SHELTER REPORT

Build Hope: Housing cities after a disaster

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Habitat for Humanity®

ShelterReport 2012

BUILD HOPE: HOUSING CITIES AFTER A DISASTER

Habitat for Humanity®

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Table of Contents

In July 2007, summer monsoons caused massive flooding in Bangladesh, damaging more than 500,000 homes. By mid-August, hospitals were reporting up to 1,000 patients per day from the effects of cholera and diarrhea. On Aug. 19, Habitat for Humanity International and Habitat for Humanity Bangladesh flew over flood-affected areas in Dhaka to assess the damage, then headed north to a Habitat satellite project in Modipur. As part of its response to the disaster, Habitat built bamboo core houses with a stilt foundation to protect families against floodwaters in the future.

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Foreword

In the past five years, more than 14.1 million people have lost their homes to natural disasters. Storms and earthquakes seem to be coming at us harder and faster, and the devastation left behind can upend lives, communities and even nations.

Urban areas are hit especially hard. Reconstruction efforts must address the challenges of concentrated populations; complex infrastructures; the mix of renters, homeowners and squatters; land tenure; and economic loss.

More than half of the world's population now lives in urban centers, and the vast majority of the world's growth over the next 20 years will be in cities in the developing world. People of all economic levels are drawn to the benefits of densely populated cities that provide opportunities for more efficient public services, such as education and health care, along with more stable, higher-paying jobs. The death toll and utter destruction of Port-au-Prince after the 2010 Haiti earthquake, however, remind us of the great losses that can result when natural disasters strike highly populated areas.

Habitat for Humanity not only seeks to help communities rebuild after a disaster, but we are also committed to helping people in locations prone to storms and earthquakes as they develop and implement disaster mitigation plans.

This year's Shelter Report draws on Habitat's experience in Haiti, the U.S. Gulf Coast, the Indian Ocean tsunami and other recent disasters while exploring the complexities of responding to disasters in urban areas.

Walking around the sites of recent disasters has brought about some of the most difficult moments I have experienced at Habitat. I have sometimes wondered how anyone could coordinate the efforts required to provide real assistance. Even so, I knew we had to find a way to help. During a visit to Haiti, I was reminded why. When a new mother who was living in one of our transitional shelters told me how grateful she was to have this clean, safe place to give birth, I was both heartbroken and incredibly energized.

I am humbled that generous people all around the world continue to help, and I feel incredibly blessed to be a part of this ministry that can help families rebuild their lives.

Jonathan T. M. Reckford
Chief Executive Officer
Habitat for Humanity International

1

Cities and disasters

The urban world

- There are 21 megacities in the world, with at least 10 million people each.
- Asia has the largest number of megacities (11 in 2010). Latin America has four, and Africa, Europe and North America each have two.
- Eight other cities are expected to reach megacity size by 2025: 33 cities with 5 million to 10 million inhabitants are "megacities in waiting."
- 958 cities have more than half a million inhabitants each. A third of all urban inhabitants (1.2 billion) live in small cities with populations below 100,000.
- Slightly over half a billion people live in cities with populations between 100,000 and 500,000.

Consider these facts about urban populations, which now represent more than 50.5 percent of the world's population:

- Today, there are 2.5 billion urban dwellers in low- and middle-income nations — that is roughly the same as the world's total population in 1950.
- Africa is usually considered to be predominantly rural, but its urban population is now much larger than that of North America.
- For the first time in history, most of the world's largest cities are in low- and middle-income nations.
- However, in recent decades, many high-income nations had periods with faster increases in their levels of urbanization than those taking place in most low- and middle-income nations.

Source:
"World Urbanization Prospects: The 2009 Revision, Highlights," at www.unpopulation.org.

SOUNDING THE ALARM

As the world's population becomes increasingly urban, the number of people affected by disasters in cities climbs.

Although that seems as inevitable as night following day, the enormous populations and problems of many urban areas on a good day make that statement a cause for alarm over the potential for future pain for the human family and the world's economy. That alarm will only get louder if the world community does not begin planning now to lessen the devastation of future urban disasters.

The numbers are staggering. Estimates suggest the number of urban residents vulnerable just to earthquakes and cyclones will grow from 680 million people in 2000 to 1.5 billion people by 2050.[1] South Asia, with its many megacities, and sub-Saharan Africa[2] are especially vulnerable to a variety of potential disasters. The death toll in the rubble of Port-au-Prince after the 2010 Haiti earthquake underlines the sad potential for other cities — even Los Angeles or Tokyo.

Urbanization has significant economic and environmental benefits — if cities are prepared for the growth. The higher density of cities provides opportunities for more efficient public services, such as education and health care, and more stable, higher-paying jobs. Rural residents throughout the developing world continue to flock to cities in search of jobs and a better life. The trend is irreversible and unstoppable.

But with 90 percent of the world's urban growth occurring in developing countries with limited resources, many cities do not have the ability or infrastructure to accommodate this rapid expansion.[3] Urban areas in river deltas or mountain valleys have physical limits on space for massive populations. Even cities with room to expand struggle to meet the needs of the migrating rural masses. So the poorest residents are forced onto marginal land, living in inadequately constructed homes in unregulated informal settlements, increasing their exposure to natural hazards — and the probability of facing a disaster. More than 50 percent of a city's population may crowd into a slum on only 5 percent of the land.

Mountainous cities such as Caracas, Venezuela, suffer frequent landslides that devastate informal hillside settlements. Crowded slum conditions in Cape Town, South Africa, where paths among shack settlements are too narrow for fire trucks, too often mean loss of life through fire.[4]

The earthquake in Port-au-Prince took the city by surprise, killing more than 100,000 people and displacing more than a million throughout Haiti. Many of the displaced families lived along steep ravines in poorly constructed housing. Hundreds of thousands of those displaced were slum dwellers. Similarly, the Indian Ocean tsunami washed away hundreds of homes in the Indonesian coastal city of Banda Aceh, and floods have inundated informal settlements along waterways in Maputo, Mozambique, and Colombo, Sri Lanka.

With cities unprepared for growth, let alone catastrophe, disasters create more destruction, more deaths and more debris and displace more people from their homes. The poor living each day on the edge in precarious housing suffer more after disasters despite the romantic notion that storms or earthquakes are impartial.

"There's a fairly strong myth that disasters are equalizers," said Tricia Wachtendorf, associate director of the Disaster Research Center. But reality is "some groups are more vulnerable than others, and not recognizing that really discounts our ability to help those who are impacted."[5]

"The value and importance of housing to (poor people) far exceeds its monetary value. What seems to outsiders to be no more than a shack built mostly of temporary materials is actually the home with all its key attributes for family and social life, privacy and safety, and is the primary defense for those living there against most environmental health risks. It may also be the place of work for some household members and is often the household's most treasured asset."

—David Satterthwaite, writing in the International Federation of Red Cross and Red Crescent Societies "World Disasters Report 2010"

Homes in low-income hillside settlements around Port-au-Prince, Haiti, crumbled down the slopes during the January 2010 earthquake.

A CRUCIAL ELEMENT OF ECONOMIC RECOVERY

If half the population of an urban area lived in inadequate and unsafe housing before a disaster, it follows that housing is an acute and overwhelming need after a disaster. Disaster recovery simply overlays new, urgent issues on the long-term problems of inadequate housing. This poses a special challenge to shelter-recovery efforts, since long-term issues — tenure insecurity, poor basic services and lack of effective building regulation — do not disappear.

Adequate housing should be at the center of urban disaster-recovery efforts, not only because the need is great, but also because it facilitates other elements of recovery. Medical care and food are urgent needs immediately after a disaster. Safe shelter is known to have a positive impact on human health; a focus on shelter recovery after a disaster therefore leverages the investment in immediate medical and food aid.

Reviving an economy becomes just as urgent in the months that follow, and housing remains pivotal to holistic, long-term recovery.[6]

Advocates of jump-starting an economy "in a way that reaches poor people"[7] and concentrating on livelihood acknowledge that if housing is in the wrong place — too far for people to get to work, for example — people won't live there, wasting money and effort.

Housing is central to the effort to revive a damaged urban economy. The economic benefit of building shelter and settlements cannot be questioned. The purchasing and hauling of materials; the fabrication of construction elements; the preparation of sites; the building of homes, apartment blocks, clinics and schools; the digging of ditches; and the laying of pipe all pump money into the local economy. Time and again, this proves pivotal to the recovery of communities.

Housing also can be a powerful motivating factor for poor people who may have been ignored and disenfranchised before a disaster (See Simon-Pelé, page 22), and a psychological boost for families to begin taking control of their own future. Communities working on shelter recovery are indisputably healthier, psychologically speaking, than those condemned to an uncertain future in "temporary" camps.

Post-disaster decisions about shelter are often made quickly against a backdrop of competing urgent demands. Although it is important to provide shelter to as many people as possible as soon as possible, it is equally important to consider the long-term effects on people's lives and livelihoods, and the economy. How will households survive in a new location? Can provided shelters be maintained or upgraded with local materials and skills over time?

