainage, road infrastructure, street signage, youth sports facility, a health clinic, and water kiosk improvements

In addition, Habitat for Humanity acted as a catalyst to bring health services to the community, which resulted in 3,716 children and adults immunized against various diseases, 5,000 hygiene kits distributed alongside replacement medical records, 15 community health workers trained and a committee formed to continue providing services to the community, and 5,000 emergency kits pre-positioned for future disasters.

Lessons Learned

The original focus area in Simon Pelé was expanded into neighboring areas with the support of the World Bank. From the initial work, it was possible to identify a number of lessons.

Timing of the intervention. This type of programming is labor-intensive and requires the development of a long-term community strategy. Institutional donors are often willing to support these types of interventions as part of recovery; however, in future recovery programs, these activities should start earlier.

Using technology effectively. Technology is a great asset, especially for the collection and analyzing of data. However, strong geographic information system capacities are needed to ensure that the most benefit is derived from this technology. These types of projects also require carefully designed impact indicators and long-term monitoring to show results beyond simple project "outputs."

Importance of community relationships. Building a relationship based on facilitation rather than aid provision takes time with the community and careful messaging and programming. Being embedded in the community with a Habitat Resource Center was critical to building trust and relationships. Even so, local security issues at times limited access to the community. At these times, the local community kept the project moving without direct supervision.

Managing local agendas. Determining who the real "community representatives" are means navigating agendas that are often not clear. Filling key project management roles from outside the community, while filling operational positions from within the community, helps ensure decision making is not affected by local conflicts.

Generating useful data. Data can be a powerful tool for advocacy and mapping and for informing decision making at a city-wide level. It is important to establish common standards and to harmonize data collection efforts among nongovernmental organizations (NGOs) and/or CBOs running similar projects so that data can be consolidated. It is also essential to establish rules for ownership and access to the community data, given its sensitive nature.

Working with the community. A focus in the project on the involvement of women and youth ensured that a wider range of perspectives was considered. Using public spaces (e.g., municipal buildings, community centers, schools) helps ensure access and comfort for community participants. Training and capacity building is highly valued by community participants. Community contracts need to start small. As experience is gained and trust is built, these contracts can increase in size.

Building local partnerships. Strong partnerships with local elected officials and service providers helps ensure an integrated approach to development, since these agencies can bring complementary resources to the table (e.g., for health, education, livelihoods).

Conclusion

The experience of Habitat for Humanity in Simon Pelé has highlighted that this approach can successfully bridge the gap between relief and development programming, ensuring that initial investments within the humanitarian phase of a response can be a platform for long-term development.

This case study was prepared by Mike Meany, Chief Operating Officer, HFHH.

Photo credit: UN-Habitat

Annex II
Haiti Shelter and Housing Timeline

Timeline Period: January 2010–November 2011

Sequence	Event	Date
1	Earthquake of magnitude 7.3 hits Haiti at 16:53 local time (21:53 UTC).	1/12/2010
2	Inter-Agency Standing Committee (IASC) tells lead agencies to activate five clusters, including Shelter and Camp Coordination/Camp Management (CCCM) clusters, both led by International Organization for Migration (IOM).	1/14/2010
3	IOM begins issuing joint Shelter/CCCM updates.	1/15/2010
4	Ministère de la Planification et de la Coopération Externe (MPCE) (Ministry of Planning and External Cooperation) is designated lead agency for Post-Disaster Needs Assessment (PDNA).	1/16/2010
5	United Nations Office for the Coordination of Humanitarian Affairs (OCHA) launches Haiti Flash Appeal for $562 million.	1/16/2010
6	First national Shelter Cluster meeting is convened.	1/22/2010
7	Two-day Montreal Preparatory Conference is held, hosted by Canadian government.	1/24/2010
8	President Préval establishes Interim Haiti Commission for Shelter and Reconstruction (IHCSR) and names Patrick Delatour its chair.	1/26/2010
9	Shelter Cluster issues draft "Shelter Sector Response Plan" to IHCSR for government review.	1/26/2010
10	U.S. Agency for International Development (USAID) Office of U.S. Foreign Disaster Assistance (OFDA) issues United States (U.S.) shelter and settlements sector strategy.	1/26/2010
11	Emergency Shelter and Camp Coordination/Camp Management (CCCM) Clusters issue "Emergency/Transitional Shelter and Camp Coordination and Camp Management Strategic Framework for Haiti, Version 5."	1/28/2010
12	First Shelter Cluster Strategic Advisory Group (SAG) meeting is held. Cluster will support Haitian government in developing strategy for shelter and housing reconstruction. Haiti military is given responsibility of providing rubble removal plan.	2/2/2010
13	Shelter Cluster holds meeting to discuss T-shelters: 24 organizations commit to total of 116,100 Tshelters.	2/5/2010
14	Ministry of Public Works, Transport, and Communications (MTPTC) announces permissible building codes for reconstruction—ACI-318 Euro Code 8 IBC and NBC of Canada—and limits use of certain building materials.	2/9/2010
15	Shelter Cluster coordination is transferred from IOM to International Federation of the Red Cross and Red Crescent Societies (IFRC). Shelter Cluster and government issue final "Shelter Sector Response Plan."	2/10/2010
16	UN-Habitat submits "Strategic Emergency Plan" to Prime Minister Bellerive.	2/10/2010
17	U.S. Army Corps of Engineers issues draft debris management plan, which estimates debris at 20 million cubic yards (15 million cubic meters). (Updated version reissued in July 2010.)	2/10/2010
18	OFDA announces host family support program (which eventually supports 26,500 hosting arrangements, of which 18,000 reportedly become permanent).	2/10/2010
19	Government approves $164 million in projects from Petrocaribe funds, including $129 million for road repairs and $12 million for shelter.	2/11/2010
20	OCHA launches Revised Flash Appeal for $1.4 billion (CCCM Cluster: $73 million; Early Recovery [ER] Cluster: $158 million; Shelter Cluster: $119 million).	2/18/2010
21	Shelter Cluster issues "Transitional shelter technical guidance," which states that shelters should last three years and cost no more than $1,500.	2/19/2010

