

 **Habitat for Humanity<sup>®</sup>**  
**Disaster Response  
Shelter Catalogue**







Disaster Response Shelter Catalogue  
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Front cover:

Sondy-Jonata Orientus' family home was destroyed in the 2010 earthquake that devastated Haiti, and they were forced to live in a makeshift tent made of tarpaulins. Habitat for Humanity completed the family's new home in 2011. © Habitat for Humanity International/Ezra Millstein

Back cover:

Top: Earthquake destruction in Port-au-Prince, Haiti. © Habitat for Humanity International Steffan Hacker

Middle: Reconstruction in Cagayan de Oro, Philippines, after tropical storm Washi. © Habitat for Humanity International/Leonilo Escalada

Bottom: A tsunami-affected family in Indonesia in front of their nearly completed house. © Habitat for Humanity International/Kim McDonald

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A final recognition to all the field staff from Habitat national organizations and affiliates who worked with extreme dedication and commitment to make all of these interventions possible. Our thoughts go out to all disaster-affected families that participated in these projects.

[Habitat.org/disaster](http://Habitat.org/disaster)

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## Foreword

Low-income families living in substandard housing are among those most vulnerable to natural and man-made hazards and the turmoil of armed conflicts. The devastation resulting from disasters destroys homes and livelihoods, and dreams for the future. War and civil unrest create millions of refugees and internally displaced people. Families whose lives are upended often struggle to rebuild their lives with few tools or resources.

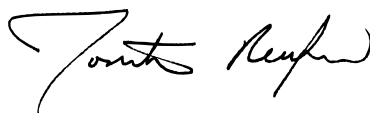
Providing humanitarian aid to affected families requires immediate action. However, the need for simple, decent, well-built shelter remains for months and years — long after the headlines fade.

Since responding to Hurricane Mitch, which struck Central America in 1998, Habitat for Humanity has increased its capacity to support disaster risk reduction and response worldwide. Our work after some of the worst disasters of the past decade — including the 2010 Haiti earthquake, Hurricane Katrina on the U.S. Gulf Coast in 2005 and the Indian Ocean tsunami in 2004 — has forever changed our idea of what's possible. To date, we have provided shelter assistance in a wide variety of forms to more than 80,000 families facing the gravest of circumstances. Our goal is to help families not only acquire adequate housing, but also to help them return to schools, jobs and communities that can help them create a pathway to permanence.

Habitat's first Disaster Response Shelter Catalogue is an overview of our work around the world. We hope it will provide an inspiring record of our disaster response and mitigation efforts and will capture many of the valuable lessons we have learned.

Habitat for Humanity believes that every single person we serve is of infinite worth. We celebrate each family that moves into a home, each livelihood that is restored and each child who does better in school because they have a safe place to study. I want to thank everyone who has supported our disaster response efforts: all the Habitat staffers who have worked long hours in stressful situations, all the donors who have responded with generous hearts, all the volunteers who have left behind their daily responsibilities to offer help, and all our amazing partner families.

Our prayers continue to be with those who are starting anew, and Habitat remains committed to helping those affected by future disasters.



Jonathan T.M. Reckford, CEO  
Habitat for Humanity International





## Introduction

For 14 years, Habitat for Humanity has been working in Disaster Response, offering a variety of interventions to help vulnerable families and communities recover from devastating disasters and conflicts. This Disaster Response Shelter Catalogue, the first one published by Habitat, seeks to give a meaningful overview of our efforts as of 2012. The reports here, selected from among Habitat's many responses and interventions, span the globe and every possible metric, from modest local efforts to help one village to huge undertakings that involve multiple countries, partners, complex logistics and millions of dollars.

Some responses have been unqualified successes. Others met with significant challenges, and the partners involved had to adapt as they went, sometimes having to re-think original goals. Those latter responses can provide valuable lessons learned, both for Habitat and for our fellow humanitarian organizations, and those lessons are included. We hope they will contribute to the institutional memory of Habitat and assist others who work in similar arenas.

Habitat's recovery initiatives include shelter and settlements interventions with an end goal of sustainable development. They include emergency shelter kits, transitional shelters, core and incremental building; complete new house construction, repairs and reconstruction; and retrofitting to enhance resistance to hazards. Access to land, affirmation of tenure rights, access to clean water and improved sanitation complement this enabling strategy.

Habitat supports holistic approaches to working with families and communities who have been affected by disasters. In addition to shelter, community needs can include restoration of livelihoods, education, skills training, concerns for safety, and maintaining valuable social networks. In collaboration with community leaders, local government, humanitarian aid and development organizations and the affected families themselves, Habitat tries to address these needs where appropriate.

Habitat also provides customized training and resources to help communities and homeowners reduce the impact of future disasters. Mitigation and preparedness initiatives are community-based and designed to empower communities with risk-management capabilities. With particular emphasis on disaster-prone locations, Habitat works to build local capacities to identify hazards, reduce vulnerabilities and mitigate disaster effects.

Initiatives are implemented by Habitat for Humanity International, Habitat affiliates, national organizations and partners. Affected families and communities participate in all stages of the work, from planning and preparation to construction.

All of these tenets are summed up in our Pathways to Permanence strategy for reducing vulnerability and sheltering disaster-affected families. (For a full explanation of Pathways to Permanence, see page 11.) It's a multi-faceted approach that rejects "one size fits all" and acknowledges that there are multiple pathways on which families will move toward the goal of permanent, durable shelter and settlements solutions. Pathways to Permanence includes the affected populations in the decision-making process, and includes listening and responding to the people we are assisting.

We would like to take this opportunity to thank those members of the Habitat Disaster Response community of practice around the world who contributed to this publication and encourage the study and dissemination of the many lessons contained here. We would also like to recognize the thousands of committed and dedicated workers, staffers, volunteers, partners and families who have been and continue to be a part of our Disaster Response efforts for a world where everyone has a decent place to live.

Mario C. Flores  
Director, Disaster Response Field Operations  
Habitat for Humanity International

# Pathways to Permanence: A Strategy for Disaster Response and Beyond

By Mario C. Flores and Michael C. Meaney

## Introduction

As Habitat for Humanity International began assembling and distributing emergency shelter kits in Haiti after the January 2010 earthquake, the response team started looking to the next set of interventions. In coordination with the Inter-Agency Standing Committee Shelter Cluster, the response team decided that transitional shelter solutions were needed by the significant number of families that were facing the upcoming hurricane season. However, the unavoidable question arose: Transitional shelters . . . but a transition to what?

Habitat for Humanity believes that safe, decent shelter provides the platform upon which much of post-disaster assistance is built: health, water, sanitation, livelihoods, safety, education, etc. To support these crucial processes, the Pathways to Permanence strategy places affected families on a path to durable, permanent shelter solutions using incremental stages as needed (e.g. erecting an emergency shelter, accessing or affirming land rights, improving a transitional shelter solution, defining next steps for a disaster-damaged house or expanding a new core house solution).

*Pathways to Permanence is the process of reducing vulnerability as well as supporting disaster-affected families and communities using holistic program interventions that enable incremental progress toward the achievement of permanent, durable shelter and settlements.*

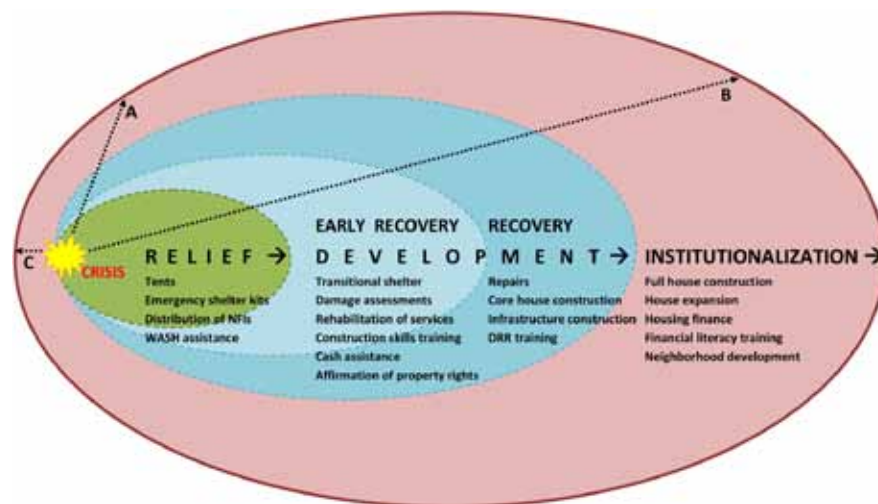
This approach focuses as much on the process of sheltering and risk reduction as it does on the products that might support it. Depending on the situation, actual shelter products may be differently designed, and shelter components will often be used in different ways.

Products that support the process might include, but are not limited to, emergency shelter kits, provision of technical assistance for disaster damage assessments, transitional shelter (t-shelters), technical assistance for affirmation of property rights, core housing schemes, disaster risk reduction trainings and others.

Families enter Pathways to Permanence at different points after a disaster strikes. Habitat has learned that in the immediate aftermath of a disaster, affected families with shelter needs almost always come up with shelter default solutions by themselves. Effective shelter assistance and programs will seek to build on that effort, channelling such default solutions into synergies that will take them, in different iterations, to the next incremental step by potentially improving on various aspects (for example, reconstructing a foundation, substituting shelter elements with better quality materials, adding a room, etc.). This shelter continuum takes a disaster-affected family from disaster homelessness to a permanent, durable solution, in a timeframe that can last from a few weeks to many years.

In addition, it is important that the process involve those it is designed to assist. Interventions in either a development or disaster response setting are more successful when the affected population participates in the decision-making process. This includes listening to and responding to feedback from affected people when planning, implementing, monitoring and evaluating programs, and ensuring affected people understand and agree with the proposed pathways.

There might also be significant regulatory barriers toward achieving early recovery. Habitat advocates for governmental policies that ensure immediate decisions take into account long-term implications.



**Families A and B will walk different “pathways” toward a permanent housing solution. A number of shelter support interventions can enable incremental improvements to their shelter conditions along the way. Family C has the means to quickly resort back to its pre-disaster permanent housing condition.**

## Highlights of Pathways to Permanence

**Pathways:** There are multiple pathways toward permanent durable shelter, and different circumstances, context, capacities and means will exist for families. Habitat interventions should recognize these variables and the fact that different families will have different pathways. Interventions should support these pathways, targeting the most vulnerable in the population.

**Process:** By focusing on the process of sheltering and risk reduction, Habitat's interventions recognize the incremental nature of shelter in the program design and the range of roles Habitat may play at different stages of the process. Support for this process can include the provision of shelter elements; the construction of shelter units; the development of housing support services; and support for the market housing value chain. Additionally, given that families will have different pathways towards permanent durable shelter solutions, the support provided may be different, and change over time.

**Reduced risk:** Recovery must leave communities safer by reducing vulnerability and building resilience. Through the identification of hazards and disaster risk, intervention programs should develop strategies that mitigate them by structural and non-structural means.

**Holistic intervention:** Seeing shelter and settlements as central to other critical interventions, shelter program should not simply entail rebuilding physical structures, but also restoring social, economic, natural and cultural environments; and becoming a platform for health, water, sanitation, livelihoods, protection, education and other post-disaster assistance.

**Empowerment and support:** Families and communities should not be viewed as victims of a disaster, but partners in their reconstruction process. Empowering the capacities and strengths of families to participate in program design is critical to the outcome of the interventions. Program design should also look at the environment in which reconstruction will take place and try to strengthen government and community capacities, invest in the housing value chain, and enable rebuilding of livelihoods.

**Incremental approach:** Recognizing that reconstruction can take years and is very capital intensive, scaled shelter solutions are likely to use an incremental building methodology. It is also likely that Habitat's role would change throughout this incremental process from provider of solutions to enabler of housing support services.

**Permanent solutions:** The goal of permanent durable shelter solutions drives all interventions. Given a country's housing mix, this solution will look different based on the context, but could include owner occupancy, rental housing, cooperatives, public housing, etc.

As mentioned before, interventions in either a development or disaster response setting are more successful when participation of affected populations is fully achieved at all stages of the project cycle. Building such participation in shelter programs facilitates a process in which people understand and agree with the proposed or selected pathways, making sure interventions are aligned and in support of their choices.

## Pathways to Permanence in Action

When Habitat for Humanity puts Pathways to Permanence to work, a set of priorities guide and inform disaster risk reduction and disaster response program design, implementation, monitoring and evaluation. These priorities become a framework for a Habitat project cycle.

### **1. Community-based programs for Disaster Risk reduction and Disaster Response**

**interventions.** Community-based DRR and DR programs are characterized by a highly participatory process that engages local resources and seeks to build up local decision-making and multi-sector participation.

Habitat for Humanity fully embraces the concept that grass root or community development must be focused on long-term sustainability to be counted as true development. We further believe that comprehensive disaster management is an integral part of that long-term sustainability. Both in the pre-disaster and post-disaster stages, successful outcomes in risk reduction or response interventions are directly proportional to the role and level of involvement of the communities themselves. Disaster-affected families and communities are, in fact, the true first responders after a disaster, and it is crucial that they see themselves as active participants and owners of their recovery processes. Designing programs supported on this concept is fundamental if shelter-related interventions are to enhance community resilience and the reduction of vulnerabilities, fostering development. As nothing happens in a vacuum, it is



**Community members in an Afghanistan village build a traditional home.**

important to take a look at how post-disaster scenarios usually develop, and the implications on families seeking to restore the inextricably related conditions of their shelter and livelihoods.

The investment of efforts in community engagement can make all the difference in the implementation phase of shelter-related programs. These efforts begin with the identification of local leaders to facilitate involvement of the community around pre-program activities, such as initial assessments. They continue with participation in the design of shelter interventions and actual sweat equity in construction-related activities. The same applies with community-based disaster risk management processes. Best practices in the sector have shown that this approach, which assigns as much importance to the participatory process as to the outcome of programs, is the right and most respectful one. Community-driven, rather than agency- or donor-driven, is the key to successful and sustainable interventions.

The use of local materials, labor and technical know-how is strongly encouraged. Apart from the obvious benefit to local livelihoods and economies, the preference of local, culturally appropriate shelter solutions ensures their sustainability and multiplies the potential for incremental improvements undertaken by the beneficiaries themselves.