Disaster response in urban areas seldom has the luxury of focusing on one house at a time. Instead, the density of housing requires it to focus on an entire neighborhood. Listening to and working closely with the affected population will help to determine priorities for response. When possible, demand-driven forms of assistance — cash grants to displaced families, technical assistance and training, materials, tools — can be more successful in urban areas. Solutions must be designed to reflect the diversity of neighborhoods and not provide one standard assistance mechanism across the entire city.

Finally, post-disaster housing solutions should be designed to reduce the risk of future hazards. There is no point in rebuilding in a flood plain, or on an unstable slope, or with the same technique that made houses vulnerable in the first place.

The challenge is that too often, humanitarian assistance and funding stop at emergency shelter. The design of temporary solutions should take into account — and if possible jump-start — the construction of permanent solutions. Without a strategy outlining a process for families to return to durable and safe homes, emergency shelter could transform into a permanent slum.

From the beginning of disaster recovery, housing solutions should be coordinated with other sectors such as debris removal and cleanup, infrastructure repairs, school and hospital operation, or job creation.

If shelter is at, and on, "the table" during the immediate post-disaster planning phase and in the long term, the recovery process has a chance to be holistic enough to repair lives and lessen some of the inequity built into slums and squatter settlements.

2

Shelter at the center

3

Roadblocks to shelter

Providing long-term shelter solutions in urban areas requires a different approach than disasters in rural areas.

Urban areas are dense, with large concentrations of poverty, poorly constructed housing, old infrastructure systems, insecure or informal land tenure, and multiple layers of government and stakeholders. Settlements and neighborhoods must dominate discussion about shelter.

Examining how such factors affect recovery in post-earthquake Port-au-Prince and in other recent disasters helps emphasize both the importance and practical complexity of shelter assistance.

WHOSE JOB IS DEBRIS?

The lack of debris removal in Haiti after the 2010 earthquake could be a case study in lack of authority, funding and coordination among nongovernmental organizations and government. Such lack of coordination is hardly a new criticism at this point, but getting the debris out of the way so buildings can be repaired or replaced is an essential step when responding in a city.

Disasters caused by natural hazards leave a great deal of debris in their wake. Hurricane Katrina and the earthquake in Haiti each produced 25 million to 33 million cubic meters of debris — enough to build the Hoover Dam seven times.[8] Because urban settings are already densely populated and have scarce land, long-term housing reconstruction cannot begin until the debris is removed.

While it doesn't seem logical, debris removal is often overlooked or not adequately planned. It isn't counted among the 11 clusters of the Inter-Agency Stand-

ing Committee's cluster system of NGOs,[9] and few donors fund large-scale debris-removal programs after disasters.

That's certainly true in Port-au-Prince, where rubble removal from the earthquake has become a major impediment to shelter recovery. The United States government funded programs to remove rubble, but few other organizations are following the example. The sooner debris is removed, the sooner reconstruction can begin and people can move into a safe and decent home.

Debris removal is an enormous task that requires large equipment, a dump site for disposal, and safe handling of environmentally hazardous debris. Equipment large enough to be efficient is often not available or cannot fit through the narrow streets of cities. This apparent obstacle can be converted into an opportunity if debris is recycled or reused.

The most commonly funded programs for debris removal are cash-for-work programs, which are designed to pay local workers to remove rubble by hand. A cash-for-work program cleared more than 300,000 cubic meters of debris[10] from public land in Pakistan after a 2005 earthquake. Although it exceeded its target, it was a small percentage of the 16 million cubic meters of rubble.[11] Although cash-for-work programs do inject cash into the local economy, it takes an enormous amount of manpower to slowly remove an entire city's rubble by hand. Cash-for-work programs should be coupled with larger-scale mechanized rubble removal whenever possible. The U.S. government funded a cash-for-work program combined with mechanized rubble removal in Port-au-Prince, but

because of the high costs associated with the machinery and transportation, it employed a little more than half of the number expected.[12]

The psychological effect of piles of debris left long after a disaster is wearing on the population and is a key obstacle to housing. Because debris after a disaster is a given, debris removal is a key subject for planning by local governments and NGOs dealing with disaster recovery.

Debris removal requires a government-led strategy that is customized to the particular situation. The removal should be coordinated among the many humanitarian responders to ensure efficiency and ability to bring all efforts to scale. But if the government is too weakened by a disaster to lead coordination, the United Nations, donor governments and NGOs need to make sure their coordinating structure doesn't ignore the need.

THE ROLE OF GOVERNMENT

Ideally, government — local, regional and national — should provide policy directives and manage disaster response activities from the outset.[13] Both long-term and short-term housing strategies must be developed immediately by identifying priorities and available resources. If government does not have the capacity to provide the policy directives, international support should be aimed at building that capacity.

When capacity is limited, governments can develop a dedicated agency to manage all disaster response activities. After the 2004 tsunami, Indonesia created a new national agency — the Badan

On April 27, 2011, one of a historic outbreak of tornadoes devastated the Alberta neighborhood of Tuscaloosa, Alabama. Altogether, the storms ravaged six states, killing hundreds and flattening neighborhoods. In the early response to the storms, Habitat for Humanity affiliates from areas struck by hurricanes Katrina and Rita offered Alabama affiliates their help and expertise in dealing with major disaster response.

Areas of Banda Aceh, Indonesia, remained devastated months after the December 2004 tsunami. As a central component of its response to the disaster, Habitat for Humanity worked directly with those affected most to devise the proper shelter solutions. Encouraging those struck by disaster to lead rebuilding efforts helps the community to heal and increases the capacity of the community to respond to future calamities.

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Rekonstruksi dan Rehabilitasi Aceh-Nias, or BRR — to manage the reconstruction process. Local and regional governments had lost staff to the disaster and had a history of political instability. Similarly, the Pakistani government established the Earthquake Relief and Rehabilitation Authority to coordinate recovery. Both the Indonesian and Pakistani agencies were effective in establishing and implementing a strategy to rehouse displaced households.

In the cases of Indonesia and Pakistan, the disaster did not directly affect the capital cities. The central government remained intact and had the capacity to lead the reconstruction process. That was not the case in Haiti. The 2010 earthquake struck the capital city, devastating the country's already fragile central government.

In a model similar to BRR, the Interim Haiti Recovery Commission was devised to organize reconstruction efforts and manage coordination between the government and NGOs, but the commission lacked financial resources, technical staff and real authority.

International efforts can work toward building capacity and improving effectiveness when a government is weak. With funding from the United States Agency for International Development, a program that has had success in Haiti was administered by Development Innovations Group and Habitat for Humanity International. The program placed technically skilled members of the Haitian diaspora in government ministries to build capacity. This program ran for nine months and had more than 15 high-level Haitian professionals from the United

States and Canada working alongside Haitian officials and providing advice and support for day-to-day operations. Such programs can become part of planning before disasters.

COORDINATION IS CRITICAL

Rebuilding a city requires strong coordination.

Without it, resources may be wasted. Assistance may overlap. One organization may build new homes for displaced families while another NGO gives the same families cash grants to rebuild — and other families may get no support.

Coordination is important not only for government but also for the humanitarian community. Although the cluster system has improved coordination tremendously, its limitations seem magnified in urban settings.

By separating sectors into clusters, developing a holistic approach to recovery is severely challenged, and some critical issues, such as debris removal, fall between the cracks because no cluster has a mandate to address the issue.

The cluster system can hamper shelter recovery because housing requires close coordination of water, sanitation and family services. Coordination across current clusters is needed for increased efficiency and a greater ability to respond to families' needs.

The cluster system is still a work in progress, and despite any shortcomings, it plays a pivotal role in organizing reconstruction efforts after a disaster.

Sensible coordination on a small scale brought piped water, septic tanks and electric service to Mandana, Sri Lanka, in

three years. A community of 196 homes was built with resettled families after the 2004 Indian Ocean tsunami.[14] The government agreed to provide full services, but only after the community was complete. This posed significant problems during construction and for families as they moved into their new homes. Habitat for Humanity in Sri Lanka negotiated with other NGOs to provide wells, water tank and water delivery and then joined the community association and a corporate sponsor in an advocacy campaign lobbying for the government's promised provision of full services.

TENURE SECURITY

Tenure security involves the legal title or ownership of property or the right to occupy the property without fear of eviction. Determining or establishing tenure security is an essential component of shelter for poor people with or without disaster. When land tenure is not secure, residents live with the fear of eviction, can't use homeownership to build wealth and often take less pride in their homes. What secure tenure can mean to people and an economy was demonstrated in Peru after 1.2 million titles were distributed in 1996. Housing renovations increased 68 percent in four years.[15]

Tenure insecurity is commonplace in informal settlements in urban areas, where homes are patched together as people move to cities in hope of a better life. In many cases, governments do not maintain records of land sales and ownership. As cities grow, data may become outdated or simply not exist. The U.N. estimates that only 30 percent of land worldwide is registered in a formal system.[16]

Land tenure in Haiti

Land tenure is one of the biggest obstacles to rebuilding Port-au-Prince. Organizations providing housing assistance hesitate to invest in land for new housing or direct assistance to households if there is no legal proof of ownership. Haiti's land tenure system was rife with issues long before the earthquake struck Port-au-Prince in 2010, with only 5 percent of landowners estimated to hold legal title. An estimated $5.2 billion of real estate is held informally, which is four times the assets of all the legally operating companies in the country.