Sequence	Event	Date
22	Government makes decision to create Corail Cesselesse and Tabarre Issa camps.	2/25/2010
23	MTPTC creates Bureau Technique d'Evaluation des Bâtiments to conduct building safety assessments, with support from World Bank, United Nations Office of Project Services (UNOPS), and others.	3/1/2010
24	Building safety assessments are launched.	3/1/2010
25	First Shelter Cluster sub-hub meetings held in Léogâne, Petit Goâve, and Grand Goâve.	3/10/2010
26	Government issues Decree 22, Order of Public Utility (déclaration d'utilité publique) for more than 7,450 hectares of land between Bon Repos and Cabaret north of Port-au-Prince that includes area for Corail camp.	3/22/2010
27	Government issues Action Plan for National Recovery and Development of Haiti (APNRDH) and PDNA, attached as annex.	3/30/2010
28	Donor pledging conference entitled "Towards a New Future for Haiti" is held at United Nations (UN) in New York. Over $5 billion is pledged for Haiti's recovery for 2010 and 2011, and $10 billion for next 10 years.	3/31/2010
29	First Shelter Cluster sub-hub meetings are held for Port-au-Prince metropolitan area and Jacmel.	4/10/2010
30	Shelter Cluster issues "Host Family and Community Needs Assessment Guidelines."	4/10/2010
31	Presidential Préval issues decree creating Interim Haiti Recovery Commission (IHRC), with 18-month mandate.	4/21/2010
32	Shelter Cluster issues "Transitional Shelter Parameters," which restates that shelters should last three years and cost no more than $1,500.	4/21/2010
33	Logement-Quartiers working group holds its first meeting to discuss terms of reference under ER Cluster.	4/22/2010
34	Shelter Cluster issues "Advocacy Document," which advocates for risk and building assessment, transitional shelter funding, and resolution of land tenure issues.	4/26/2010
35	Ministry of Social Affairs and Labor (MAST) holds brainstorming session on housing reconstruction.	4/27/2010
36	IASC issues "Inter-agency Real-time Evaluation in Haiti: 3 Months after the Earthquake."	4/30/2010
37	MAST holds second brainstorming session on housing reconstruction.	4/30/2010
38	Shelter Cluster goal for distribution of emergency shelter before onset of rainy season is achieved.	5/1/2010
39	Prime minister's office holds meeting on permanent housing with G11 and UN Resident Coordinator that focuses on startup of IHRC.	5/5/2010
40	First Shelter Cluster sub-hub meeting is held in Carrefour.	5/10/2010
41	UN Stabilization Mission in Haiti announces completed relocation of 4,900 people from Pétionville Golf Club and 2,400 people from Vallée de Bourdon to Corail Cesselesse and Tabarre Issa camps.	5/10/2010
42	President Préval creates committee for Champs de Mars return.	5/10/2010
43	Haiti Reconstruction Fund (HRF) is established upon signature of first Administration Agreement with Brazil.	5/11/2010
44	President Préval establishes Secretariat for committee on Champs de Mars return.	5/20/2010
45	President Préval declares that time for camps in city squares and tents is over.	5/24/2010