**2. Preference for on-site reconstruction over relocation and displacement.** Preventing displacement and helping households to quickly return to their own land to initiate recovery and reconstruction are key steps to restarting family livelihoods and community economic recovery. Relocating families to barracks and tent camps for long periods encourages dependence and slows the community reorganizing and planning that are needed for a community-based response program.

Experience has shown that households that are able to avoid displacement after disasters recover faster than those that need to spend time in spontaneous or planned camps. In the middle point are those households that find support with host families near their original locations. This is important because families need to resume their livelihoods and draw support from established social support networks. When disruption of these two elements is high, recovery becomes difficult. The main failure of shelter relocation schemes is the lack of planning and provision of support around these issues for families if they are resettled in housing projects away from their familiar environment. If relocation becomes the only available option (because of high risk in original locations or issues of land rights), programs should consider (and budget) follow-up support for integration of the new settlement and families into the existing environment, with investments in livelihood support and facilitation of services. Think settlement, not just houses.

**3. Agency and donor coordination: a commitment to work collaboratively in all areas.**

Habitat's DRR and DR programs emphasize collaborative work with partners to ensure that the goal of comprehensive disaster management becomes a reality.

The current standard for coordination is advanced by the Interagency Standing Committee, an inter-agency forum for coordination, policy development and decision-making involving UN and non-UN humanitarian partners, and is operated under the leadership of various United Nations agencies. Leadership of the Shelter Cluster is divided between the International Federation of the Red Cross/

Red Crescent and the Office of the United Nations High Commissioner for Refugees. While the former is the convener of the Shelter Cluster for natural hazards disasters, the latter is in charge of the Shelter Cluster during complex humanitarian emergencies or conflict-related ones.

Habitat for Humanity strongly supports this and other coordination mechanisms which address gaps in shelter assistance and help avoid duplication or interventions that may cause harm to affected populations. Shelter can be pivotal for interventions in other sectors, such as access to drinking water, provision of sanitation, enhanced safety, and livelihood support activities in the home. In other words, coordination is sought not only within the shelter sector, but with all related sectors.

Coordination of donor support to reconstruction activities (both geographically and in terms of products and methodology) is also encouraged. An increased number of households can be assisted at a more reasonable cost if shelter solutions are provided in a non-competitive environment.



**Members of a women's self-help program discuss disaster preparedness in India.**

**4. Compliance with global and local standards and accountability to program beneficiaries.** As a matter of principle, Habitat for Humanity supports the right of affected people to assistance and protection with dignity, impartiality and without discrimination in times of disaster, calamity and civil strife. Habitat frames disaster response programs within the universally accepted concept of the humanitarian imperative: That action should be taken to prevent or alleviate human suffering arising out of disaster and conflict within the ethics of unconditional help based only on need. Habitat's mission principles have always emphasized action toward those in greatest need first; assistance without any type of discrimination;



participation of those in need of assistance; dignity for all people; neutrality and independence from political, economic, or foreign policy objectives; and an understanding of housing as a fundamental human right.

To ensure the implementation of these principles in shelter programs and to foster accountability, all Habitat disaster response interventions seek compliance with provisions in globally-recognized standards, including, but not limited to, the Code of Conduct for The International Red Cross/Red Crescent Movement and NGOs in Disaster Relief, the Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere), the Humanitarian Accountability Partnership 2010 Standard and the Private Voluntary Organization Standards as defined by the American Council for Voluntary International Action. In addition, disaster response interventions involving permanent housing aim to comply with applicable local standards and with Habitat's own Housing Quality Standards. This guidance applies to all stages of program/project cycle (conceptualization, design, implementation, monitoring, evaluation, etc.).

## Final thought

Recovery after a disaster begins on day one, with the understanding that when it comes to shelter assistance, one size does not fit all. Comprehensive disaster management demands that consideration be given to both vulnerabilities and capacities of affected families, creating opportunities with the purpose of placing the ownership of the recovery process into the hands of disaster-affected families. This is the unequivocal consideration of Habitat for Humanity's Pathways to Permanence, in the pursuit of its institutional vision: *A world where everyone has a decent place to live.*

## About the authors

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Michael C. Meaney is associate director of Disaster Response Field Operations at Habitat for Humanity International. He holds an MBA from the Open University in England, and has studied numerous disaster related courses, including the University of Cranfield's International Disaster Management program.

# Habitat for Humanity International's Disaster Response Around the World

- Active Habitat for Humanity countries
- Disaster Response projects past and present

All information is current as of September 2012.

Europe and Central  
Asia Area Office  
Bratislava, Slovakia

United States and Canada  
Administrative headquarters  
Atlanta, Georgia

Latin America and  
the Caribbean Area Office  
San Jose, Costa Rica

More than 100,000 families (approximately 500,000 people) have been assisted with direct shelter interventions after disasters and conflicts; many thousands more have benefited of risk reduction (mitigation and preparedness) programs.







# Africa and the Middle East



## Belcior Community Resettlement, Angola

### PROJECT NAME AND LOCATION

Belcior Community Resettlement, Bie province, Angola

### TYPE OF INTERVENTION

Resettlement project for returning refugees and IDPs

### YEAR

2004-2005

### PROJECT TARGET

400 families

### SHELTER/HOUSING SOLUTION SIZE

24 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity International

### PARTNERS

CARE Angola  
Development Workshop

### FUNDING

Habitat for Humanity International

### ADDITIONAL INFORMATION

Shelter assistance in post-conflict environment

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## Angola



## Summary

Habitat for Humanity International implemented a shelter resettlement program for returning refugees in the central province of Bié. Partnering with CARE Angola and other agencies, the resettlement program served 400 families (2000 people) with technical assistance for the production of mud bricks and transfer of construction skills. The shelter program was supported with a food security component to allow the resettlement and rebuilding process.

## Timeline

- February 2004 — De-mining work completed for Belcior project.
- April 2004 — Collaborative agreement between HFHI and CARE Angola signed.
- May 2004 — Construction project began.
- October 2004 — First 100 houses built, dedication ceremony held.
- December 2005 — Additional 300 houses built.

## Background

Since the end of the Angolan civil war in 2002, more than 4 million refugees and internally displaced people returned to their homes in rural Angola. A large percentage of this population was relocated to the central provinces of Bié and Huambo, where the 35-year civil war took its greatest toll. The decades-long conflict killed or wounded hundreds of thousands of people, displaced 1.2 million people, destroyed towns and cities, severely damaged the economy and left huge tracts of farmland unattended and unproductive.

About 80 percent of the displaced were women and children. The high percentage of disabled and maimed populations bears grim testimony to the scourges of landmines, bitter fighting and disease.

## Project Overview

In May 2004, Habitat for Humanity International, through the First Shelter Initiative, started working to assist families that had recently moved back to their rural regions in the central province of Bie in Angola. This was possible through a strategic partnership created with CARE International in Angola, an organization with an established history of relief and resettlement activities in the province, generally through emergency relief, food security programs and agriculture extension work. The Angola FSI pilot project started in Belchior, a newly resettled community near the Bie province capital of Kuito. Between 2004 and 2005, some 400 returning families were helped with shelter and latrines. Houses were 24 square meters. They were built using mud bricks produced onsite and have two wooden windows and



An Angolan boy outside a new shelter in Belcior.

a wood front door, a plastered mud floor and a roof made of minimal wooden structure and corrugated galvanized iron sheets. The provincial government assigned land for resettlement, with a secured tenure agreement for families. Areas for the housing project were combined with areas designated for agricultural purposes, which will become the main livelihood for the families.

### Implementation

Before the project started, mine-clearing agencies took care of unexploded ordinance. Once land was assigned, families in Belcior worked in groups to make adobe blocks for each family in the community. These family groups provided sweat equity to build the walls for the houses. Habitat then provided doors, windows and metal sheets necessary to finish the houses. By working in groups, the vulnerable families (amputees, sick, elderly) received a better house and the entire community benefited. Families worked in small groups to gather the water, mud and straw for the blocks, build the walls of their own and their neighbors' houses, procure the wood beams and complete their latrines. CARE Angola provided food distributions to facilitate resettlement and allow for families to work on construction.

### Lessons & Promising Practices

- Lack of support from local authorities for other services limited success of the resettlement project. Although the shelters and latrines were considered appropriate, no further support for livelihoods was available.
- The food security program that ran in parallel with the shelter intervention was instrumental in allowing families to become engaged with construction-related activities.
- Technical assistance from partner Development Workshop helped to apply corrective measures to housing solution design and improved construction quality.
- The project layout reflects nothing of a rural culture, which might be an issue in the future. Its straight-line, urban layout is based on private, independent plots that will ultimately be serviced. Rural villages are planned organically with a focus on the family (social capital) and household assets. It is not clear how a straight-line township layout promotes rural social relations. Indeed, the use of trees and spatial layout helps define the separation of different land uses, including sanitation. The positioning of latrines directly adjacent to the house starts to challenge certain cultural taboos.



## Muyinga Province, Burundi

### PROJECT NAME AND LOCATION

Housing Project in Muyinga Province, Burundi

### TYPE OF INTERVENTION

House construction

### YEAR

2004

### PROJECT TARGET

400 highly vulnerable households in returning refugees population

### SHELTER/HOUSING SOLUTION SIZE

18 square meters

### IMPLEMENTING ORGANIZATION

World Vision International/Burundi

### FUNDING

Habitat for Humanity International

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## Burundi



## Summary

By 2004, relative improvements in peace and security conditions in Burundi allowed many refugees to return from Tanzania, where they had sought refuge from conflict, to their homes in Muyinga. To meet the need for housing for these refugees, World Vision International/Burundi, in partnership with Habitat for Humanity International, launched the Habitat for Humanity Housing Project in Muyinga Province to build 400 households in the Giteranyi and Muyinga communes with decent, watertight and secure housing.

## Timeline

- 1993-2005 — Burundi civil war.
- April 2004 — Habitat for Humanity housing project began.
- November 2004 — All construction materials received and all 400 houses covered with tiles; doors and windows fitted.
- December 2004 — All 400 homes completed.

## Background

As the civil war was ending, 21,476 refugees returned to Giteranyi and 10,238 to Muyinga, according to the United Nations High Commissioner for Refugees. In addition, the number of internally displaced persons decreased from about 280,000 to 140,000 for Burundi as a whole, indicating the number of people returning to their villages to start a new life. Statistics provided by the provinces indicated that only 23 percent of the people of Muyinga had houses suitable for occupancy. The majority of people lived in houses called

“blindé”, which means hardened or armored. Compounded by the economic difficulties caused by the decade long war, these changes increased the need for decent housing in Burundi.

## Project Overview

The goal was to provide shelter and access to essential services. The target population was 400 families (vulnerable persons) in Giteranyi and Muyinga communes (200 families in each commune). Community meetings were held to increase awareness of the project and identify the most vulnerable families. Families were responsible for obtaining their own construction materials, such as tiles, doors and windows, to demonstrate their willingness to contribute to the construction of their own homes. Homes consisted of a covered area of about 18 square meters (consistent with a Sphere indicator for a family of five), and incorporated mud bricks, mud plaster, a wooden roof structure, roof tiles and



Makeshift hut built by refugee family in Muyinga.

wooden doors and windows. Local builders were hired to build the homes, while families participated with non-skilled labor. In keeping with Habitat's community-based development model, local authorities contributed to the program by encouraging community participation.

## Implementation

World Vision International/Burundi consulted development committees and commune administrators to identify the most vulnerable families in each commune. Four hundred families were selected from about 3,920 households based on whether they were returnees, internal displaced persons, widows, orphans, handicapped, elders and low-income. In order to prevent jealousy, the criteria did not favor one group exclusively. WVB staff visited homes to evaluate the families and to identify the construction materials needed for their homes.

Beneficiaries were then mobilized to find and obtain the construction materials. WVB assisted families that were less able to do so, such as the elderly and disabled, and purchased wood for families that did have access to wood. In order to ensure that the houses were of good quality, WVB hired 20 local builders who worked in teams of five to build 20 houses each.

## Lessons & Promising Practices

- Four hundred houses were too many for one person to monitor. However, 200 to 250 is a more appropriate figure. To ensure sufficient monitoring of construction, more than one supervisor/monitor per project is needed.
- Additional resources, such as motorbikes, need to be available so construction supervisors can reach the sites.
- In many cases, the water source was a long distance from the families in Giteranyi commune. With the onset of the rains, households were able to collect rainwater to complete the plastering of their walls.
- Clay tiles were chosen for roof cover instead of iron sheeting because they could be found locally in Muyinga Province. Although clay tiles are more weather-resistant, durable and cheaper than iron sheeting, transportation costs were higher, structures had to be more robust to account for their weight, their production requires burning considerable amounts of wood, suppliers did not have sufficient quantities, and production sites were located on dirt roads often impassable in the rainy season. Ultimately, the governor of Muyinga province suggested future houses be built using iron sheets for roofing.



## Pujehun District, Sierra Leone

### PROJECT NAME AND LOCATION

Habitat for Humanity First Shelter Reconstruction Project, Pujehun District, Sierra Leone

### TYPE OF INTERVENTION

Technical assistance and building materials for permanent homes

### YEAR

2005-2006

### PROJECT TARGET

600 vulnerable households

### SHELTER/HOUSING SOLUTION SIZE

Varied

### IMPLEMENTING ORGANIZATION

World Relief

### PARTNERS

Netherlands Reformed Church

### FUNDING

Habitat for Humanity International

### ADDITIONAL INFORMATION

Technical assistance support for the building of permanent homes, five community structures, one central market structure and preventative health and HIV/AIDS awareness campaigns

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## Sierra Leone



## Summary

The Republic of Sierra Leone experienced a traumatic armed civil conflict from 1991 to 2002, leaving 50,000 people dead, countless injured and many more people displaced. Habitat for Humanity International partnered with World Relief to provide public and private infrastructure (technical assistance and building materials) to 600 families, build five community structures for meetings and other functions, one central market structure, and provide preventative health and HIV/AIDS education to 600 households (3,000 people).

## Timeline

- 1991-2002 — Sierra Leone civil war.
- 2005 — HFHI and World Relief partnership for first shelter reconstruction project began.
- 2006 — World Relief distributed building materials for 632 families.
- July 2006 — Extension granted for project completion.