Haiti's inadequate land tenure system stems from a number of problems, including a lack of government capacity to track land sales, which leads to poor records, unaffordable costs associated with formally registering land, document fraud, and a lack of recognition of the government land tenure system. In addition, before the earthquake, 40 percent of Haitians lacked the identification documents required to register land documents.

Although the government of Haiti is working toward a solution, the issue has led many organizations to seek alternative methods of providing assistance. But most residents still are rebuilding on insecure land, placing them in constant fear of eviction.

Sources:

Commission Interimaire pour la Reconstruction d'Haiti. "Briefing Paper: Land Issues." 2011.

de Soto, Hernando. 2000. "The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else." New York: Basic Books.

UN-HABITAT, "Strategic Citywide Spatial Planning: A situational analysis of metropolitan Port-au-Prince, Haiti" 2010. http://www.unhabitat.org/pmss/getElectronicVersion.asp?nr=3021&alt=1.

After a disaster, agencies often need to quickly identify and purchase land for resettlement. Breakdowns in the legal process for purchasing property can stall recovery.

In Haiti, land registration can take up to two years, and no mechanism is in place to fast-track the process in an emergency. There is also no working system for the government to acquire and transfer land so shelter can be built by reconstruction agencies. As a result, large resettlement projects have been delayed and even prevented.

After a disaster, tenure problems may include a heightened danger of losing home or land, land grabbing, lost records, and inheritance issues because of deaths. Aid organizations need to learn how to work despite these difficulties, because lack of secure tenure is a given in many developing countries.

The uncertainty of insecure tenure is an issue that poor people cannot forget. To avoid future eviction or permanent displacement, unregistered residents may refuse to evacuate during disasters, risking their lives in the attempt to hold on to their land. Such was the case after the 2003 earthquake in Bam, Iran, when residents remained on their property rather than move to emergency shelters and risk losing their home.[17]

Land may be lost through post-disaster land-grabbing and rural-urban migration. In Sri Lanka in 2004, "the tsunami provided a pretext for evictions, land grabs, unjustifiable land acquisition plans and other measures designed to prevent homeless residents from returning to their original homes and lands," author

Scott Leckie recounted.[18] A no-build zone 100 meters from the coastline unfairly displaced thousands of low-income residents while exceptions were made for resorts and wealthy property developers, he said.

To prevent such land grabbing, the National Land Agency in Indonesia prohibited all land transfers for a time after the 2004 tsunami. Land administration offices were set up in each village to settle boundary disputes over properties.[19]

Government and personal land records may be lost or destroyed during a disaster. In Banda Aceh, Indonesia, records for properties that were registered were mostly destroyed.[20] After Hurricane Katrina, 5,000 of 60,000 volumes of conveyance and mortgage documents had to be freeze-dried and recovered after being damaged by floods.[21]

Inheritance rights to land can be ignored in a post-disaster situation. Widowed women and orphans are especially vulnerable to losing land rights. In many countries, property is not jointly owned by husband and wife; when the husband dies, the property is inherited by a brother or eldest son. That happened after the 2005 earthquake in Pakistan even though women have the right to own property there. Custom was followed rather than law, and many women were left landless while male relatives inherited land and collected compensation from the relief program.[22]

Although it's important to clarify land rights, it is also important to be flexible in approaches to land tenure. Governments and organizations commonly require proof of land tenure as a condition for housing assistance — this excludes the

very people who are most in need of help. Housing assistance programs should be designed to include the most vulnerable populations regardless of land tenure status.

Governments can reduce barriers to registering or transferring property titles after a disaster. New Orleans did that by revising its laws to quickly transfer properties to heirs so they would be eligible for housing assistance. When a will did not exist, the heir could submit an affidavit with signatures from other heirs that he or she was the rightful owner.

Some see a disaster as an opportunity to embark on an extensive titling project, but this takes time and resources that should be used for more pressing needs. As an interim step to solving land tenure issues, transitional property documents can be issued in lieu of an official title. A transitional property document will improve the perception of secure title while the government moves to establish more formal tenure security over time.

Community mapping or enumeration can get the residents themselves involved in identifying who owns land in their neighborhood. A team of residents maps information about each land parcel and other relevant information about households: the extent of damage to properties, connection to essential services, demographic information, and safety concerns.

"Rebuilding a city after a disaster is always messy. There are a lot of different actors, different levels of government, separate government entities, property owners, associations, businesses and NGOs."

—*Disaster recovery expert Dr. Robert Olshansky*

Xie Ya Zhen and her husband, Cheng De Bing, gather bricks from the rubble of their former house in China's central Sichuan province. The magnitude-8.0 earthquake that struck the region in May 2008 killed more than 69,000 people, according to official figures. Immediate and efficient debris cleanup and removal is a vital first step in disaster response to ensure a speedy path to rebuilding.

4

Plan for permanent from the start

When temporary becomes permanent

Domiks, or metal rail-car shipping containers, were a temporary shelter solution provided by international donors to house displaced people in Gyumri (then Leninakan), Armenia, after the 1988 Spitak earthquake. More than 20 years after the earthquake, families still live in domiks, with no piped water and little insulation to protect from below-freezing temperatures in the winter. USAID funded a program that gave vouchers to domik dwellers to purchase more permanent housing units, but despite the program's effort to remove domiks once a family received a voucher, the shipping containers continue to circulate in the informal housing market.

Source:
The World Bank. "Disaster Risk Reduction and Emergency Management in Armenia." Global Facility for Disaster Risk Reduction and Recovery: Armenia: Institutional Arrangements for Disaster Risk Management and Reduction. The World Bank Europe and Central Asia Region. Washington, D.C. 2009. http://www.unisdr.org/we/inform/publications/12368.

KEEPING TEMPORARY SHELTER TEMPORARY

Regardless of how it looks, temporary housing should be exactly that: temporary. At the same time, temporary shelter should provide access to basic services and meet the minimum standards outlined by the Sphere Project in its "Humanitarian Charter and Minimum Standards for Disaster Response" handbook, available at sphereproject.org.

Temporary structures have a tendency to remain for much longer than anticipated. The flow of international aid to build housing after a disaster diminishes over time. If there is no long-term plan for permanent housing, temporary housing will become permanent.

Shelter response is often compartmentalized into three stages: emergency, transitional and permanent. These phases are artificial, and they overlap or intermingle. Urban areas, with large, dense populations of low-income residents, renters and migrants, require a reorganization of approach that includes experts working on the second and third stages from the beginning. Many organizations

that implement relief efforts specialize in emergency response and may not have expertise in long-term housing reconstruction or urban planning, so housing specialists and urban planners should be involved in the response the day after the disaster. Communication with long-term reconstruction specialists must start early in the recovery process so thinking and planning toward permanent shelter can affect decisions for emergency and transitional housing.

More flexibility in funding also is needed. One restricting example is the inability of the U.S Government Office of Foreign Disaster Assistance to fund permanent reconstruction solutions such as building a permanent home.

EMERGENCY SHELTER ALTERNATIVES

In urban areas, emergency shelter is challenging because of the sheer number of displaced people.

Emergency shelter in urban settings often consists of tents, which are organized into camps by humanitarian organizations in available open space such as parks or stadiums. Additionally, families often set up impromptu camps of varying size using tarps and other materials distributed by aid agencies or that the families acquire themselves. Camps of any kind are costly to maintain, and conditions tend to deteriorate over time. Security, especially for women, is difficult to enforce.

Living in emergency shelter such as tents or under plastic tarps in a camp is not a long-term solution. But if roadblocks to permanent housing such as land tenure issues or rubble removal are not ad-

dressed, emergency camps can become permanent.

Reconstruction always begins the day after the disaster. Providing families with materials to repair their original home during the emergency phase speeds their long-term recovery. Many organizations, Habitat for Humanity Haiti among them, have had success delivering emergency shelter kits to earthquake victims. The kits provide families with resources to make repairs to their homes or begin cleaning up their plots.

Habitat's emergency shelter kits include useful items for construction such as five-gallon buckets, contractor-grade tarpaulins, solid braided rope, utility wire, roofing nails, duct tape, leather gloves, masks, safety glasses, hammers, a pry bar, knives, a chisel, pliers and a saw. Emergency shelter kits are an example of a short-term solution that helps families start their recovery.