Sequence	Event	Date
46	Comité Interministériel d'Aménagement du Territoire (CIAT) (Interministerial Committee for Territorial Planning) organizes workshop on Corail camp and Canaan.	6/1/2010
47	Prime minister establishes ad hoc working group under CIAT to prepare strategy on return and reconstruction.	6/1/2010
48	Working group on repairs is established, led by MTPTC.	6/1/2010
49	CIAT publishes "Haïti Demain" on its website.	6/10/2010
50	Clinton Foundation and Malcolm Reading issue request for proposals for "Building Back Better Communities" competition on behalf of government. Proposals are due June 25, 2010.	6/16/2010
51	First official meeting of IHRC is held.	6/17/2010
52	Deadline for proposals for "Building Back Better Communities" competition is extended to July 5, 2010.	6/25/2010
53	MPCE and United Nations Development Programme (UNDP) endorse plan for transition from ER Cluster to government-led recovery coordination.	7/1/2010
54	Coalition of Caribbean Urbanists holds three-day workshop on reconstruction of Port-au-Prince in San Juan, Puerto Rico.	7/8/2010
55	Ad hoc working group presents "Government of Haiti Strategy to Support the Return of Populations to Safe Habitats and the Rebuilding of Homes and Neighborhoods" to prime minister. (See item 47.)	7/10/2010
56	MPCE holds three-day workshop on urban planning for Port-au-Prince.	7/29/2010
57	CIAT and international agencies hold first meeting to discuss common enumeration approach.	8/1/2010
58	Prime minister's office holds meeting on housing reconstruction.	8/6/2010
59	First Shelter Cluster sub-hub meeting is held in Tabarre.	8/10/2010
60	HRF approves $16.95 million for Debris I Project, to be implemented by the UN.	8/17/2010
61	Second IHRC meeting is held.	8/17/2010
62	Government approves $107 million from Petrocaribe funds for various projects, including $10 million for debris management.	8/24/2010
63	Government issues Order of Public Utility (déclaration d'utilité publique) for Port-au-Prince city center.	9/2/2010
64	CIAT and international agencies hold second meeting on common enumeration approach.	9/14/2010
65	OFDA approves neighborhood project in Ravine Pintade neighborhood of Port-au-Prince.	9/28/2010
66	Housing Land and Property Working Group (HLPWG) presents paper on forced evictions to UN Humanitarian Country Team (HCT).	10/1/2010
67	Prime minister establishes Interministerial Housing Commission (IHC), headed by MAST and including representatives from MTPTC, Ministry of Interior and Local Government (MICT), MPCE, Ministère de l'Economie and des Finances (MEF) (Ministry of Economy and Finance), and MAST.	10/1/2010
68	UNDP relaunches ER Cluster.	10/1/2010
69	IHRC Housing and Neighborhoods team organizes workshop with government and organizations working on housing.	10/4/2010
70	Third IHRC meeting is held.	10/6/2010
71	IHRC co-chairs Prime Minister Bellerive and former U.S. President Clinton request that housing and neighborhood strategy be prepared based on October 4 workshop outcomes.	10/6/2010

Sequence	Event	Date
72	IHRC distributes first draft of Neighborhood Return and Housing Reconstruction Framework (NRHRF) for comments.	10/8/2010
73	Ministry of Health confirms cholera epidemic.	10/21/2010
74	IHRC staff distributes final draft of NRHRF to IHRC Board. It is never approved.	10/28/2010
75	ER Cluster reactivates with four working groups: Debris Management, Logement-Quartiers, Livelihoods, and Host Communities.	11/1/2010
76	European Community/ECHO provides funds for Shelter Cluster coordination.	11/1/2010
77	IFRC reports first instance of households receiving rental subsidies.	11/1/2010
78	Shelter Cluster coordination is transferred from IFRC to UN-Habitat.	11/10/2010
79	CIAT and international agencies hold third meeting on common enumeration approach.	11/22/2010
80	Presidential, parliamentary, and senatorial primary elections are held.	11/28/2010
81	OCHA issues 2011 Consolidated Humanitarian Appeal (CHAP) for Haiti for $907 million (CCCM Cluster: $93 million; Shelter Cluster: $92 million).	11/30/2010
82	Preliminary election results are announced.	12/7/2010
83	Fourth IHRC meeting is held in Santo Domingo.	12/14/2010
84	HRF approves $25 million for Debris II Project, to be implemented by UN.	12/15/2010
85	HRF approves $65 million for Port-au-Prince Neighborhood Housing Reconstruction Project (PREKAD).	12/15/2010
86	Municipality of Port-au-Prince and Centre Haïtien de Recherche en Aménagement et en Développement hold meeting on "Strategic Urban Planning for Port-au-Prince and the Metropolitan Area."	12/17/2010
87	Debris figures revised from 20 million cubic meters to 10 million cubic meters.	1/1/2011
88	Organization of American States starts recount and investigation of primary elections.	1/9/2011
89	First anniversary of earthquake.	1/12/2011
90	Week-long urban planning workshop is convened by Prince Charles Foundation for Port-au-Prince city center.	1/17/2011
91	Inter-Cluster Coordination adopts "Return and Relocation Strategy" (later endorsed by HCT).	1/18/2011
92	IHC meeting is held at MAST.	1/27/2011
93	MTPTC launches "Guidelines for Repairs" and "Good Practice Guidelines for Construction."	1/31/2011
94	Clinton Foundation's "Building Back Better Communities" conference is held.	2/1/2011
95	OCHA issues Inter-Cluster Assessment of Canaan, estimating that 15,000 households were present, almost all in temporary structures.	2/11/2011
96	European Union (EU) organizes meeting on establishing common framework for donors that are funding housing repair and reconstruction. This becomes housing donor group, coordinated by World Bank.	2/15/2011
97	MTPTC issues "Règles de calcul intérimaires pour les bâtiments en Haïti."	2/15/2011
98	IHC meeting is held at MAST.	2/18/2011
99	MPCE holds workshop on urban planning for earthquake-affected secondary cities and regions.	2/23/2011
100	Fifth IHRC meeting is held.	2/28/2011
101	CIAT and international agencies hold fourth meeting on common enumeration approach.	3/1/2011