## Background

The republic of Sierra Leone became one of the poorest countries in the world during its civil war. Once peace was declared in 2002, nearly 250,000 refugees and internally displaced persons returned to their villages to rebuild, renovate personal property and re-establish livelihoods in the petty trading and agriculture sectors. The Pujehun district hosted displaced returnees in temporary settlements and refugees in camps, causing additional pressure on community resources and facilities.

Community rehabilitation was seen as a much needed and effective method of sustaining lasting peace in this volatile region of West Africa.

## Project Overview

This program focused on communities in the Pujehun District that were marginalized by the government and other development agencies because of poor road networks and difficult accessibility. Some of these communities could be reached only on foot or by crossing a river or lake. Since the end of the war, World Relief was the only NGO that had reached some of these communities. Six hundred beneficiaries were chosen with the approval of each community, trained to build their own houses and latrines, and given materials and technical assistance. Families that worked to rebuild their own permanent homes proved their commitment to the daunting challenge



House in disrepair as a result of armed conflict.

of re-establishing livelihoods and fostered stability in the Pujehun district, which was devastated by years of civil conflict.

## Implementation

The program targeted four chiefdoms across 53 communities. World Relief conducted community assessments, identified those willing to partner, and sensitized the community on how to select beneficiaries. Each village received a number of beneficiaries based on its estimated population before and after the war. The categories of beneficiaries were prioritized for elderly widows, aged people, disabled, female/single parent and youth. Beneficiary families had to satisfy Habitat criteria for the need of adequate shelter, ability to perform sweat equity and willingness to partner. World Relief ensured that families were not discriminated on the basis of race, gender, tribe, religion, ethnic heritage, color or disability. After the families were chosen, World Relief organized a community meeting to confirm the beneficiary list; residents were asked to publicly agree or disagree with the selection.

Beneficiaries were responsible for their own construction with the assistance of a technical advisor hired by World Relief. The technical advisor constructed a sample house and latrine, and beneficiaries were trained on how to build them. World Relief provided building materials to 632 families; the extra 32 came from leftover materials from other families and from changing the design for some of the

latrines from standalone structures to rows for group families. Once construction of the foundation, walls, rafters, windows and door frames were complete, World Relief delivered iron sheets, nails and cement for plastering to complete the houses and latrines.

## Lessons & Promising Practices

- Some beneficiaries resisted World Relief because they did not see the value of latrines; they work mostly in the fields and would not use them much. In the future, it would be useful to make assessments and design education programs around such projects.
- Communal septic tanks and toilets should be built in seaside communities because latrines might sink in sandy soil.
- Construction projects should be done outside of planting season, because residents spend so much time preparing the fields for farming.
- Some families were initially resistant to using mud blocks because traditional houses are usually built with sticks. Additional training and education about the use of mud blocks was needed to overcome this unfamiliarity.
- Iron sheeting is commonly stolen. Security precautions and solid construction are needed to prevent thefts.
- Some Muslim community members were initially suspicious of World Relief's motive as a Christian organization, but the resistance subsided once work started, and there were no attempts at proselytizing.

## Transitional Shelter Assistance, Lebanon

### PROJECT NAME AND LOCATION

Transitional Shelter Assistance for Southern Lebanon

### TYPE OF INTERVENTION

Shelter assistance, repairs and resettlement, vocational training

### YEAR

2006-2008

### PROJECT TARGET

More than 5,000 individuals in 18 villages and three southern suburbs of Beirut

### IMPLEMENTING ORGANIZATION

Habitat for Humanity International

### PARTNERS

YMCA Lebanon  
The Center for Dialogue & Development

### FUNDING

United States Agency for International Development, Office of Foreign Disaster Assistance

### ADDITIONAL INFORMATION

Complex humanitarian emergency and armed conflict

### SUBMITTED BY

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## Lebanon



## Summary

This program was a response to the tremendous damage to houses after the July 2006 conflict between the militant wing of the Lebanese group Hezbollah and the Israeli Defense Force. HFHI received a cooperative agreement with USAID's Office of Foreign Disaster Assistance for a shelter recovery program in rural villages in southern Lebanon. The program was called Transitional Shelter Assistance for Southern Lebanon and served more than 5,000 people with shelter and livelihoods support interventions.

## Timeline

- July-August 2006 — Fighting between the armed wing of Hezbollah and the Israeli Defense Force left thousands homeless and displaced in southern Lebanon.
- September 2006 — HFHI assessed damage and shelter needs.
- December 2006 — HFHI awarded a grant by USAID/OFDA; program started.
- April-July 2007 — YMCA started training component.
- January 2008 — Program completed.

## Background

In the summer of 2006, fighting between Hezbollah and the Israeli Defense Force left thousands of Lebanese homeless in rural southern villages and the southern suburbs of Beirut. More than 30 days of aerial bombardment and ground fighting displaced nearly 1 million people. A study conducted by the Council of the South, a Lebanese government recovery agency, found that 11,100 homes were destroyed in rural communities and 86,093 were

significantly damaged. In the southern suburbs of Beirut, also known as the Dahia, 4,620 residential units were destroyed and 38,401 were damaged.

Beyond the direct damage done to homes and property, many families lost their livelihoods as a result of the fighting. Farmers lost the entire 2006 crop through fires or because of the large number of unexploded ordinance scattered throughout their fields. Many of these farmers lost the next year's crops as well while humanitarian agencies struggled to clear land mines.

## Project Overview

Habitat's response focused on accelerating, monitoring and funding the repair and reconstruction of homes affected by the fighting. This was complemented by an effort to stimulate local economies in the service area. The program was designed with three components:

1. Rapid shelter recovery and resettlement. Habitat used phased cash disbursement to accelerate shelter



The Bazzi family's home was rebuilt with help from Habitat Lebanon.

recovery in rural villages, particularly repairs to meet the basic shelter needs of the family. This meant a 40-square meter living space, secure from inclement weather, with access to a kitchen and bathroom.

2. Vocational training. A three-month training program was designed to transfer skills, focused on installation of water and electrical networking in homes. The training combined classroom learning with practical, on-the-job experience. This had the added benefit of accelerating shelter recovery by augmenting the skilled labor workforce that performed basic repairs in residential buildings and houses.

3. Shelter repair and protection. One of the largest gaps that emerged in the early shelter recovery environment was the indirect effect on apartment buildings of Beirut's southern suburbs. While they were not hit by the bombardment, these buildings were close enough to demolished structures that the shaking from the nearby bombing exacerbated to critical levels long-standing water leak problems. This component was designed to address corrosion in structural steel that was exposed to significant amounts of winter rains in order to mitigate failure of structural systems in the buildings.

## Implementation

Focusing on salvageable structures, cash disbursements were made to beneficiary families for specific repairs. The program benefited 398 households (2,569 individuals). Money for repairs ranged from US\$500 to US\$5,000, with an average repair cost of US\$2,713 per home. This transitional shelter solution could then be built around or added on to in order to complete the reconstruction or restoration of the entire home. Also, the direct disbursements led to an injection of US\$1 million into the local construction industry, helping to stimulate the economies of all villages in the service area. YMCA Lebanon was selected as sub-grantee for a vocational training program targeting

unemployed youth and returnees in the villages of the Sur and Bint Jbeil kadaas. Professional builders taught the classes and focused on the practical application of their lessons. Forty-two students participated in the program; 37 graduated. Two-thirds of participants found jobs on or before graduation. Additionally, Habitat subcontracted with two waterproofing companies and sealed the roofs of 33 buildings located in southern Beirut suburbs, benefitting 488 households (2,471 people).

## Lessons & Promising Practices

- Inter-agency coordination of program activities through the IASC Emergency Shelter Cluster was a key element to prevent duplication of reconstruction and training efforts.
- Cash assistance proved a valuable intervention to support shelter activities. Families have flexibility on where investment of the assistance should be applied, rather than a normal physical intervention.
- Partnerships with local NGOs and others facilitated program mobilization and met gaps while Habitat focused on establishing a full implementation team. It also facilitated consultation processes with local authorities and community leaders.
- The establishment of leadership committees among residents reflected existing diversity (for example, representation of Muslims and Christians, men and women, diverse political parties), but required additional time and effort to achieve agreements.
- Leadership committees provided an invaluable local counterpart during the program. The extra-governmental composition helped assuage concerns of the community that aid would be heavily politicized. The inclusion of religious and social leaders built trust between residents and Habitat. The committees also provided a necessary local endorsement for the program and assisted regularly in enforcing the appropriate use of cash disbursements with families.





# Asia and the Pacific



## Cyclone Orissa Response, India

### PROJECT NAME AND LOCATION

Cyclone Orissa disaster response  
Bhitara Srichandanpur village in  
Jagatsingpur district, and Batrapada  
village in Puri district, Orissa state,  
India

### TYPE OF INTERVENTION

New house construction

### YEAR

2000-2002

### PROJECT TARGET

73 families/365 people

### SHELTER/HOUSING SOLUTION SIZE

288 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India – Cuttack  
affiliate

### PARTNERS

Lok Sevak Yuva Mandal, India

### FUNDING

American Association for Physicians  
of Indian Origin  
Our Village Trust  
Rotary Club of Birmingham, UK

### SUBMITTED BY

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## India



## Summary

On Oct. 29, 1999, a cyclone struck Orissa, a state on India's eastern coast. It was the deadliest Indian storm since 1971, killing about 10,000 people. This came after severe flooding in August, and a cyclone just a few days earlier. Habitat for Humanity India responded to help those affected in two locations — the village of Bhitara Srichandanpur in Jagatsingpur district, and the village of Batrapada in Puri district, building 73 homes as part of a wider, holistic disaster response operation carried out in partnership with other organizations.

## Timeline

- September 2000 — Coordination meeting with partners and community representatives.
- November 2000 — House design presented to community for feedback.
- January 2001 — House construction started.
- February 2002 — Program completed.

## Background

Orissa state, officially called Odisha, has a 480-kilometer coastline along the Bay of Bengal, making it particularly vulnerable to cyclones. Cyclone 05B struck Orissa's coastline and remained over the state for more than 48 hours before weakening. The India Meteorological Department described it as a super cyclonic storm, a term that had never been used before. The cyclone caused heavy rainfall across southeast India, leading to heavy flooding in low-lying areas. More than 275,000 homes were destroyed and 1.67 million people were left homeless. Areas most

affected were Bhubaneswar, Puri, Cuttack, Paradeep, Jagatsingpur and Kendrapara.

## Project Overview

Orissa state government extended emergency relief operations for three months, with assistance from non-governmental organizations and other institutions. In addition to deaths, injuries and housing damage, the cyclone destroyed the livelihoods of much of the coastal farming community, saturating more than 1 million hectares of crop under salty water and killing more than 400,000 livestock.

Our Village Trust, a U.S.-based organization, and its local partner Lok Sevak Yuva Mandal, approached HFH India to construct homes for residents of Bhitara Srichandanpur village, where all homes were destroyed and where LYSM had been conducting relief operations. OVT and LYSM constructed a multipurpose community hall, used as a children's day-care center, a night



A completed house in Bhitara Srichandanpur.



school, and a venue for adult education and community meetings. LSYM formed a local council and started a seed bank. Trees were purchased and families received loans to purchase cattle. Within six months, livelihoods had been restored.

Batrapada was another village where every house was destroyed by the cyclone. HFH India identified 27 vulnerable families that did not fulfill government criteria for support because they had lost all their belongings and were not able to prove their identities, and supported them to build new homes. In Batrapada, the Rotary Club of Puri partnered with HFH India to provide logistical support.

### Implementation

In both villages, HFH India operated through its local affiliate in Cuttack, Orissa. Housing designs were developed by HFH India to meet government specifications and requirements, before being presented and explained to residents for their input and suggestions. Committees were formed in both villages, made up of local representatives, HFH India and partner staff, to monitor progress of the project.

All home partner families participated in orientation meetings on their house design, the construction process and the contribution of sweat equity, and actively worked to build their homes.

Community members were trained in construction, and many worked as masons or

construction workers to build all 73 houses. HFH India and partner families built the houses, while its partners provided infrastructure facilities. Houses were built of bricks and cement, and were one hall, one room, a kitchen and toilet. Government rules required that the houses be built on plinths a minimum of four meters high, built on higher ground and incorporating cyclone resistant features.

Coordination by the United Nations ensured that duplication was avoided, and provided resources to NGOs that had experience working in Orissa and were trusted by local communities.

### Lessons & Promising Practices

- The Orissa cyclone relief and rehabilitation experience resulted in policy changes, with a focus on early warning systems.
- The community based development plan developed in Orissa is to be used as a model for other Indian states.
- A state disaster mitigation authority was set up in Orissa.
- Getting building materials to the construction site was a challenge because approach roads were destroyed. Instead, materials were driven in small trucks as far as possible, and then transferred on people's heads. Materials were scarce after the cyclone, and prices shot up several times during the project.

## Sukakarya Flood Response, Indonesia

### PROJECT NAME AND LOCATION

Jakarta Floods disaster response  
Sukakarya village, Bekasi regency,  
West Java province, Indonesia

### TYPE OF INTERVENTION

New semi-permanent houses

### YEAR

2002

### PROJECT TARGET

50 families/250 people

### SHELTER/HOUSING SOLUTION SIZE

118.1 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Indonesia

### PARTNERS

Yayasan BMS  
Yayasan Mitra Mandiri

### FUNDING

General Motors Indonesia  
Habitat for Humanity New Zealand

### ADDITIONAL INFORMATION:

New and old materials were  
combined to reduce costs.

### SUBMITTED BY:

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## Indonesia



### Summary

Torrential rains that began on Jan. 29, 2002, continued for days, causing widespread flooding in greater Jakarta, Indonesia's capital, and surrounding municipalities. Flooding is an annual problem in Jakarta and the city of 12 million people ground to a halt as major thoroughfares were blocked, and shops, schools and factories closed. At the peak of the flooding, about a quarter of Jakarta was under water. Habitat for Humanity Indonesia helped 50 families to build semi-permanent shelters in Sukakarya village, in Bekasi regency, on Jakarta's eastern border.

### Timeline

- February 2002 — Assessment.
- March 2002 — Initial coordination meeting.
- March 2002 — Construction began.
- June 2002 — Project completed.