Emergency shelter with host families provides another desirable self-help alternative for a community struck by disaster. As long as adequate space is available, staying with familiar people, a family member or a friend can help disaster survivors cope and restore their predisaster lifestyle. Furthermore, an existing home is a much safer and more comfortable shelter than a tent or tarp.

Chuck Setchell of the USAID Office of U.S. Foreign Disaster Assistance calls this solution "stealth shelter" because it is overlooked by most humanitarian organizations. OFDA provided grants to host

families to help them house displaced families after the 2010 Haiti earthquake.

Guidelines prepared before a disaster can enlist, support and encourage host families as a viable emergency housing option. In many countries, displaced populations already rely on relatives and friends for shelter after disaster. Incentives such as the OFDA grants in Haiti can help sustain this as an emergency shelter option.

TRANSITIONAL SHELTERS

Transitional shelters are designed to be safer, more comfortable and occupied longer than a tent. They come in many forms and use a multitude of construction materials. Costs vary, but T-shelters often cost more than tents. Even so, many agencies find that their advantages far outweigh that difference in cost. T-shelters better withstand inclement weather and can provide more security for families. They also can be designed to be incrementally upgraded, transitioning over time to become part of a permanent shelter.

The concept of transitional shelter is not new. Dr. Eugenie Birch, professor of city and regional planning at the University of Pennsylvania, cites the use of wood-framed cottages in parks after the San Francisco earthquake and fires in 1906: "People lived in (the cottages) for weeks or months while the city cleaned up debris and restored infrastructure." When the cleanup was finished, "folks put (the cottages) on wheels and moved them to their lots and rebuilt their housing while living in these cottages." Some of the original wooden cottages still exist today as a shed, garage or part of a house.

Studies have found that families living in T-shelters during their displacement see greater benefits in long-term recovery. Families who received T-shelters[23] after the 1999 tropical storm in Central Vietnam spent one-third less on recovery costs than families who did not receive a T-shelter. This meant families with T-shelters had more money to spend on food and household goods.[24]

However, T-shelters lose their positive effects if they are occupied for too long. An impact analysis initiated by the International Federation of Red Cross and the Netherlands Red Cross after the 2004 tsunami in Aceh, Indonesia, found that the positive social and economic impact associated with occupying T-shelters decreased the longer they are occupied.[25]

Some fear that T-shelters will never be upgraded as intended and will eventually turn into slums. David Rivard, head of humanitarian logistics for Airline Ambassadors International, said in a Time magazine article, "Transitional shelter sets a precedent to build unsafe buildings and unsafe communities."[26]

In Indonesia, Florian Steinberg of the Asian Development Bank recalls, opponents of transitional housing argued that it was a "wasteful use of resources," while supporters argued that it was necessary in light of the deteriorating conditions of tents and the slow progress of permanent reconstruction.[27] Ultimately, a decision was made to provide T-shelters in Indonesia.

T-shelters are ideally constructed near a family's original home, close enough so families can easily make repairs or rebuild their original home, keep connec-

tions to friends and family, and help restore the neighborhood. However, this is difficult in dense urban landscapes where housing is often multistory and multifamily and space is scarce. In addition, a resident's original plot may be covered in debris from the disaster or vulnerable to a future disaster.

Despite the challenges of providing T-shelters in urban areas, the shelters are the main source of U.S. shelter assistance in Haiti. By the end of June 2011, USAID/OFDA supported the construction of more than 25,600 T-shelters through partners, representing nearly 35 percent of T-shelters built by the international community.

Because of the scarcity of land and complicated land tenure in Port-au-Prince, NGOs in Haiti are primarily constructing T-shelters on new settlement sites on the outskirts of the city or in lower-density municipalities.[28]

If a T-shelter site on the outskirts of the city is to become permanent, residents will need transportation, education and health care to make the transition to a new neighborhood. Great care should be made to prevent the settlements from becoming slums.

Although T-shelters offer benefits, they should never be the only source of shelter response in urban areas. Instead, humanitarian organizations can focus on repairing existing homes and providing technical assistance to residents to help them rebuild their houses.

Habitat for Humanity Haiti T-shelters

Habitat for Humanity has had success constructing transitional shelters where land is available in the Simon Pelé community in Port-au-Prince and in smaller municipalities outside of the capital, such as Léogâne and Cabaret. Habitat's upgradable shelters have a frame made of wood, plywood walls, a concrete perimeter foundation and a corrugated galvanized iron roof. All Habitat shelters include features to resist the effects of future hurricanes and earthquakes.

CASE STUDY:

Community building in Simon-Pelé

EMPOWERING AN URBAN COMMUNITY AFTER DISASTER

In the Port-au-Prince, Haiti, community of Simon-Pelé, working together as a neighborhood to identify priority needs is a critical step toward rebuilding after the 2010 earthquake. Inspired by the community-led enumeration methodology developed by Shack/Slum Dwellers International, Habitat for Humanity began in October 2010 to help Simon-Pelé residents organize to identify, prioritize and act on their needs.

Simon-Pelé is an informal or squatter neighborhood of 23,000 people in a municipality called Delmas within the larger city of Port-au-Prince. Although Simon-Pelé is not formally recognized, the residents of the densely settled community have de facto security of tenure — the legally protected right to occupy the land. As a result of the earthquake, however, at least 8,000 of those residents now live in one of eight camps surrounding the neighborhood.

Although the neighborhood has a vibrant commercial main street and strong social connections, its informal origins mean it lacks water, sanitation, sewers, latrines, solid waste disposal, street lighting, and social amenities such as schools and playgrounds. Many streets remain unpaved. Diseases like cholera spread easily and often.

Communities like Simon-Pelé present many challenges, all magnified by the earthquake. Individual plots are small and irregular, and houses are built by the residents from salvaged materials. This makes it almost impossible to rebuild structures from scratch. High population density and narrow streets mean housing and infrastructure work affects groups of households, so it is difficult to help one household at a time. Most importantly, the strong social bonds created by a shared history of informal settlement and survival mean it is important to create a process that all residents believe will meet their needs over time. Isolated projects, by contrast, could create jealousy and division.

Recognizing these challenges, Habitat for Humanity Haiti decided to support a community-based enumeration (survey) process that would help the community take stock of its resources, prioritize its needs and develop plans of action to address them. In this way, the community would take ownership of the process and demonstrate its commitment to work in partnership with government and NGOs to address its needs. Although the project is still at an early stage, community teams have mapped and numbered 4,000 buildings and surveyed 6,000 households in Simon-Pelé.

The Simon-Pelé enumeration is based on a standardized set of questions developed by a working group of Haiti's Interministerial Committee for Territorial Planning (Comité Interministerial d'Amenagement Territoire). This ensures that the information gathered is compatible with other organizations' neighborhood surveys. The working group hopes to collect and compile such surveys on a citywide scale for all of Port-au-Prince.

The enumeration process involves forming and supporting community-based survey teams; numbering and mapping buildings; surveying every household for information about demographics and economic activity; and assembling focus groups to create community maps and use them to decide which needs are most urgent. Local university architecture students help with training, verifying and compiling the data into a database. The process is punctuated by community mass meetings and celebrations designed to cement broad commitment to the process.

Interestingly, the first priority identified by the Simon-Pelé enumeration was not housing repair or reconstruction, but safe water; two community water points are now under construction. Two more projects are expected to start in the next few months to add street lighting — especially important to women's groups for safety — and solid waste management.

Nevertheless, the Simon-Pelé project is creating the basis for housing interventions, including upgrading existing houses so they are earthquake-resistant; repairing and retrofitting earthquake-damaged homes; and building new permanent homes on vacant land. Habitat Haiti also is building transitional shelters in or near Simon-Pelé and partnering to clear rubble with the Community Housing Foundation International.

For Habitat and the community, however, the surveys and focus groups are tools for building more than housing in Simon-Pelé. The enumeration methodology is designed to build community self-confidence, create a platform for ongoing engagement with the community as a whole, and initiate post-earthquake reconstruction in a way that builds on existing community capacities, both physical and social.

Vilaire Syrin, 29, a team leader in the enumeration, has lived in the community for 27 years and says the process has boosted his confidence and skills. The enumeration "is one of the best things that Habitat had done," he said. "It's the first step."

This is particularly important in a neighborhood whose residents have long been stigmatized as "illegal" residents of the city.

The Simon-Pelé enumeration also has caught the attention of the Delmas municipality, and other NGOs, in a positive way. This helps attract funding and strengthens the neighborhood's acceptance as an integral part of the municipality — particularly important when it comes to regularizing tenure.

From Habitat's perspective, the Simon-Pelé enumeration has numerous benefits. The quality of information is better in an enumeration process because people tend to share more, and exaggerate less, when talking to neighbors. More accurate data and deeper community engagement increase the efficiency and effectiveness of project design. And the resulting pool of trained and committed local residents serves as yeast for future work, both within Simon-Pelé and for other neighborhoods in need of the enumeration process.