Sequence	Event	Date
102	World Bank holds first housing donor group meeting [date approximate].	3/1/2011
103	Housing and Neighborhood Reconstruction Support Program (HNRSP) is approved by IHRC.	3/1/2011
104	UN-Habitat initiates consultation for Port-au-Prince urban planning forum: Vil Nou Vle A.	3/1/2011
105	Presidential election runoff is held.	3/20/2011
106	Martelly Transition Team begins discussions of Rehabilitation of 16 Neighborhoods and Voluntary Return of Residents from 6 Camps (16/6) Project with UN and other stakeholders.	4/1/2011
107	UN Office of the Envoy to Haiti (OSE) reports that 37% of donor pledges have been disbursed.	4/1/2011
108	Election Commission announces that Michel Martelly has been elected president.	4/4/2011
109	French Caisse des Depôts presents final report on National Housing Policy for Haiti.	4/4/2011
110	IHC holds meeting at MAST.	4/6/2011
111	Sixth IHRC meeting is held, which includes thematic roundtables on housing and other sectors.	4/15/2011
112	Government approves $109 million in projects from Petrocaribe funds: $15 million for debris, $22 million for Fort National (later used for Morne a Cabrit), and $22 million for Bowen Field (reallocated to other projects).	5/12/2011
113	Michel Martelly is inaugurated as 56th president of Republic of Haiti.	5/14/2011
114	Inter-American Development Bank (IDB) and Fund for Economic and Social Assistance (FAES) launch IDB "400 pour 100" housing project in Oranger.	6/13/2011
115	President Martelly and IHRC Co-Chair Clinton open Building Back Better Communities Expo in Zorangers.	6/16/2011
116	Housing donor group meets with Martelly team at UNOPS to discuss 16/6 Project.	6/24/2011
117	HRF approves $30 million for HNRSP.	6/28/2011
118	2011 CHAP reduced from $907 million to $382 million, of which $199 million (52%) has been received.	6/30/2011
119	Seventh IHRC meeting is held.	7/21/2011
120	IHRC Board approves 16/6 Project.	7/21/2011
121	Banque Nationale de Crédit launches "Kay pam" mortgage program to help those with legal title buy or repair homes.	7/22/2011
122	Last Shelter Cluster meeting under UN-Habitat coordination (25 agencies in attendance).	8/16/2011
123	HRF approves $30 million for 16/6 Project.	8/30/2011
124	Shelter Cluster is merged with CCCM Cluster; coordination is transferred to IOM.	9/1/2011
125	UNDP issues press release saying more than 50% of 10 million cubic meters of rubble has been cleared.	10/11/2011
126	IHRC reaches end of its 18-month mandate and closes.	10/21/2011
127	Unité de Construction de Logements et de Bâtiments Publics (UCLBP) (Housing and Public Building Construction Unit) is created.	11/1/2011
128	Second anniversary of earthquake	1/12/2012

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Global Facility for Disaster Reduction and Recovery

The Global Facility for Disaster Reduction and Recovery (GFDRR) is a global partnership that helps developing countries better understand and reduce their vulnerabilities to natural hazards and adapt to climate change. Working with over 400 local, national, regional, and international partners, GFDRR provides grant financing, technical assistance, training and knowledge sharing activities to mainstream disaster and climate risk management in policies and strategies. Managed by the World Bank, GFDRR is supported by 34 countries and 9 international organizations.