### Background

Jakarta is situated at the mouth of the Ciliwung River, and 40 percent of the city is below sea level. Jakarta's low topography and numerous rivers make it prone to flooding. Overpopulation and deforestation exacerbate the situation. Those most affected by the flooding in early 2002 were living in the poorer, low-lying areas of the city, including shantytowns, where thousands of squatters live in makeshift dwellings. Hundreds of thousands of people were forced to leave their homes and more than 114,000 people moved to temporary shelters provided by the city and non-governmental organizations. While many returned to their homes, many of their possessions were lost or damaged.

### Project Overview

HFHs Indonesia conducted assessments in several locations and decided to concentrate on Sukakarya village, in Bekasi regency, an area close to Jakarta, based on recommendations and consultation with two local NGOs — Yayasan BMS and Yayasan Mitra Mandiri. The housing design used material easy to find in the area, such as bamboo for walls and roofing, traditional bricks and roof tiles, and wood. HFH Indonesia hired local workers to preserve and benefit from knowledge of traditional building methods.

General Motors Indonesia, under its banner Penduli, Bakti Sosial General Motors Indonesia (Care, General Motors Indonesia Social Service) and HFH New Zealand provided financial support.

HFH Indonesia invited students, corporate employees and embassy expatriates to join the project through the Building on Saturday and Sunday project, to fundraise and to increase awareness of volunteer



Flooding in Sukakarya

opportunities and the needs of the families. This plan also helped achieve reconstruction targets and raised the profile of HFH Indonesia.

### Implementation

HFH Indonesia asked Yayasan BMS and Yayasan Mitra Mandiri to collaborate on the project. To select home partner families, HFH Indonesia distributed an application form to be completed by the community before starting verification. Families were selected based on land ownership, income level, extent of flood damage and number of children.

HFH Indonesia, Yayasan BMS and Yayasan Mitra Mandiri divided the construction process into three phases because of the limited number of skilled laborers in the area. HFH Indonesia oriented all groups on the construction timeline, the housing size, the locations (some family members chose to move because of future flood risks) and labor costs.

HFH Indonesia explained the sweat equity concept to home partner families. This involved moving construction materials from road to build location, mixing concrete, producing coffee and tea for the laborers and assisting in the construction process.

### Lessons & Promising Practices

- Having volunteers work with local communities made the reconstruction process more enjoyable and helped maintain home partner dignity.
- Dividing the project into three phases ensured that targets were met, the project well-monitored and there was maximum impact for home partners and volunteers.
- By working with local NGOs, HFH Indonesia could ensure that the most vulnerable families were selected to receive assistance.
- There were occasions when HFH Indonesia could not help families because they didn't satisfy the criteria of owning their own land, or because they chose to relocate to a different area.

**Right: Habitat founders, Linda and Millard Fuller, present house key to home partner.**



## Gujarat Earthquake Recovery Initiative, India

### PROJECT NAME AND LOCATION

Gujarat Earthquake Recovery Initiative, Kutch District, Gujarat State, India

### TYPE OF INTERVENTION

Debris removal, housing reconstruction and community buildings

### YEAR

2001-2004

### PROJECT TARGET

541 earthquake-affected families

### SHELTER/HOUSING SOLUTION SIZE

30 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India  
Habitat for Humanity International  
World Vision International

### PARTNERS

Discipleship Center

### FUNDING

United States Agency for International Development

### SUBMITTED BY

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## India



## Summary

After a devastating earthquake that affected thousands of vulnerable people, the Gujarat earthquake recovery program was conceived to help foster long-term recovery objectives. World Vision, with a grant from USAID, worked in partnership with Habitat for Humanity International and Habitat for Humanity India to launch the housing component for 541 families, with programs that included support for economic activity and the restoration of livelihoods.

## Timeline

- Jan. 26, 2001 — A powerful earthquake struck Gujarat state.
- February-April 2001 — Field assessments conducted.
- June 2001 — Grant agreement approved by USAID.
- August 2001 — Project began in Sikara, Khumbariya and Somanivandh villages.
- December 2003 — Housing project finished.

## Background

On Jan. 26, 2001, an earthquake measuring 7.7 on the Richter scale struck western India. Although the major commercial center of Ahmedabad sustained significant damage, the focal point for destruction was Kutch district. Villages and towns were destroyed, and survivors confronted a variety of needs: Food, shelter, water, sanitation, social services and livelihoods.

Severely affected populations included 15,000 artisans and thousands of herders and wage laborers. Handicrafts are one of the main forms of income for

many Kutchis, with a significant cottage industry throughout the district (mostly embroidery, dyeing and patchwork). Many lost their stock of handicrafts, and their tools and homes were destroyed. Herders lost animals. Many buffalo and goats, used primarily for dairy production, were injured or killed. Wage laborers employed in small-scale manufacturing, salt production and port-related activities also suffered loss of income. Kandla port, one of India's first free trade zones and the second largest port in India, handles 17 percent of the country's maritime traffic. The five districts most affected by the earthquake produce 75 percent of India's salt. All of these vulnerable groups experienced further economic losses as they confronted the rebuilding of their homes. The recovery program focused on vulnerable groups by providing an income buffer while reconstruction proceeded by incorporating a cash-for-work component.

## Project Overview

The program recognized both the context in which the earthquake took place and



Local contractor checks progress on house construction in Khumbariya village.



the groups made most vulnerable. The program was designed as a catalyst for a longer-term development, and each intervention was proposed through coordination with the partner communities, the government of Gujarat, other NGOs and partner organizations. Coordination was established in order to minimize risk, maximize impact and respect key stakeholders in a changing policy environment.

The project resulted in the reconstruction of 541 permanent houses as a part of the wider recovery program. Reconstruction was designed to keep families in the places where they lived, because one of the objectives was preventing relocation. The houses had a covered area of 30 square meters and were designed with permanent materials (masonry). Their design and size followed the government's guidelines for the smallest allowable house size to be constructed for landless laborers and farmers having less than one hectare of land. This criterion applied in villages where more than 70 percent of the housing stock was destroyed. This way, the program complied with the so-called "package 1" of the rehabilitation and reconstruction project announced by the government. At the same time, the recovery program targeted the most affected villages and the most vulnerable people in those villages.

## Implementation

HFHI brought technical expertise and experience in project management and housing construction to the program, while WV contributed its relationships with the communities in Kutch, relationships with local and state government officials, years of U.S. government grant experience, private funding, and an integrated plan for rehabilitation. The commitment of both organizations was to support interventions to enhance long-term recovery.

Debris removal was included, and it was conducted as a cash-for-work activity. Fifty workdays were budgeted for two members of each household in the targeted villages, and included some demolition in addition to clearing rubble. The CFW income became an incentive to accelerate the housing reconstruction process. While only two members per household could be compensated for their labor, other household members also assisted with debris removal. Rented tractors facilitated more participation and faster clearing. During the final phase of the program, it was necessary to strengthen the field operations by including the services of another local NGO that was already working on housing reconstruction in Gujarat. Hence, Discipleship Center was appointed as the project manager and given the task of completing 69 houses in Somanivandh village. Discipleship Center strategically positioned its staff in the field and provided effective management of all resources.

## Lessons & Promising Practices

- The design of the houses incorporated seismic resistance features and met national building standards. Geotechnical assessment provided information on soil type and its suitability to safely bear the houses constructed in high-risk seismic zone. In order to ensure compliance, a professional local engineering firm was hired for seismic design and drawings and for periodic supervision during construction. The firm provided safety certificates when houses were completed.
- The targeted communities preferred on-site reconstruction instead of relocating to new land. Relocation would have promoted better use of land and resources, but it would have been at the cost of social and financial disturbances to the families' networks and livelihoods.

- Community involvement was encouraged during planning and for the clearing of debris. During the construction stage, community participation was somewhat hindered, limited to works related to concrete curing and movement of construction materials. Residents could not participate fully in the regular construction of houses because that required technical and skilled workmanship. In addition, the contractors were obligated to complete the work on time, and required quality.
- Technical solutions for sanitation facilities must be adapted to the local environment, financial resources, local skills and the traditional behavior of the users. Flush systems with septic pits were provided in Sikhra and Khumbariya villages. Unfortunately, the families were not in the habit of using flush latrines. Because of disuse, the units were neglected and many were damaged. Before constructing flush latrines, it is necessary to provide corollary household training on appropriate use and maintenance. It is also necessary to ensure availability of water throughout the year. Because of uncertainties on these two issues, sanitary facilities were not included in the houses built in Somanivandh village

## Salbarun Village, Afghanistan

**PROJECT NAME AND LOCATION**  
Salbarun Village, Balkh Province  
Mazar-e-Sharif, Afghanistan

**YEAR**  
2002-2003

**TYPE OF INTERVENTION**  
Direct shelter assistance, construction materials production, reconstruction

**SHELTER/HOUSING SOLUTION SIZE**  
39 square meters

**PROJECT TARGET**  
199 households

**IMPLEMENTING ORGANIZATION**  
Habitat for Humanity International

**IMPLEMENTING PARTNERS**  
Joint Development Associates  
Food for the Hungry International

**FUNDING**  
Habitat for Humanity International

**ADDITIONAL INFORMATION**  
Complex humanitarian emergency in the context of civil conflict and failed state

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## Afghanistan



### Summary

Salbarun village, located in Balkh province in northern Afghanistan, is a typical rural settlement that revolves around agriculture and livestock. A shelter program for returning war-affected displaced households was started in 2002-2003, with strong links to shelter and livelihood, and a complementary food security intervention by partners.

### Timeline

- November 2001 — Fall of the Taliban regime.
- February 2002 — Exploratory trip to northern Afghanistan by HFHI assessment team.
- March-May 2002 — Surveys conducted in five villages in Balkh province.
- June 2002 — Habitat for Humanity office opened in Mazar-e-Sharif.
- August 2002 — Agreement signed with Salbarun community elders. Project began with massive production of mud bricks.
- February 2003 — Project dedication ceremony attended by Afghan government officials.

### Background

By 2002, more than 30 years of civil conflict had created difficult living conditions for a large number of Afghans. After the fall of the Taliban regime in 2001, millions of refugees and internally displaced persons returned to their places of origin, mostly to find dilapidated housing in dire need of repair and/or reconstruction. Ongoing civil unrest, a persistent drought and an earthquake in 2001 compounded one of the more complex humanitarian emergencies seen lately. Though Afghanistan was under a United Nations mandate with support from an international security assistance force and the U.S. military, local warlords still remained as the power brokers in vast regions outside the capital Kabul.



Residents show certificates of participation in shelter programs.



## Project Overview

Salbarun village was selected after a survey of returning refugee and IDP populations as a place for intervention to support holistic efforts that included food security and agriculture technical assistance programs organized by partner organizations. The shelter intervention included new housing and repairs using local materials and the traditional dome-shaped roofs. The project included the production of mud bricks for walls, masonry of the walls and roof, plastering with mud and straw and the provision of wooden doors and wood and glass windows. The entire community was organized for the production of materials and participation in construction. Overall, some 1.5 million bricks were produced and used in 33 new houses, 25 major renovations and 141 repairs. The design included seismic analysis, and that determined thickness and height dimensions of walls and wood that was used as a horizontal bond and reinforcement in corners. All 199 families living in the village participated.

## Implementation

To respect Islamic culture, genders were separated during phases of the project. Most participants in the project were men. Women were surveyed separately by HFHI female staff during the planning stage, and contributed significantly to the layout design of the new houses, specifically room dimensions to allow for carpet weaving, a livelihood support issue. A community council was organized and comprised of 15 community elders (all men), including the local mullah. The village mosque was used as a meeting place for planning and project monitoring meetings, and community areas were used for warehousing. Participation was also facilitated through food security assistance from Food for the Hungry International and by logistics support provided by Joint Development Associates.

**Right: Community leaders signing project agreement.**

**Facing page from top to bottom: Doors and windows installed in a new Habitat house; beneficiaries making bricks.**







## Lessons & Promising Practices

- On-site reconstruction is preferred over relocation, even for returning populations. Households in this project had a high level of attachment to their place of origin and community, as they resettled after being displaced in locations as far away as Iran.
- Having field female staff working for Habitat for Humanity proved critical in reaching women for feedback and information during the project design.
- Involving the community in the governance of the project through a community council constituted a promising practice because problems and issues were resolved in a transparent and participative manner.
- Risks remain on the long-term sustainability of the re-settlement because of unresolved broader governance and political issues affecting life in the community.



## Balakot, Pakistan

### PROJECT NAME AND LOCATION

Pakistan Earthquake Response  
Mansehra District and Northwest  
Frontier Province

### TYPE OF INTERVENTION

Distribution of non-food items  
distribution, transitional shelter,  
support of house construction and  
repair, salvaged materials processed  
by Habitat Resource Centers

### YEAR

2005–2008

### PROJECT TARGET

More than 10,500 households

### SHELTER/HOUSING SOLUTION SIZE

Transitional shelter covered area:  
18 square meters  
New housing of various sizes

### IMPLEMENTING ORGANIZATION

HFH Pakistan

### PARTNERS

Partner Aid International  
International Organization for  
Migration

### FUNDING

Habitat for Humanity International,  
Korea International Cooperation  
Agency, Japan Platform, Canadian  
International Development Agency,  
Pakistan's Earthquake Reconstruction  
and Rehabilitation Authority

### ADDITIONAL INFORMATION

Project included traveling sawmills

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## Pakistan



## Summary

After a devastating earthquake in October 2005, Habitat for Humanity Pakistan started a multi-component intervention to assist households in northwest Pakistan with distribution of emergency supplies, construction of transitional shelters, and the establishment of Habitat Resource Centers to support house repairs and reconstruction, salvage and reprocessing of construction materials and skills training. Working with partners and the government of Pakistan's Earthquake Reconstruction and Rehabilitation Authority, the project assisted more than 10,000 families.

## Timeline

- Oct. 8, 2005 — Earthquake struck northwest Pakistan.
- Oct. 15, 2005 — Distribution of materials began.
- December 2005 — Transitional shelter construction began.
- July 2006 — HRCs established in Balakot and Mansehra.
- August 2006 — ERRA began government housing grants.
- September 2006 — HRCs mobile sawmill services began.
- October 2008 — New phase of the house repair project began.