Mésina Antoine, 73, a charcoal retailer who lives in the community with her four grandchildren, says she's feeling better about the neighborhood after the tough times that followed the earthquake, and she has begun to look forward. "Now I'm praying for my grandchildren to have a better future in a safe place," she said.

Through this community-building process, the area now has a critical mass of aware and empowered residents capable of organizing for change so that Simon-Pelé is a better, safer place for all of Haiti's children.

—*Ted Baumann, director, International Housing Programs, Habitat for Humanity International.*

Sources:
Habitat for Humanity Haiti and Habitat for Humanity International staff
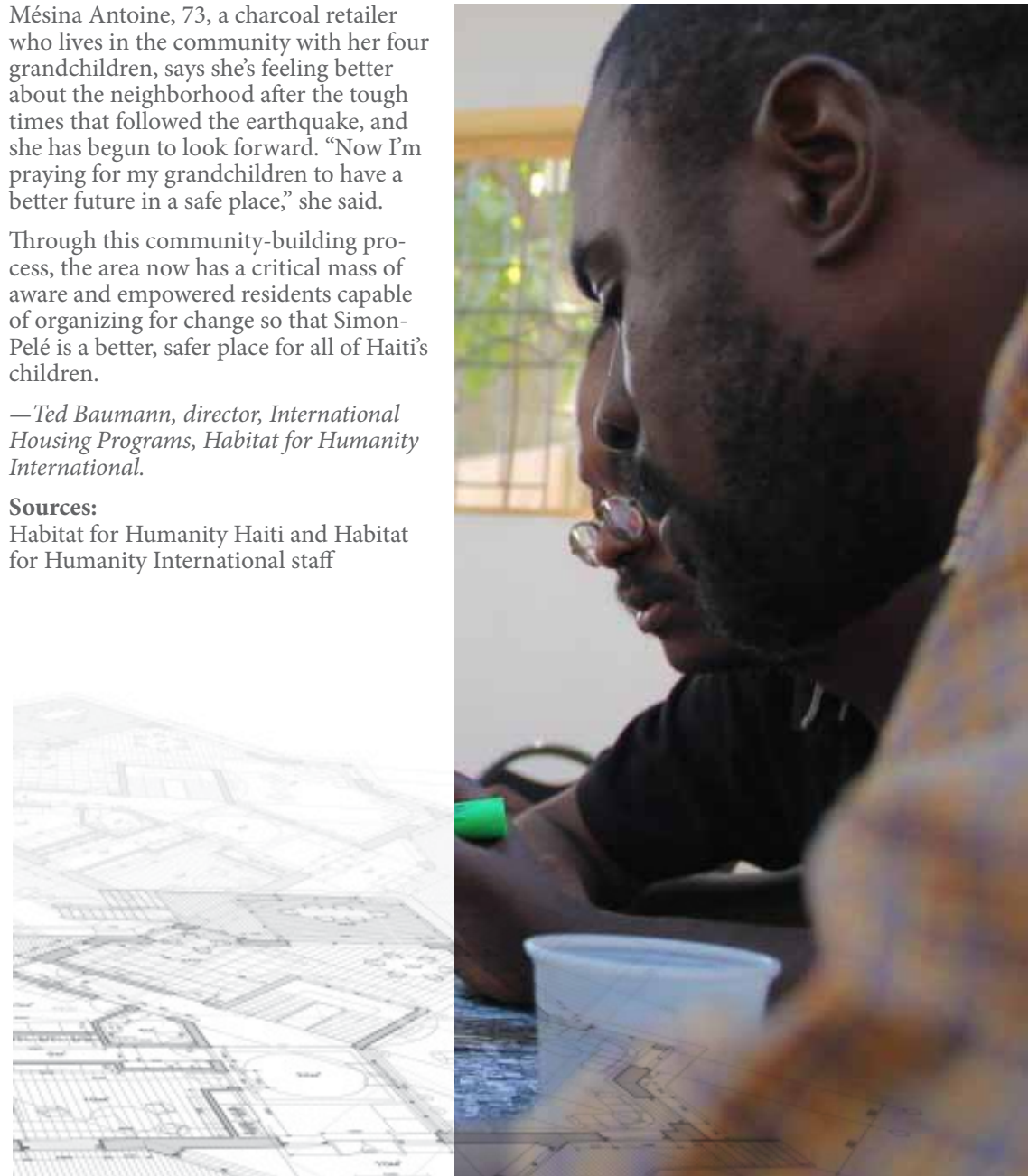
5
Long-term housing solutions

THE COST OF NOT KNOWING THE COMMUNITY

Engaging with the community can help architects and planners design a suitable home. In Tamil Nadu, after the Indian Ocean tsunami in 2004, a private voluntary organization did not consult the community when designing the neighborhood. The result was a uniform, gridlike layout and homes that were only large enough to fit one nuclear family: a mom, dad and children. The Western design led to a breakdown of social security systems, particularly for dependent elderly parents formerly living with grown children.[37]

REBUILD WITH DISASTERS IN MIND

While we cannot prevent disasters, we can reduce future devastation through better construction techniques, land-use regulations and disaster-response plans. After a disaster, there is an opportunity to correct past mistakes and rebuild a safer city.

Disaster risk reduction varies from city to city depending on the circumstance, but all cities should have hazard mitigation plans to reduce future risks. Plans should be updated frequently and incorporated into capital improvement projects, land-use plans and building regulations. If no hazard mitigation plans existed before a disaster, governments should take time at the beginning of the rebuilding process to assess the disaster's effects and identify future risk. Below are several areas of risk reduction to consider.

Land-use regulations, although unpopular and difficult to enforce in rapidly growing cities in the developing world, can prevent development on dangerous or sensitive land.

Natural ecosystems play a role in regulating drought and flood risk, but as building encroaches on wetlands and into floodplains, the ability to naturally absorb heavy rainfall becomes limited. Leaders in Tulsa, Oklahoma, corrected their past mistake of allowing construction in a flood zone by taking steps to buffer the city from the Arkansas River. The local government purchased almost 1,000 flooded homes from residents along the river and replaced them with retention ponds to protect the city from future flooding.[29] A recent study found that 360 million urban residents worldwide now live in low-elevation coastal zones with greater exposure to sea-level rise and storm surges.[30]

Disasters can naturally prevent people from rebuilding in unsafe areas. Some neighborhoods in Aceh were covered by water after the 2004 tsunami, forcing residents to relocate in safer areas. Rubble along steep mountainsides after the Haitian earthquake has prevented people from rebuilding on dangerous slopes. Piling debris onto such dangerous sites to prevent future building has been one clever, practical solution suggested by ODFA in Port-au-Prince.

Developing and enforcing sound building construction techniques can reduce the impact of earthquakes and save lives.

After collapsing buildings killed 17,000 people and injured 40,000 during the 1999 Marmara (Izmit) earthquake, Turkey updated its building codes and enforcement procedures to require all buildings to meet earthquake-resistant construction standards.[31]

Contractors may be unaware that some cost-saving techniques will result in an unsafe building, making training programs a vital part of mitigation. Buildings collapsed in the 1999 Spitak earthquake in Armenia because construction workers cut steel beams too short, trying to save money. In Haiti, contractors commonly use too little sand in their brick-making mixture, causing bricks to crumble easily.

After the earthquake in Haiti, USAID/OFDA and the World Bank funded a training manual for the construction and repair of non-engineered buildings. Habitat for Humanity and Pan American Development Foundation created a pictorial manual for the Ministry of Public Works in French and Creole and distributed it to families. Unfortunately, widespread distribution was limited by funding.

In addition to reducing risk through building regulations or land-use restrictions, it is important to rebuild sustainably.

Some cities are characterized by sprawling, haphazard residential growth, making it difficult and costly to provide infrastructure such as water or sanitation. A large-scale program adjusted lot size and shape in the Indian city of Bhuj, where homeowners' plots were irregular in shape, making it difficult to access homes by roads or with utility pipes. After the Gujarat earthquake leveled the city, officials used a tool called land readjustment to redraw homeowners' plots, allowing room for construction of new roads, footpaths and utilities before rebuilding could start.

Growing upward, not outward, can help cities prevent future settlement on coastal lands or mountainsides.

After the Kobe earthquake, Japanese officials relocated residents of lower-density, unsafe wooden houses and rebuilt higher-density, earthquake-resistant multifamily buildings.[32] This set the groundwork for a more sustainable building pattern that is also less vulnerable to a future earthquake.

RETHINK GREENFIELD DEVELOPMENT

There is a tendency in post-disaster situations to overlook what is not destroyed.[33] Overwhelmed by the despair caused after a disaster and confronted by the enormous task of rebuilding, governments may be tempted to look not at what is left inside the city but outside for solutions. One immediate reaction may be to develop new neighborhoods or satellite cities that are clean, undamaged and without the problems that existed even before the disaster.

Building such new housing on undeveloped land is known as greenfield development. Greenfield projects are often government's preferred option in post-disaster situations. Building new homes for displaced households is visible and an attractive option for governments, relief workers and donors alike, as all are eager to produce rapid results after a disaster.

While greenfield development appeals to the natural desire to bring rapid order to chaos, it also is attractive because it is amenable to expert-driven project designs and tight financial accountability and it encourages private-sector involvement in construction. But greenfield development also poses risks for residents, governments and NGOs, along with risk for the environment.

The most common negative consequence of greenfield housing projects is on residents' livelihoods. Greenfield developments on the urban edge separate previous inner-city residents from social networks, jobs and transportation. This reduces incomes, increases living costs and disrupts essential social support networks. The resulting "communities" are often not much more than an isolated collection of houses and are more often than not unsustainable over the long term.

Project designers often underestimate the costs of greenfield developments by not including the capital or maintenance costs of essential services, such as bulk water and sanitation connections, or health care, education, market, social and transportation facilities.[34] Even if these costs are included, such items often depend on future government funding that seldom arrives. Funding to support the project is thus usually required for years until the communities adapt to their new environment and predisaster livelihoods are re-established.[35]

Greenfield projects also run counter to the ideal of more compact, efficient cities. Large-scale post-disaster city plans may envisage integrated "corridors" that create density around a new greenfield project, but these plans often fail to materialize, leaving the new settlements isolated and reliant on costly and environmentally unsustainable transport systems back to the city center.

If resettlement has to occur, every effort should be made to build in urban infill or close to the city center at a higher density.

Because of their high-profile imagery, greenfield projects often appeal to politicians and others who wish to be seen to reward favored constituencies. This can actually destabilize cities politically, just when stability is most needed.

If greenfield development at a distance is the only available option, the resulting community should be supported over time to become economically, environmentally and socially sustainable. This starts with meaningful engagement with the community in all decisions, with an emphasis on maintaining existing social ties. Beneficiaries should be expected to contribute equity such as labor or savings to the project, with mechanisms incorporated to include low-income households.

The layout of a greenfield development should follow design guidelines set in the city's master planning documents. If planning documents do not exist, the layout and design should be consistent with surrounding areas and avoid unsustainable development patterns. The design of homes should be culturally adaptable and use local building materials. When construction materials are imported and unfamiliar to the local population, it will be more difficult for them to make future repairs and provide maintenance.[36]

COMMUNITY PARTNERSHIPS

Considering a neighborhood as a whole rather than responding to just one family is the added challenge after an urban disaster. Because of the density in cities, work on one home will affect the homes next door or upstairs. Therefore, the entire community should be engaged in designing response programs.

Such programs need a multipronged approach to reflect the diversity of needs in urban neighborhoods. An appropriate approach might include a mixture of urban infill, repairs, transitional shelter and technical assistance for one neighborhood.

Furthermore, a housing solution may need indirect or incremental interven-

In response to Cyclone Sidr, which struck Bangladesh in 2007 and caused more than 3,400 deaths, workers at Habitat Resource Centers made building materials such as concrete pillars that could be transported to areas affected by the disaster. In addition to materials for rebuilding, these resource centers can provide jobs and training in vital construction skills.

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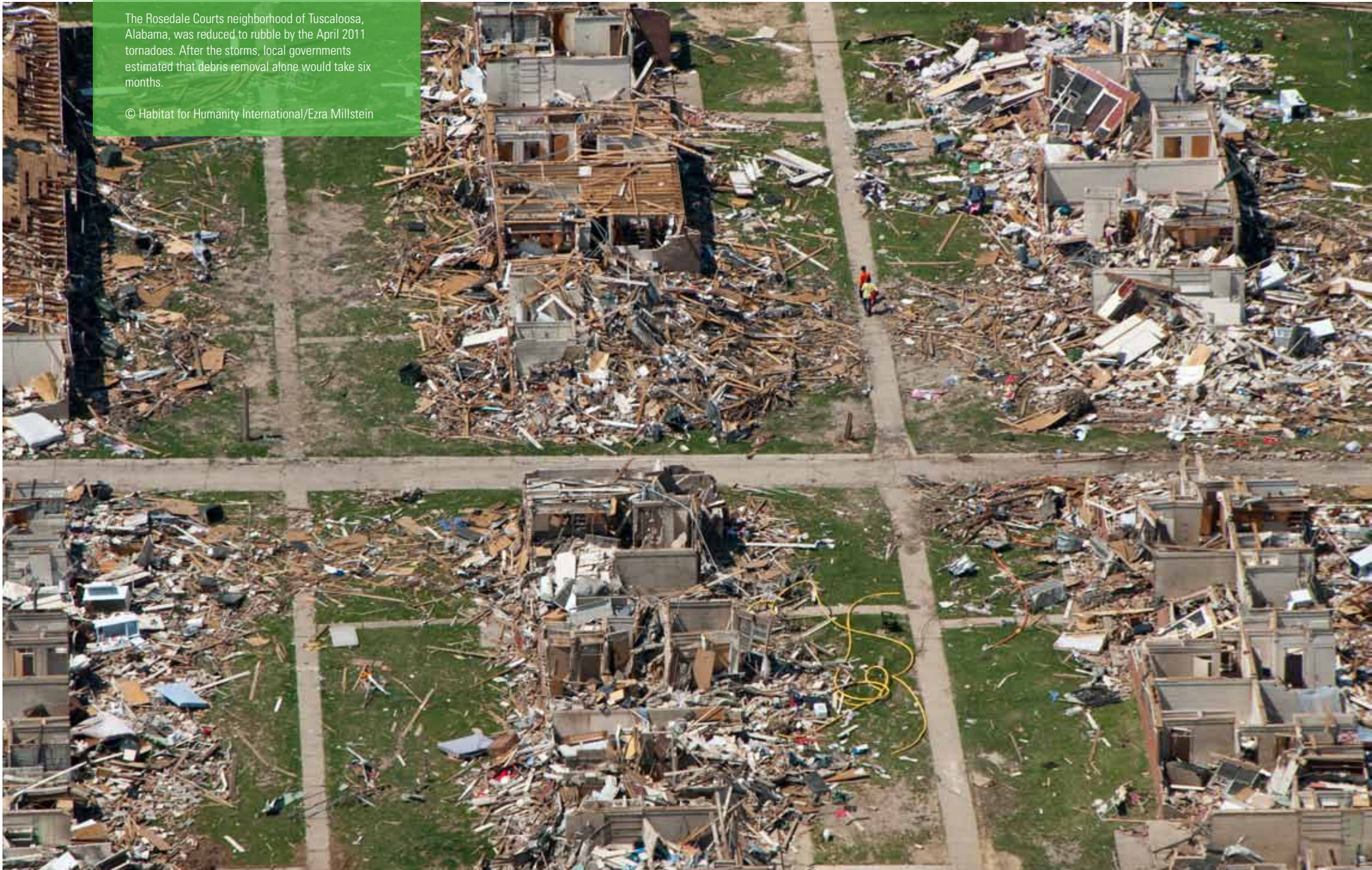
tion that addresses everything that affects a resident's ability to build or rebuild a home. A safe and decent home is at the center of recovery, but to get there, families will need a source of income; access to a skilled contractor; understanding of safe building techniques; connections to water, a toilet and electricity; affordable building supplies; security; and enough food to feed the family.

Community development professionals are needed at this phase to engage the neighborhood in a participatory planning process. Community mapping or enumeration can be designed to assess damage and address land tenure and also should identify infrastructure needs, quality of roads or drainage networks, and risk in future disasters.

Like neighborhood revitalization or slum-upgrading programs, a menu of neighborhoodwide improvements should be designed by and with residents to include items such as repairing homes and infrastructure, improving roads and drainage, improving access to jobs, and legitimizing land tenure.

Community members and representatives should be intimately involved as decision-makers at all stages of the recovery process. As a result, the community will feel empowered to make decisions regarding their own future. The open channels of communication allow NGOs to design housing solutions that incorporate the community's needs, values and cultural necessities.

Habitat for Humanity, with support from the community, is preparing community maps for Simon-Pelé, a Port-au-Prince neighborhood battered by the earthquake (See page 22).

The community can retain influence over the reconstruction funds invested in their neighborhood through a process called "community contracting" — the direct hiring of the community to implement public works projects. Community members can be engaged in managing, designing, costing or carrying out the project. Examples of projects include repairs to homes, debris cleanup, and repairing roads, walkways or drainage systems.

A benefit of community contracting is that it places funds in the community rather than with an outside contractor. Furthermore, it develops skills within the community that can later be used to generate income for the unemployed. Most importantly, it requires community participation and engagement, allowing the program to be more sustainable.

HOUSING SUPPORT SERVICES

When disasters hit urban areas in the developing world, they layer a new set of shelter problems on top of longer-term issues. Households that have never had secure tenure now have that problem plus a lack of shelter itself. Slum dwellers who struggled to find cheap materials out of which to construct shelter before the disaster now find the source of any material disrupted entirely. Local builders who might have helped slum residents build solid walls for their illegal houses are now working for NGOs on better-paying projects.