## Background

On Oct. 8, 2005, a magnitude-7.6 earthquake struck Pakistan, India and Afghanistan. The epicenter was near Muzaffarabad, the capital of Pakistani-administered Kashmir, about 100 km north-northeast of Islamabad, the capital.

The earthquake devastated towns and villages in the harsh mountainous terrain of northwest Frontier Province, Northern Punjab and Kashmir. Even before the tragedy, people in six of the nine districts that were hardest hit scraped a living from their small landholdings.

Aftershocks and landslides severed roads, hampering relief efforts. About 250,000 people were forced into tent camps. Almost 750,000 people were stranded in the mountains, relying on airlifts for food, shelter and medicine. The Pakistani government estimated that the earthquake affected 3.5 million people, killed 73,276, injured 70,000, and left 2.8 million homeless.

## Project Overview

The project consisted of several phases, from emergency response to reconstruction of permanent homes.



A young villager helps rebuild Balakot.



After initial distributions of non-food items (including 800 winter survival kits, 500 blankets, 150 waterproof tents, ropes, buckets, nails and tarpaulins), transitional shelters were used to prevent displacing families from their communities and livelihoods (mostly livestock and basic agriculture). The transitional shelters consisted of a dome-shaped design adapted for quick assembly. The design featured materials that could be reused later in permanent housing (corrugated galvanized iron sheets and insulation for cold weather).

For permanent reconstruction, the project provided technical support and assistance for the design, processing and recycling of salvaged materials and construction of new housing that met new government standards intended to mitigate earthquake risks. The project also handled house repairs and developed training on construction-related skills.

## Implementation

HFH Pakistan initially worked in Balakot, a town near the epicenter of the earthquake. In collaboration with Partner Aid International, materials for the transitional shelters were flown to remote areas by the Pakistani military. Most of the labor was provided by the families under technical direction by HFH Pakistan staff.

Pakistan's Earthquake Reconstruction and Rehabilitation Authority announced a US\$3.5 billion, three-year recovery plan. Families building their homes to new earthquake-resilient designs were eligible for government grants. In August 2006, the authorities assigned HFH Pakistan to

rebuild in four union council areas. About 30 percent of the more than 18,000 homes in the areas had been destroyed or badly damaged.

Several factors hampered local people from building their homes to the new standards:

- A lack of skilled labor.
- Shortages of roofing sheets and materials for upper walls.
- No equipment for cutting the significant amounts of wood and timber that was salvaged.
- It was clear that in order to prevent death and injury from another earthquake, a different house design would be needed. The design would have to be acceptable to the cultural traditions and meet the new building standards.

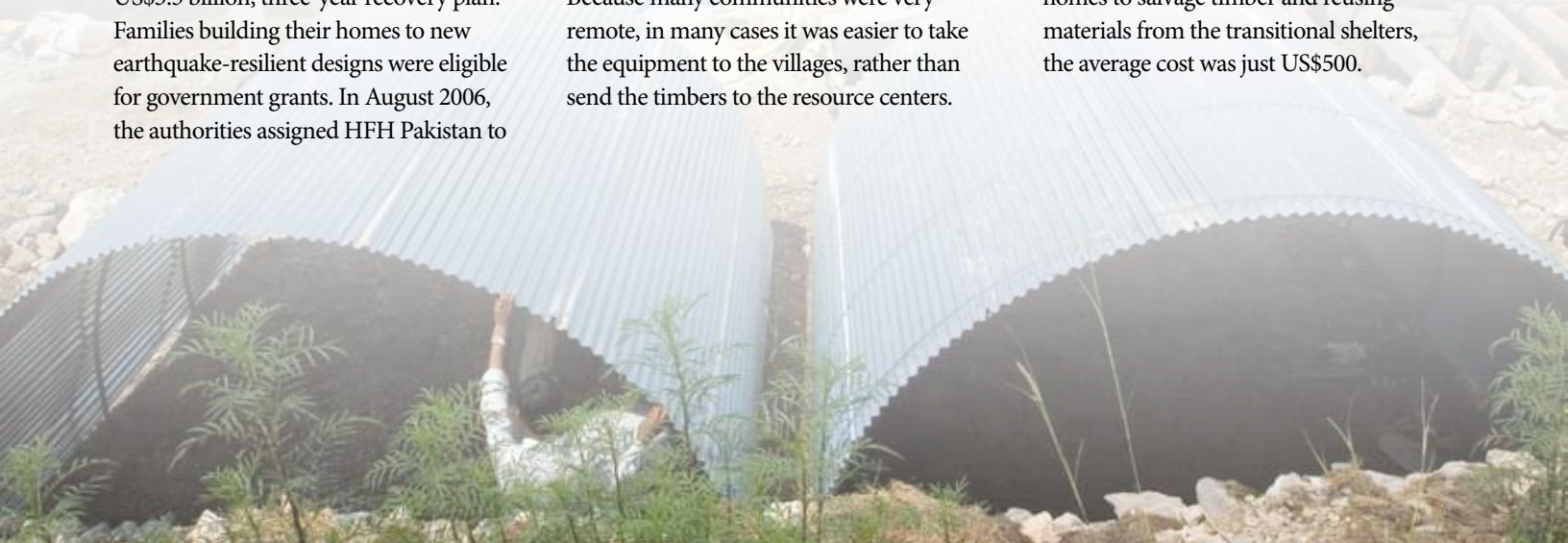
HFH Pakistan established Habitat Resource Centers in Mansehra and Balakot. The HRCs served three important functions: they were bases for local Habitat teams to store construction materials, places for members of the communities to decide about their rebuilding programs, and places for people to receive training and advice. The centers were also distribution points for materials.

Designs were tested to ensure they worked and were earthquake-resilient. Villagers were consulted about needs and preferences. Families brought pieces of salvaged timber for cutting and processing. Because many communities were very remote, in many cases it was easier to take the equipment to the villages, rather than send the timbers to the resource centers.

HFH Pakistan used mobile sawmills. At each stop, villagers brought their salvaged timber for cutting into boards and trusses. HFH Pakistan set up traveling teams to accompany the mobile sawmills. These teams trained local trainers, certified house designs and trained residents on the use of lighter-weight materials, proper linking of superstructures and foundations and other government-mandated standards for earthquake-resistant construction.

## Lessons & Promising Practices

- Transitional shelter and distribution of NFIs proved to be a rational strategy to prevent displacement and disruption of basic economic activity and livelihoods.
- A fairly well coordinated government strategy in support of reconstruction was a key element, particularly the issuing of new earthquake-resistant design and construction standards.
- HRCs proved to be an important program delivery platform, creating many avenues for technical support and training.
- A mobile version of the HRCs brought technical assistance to communities that otherwise would have gone unattended. This outreach model for HRCs services should be explored more for its potential to improve quality in shelter and housing reconstruction.
- The estimated cost of a new home, if materials were bought commercially, was US\$2,500. By dismantling damaged homes to salvage timber and reusing materials from the transitional shelters, the average cost was just US\$500.





## Indian Ocean Tsunami, Indonesia

### PROJECT NAME AND LOCATION

Indian Ocean tsunami disaster response  
18 villages in West Aceh regency, 10 villages in Nagan Raya regency, 8 villages in Aceh Jaya regency, 10 communities in Sigli town, Pidie regency, and 10 communities in Banda Aceh city, Aceh province, Sumatra, Indonesia

### TYPE OF INTERVENTION

New house construction  
House reconstruction and renovation  
Community infrastructure development  
Construction material production

### YEAR

2005-2008

### PROJECT TARGET

8,370 families/41,850 people

### SHELTER/HOUSING SOLUTION SIZE

36 square meters and 45 square meters

### FUNDING

Singapore Red Cross  
Christian Aid, UK Tsunami Disaster Fund, South Africa Plan, Obor Berkat Indonesia

### PARTNERS

Atlas Logistic, International Labor Organisation, Duta Wacana Christian University, Mercy Corps, Salvation Army, Qatar charity, International Organization for Migration

### SUBMITTED BY

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## Indonesia



## Summary

On Dec. 26, 2004, a massive tsunami wave caused by an undersea 9.0-magnitude earthquake struck 160 kilometers north of Simeulue Island, just off Sumatra, Indonesia. An estimated 167,540 people were killed, and around 141,000 homes destroyed. Habitat for Humanity Indonesia repaired, rehabilitated or built homes for 4,991 families, and supported 3,379 other families by building community centers, playgrounds, kindergartens, public clinics, or setting up water and sanitation infrastructure.

## Timeline

- February 2005 — First coordination meeting.
- April 2005 — Four centers set up.
- April 2005 — First houses started.
- December 2008 — Project completed.

## Background

The earthquake that led to the 2004 Indian Ocean tsunami was the third largest ever recorded, and the tsunami was the deadliest. Approximately 230,000 people died. Indonesia, the country that was hit hardest, accounted for nearly 73 percent of all deaths and nearly half of the region's economic loss. The physical force of the tsunami was strongest in Indonesia, the infrastructure the weakest and the population the most concentrated. The tsunami traveled six kilometers inland, destroying towns, villages, infrastructure and agricultural land. Although an estimated 141,000 homes were destroyed,

the Indonesian government estimated that only 120,000 needed to be rebuilt because so many families were killed.

## Project Overview

Aceh province on the island of Sumatra suffered the most. The death of community leaders and local government officials, on top of extensive damage to land administration services and facilities, left a void in the capacity for redevelopment and rebuilding. In Aceh, 80 percent of land documents were destroyed, including almost all cadaster maps, detailing registered land ownership with information on tenure, location and dimensions.

Habitat for Humanity Indonesia established four centers — in Banda Aceh, Aceh's provincial capital city; in the town of Sigli; in the town of Meulaboh; and in an isolated area of West Aceh. These centers employed nearly 400 people, a number



An Indonesian mother of two daughters in her new Habitat home, part of the tsunami response.

that rose to 600 at the height of construction. HFH Indonesia's program director and more than 30 staffers worked in the center. This center handled relations with government authorities, donors and other HFH partners, providing financial services and management oversight. The other, smaller, centers, led by local HFH Indonesia staff, worked primarily on project implementation with families and communities.

### Implementation

HFH Indonesia collaborated formally with several local and international non-governmental organizations in Indonesia, including Mercy Corps, which covered the labor costs for building houses; and Obor Berkat Indonesia and Atlas Logistics, which supported the delivery of materials. To support with resettlement, HFH Indonesia teamed up with various NGOs to meet a wide range of shelter and community needs.

For example, in Peunaga Raya village, in Meulaboh, West Aceh, a group of families communally bought the rights to a piece of land that a community committee divided into 77 plots, and HFH Indonesia built the homes. The committee sought partnership with other organizations in order to address the community's overall needs.

In other locations, HFH Indonesia built houses consisting of two rooms and a toilet in communities where other donors provided water and sanitation facilities. In Jangka Buya, in Pidie Jaya, and Ujong Beusa, West Aceh, HFH Indonesia built homes, while Dow Chemical installed a water treatment facility, and other donors set up a clinic and community center. In Samatiga, West Aceh, the French Red Cross provided water and sanitation facilities for houses built by HFH Indonesia.

**Right: Habitat homes built with tsunami-affected families in Sigli, Aceh province.**

**Facing page top: A Habitat house is modified to meet new design standards following the tsunami.**

**Bottom: Nearly finished homes in the the Lho Kruet area of Indonesia.**







## Lessons & Promising Practices

- After the tsunami and massive reconstruction process in Aceh, not many NGOs were concerned about incorporating disaster risk reduction training into their projects. In 2005, DRR was not popular, and in Indonesia, the implementation of 2005's Hyogo Framework for Action, a 10-year plan to make the world safer from natural hazards, did not become commonplace until 2007.
- The distinguishing features of this disaster response project were community mobilization and transparency.
- Houses built by community members and hired local labor, supervised by HFH Indonesia, were of better quality than those built by contractors.
- HFH Indonesia's selection process, including on-site interviews and public hearings, ensured that it assisted the most vulnerable tsunami victims.

**Habitat recovery homes in Meulaboh receive final work.**



## Yogyakarta Earthquake Response, Indonesia

### PROJECT NAME AND LOCATION

Yogyakarta earthquake disaster response project  
Bantul and Klaten regency, Java, Indonesia

### TYPE OF INTERVENTION

Non-food item distribution  
Construction tools mobile unit (Cotomu)  
Debris clearing  
Core house building  
Construction training

### YEAR

2006–2008

### PROJECT TARGET

1,345 families (6,725 people) and 500 families supported through Cotomu

### SHELTER/HOUSING SOLUTION SIZE

18 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Indonesia

### PARTNERS

Duta Wacana Christian University, Indonesia  
Christian Foundation for Public Health, Indonesia  
Yayasan Indo Jiwa, Indonesia  
Yakkum Emergency Unit, Indonesia

### FUNDING

ABC, ABN Amor, Amigo, AYUB, BMW, Cargill, Caritas Germany, Doshisa University Japan, Dow Indonesia, Exxon Mobil Oil Indonesia, Floral Home, GE Lighting, Gerakan Kemanusiaan Indonesia, HOPE International, IFF, International English Service, Jakarta Korean International School, Microsoft Inc., National University of Singapore, NOKIA, Otsuka Chemical Tbk, Paguyuban Freeport, PT Lautan Luas Tbk, PT Indonesia

Pusat Bahasa Universitas Atmajaya Yogyakarta, Pusat Rehabilitasi Yakkum, Surabaya International School, Yuhui's Team Singapore

### SUBMITTED BY

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## Indonesia



## Summary

On May 27, 2006, a 5.9-magnitude earthquake struck just off the southern coastline of the Indonesian island of Java. More than 5,700 people were killed and more than 45,000 people injured. The sultanate province of Yogyakarta Special Region was closest to the epicenter, and Bantul regency was the worst affected region. Habitat for Humanity Indonesia supported people during the immediate relief operation and the recovery phase.

## Timeline

- May 2006 — House design completed.
- June 2006 — Relief items distributed, first houses started.
- May 2007 — Cotomu was assembled and started operations.
- April 2008 — Project was completed.

## Background

Java is one of the most densely populated places in the world and is home to 60 percent of Indonesia's population. Combined with the earthquake's shallow depth and poor building standards, this led to high casualty rates from the Yogyakarta earthquake. More than 350,000 families lost their homes in central Java and 1.5 million people were affected.