In such real-world situations, those who work to provide shelter cannot ignore the predisaster realities of low-income housing. Nothing magical happens after a disaster to improve households' incomes or make housing more affordable — quite the opposite. Shelter NGOs, in line with the emerging best practice in emergency market management, should base any intervention on a robust understanding of how the affordable housing process functioned — and didn't function — before the disaster, and try to help the process recover and improve, rather than apply new temporary alternatives that a society can't sustain.

The core of this approach is called housing support services. These are demand-driven services or products designed to enable a household to reach an adequate housing quality standard in secure tenure, basic services, and shelter durability and space; or to make shelter-related improvements in health, safety and livelihood. Essentially, these services involve identifying what people normally use to achieve adequate housing and intervening to re-establish the supply of those things quickly and, if possible, in a way that mitigates future disasters.

"Demand-driven" simply means that households themselves prioritize what's important for recovery. For example, households might prefer treated lumber and roof sheets because these can be reused and incorporated into permanent, albeit informal, shelter. Plastic tarps, on the other hand, deteriorate rapidly and are of little use beyond the initial relief stage. The key is to listen to what households say about what will work for them.

HOUSING RESOURCE CENTERS

Habitat for Humanity's institutional model for providing housing support services is the Housing Resource Center. HRCs were introduced to produce construction materials in the aftermath of the 2004 Indian Ocean tsunami, but the model evolved. As staff and communities identified more need, more resources and services were offered. HRCs are now designed to fill gaps in local shelter systems by providing a full range of housing support services. This approach recognizes that many people make housing improvements incrementally; HRCs provide ongoing support throughout the process. For example, Habitat for Humanity Pakistan learned that households did not have the equipment to cut heavily damaged roofing material after the 2005 earthquake. In response, the Habitat HRCs provided mobile saw mills to help residents cut the material and reuse it in repairs.

HRC services can be tangential to the construction of a house. When HRC staff in Sri Lanka understood that families could not afford to rebuild their homes because their income-producing fishing boats were destroyed in the tsunami, the HRC helped the community build new boats.

Using local materials: The mulberry trees of Tajikistan

Every year, Tajikistan, in the Pamir mountain range in Central Asia, experiences more than 5,000 tremors and earthquakes.

In most mountainous villages, homes cannot withstand such strong vibrations. Destruction caused by natural disasters exacerbates poverty in the country, where almost half of the population lives on less than US$2 a day. Tajik families cannot afford rebar to reinforce concrete for homes.

Habitat for Humanity Tajikistan, in partnership with the Tajik Institute of Seismology, came up with an inexpensive technology using mulberry trees to provide more safety.

The first 82 homes using "mulberry tree" technology were built in Rasht with support from OXFAM. Structurally reinforced homes have survived at least two earthquakes.

Trees cut seasonally to harvest silk cocoons are freely available. They are bound into grids and attached to walls using plaster mixed with straw and wool. This simple and affordable design makes buildings strong. As a result, the risk of being trapped, injured or killed in the house during an earthquake is significantly reduced.

Another advantage of the technology is that it can be not only built into a new construction but also added to existing houses. It is 30 percent cheaper than the standard reinforcement techniques. If applied to an existing house, this technology can reduce construction costs up to five times.

—Katerina Bezgachina, public relations and media manager, Europe and Central Asia area office, Habitat for Humanity International.

Masons in Tajikistan reinforce mud walls with mulberry tree branches.

Of course, if a disaster is of such a scale that all structures and market systems are destroyed, as was the case in Banda Aceh, Indonesia, after the 2004 tsunami, housing support systems must be styled as a continuation of a transitional shelter strategy, so it is important to design transitional shelters with that future in mind.

Post-disaster housing support services typically involve household- or community-level training or capacity building; improving the supply and quality of low-cost construction materials; facilitating access to skilled builders; and assisting with permits, regulations and similar shelter-related issues.

Although the concept sounds simple enough, it actually poses many challenges. Governments may be skeptical of low-income residents rebuilding "shacks" or other slum dwellings, and prefer that people wait in camps for permanent housing that may never arrive. Donors and NGO protocols may not recognize the value of the simple, locally based interventions involved in support services. And affected households may be tempted to wait for a "better deal" instead of rebuilding their previous shelter, especially when some NGOs are providing "free" houses to a few households. Ultimately, however, providing housing support services is a scalable, sustainable strategy to meet the needs of large numbers of low-income households after a disaster.

CASH TRANSFERS

There is no one-size-fits-all solution to housing needs after an urban disaster. Every house is affected in a different way. Some families will need bricks and mortar to repair a wall; others will need a roof; and many will need to hire an experienced contractor.

Giving families direct cash grants allows them to make their own reconstruction choices, which will result in greater satisfaction. Direct cash transfers close the funding gap families need to repair homes. They also benefit the local economy by increasing local spending power.

Cash transfer programs can either be designed to distribute a uniform amount to each homeowner or vary based on damage assessments or estimated cost of repairs. After the 2005 Kashmir earthquake, Pakistani officials distributed a uniform amount of $2,900 to each of the 450,000 families whose homes were destroyed and $1,200 to each of the 110,000 households whose homes sustained repairable damage. Additional funding was given to households with deceased or injured family members. A total of 1.7 million families received funds via a direct deposit into their bank account.[38]

One aspect that is often overlooked in the design of cash transfer programs is oversight and adherence to safe construction guidelines. In order to stretch limited resources, households may be compelled to cut corners and use money-saving measures such as less sand in cement mixtures, resulting in greater risk to future earthquakes. Programs that transfer cash directly to residents should also provide support services such as training for construction contractors.

To provide oversight, Pakistan deployed small teams to provide technical assistance and training in safe building construction. Safe construction guidelines were developed based on traditional Pakistani houses. As a result, 90 percent of the 400,000 housing units complied with construction guidelines.[39]

In some cases, families have little experience managing the large sum given in a cash grant. Providing counseling in money management or releasing grants incrementally as construction is closer to completion can help ensure the money is used effectively.

The International Federation of Red Cross and Red Crescent Societies has developed a model that ensures recipients spend the cash on home construction. The Repair and Redevelopment or RED card, also known as "Tarjeta RED," was used in Chile by the IFRC and the Chilean Red Cross to assist residents in the rebuilding process. These are debit cards that can be used only to purchase construction tools and materials from a list of specified vendors. No doubt such an option requires a level of sophistication within the local infrastructure to carry out; nonetheless, it's a good option when viable.

Cash grants can be a useful reconstruction tool on their own but work best if accompanied by technical assistance and coordinated with infrastructure, health care or other reconstruction programs. In all cases, NGOs should supplement cash transfer programs with technical assistance.

"The survivors of disasters should be looked at in a new way, and should not be viewed simply as helpless and dependent victims; rather, they should be regarded as agents for change in rebuilding their lives and their communities."

— *Diane Archer and Somsook Boonyabancha in Environment & Urbanization, October 2011*

6

Forgetting the obvious

Although women are often the vital center holding families together before and after disasters, the needs of mothers and children — and women in general — can be overlooked. Renters also are a large and expected part of urban life that needs special help.

WOMEN AND DISASTERS

Women play a large role in disaster recovery because of their traditional role caring for children. They are integral to helping the family cope and resume normalcy. However, women, particularly those in urban areas, face more challenges than men in the aftermath of a disaster, including violence, tenure insecurity and the risk of being overlooked by disaster assistance programs.

Living in emergency shelter or camp situations exacerbates tensions and can lead to violence against women. There is evidence that domestic abuse increases after a disaster, along with instances of sexual violence such as rape. After the 1999 Marmara earthquake in Turkey, reports of domestic violence increased drastically.[40]

Some factors causing post-disaster violence toward women include increased stress, grief, feelings of helplessness, post-traumatic stress disorder and scarcity of basic provisions.[41] Support networks of friends and family that provided protection before a disaster may no longer exist.

Transitional shelter must be designed with a gender perspective. Safety measures should be added into the design of communal facilities or shelter materials. Some transitional shelters in Haiti were reported to use a semitransparent tarp for walls, allowing outsiders to see an outline of female inhabitants, which made the women more vulnerable to intruding sexual assailants.

Women's groups included in the enumeration of Simon-Pelé insisted on the importance of installing streetlights in their neighborhood for safety, a priority that would have been missed without their voice. Still, women are often not represented in relief teams or in the design of reconstruction policies. Unmarried or widowed women tend to remain in emergency shelter for much longer, and there is risk that disaster assistance programs will exclude them.

RENTERS LEFT BEHIND

Renters are frequently overlooked in housing reconstruction approaches. When housing is destroyed, renters are dependent on their landlord's ability to restore rental property. In most cases, landlords are dealing with the loss of their own home, making rebuilding rental property less urgent for them.

Most rental agreements in developing countries are informal and unregulated. No policies protect tenants' rights or require landlords to rehouse renters displaced by disaster. For example, some landlords in Grenada used Hurricane Ivan as an excuse to rid themselves of low-income tenants.[42]

Rental housing that survives a disaster will increase in value because there is a limited supply. Two years after Hurricane Katrina, rental prices were 46 percent higher than prestorm levels because of the decrease in supply.[43] Rental property that was undamaged was rented by aid workers or wealthier homeowners in need of a temporary place to stay while rebuilding their home.

One solution to housing rental populations is to stimulate the economy and provide incentives for investors to increase rental supply with small grants or housing loans.

However, programs with incentives for new construction should target the population in most need. In New Orleans, a tax credit program targeted landlords who provided housing to the population between 50 and 60 percent below the median income. A surplus of units was put on the market targeting this income group, excluding the population at lower income levels.

Another program in New Orleans attempted to increase rental supply through access to finance for smaller-scale landlords. Ultimately unsuccessful, the program was expected to increase rental supply by 10,000 to 18,000 units. Because the program awarded the loan after construction was complete, many small-scale landlords could not afford the up-front costs of construction. As a result, only one-third of the original 200 participating landlords completed the program.[44]

Government-built rental units can help close the gap in the rental housing supply after a disaster, but governments need to have the capacity and commitment to provide long-term maintenance and services. Engaging the private sector stimulates the market to operate on its own and may have greater effect in the long term. A federal program in the United States provides low-income residents with "disaster vouchers," which are rent

stipends paid directly to the participating landlord. Tenants can choose their rental unit in the market, and the voucher supplements their existing income until they find jobs.

Voucher programs and rent stipends work only when there is an available supply of rental units. In most disaster situations, a two-pronged approach is required to stimulate both new construction and repair of rental units and also to increase renters' ability to pay. There are few examples of programs that successfully stimulate both the renter and the landlord.

After the Gujarat earthquake in 2001, Indian officials in Bhuj designed a program that attempted to address both supply and demand. Landlords were eligible to receive an extra 60 percent of their homeowner assistance package to reconstruct rental housing. To be eligible for assistance, landlords were required to take their original pre-storm tenants at the same controlled rent rate that was well below market value. Unfortunately, few investors took the opportunity because the assistance package was too low compared with increased land values. Further complicating matters, few renters could provide the required proof of tenancy to re-rent their original property before they could receive the small stipend for rent. The program never attracted NGO engagement because the process took too long.[45]

In Haiti, assistance is provided by IFRC to both renters and landlords through a program that provides a $500 stipend to renters and a $500 stipend to the landlord to make repairs. In exchange, the landlord agrees that the family can rent the property for three years without further payment. Each household was given a grant of $250 to re-establish livelihoods.[46] It is too early to tell whether the program will be successful. Rehousing renters after a disaster needs a two-pronged approach to address the renter's ability to pay and the landlord's ability to build or repair rental units. Because it takes time to construct or repair new rental housing, this should be made an immediate priority after the disaster.

"Shelter is the cornerstone of recovery after an urban disaster. It's vital to long-term economic recovery and to restoring human dignity to the daily lives of disaster survivors. Just as vital is a commitment by all to rethink and refine how we plan before and respond after urban disasters to lessen the impact next time."

— *Kip A. Scheidler, senior director, Global Disaster Response, Habitat for Humanity International*

A monster tornado hit Joplin, Missouri, in May 2011, killing 116. It was the single deadliest tornado in the United States in 60 years.

© REUTERS/Ed Zurga

7

Conclusion and recommendations

LESSONS LEARNED FOR THE NEXT URBAN DISASTER

A report by the U.K.-based Disaster Emergency Committee predicts five major urban disasters over the next 10 years. With every new disaster, those who respond ought to become wiser by learning innovative techniques and developing new strategies. We have learned valuable lessons at the expense of Port-au-Prince and other urban areas devastated by disasters. We must learn from the experience.

Urban disasters have taught us that:

- Building new homes one family at a time has little impact in big cities.

- Listening closely to the community and asking what neighbors need to rebuild lets assistance profit from the strengths and wisdom of people caught in disasters.

- Women must be included for disaster recovery to succeed.

- Providing training to local contractors, procuring affordable building materials, and assisting families in their own rebuilding and repair efforts may well prove more successful in the long term.

- Governments need to establish a plan up front and dedicate resources to the entire housing continuum — all the way from temporary shelter to permanent housing solutions. When government has little capacity to do this on its own, the international community should work alongside the government to increase capacity instead of against or around it.

- Using community mapping methods to establish land ownership is an important step toward providing secure tenure for displaced families and a psychological boost to the community.

- Renters, who are frequently overlooked in housing recovery programs, should be included.

Urban disasters require us to be creative, flexible, enduring — and ready before the next one strikes.

PRINCIPLES

- Reaffirming The Humanitarian Charter in The Sphere Project, it must be recognized that affected governments or controlling powers hold primary responsibility for addressing the needs of affected populations. Agencies define their role in disaster response based on what those with primary responsibility can or cannot do, or choose not to do. Whenever possible, program design by agencies should support the plans as articulated by affected governments or controlling powers.

- Urban density makes it inefficient to focus on one household at a time; infrastructure and services are inextricably linked to houses in urban areas. Therefore, whenever possible, reconstruction should be based on a neighborhood or settlement approach.

- Disaster risk reduction should always be incorporated in reconstruction program design.

- Responders should choose repairing what already exists over new construction to avoid duplication of resources and to make better use of existing urban infrastructure.

- Self-help programs should be designed to provide households with resources they need to rebuild. Whenever possible, demand-driven forms of assistance, such as cash grants, technical assistance, materials or tools should be preferred. Housing Resource Centers set up by assisting agencies and NGOs are a good vehicle to identify and provide these tools.

- Secured land tenure should be reinforced. Short of a viable government plan for quickly resolving land tenure issues, community-led mapping should be used to identify land ownership, resolve land disputes and provide a more secure form of ownership to protect residents from eviction and allow them to receive assistance.

- Transitional housing should be built on or near the displaced resident's original plot. If it is possible, it is preferable to house displaced residents with host families rather than constructing transitional housing.

- Relocation should be avoided. If it is necessary, the location must include access to utilities, transportation, jobs, markets and social services, and the relocation should attempt to preserve community cohesion.

- Community input should always be incorporated into the design of disaster response programs.

- The needs of renters must not be overlooked. Cities have a higher percentage of renters than rural areas, and the renters are dependent on their landlords' ability to rebuild.

- The rights of women should be given special consideration in the design of housing assistance programs. Unmarried or widowed women are often overlooked in disaster assistance because they are not included on land titles.

RECOMMENDATIONS

Look beyond the emergency stage. Too often, humanitarian assistance for shelter stops at relief. The design of emergency solutions should be tied to that of permanent solutions. Organizations involved in humanitarian shelter assistance should incorporate efforts into long-term strategies, and donors that provide funding should keep long-term recovery in mind.

Promote communications across sectors. Responding to disasters is more complex in cities than in rural areas because of population density. As a result, greater coordination is required among sectors. The Inter-Agency Standing Committee Cluster System coordinates NGO activity within specific sectors, but coordination between sectors needs improvement. A system needs to be developed to coordinate both within and among different sectors providing disaster response.

Tackle land tenure issues. A lack of land ownership records or an unclear legal framework for land transfers can delay or prevent assistance to the poorest displaced residents. Solutions to unclear land tenure should be identified and implemented at the beginning of the reconstruction process. If land tenure problems exist before a disaster, flexible approaches such as community enumeration should be used to establish ownership before rebuilding.

Endnotes

Chapter 1

1 The World Bank and U.N. produced a report that compared city-specific population projections and geographic patterns of hazard events that occurred between 1975 and 2007.

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Chapter 2

6 "Disaster risk reduction and management ought to remain a pivotal element in the development process if we are to reduce the vulnerability of communities, especially those exposed to a wide range of hazards. Where community vulnerabilities interface with development obstacles, opportunities for disaster risk reduction can and should be identified. Our plans and policies undergo continuous enhancement to enable participatory local planning to mitigate disaster impacts across sectors." — Jejomar C. Binay , vice president and Housing and Urban Development Coordinating Council chairman, Philippines.

7 From an interview with Dr. Robert Olshansky, urban planner and long-term disaster recovery expert, University of Illinois:

Q: Is housing the organizer after disaster?

A: I think it's livelihood. People move to cities in the first place to make a living. That doesn't change because there's been a disaster. The real problem after a disaster is somehow getting some economy going there in a way that reaches poor people.

Chapter 3

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Habitat for Humanity International is a global nonprofit Christian housing organization that seeks to put God's love into action by bringing people together to build homes, communities and hope. Since 1976, Habitat has served more than 500,000 families by welcoming people of all races, religions and nationalities to construct, rehabilitate or preserve homes; by advocating for fair and just housing policies; and by providing training and access to resources to help families improve their shelter conditions.

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