## Project Overview

During the immediate relief operation, Habitat for Humanity Indonesia distributed food, tarpaulins, blankets, medicine and other non-food items to meet daily needs. In the recovery phase, when designing the disaster response operation, HFH Indonesia knew that the program must be well-planned and sustainable; involve affected communities as partners, not subjects; and must involve outside parties, whether individuals or groups, to not only assist financially, but to physically support communities and help in the healing process.

HFH Indonesia focused on the regencies of Bantul and Klaten because they



Family clears foundation to build temporary shelter.



were the areas hit hardest. The villages were selected after a series of meetings with non-governmental organizations, local government and community-based organizations.

The house design was influenced by many considerations. With Java's propensity for earthquakes, houses needed to be strong and earthquake-resistant; easy to build, because many people were living in tents; and as economic as possible to ensure the maximum number of people could be helped without compromising standards. Because residents would be involved in the construction, skill levels had to be taken into account. The final house design was for a core house, allowing partner families to expand their home as their circumstances changed.

### Implementation

HFH Indonesia distributed food and non-food items in the weeks after the earthquake, with the International Organization for Migration, Atlas Logistic and Handicap International providing transportation.

Many residents lacked the skills needed for house construction, so training sessions were held to build capacity. Besides theoretical learning, practical training took place as houses were built.

Houses were built using a reinforced concrete structure, with foundations of reinforced concrete foot plates and roofs made of non-asbestos fiber cement material, commonly used in central Java. Following the concept of gotong royong (mutual aid), residents worked together on each other's homes, reusing materials they already had or were able to salvage after the earthquake, and transferred construction knowledge among themselves.

HFH Indonesia also set up a construction tools mobile unit (Cotomu), consisting of carpentry tools, a generator, electric saw

and drill machine. Cotomu traveled to communities where reconstruction was taking place, even in areas where Habitat was not active, to aid the recovery process.

The program was managed by a project coordinator based in Yogyakarta and reporting to an independent board.

### Lessons & Promising Practices

- The earthquake left many people with long-term physical disabilities, largely caused by houses collapsing on them. Often these were the primary income earners in families, leading to a drastic change in a family's financial situation. The needs of these injured people were largely overlooked in the aftermath of the earthquake, so HFH Indonesia made a conscious decision to support these families in particular.
- In communities where there was an abundance of people with construction knowledge, the gotong royong concept worked well, but not as well in others as differing levels of knowledge meant varying levels of support, which could potentially affect the quality of a house. Thus, HFH Indonesia hired skilled laborers when expertise was required.
- Different communities had different agreements to ensure adherence to the gotong royong concept. Some instigated a daily fine system; others a substitution system requiring the employment of a skilled laborer when a family couldn't participate. To support the arrangements decided by each community, HFH Indonesia delivered materials in stages so that if one resident did not comply with the arrangements, supplies for another group were postponed and social pressure ensured the situation was resolved quickly.

## Tamil Nadu State and Puducherry Union Territory, India

### PROJECT NAME AND LOCATION

Community-based Disaster Preparedness & Mitigation Program  
Tamil Nadu State, India

### TYPE OF INTERVENTION

Disaster preparedness training and awareness; structural mitigation of houses

### YEAR

2007-2008

### PROJECT TARGET

9,152 families in 41 coastal villages

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India

### PARTNERS

Rural Education and Action for Liberation (REAL)  
Gandhiji's Oriental Organization for Development of Workers and Institute for Literacy and Logic (GOODWILL)

### FUNDING

Habitat for Humanity International

### SUBMITTED BY

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## India



## Summary

In May 2007, Habitat for Humanity organized a disaster preparedness and mitigation program that benefited more than 9,100 families in 41 villages of Tamil Nadu State and Puducherry Union Territory. School-based programs reached 2,500 students and 70 teachers. Residents participated in hazard mapping and vulnerability analysis, disaster preparedness planning, awareness raising and hazards monitoring. Also, nearly 800 houses were retrofitted to protect against multiple hazards. Structural mitigation included reinforcement of walls, strapping of roof structures, waterproofing terraces and plastering exposed walls. Additional related training addressed know-how transfers for improvements in design, materials and construction techniques.



**Top: Children participate in hazards identification activity.**

**Bottom: Community map drawn by training participants.**

## Timeline

- Dec. 26, 2004 — A tsunami devastated numerous communities along the coast of Tamil Nadu State and Puducherry Union Territory in southeastern India.
- February-July 2007 — Habitat for Humanity International and Habitat for Humanity India developed a strategy for a community-based disaster risk management program in tsunami-affected communities.
- August 2007 — Surveys conducted and communities selected.
- September 2007 — House retrofits began.
- November-December 2007 — Training and community workshops conducted.
- May 2008 — Refresher programs conducted.

## Background

The southeast coast of India is prone to annual flooding and wind damage from cyclones and monsoon rains. Rising sea levels and increased rainfall over the last few years, particularly in the Puducherry region and its adjoining Cuddalore and Viluppuram districts of Tamil Nadu state, demonstrate the effects of climate change patterns. The 2004 Indian Ocean tsunami killed nearly 11,000 people in India and displaced 150,000; about 90 percent of the tsunami-affected population lives in these low-lying areas. Fishermen, dalits (very low-caste families) and other marginalized and vulnerable communities living in disaster prone areas generally lack the knowledge and facilities for safeguarding

themselves from the effects of disasters. They frequently suffer the most in terms of losses of family members and property. Habitat for Humanity's disaster preparedness and mitigation program was conceived to mitigate such losses, and to educate and prepare residents of these disaster-prone areas.

### Project Overview

The program was designed to facilitate capacity building and to empower local communities to address their longer-term vulnerabilities, thus building community resilience. This, in turn, would prepare them to respond to any hazard. In addition, the project included activities to mitigate the impact of a hazard, with concrete structural mitigation components applied to existing houses. Some of these communities were already involved in reducing vulnerabilities (particularly in the social and economic fields) through their own development initiatives.

The inclusion of hazard preparedness and mitigation brought added value to the development initiatives being implemented by other local NGOs in these communities. The program had three objectives:

1. Disaster preparedness and mitigation community plans: Empower communities in 41 coastal villages from Villupuram, Cuddalore district and from Puducherry Union Territory to address vulnerabilities and to acquire skills to prepare for and mitigate impact of future hazards.
2. Disaster preparedness and mitigation measures for schools: Educate and equip 15 schools from Villupuram district to respond to any disaster.
3. Structural mitigation program: Retrofit 800 houses to make them hazard-resistant.

### Implementation

The primary strategy was to work with local partners that had a long-term presence and

**Right: A couple in front of their damaged home in Tamil Nadu.**

**Facing page: Women from self-help groups attend a preparedness workshop.**



interest in the communities. Habitat selected local community-based organizations REAL and GOODWILL on the basis of their capacity, past achievements and long-term commitments toward the communities in which they work. Disaster preparedness and mitigation plans, at the village level, started with a hazard mapping and vulnerability analysis exercise in each village. The exercise used participatory rural appraisal tools, with different stakeholder groups providing perspective on issues related to hazards and their impact on the community. Through a socio-economic mapping exercise, groups were taught to record the impact of past and possible future hazards on the social, cultural, environmental, economic and individual life in their community. The community groups also discussed and recorded the resources and capacities that could be used to respond. The whole process was participatory, with each group taking transect walks through

the village to re-familiarize themselves with various resources, landmarks, hazard-prone areas. These were translated into hazard, vulnerability mapping. The findings of the four different groups of stakeholders (women's self-help groups, men, youth, and other vulnerable people) were brought together by a committee with representation from each stakeholder group to design the village hazard and vulnerability scenario.

Local contractors handled the structural mitigation of houses with participation of homeowners and under close supervision by HFH India technical staff. Interventions included buttressing weak walls to improve lateral load resistance of long walls, fitting weather-resistant tiles for sealing flat roofs to stop the corrosive effects of water leaks from compromising the underlying structures, fitting cement lateral bands on the tiled roofs to provide additional stability for houses





located in cyclone and high wind locations, installing cistern rainwater harvesting structures for proper drainage and to prevent water collecting around structures, fitting rooftop doors so inhabitants could escape to the roof, and repairing or retrofitting houses to strengthen structures.

### Lessons & Promising Practices

- A community-based disaster preparedness and mitigation program reinforces traditional community values such as self-help, resourcefulness and cooperation. With this program, Habitat for Humanity kick-started a community-led initiative that can be developed further. The capacity-building training is only an initial step toward a comprehensive hazard-resistant community. A community ideally moves up various socio-economic measures to
- reach a no-vulnerability stage.
- Disaster preparedness and mitigation programs represent a long-term commitment because they require sustained involvement with the community. Mainstreaming risk reduction elements in HFH India's work around shelter and housing adds tremendous value to the program portfolio.
- The use of local, community-based partners to engage target populations saved time and prevented misunderstandings about the scope of the program. To assure sustainability of the program, it was critically important to establish local disaster management committees with representatives from the village council, women's self-help groups, youth and educators.

**Right: Community leaders discuss disaster preparedness.**



## Cyclone Sidr, Bangladesh

### PROJECT NAME AND LOCATION

Cyclone Sidr rehabilitation  
Mirzaganj in Patuakhali district  
and Bakherganj in Barisal district,  
Bangladesh

### TYPE OF INTERVENTION

Transitional shelter construction  
Permanent toilet construction  
Community-based disaster risk  
management, and water, sanitation  
and hygiene training

### YEAR

2007-2009

### PROJECT TARGET

480 transitional shelters  
1,857 people trained in CBDRM and  
WASH

### SHELTER/HOUSING SOLUTION SIZE

20 square meters

### IMPLEMENTING ORGANIZATION

HFH Bangladesh

### PARTNERS

Southern Socio Economic  
Development Program Society  
Development Agency

### ADDITIONAL INFORMATION

Hosted 365 CAM volunteers

### SUBMITTED BY

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## Bangladesh



## Summary

Cyclone Sidr struck Bangladesh's southern coastline on Nov. 15, 2007. Sidr killed more than 3,000 people and affected more than 8 million people. Habitat for Humanity Bangladesh responded to this disaster by providing materials, training and construction assistance for 480 transitional shelters built with permanent toilets and facilitated community-based disaster risk management and water, sanitation and hygiene training in 12 communities across Patuakhali and Barisal districts.

## Timeline

- November 2007 — Seven-person assessment team visited affected areas.
- February 2008 — Habitat Resource Center opened in Mirzaganj; home partner families identified.
- March 2008 — Construction began on first 200 homes.
- December 2008 — Construction of 480 transitional homes completed.
- February 2009 — CBDRM and WASH training complete; 480 permanent toilets built.

## Background

Cyclone Sidr's winds peaked at 250 kph and tidal surges reached 6 meters, killing 3,000 people as entire villages were swept away. Reports from the worst hit areas indicated that many died when trees fell on poorly constructed homes, or as houses were swept away by torrents of water.

When compared with the destructive cyclones of 1970 and 1991 that together

killed more than 600,000 people, the lower death toll was attributed to investment in warning systems and disaster prevention efforts. Despite this, much more must be done in order to better prepare for disasters and save more lives.

Earlier in 2007, Bangladesh was struck by severe flooding and Habitat for Humanity Bangladesh was assisting families affected by that disaster in the central district of Tangail when Sidr hit.

## Project Overview

Before Sidr, Habitat for Humanity Bangladesh did not have a presence in Bangladesh's coastal southern districts, so a Habitat Resource Center was set up to coordinate operations. Mirzaganj subdistrict was chosen at the suggestion of a district commissioner because it was an area severely affected by Sidr and was a place where no other nonprofit organizations were working on housing rehabilitation.



The Habitat Resource Center manufactured cement columns and metal components for roofs.

Transitional shelters were built, rather than permanent structures, because communities were so poor that low-cost, easy-to-assemble cyclone resistant structures were the best option. HFH Bangladesh was already using a similar approach in Tangail district after floods, and this model had been used successfully elsewhere.

Between March and December 2008, HFH Bangladesh conducted 16 sessions of CBDRM training and orientation on transitional housing.

The toilets are permanent structures, built at a slight distance from the houses as stand-alone buildings. Southern Socioeconomic Development Program, a local non-government organization, built them. HFH Bangladesh provided technical expertise, supervision and quality control. Another local group, Society Development Agency, provided WASH training for all 480 families using adapted UNICEF Bangladesh materials.

## Implementation

The Mirzaganj HRC manufactured and produced pre-case cement columns and welded metal roof brace and trusses. At the peak of manufacturing, the HRC could produce five shelter kits a day and 100 in a month. Raw, aggregate steel reinforcing bars and other materials were brought in from the neighboring town of Patuakhali.

The HRC was intentionally situated near a river so that supplies, equipment and volunteers could be easily transported to and from Dhaka. Because home partner families tended to live

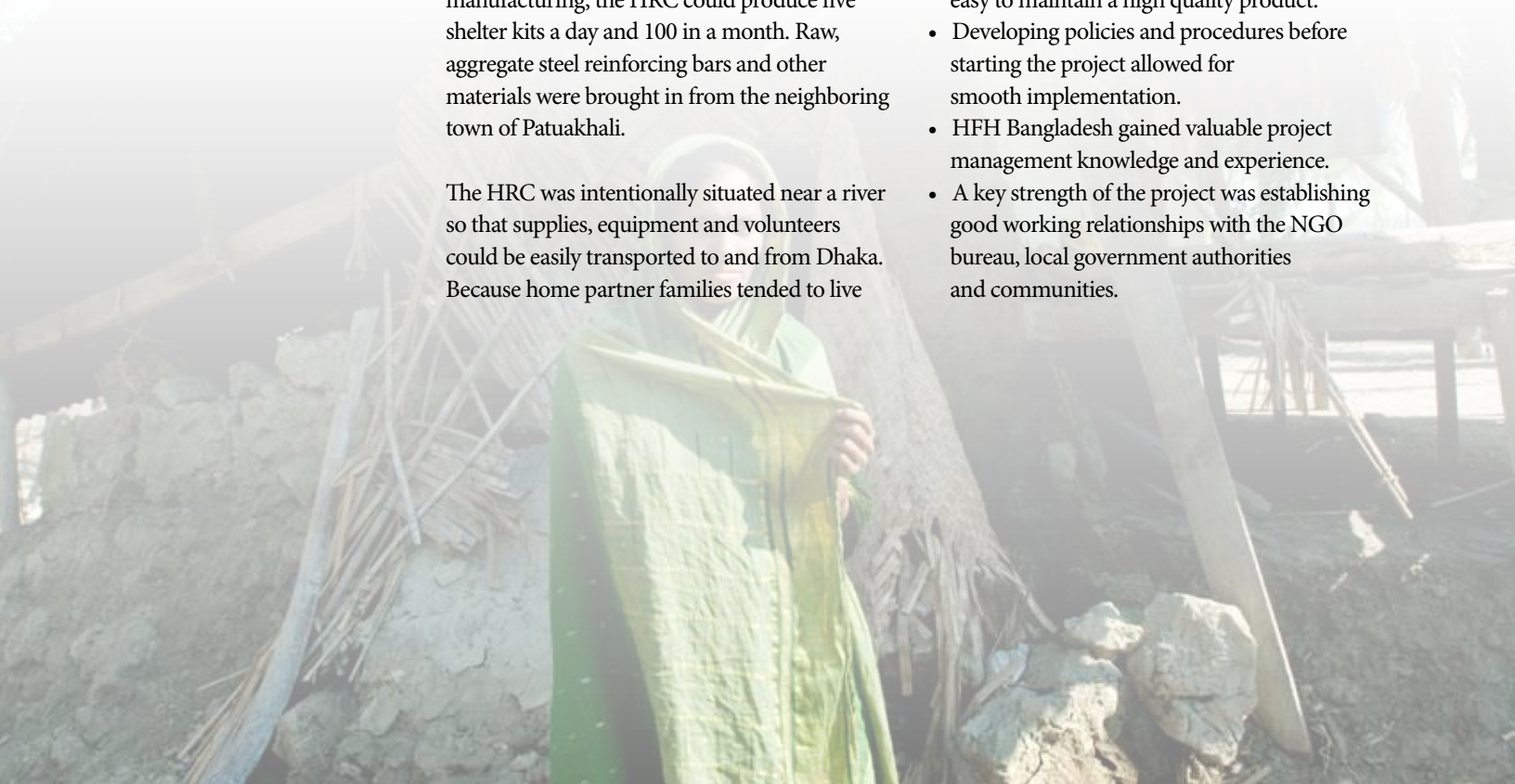
near the water, waterways were a reliable and practical way of transporting pre-fabricated shelter components to the project sites for assembly.

HFH Bangladesh identified families to benefit from the project by working with local government officials and communities. Home partner families were those who had lost their homes or those who were particularly vulnerable, with elderly or disabled relatives. Home partner families had to demonstrate clarity of land tenure.

Although many families did contribute sweat equity, this wasn't possible in all cases because many families survived on a purely subsistence basis and had to tend to their vegetables gardens and rice, or fish or take on itinerant employment in order to survive. The prefabricated components therefore tended to be assembled by volunteers and skilled or unskilled day laborers.

## Lessons & Promising Practices

- Establishing a HRC and on-site preconstruction methodology meant it was easy to maintain a high quality product.
- Developing policies and procedures before starting the project allowed for smooth implementation.
- HFH Bangladesh gained valuable project management knowledge and experience.
- A key strength of the project was establishing good working relationships with the NGO bureau, local government authorities and communities.





## Jakarta Floods Disaster Response, Indonesia

### PROJECT NAME AND LOCATION

Jakarta floods disaster response  
Bekasi city, Bekasi regency; Teluk  
Gong and Tanjung Priuk sub-districts;  
North Jakarta, West Java province,  
Indonesia

### TYPE OF INTERVENTION

House repair

### YEAR

2007

### PROJECT TARGET

1,000 families/5,000 people

### SHELTER/HOUSING SOLUTION SIZE

Varied

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Indonesia

### FUNDING

HFH Indonesia

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## Indonesia



## Summary

Beginning Feb. 2, 2007, heavy rain caused major flooding in Jakarta, Indonesia's capital, and in areas around the city, including West Java and Banten. Heavy rain, deforestation in areas south of the city and waterways clogged with debris were blamed for the scale of the devastation. Habitat for Humanity Indonesia supported 1,000 families to repair their homes in Bekasi, a Jakarta commuter city; and Tanjung Priok and Teluk Gong, two sub-districts in North Jakarta.

## Timeline

- March 2007 — Damage assessed.
- March 2007 — First coordination meeting held.
- March 2007 — House repair and renovation started.
- June 2007 — Project completed.

## Background

Jakarta sits at the mouth of the Ciliwung River, and 40 percent of the city is below sea level. Jakarta's low topography and the abundance of nearby rivers make it prone to flooding. The 2007 flood was the worst in 300 years, and killed about 50 people. Public utilities and livelihoods were disrupted and there were fears of polluted water spreading disease. Electricity and water supplies were cut in large areas of the city. Telecommunications were affected in some parts of the city, and transportation was suspended in most areas, with major train lines and some roads closed.

## Project Overview

Tanjung Priok and Teluk Gong were badly affected by the flooding. Three members of Habitat for Humanity Indonesia staff assessed the damage, traveling to villages and collecting information. HFH Indonesia responded in three areas — Bekasi, a city close to Jakarta; and Tanjung Priok and Teluk Gong, in north Jakarta, to help families with house repairs. HFH Indonesia was already running a regular Save and Build program in Bekasi, so current home partner families were supported initially.

HFH Indonesia's priority was vulnerable families, such as those headed by widows, or with disabled members or very low incomes.

Housing repairs involved repairing walls and floors; floors were repaired up to a limit of 26 square meters and walls up to one meter high. HFH Indonesia hired



local laborers to assist with repairs, with two construction workers at each house. In discussions with home partner families, HFH Indonesia staff determined what needed to be repaired and calculated quantities and costs of materials before purchasing from local suppliers.

### Implementation

HFH Indonesia addressed each area separately, with targets every month for three months. One thousand families (5,000 people) were supported: 500 families in Bekasi, 250 families in Tanjung Priok and 250 in Teluk Gong. Dividing the project into three locations meant better coordination, monitoring of budgets and adhering to the project timeline.

HFH Indonesia approached community leaders to introduce the program, gather feedback and identify vulnerable families. HFH Indonesia staff then interviewed families to verify the final list of recipients.

HFH Indonesia hired local laborers to do the work, all working with local communities, and handled family selection, coordination with suppliers and supervision of the work. HFH Indonesia coordinated with local government authorities and invited students, corporate employees and embassy expatriates to join the project through the Building on Saturday and Sunday plan, to fundraise and increase awareness of volunteer opportunities and the situation of the affected families. This plan also helped achieve reconstruction targets and raised the profile of HFH Indonesia.

### Lessons & Promising Practices

- When the floods hit, HFH Indonesia lacked a reserve fund for disaster response activity. Such a fund, which is now in place, would have allowed more families to receive help.

**Right: Flooding in Bekasi.**



## Cyclone Nargis Response, Myanmar

### PROJECT NAME AND LOCATION

Shelter component of the Cyclone Emergency Response and Recovery, Myanmar

### TYPE OF INTERVENTION

Construction of new housing and community cyclone shelters with rain water harvesting features, on-the-job training in cyclone-resistant construction skills, disaster preparedness training

### YEAR

2008-2011

### PROJECT TARGET

7,000 vulnerable families, of which 1,267 received new houses and 500 received repairs

### SHELTER/HOUSING SOLUTION SIZE

25 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity International through a secondment to World Concern

### PARTNERS

World Concern (handled most CERR work, except shelter)  
Local peace and development councils

### FUNDING

United States Agency for International Development, Office of Foreign Disaster Assistance  
Jersey Overseas Aid Commission  
Habitat for Humanity Australia  
Hong Kong Christian Council  
Tearfund  
Christian Reformed World Relief Committee

### ADDITIONAL INFORMATION

Solar rechargeable lamps were distributed to families

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## Myanmar



## Summary

After Cyclone Nargis devastated areas of Myanmar in 2008, World Concern, an international NGO, started an integrated multi-sector disaster recovery program in 30 villages in Labutta township, in the devastated Ayeyarwady Delta region, about 200 kilometers southwest of the former capital Yangon. Habitat for Humanity became one of World Concern's partners in a phased program to facilitate early recovery and restore access to food, water, shelter, livelihoods, income and healthcare. By the time phase two was completed, in April 2011, Habitat's involvement had assisted an estimated 7,000 families, or about 26,000 people in 52 villages.



**Top: Community members discuss aspects of the housing project.**

**Bottom: Bamboo being prepared for construction in the delta region of Aima.**

## Timeline

- May 2, 2008 — Cyclone Nargis struck the Ayeyarwady Delta region of Myanmar.
- June 2008 — World Concern conducted damage assessments.
- July 2008 — A comprehensive project started. Habitat for Humanity International managed the shelter component.
- April 2011 — Project completed.

## Background

Myanmar is among the poorest countries in Southeast Asia, with almost one-third of its more than 54 million people living in poverty. According to estimates, the ongoing conflicts between the government and ethnic minority groups have forced 500,000 to 1 million people to flee to

neighboring countries. Cyclone Nargis struck on May 2, 2008, and is considered the worst disaster to hit Myanmar. About 145,000 people were killed and more than 50,000 people were listed as missing. Hundreds of remote villages were affected. Damage was estimated at US\$10 billion. Political repression, ethnic strife and a dictatorial regime compounded the effects of the cyclone because the ruling junta established obstacles to humanitarian aid and foreign assistance. Nevertheless, established NGOs mounted a significant response, in contrast to little action from the government.

## Project Overview

Housing design and construction took into account tides, other cyclones and the normal heavy rains and high winds

of the monsoon season. Covered area of the housing solution provided surpassed minimum global standards (Sphere). The housing design included such elements as concrete foundations for strength and stability, posts to raise houses above normal water levels, and pitching the roofs to minimize the lift generated by the wind. One goal was to replace familiar technology and facilities with some modest improvements in quality and standards. For example, the housing style is similar to the traditional style, yet incorporates significant features that make the structures more resistant to cyclones and flooding than those they replace (metal strapping, timber frames and houses elevated on concrete stilts). Walls, windows and doors were designed of woven bamboo, and the roof cover was fitted with corrugated galvanized iron sheets. Each house included a water catchment system and a latrine.

Additionally, families received rechargeable solar lamps with charging stations in each community. The houses were planned to be constructed by local labor and a training component was provided to families to allow for repairs and maintenance. As part of the program, six multi-purpose “safety” buildings were built as a shelter from future cyclones, flooding or other disasters. Each was designed to protect up to 300 people.

### Implementation

The secondment arrangements for staff between Habitat and World Concern functioned smoothly. Habitat provided technical supervision, training, materials and logistics. Families were encouraged to work on their houses, but paid workers did most of the construction. Habitat coordinated the logistics and transportation of construction materials that were often purchased in Labutta and shipped up to five hours away to the villages. Habitat also helped to supervise the construction of jetties and the repair of roads through a cash-for-work program funded by World Concern.

The houses were constructed using paid local labor, skilled and unskilled, which demonstrated an effective use of local capacities. This provided income for men and women, and enhanced construction skills through on-the-job training for hundreds of laborers. In the villages where Habitat built houses, at least 200 skilled and unskilled workers were able to improve themselves through training in carpentry and other construction skills. Three model houses would be built with skilled carpenters from other villages on hand to guide their newly trained counterparts. After the model houses were evaluated, construction of the remaining houses went into full swing.

### Lessons & Promising Practices

- A key to the success of the program was the close cooperation with the government-backed village peace and development councils around the hardest hit township, Labutta. The councils helped in such areas as selecting the most vulnerable families, identifying relocation areas, mapping, and identifying residents to be trained in carpentry and masonry.
- The intervention included principles of accountability to beneficiaries, and a mechanism to address complaints by beneficiaries was put in place. These principles followed standards derived from the Humanitarian Accountability Project.
- Logistics proved to be a huge challenge because of the remoteness of most vulnerable villages, in addition to competition with other NGOs for materials.
- Education regarding sanitation elements was a key element for proper use of latrines. Lack of experience with latrines and disregard of hygiene practices should be considered top issues to address in any sanitation-related component.
- Political tensions and constraints for visas and mobilization of international staff outside Yangon represented a major hurdle, and an opportunity to build local staff capacities and forge partnerships.

## Monsoon Flooding Response, Nepal

### PROJECT NAME AND LOCATION

Flood disaster response program  
Ratanpur and Pabera villages in Kailali district in Seti zone, and Dekhatbhuli village in Kanchanpur district in Mahakali zone, both in the far-Western Development Region, Nepal

### TYPE OF INTERVENTION

Core house construction

### YEAR

2008-2010

### PROJECT TARGET

110 families/870 people

### SHELTER/HOUSING SOLUTION SIZE

76.2 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Nepal

### PARTNERS

Adventist Development and Relief Agency, Nepal  
Backward Society Education, Nepal  
Organization for Community Child and Environment, Nepal

### FUNDING

Habitat for Humanity Canada

### SUBMITTED BY

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## Nepal



## Summary

Monsoons in August 2008 caused large-scale flooding in Nepal. Forty-three of Nepal's 75 districts were affected, and 130 people died either from the floods or in landslides caused by heavy rain. Habitat for Humanity Nepal launched its first disaster response operation to support more than 100 families who lost their homes to floodwater.

## Timeline

- May 2009 — Two-person assessment team visited affected areas.
- June-July 2009 — Home partner families identified.
- July-August 2009 — Bamboo supplied and construction started.
- September 2009 — Construction of 50 homes in Kailali district completed.
- January 2010 — Construction of 60 homes in Kanchanpur district completed.
- June 2010 — Program completed.

## Background

Nepal is a landlocked country, prone to natural disasters, with flooding the most prevalent. With more than 6,000 rivers and streams, many flowing north to south at high velocity because of steep river gradients, heavy rains cause destructive floods and landslides. In the summer of 2008, the Koshi and numerous other rivers rose to very high levels and caused considerable flooding.

Habitat for Humanity Nepal implemented its first disaster response operation, in the districts of Kailali and Kanchanpur in western Nepal, where 16 people died, 3,000 homes were destroyed and more than 22,000 families were affected.

## Project Overview

HFH Nepal partnered with a local non-governmental organization, the Adventist Development and Relief Agency, because the scope of its disaster response operation involved western Nepal. Additionally, HFH Nepal worked with two other local NGOs — Backward Society Education and Organization for Community Child and Environment on the program.

After an assessment, BASE and OCCED worked with respected village elders in three communities and gave HFH Nepal a list of 110 families.

The families selected had had their homes destroyed by floodwater and lacked a way to rebuild. Homeowner



Finished house with exterior structure added on by home partner.



partners included the most vulnerable families in the community, those with elderly or disabled family members or female-headed households.

For the first time in Nepal, humanitarian response to this disaster operated under the United Nations' cluster system. Thus the Koshi floods marked a large step toward improving humanitarian support in Nepal, although efforts were largely focused in eastern Nepal and many aid agencies departed after initial relief efforts of distributing food and clothing.

Most of the efforts were focused on the Koshi floods in eastern Nepal, so HFH Nepal chose to focus on western Nepal.

### Implementation

After a meeting with partners and local government authorities to prioritize needs, the villages of Ratanpur, Pabera and Dekhatbhuli were identified as needing support. HFH Nepal worked with ADRA, BASE, OCCED and local communities to explain the house design and construction process. Houses of two rooms were built, with the opportunity to build additional rooms, following Habitat's core house model. Bamboo used in construction came from HFH Nepal's factory, and residents who were responsible for housing construction were trained.

Because these communities were situated in areas prone to flooding, houses were built of very high 3-meter plinths, raised mud platforms built of brick walls with compressed earth centers or a mix of soil and grass. Houses in western Nepal were often constructed using huge tree trunks, causing many people to be injured when houses collapsed. HFH Nepal encouraged residents to instead use high plinths and lightweight structures to mitigate against further disasters. Village elders were responsible for all community interaction, and their houses used for meetings and storage of bamboo.

ADRA supported the program through its Food for Work project, with 12 families receiving food for every house constructed. ADRA also provided a technical supervisor to assist with community orientation and the initial construction process.

### Lessons & Promising Practices

- Using bamboo to construct homes was a new concept for these families. Bamboo is largely ignored as a viable construction material in large parts of Nepal and so it had to be introduced as a new material that could create a secure house, built quickly.
- Time and resources could have been saved if bamboo fabrication had been done in western Nepal, rather than at the factory in eastern Nepal and driven the length of the country.



## Earthquake Response, Sichuan, China

### PROJECT NAME AND LOCATION

Sichuan earthquake program, Sichuan Province, China

### TYPE OF INTERVENTION

New permanent housing, multi-story

### YEAR

2008-2010

### PROJECT TARGET

963 households in six areas left homeless by the earthquake

### SHELTER/HOUSING SOLUTION SIZE

100 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity China

### FUNDING

Singapore Red Cross  
Flextronics Corp.  
Hong Kong Christian Council  
Hyundai Motor Co.  
Cisco Systems  
Pepsico International  
Habitat for Humanity Germany

### ADDITIONAL INFORMATION

Volunteer teams from Hong Kong and South Korea contributed to the projects

### SUBMITTED BY

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## China



## Summary

Habitat for Humanity responded in communities affected by a devastating earthquake that hit Sichuan province in southwestern China in May 2008. With support from donors, partners, volunteers and local government officials, Habitat for Humanity China worked on six housing projects designed for about 1,000 families.



**Top: Earthquake survivor in front of a two-story housing solution under construction.**

**Bottom: Volunteers do masonry work.**

## Timeline

- May 12, 2008 — Powerful earthquake struck Sichuan province.
- June-August 2008 — Assessments conducted in coordination with local governments.
- September 2008 — Construction began.
- February 2009 — Habitat China began hosting volunteer teams.
- February 2010 — Project completed.

## Background

The Sichuan earthquake on May 12, 2008, measured 8.0 on the Richter scale, killing an estimated 68,000 people. It is also known as the Wenchuan earthquake, because the epicenter was Wenchuan County. The epicenter was 80 kilometers west-northwest of Chengdu, the capital of Sichuan. The earthquake was also felt in nearby countries and as far away as Beijing and Shanghai — 1,500 kilometers and 1,700 kilometers away — where office buildings swayed with the tremor.

Official figures said 69,197 were killed and 374,176 injured, with 18,222 listed

as missing. The earthquake left about 4.8 million people homeless, though the number could have been as high as 11 million. Approximately 15 million people lived in the affected area.

## Project Overview

In compliance with government specifications for post-disaster rebuilding, Habitat for Humanity China built earthquake recovery housing in six locations. The housing, which included single detached, row houses, townhouses and apartment buildings, were built using the government's quality standard for earthquake-resistant housing and designs from the Architecture Design Institute in Chengdu, from which the families could choose. The houses are relatively large (about 100 square meters).

In an effort to increase income capacity for the affected families, many of whom lost their farmland because of the disaster, houses were constructed with livelihood in mind. In Taizi and Yangping villages, houses were built as bed and breakfasts

to accommodate tourists. The houses in Luoyang and Changzhen villages were constructed so families would have space for a small business on the ground floor and could live comfortably above. In one community, where many people were killed or hurt when overweight concrete structures collapsed during the earthquake, the new homes are a combination of brick with wood superstructures. Elsewhere the houses were built with bricks and reinforced concrete. Habitat was also involved with constructing community buildings. One county government administration asked Habitat China to assist with building a kindergarten.

### Implementation

Five of the Habitat projects are in Pengzhou City, 36 kilometers northwest of Chengdu, capital of Sichuan. The city has a population of 780,000 spread over 20 townships. The sixth

project is in Jiexiang township, Zhongjiang County, northeast of Chengdu. Although contractors did most of the construction (because of government regulations), it is important to highlight the participation of hundreds of volunteers in the six locations. Their contributions were a cornerstone of the project and a show of international solidarity with affected families.

### Lessons & Promising Practices

- Swift government action was very effective in the emergency phase. Cleanup of debris and rubble began almost immediately, clearing land suitable for reconstruction.
- The disaster was an opportunity for Habitat China to expand operations to new geographical areas and establish relationships with local authorities and academic institutions.

**Right: A two-story housing solution under construction.**





## West Sumatra Earthquake Response, Indonesia

### PROJECT NAME AND LOCATION

West Sumatra earthquake disaster response  
Kudu Ganting and Limau Purut village in V Koto Timor district, Pasie Laweh village in Lubuk Alang district, Lareh Nan Panjang village in V Koto Sungai Sarik district, Kurai Taji village in Nan Sabaris district, Padang Pariaman regency, West Sumatra province, Indonesia

### TYPE OF INTERVENTION

New house construction  
House rehabilitation  
School construction  
Water and sanitation provision

### YEAR

2009-2011

### PROJECT TARGET

882 families/4,410 people

### SHELTER/HOUSING SOLUTION SIZE

69 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Indonesia

### PARTNERS

Christian Aid Ministries  
United Nations Office for the Coordination of Humanitarian Affairs  
PADMA Indonesia  
Islamic Relief

### FUNDING

Habitat for Humanity Singapore  
Habitat for Humanity Australia  
CIMB-The Star  
DBS Bank  
Nokia  
Multiple donors. Those listed here contributed more than US\$100,000.

### ADDITIONAL INFORMATION

417 core houses, 465 house rehabilitations and four schools

### SUBMITTED BY

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## Indonesia



## Summary

On Sept. 30, 2009, a 7.6-magnitude earthquake struck just off the southern coast of Sumatra, an island in western Indonesia. The earthquake killed more than 1,100 people and left more than 250,000 families homeless or in need of decent shelter. Habitat for Humanity Indonesia built 417 new homes, four new schools and repaired 465 houses.

## Timeline

- Oct. 2, 2009 — Assessment and first coordination meeting.
- Nov. 24, 2009 — Construction began.
- Nov. 24, 2011 — Project completed.

## Background

Most of Indonesia is located in an area of high seismic activity known as the Pacific Ring of Fire. The earthquake came less than a month after a 7.0-magnitude earthquake struck off the island of Java. The earthquake's epicenter was 45 kilometers from Padang, the capital and largest city of West Sumatra, with a population of more than 833,000 people. Most of the deaths occurred in Padang Pariaman regency that surrounds Padang, home to nearly 400,000 people. About 115,000 homes were severely damaged; 135,000 houses suffered moderate or slight damage.

## Project Overview

Habitat for Humanity Indonesia's goal was to support and mobilize survivors in West Sumatra to rebuild safe, earthquake-resilient homes, to construct safe and hygienic water and sanitation systems and to repair damaged homes.

Using HFH Indonesia's expertise from the Indian Ocean tsunami and other disasters, the initial disaster response plan included debris removal and cleanup through the distribution of tool kits and "cash for work" initiatives.

After a two-week assessment, HFH Indonesia saw that many other non-profit organizations were concentrating on debris clearance and providing tool kits. Recognizing that focusing on the recovery stage would be of greater benefit, HFH Indonesia completed its assessment and



decided to work in Padang Pariaman regency, the hardest hit area in West Sumatra.

One month after the disaster, many families in Padang Pariaman had already built temporary shelters using material salvaged from their homes. HFH Indonesia set up a project of house rehabilitation and construction of core houses.

Unlike the Indian Ocean tsunami disaster response project, when funding was easy to secure, the West Sumatra earthquake disaster response project had a very tight budget. This meant that considerable work had to be done to find partners to serve as many families as possible and to prioritize assistance for the most vulnerable families.

### Implementation

The core house design used in previous disaster response projects (the West Java earthquake and the Yogyakarta earthquake in May 2006) were used again in West Sumatra, with the addition of a small room for a toilet. The house was built using an earthquake-resilient design with concrete columns and beams.

HFH Indonesia worked with residents to find usable salvage material from damaged houses. For families whose homes were damaged but weren't habitable, HFH Indonesia provided a grant for materials (US\$150-600) instead of building a new house.

HFH Indonesia was also involved in renovating and building schools as part of the disaster response project. The schools were Junior High School SMPN 1, Elementary Schools SDN 4 and SDN 9 in Nagari Kudu Ganting, V Koto Timor district; and Elementary School SDN 12 in Nagari Kurai Taji, Nan Sabaris district.

## Lessons & Promising Practices

- When HFH Indonesia built the new core houses, it could ensure that the house was well constructed. However, when staff worked with home partners to repair homes, it was clear that damaged homes had not been adequately built originally; homes were without corner columns or had the wrong reinforcing bars and incorrect connections. Home partners wanted to use their repair materials budget on walling material and ignore the need for proper reinforcements. To counter this, HFH Indonesia provided construction training and consultation services, and persuaded home partners to use their budget to purchase the right material. For example, reinforcing bars in timber columns were replaced with ones of proper dimensions and a joint in every corner.
- Distribution of materials such as cement, reinforcing bars and other construction items was difficult in the Nagari Kudu Ganting area because of poor road conditions, hills and lack of vehicle access. Landslides occurred at almost every heavy rainfall and blocked roads. To overcome this, communities worked together to clear roads of landslide debris or delivered materials to houses themselves — carrying cement, zinc roofing sheets or reinforcing bars piece by piece, occasionally using buffaloes to pull reinforcing rods across rice fields. This often took days until all the materials were in place and work could begin.

## Kosi Floods, India

### PROJECT NAME AND LOCATION

Kosi Floods disaster response  
Jorgama village in Madhepura  
district, Bihar state, India

### TYPE OF INTERVENTION

New house construction  
Community hall construction  
Livelihood restoration

### YEAR

2009-2012

### PROJECT TARGET

72 families/280 people

### SHELTER/HOUSING SOLUTION SIZE

250 to 300 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India — Delhi  
Habitat Resource Center

### PARTNERS

Church of North India

### FUNDING

Associated Cement Companies  
Hindustan Unilever

### SUBMITTED BY

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## India



## Summary

The Kosi River runs through Nepal and into India, passing through Bihar state. On Aug. 18, 2008, Kosi breached its man-made embankments and diverted to an old channel. More than 2.3 million people were affected, and 250 were killed. Habitat for Humanity India supported 72 families to build new homes and 280 other people through the construction of a community hall and livelihood restoration program.



Top: Community center under construction.

Bottom: Community members rebuild in the village of Jorgama.

## Timeline

- June 2009 — Location selected and partners secured.
- June 2009 — Housing construction started.
- May 2010 — Livelihood restoration started.
- November 2011 — Community center construction started.
- December 2012 — Expected project completion date.

## Background

Bihar is India's most flood-prone state, with more than two-thirds of the population living with the recurring threat of floods. The floods in 2008 were the most disastrous in the state's history, affecting the districts of Supaul, Araria, Saharsa, Madhepura, Bhagalpur and West Champaran in northern Bihar. More than 3 million people were forced from their homes, with 300,000 houses destroyed and hundreds of thousands of hectares of crop damaged. When Kosi changed its course, it inundated areas that hadn't experienced floods in many decades and were largely unprepared.

## Project Overview

HFH India, working in partnership with Church of North India, developed a disaster response project that included building disaster-resilient houses for 72 families, constructing a community hall and implementing a livelihood program for 280 people. Jorgama village, in Madhepura district, was selected as the location for Project Ashreya. (Ashreya means shelter or refuge in Hindi.)

CNI had already started working in Jorgama, providing immediate relief after the flooding, and approached HFH India for its support in building shelter for affected families. The Kosi floods struck Madhepura district the hardest, and the entire Jorgama village was submerged, with residents fleeing to save their lives.

The goal of the livelihood project was to set up alternative opportunities for residents of Jorgama village. Because the floods ruined farming opportunities, this project focused on training in tailoring, spice-making, masonry and other professions.

The multipurpose community hall was designed to act as a shelter during disasters and for social networking and gatherings, including being used as a training space.

### Implementation

HFH India ran the program through its Habitat Resource Center in Delhi. Habitat provided project and technical management assistance, including monitoring, time management, project reporting and transfer of funds. HFH India developed procedures for regular financial, technical and social reporting to ensure that houses were built on time.

CNI developed selection criteria in consultation with HFH India to ensure that assistance was provided to families most in need of support. Community leaders were consulted and the entire community involved in the selection process. All families that were selected participated in an orientation session that explained housing design, the construction process and flood-resistant features.

Houses were built on elevated concrete columns, with traditional lightweight concrete bricks and reinforced cement concrete slab roofs. Houses were built as twin units for two families, comprised of two rooms and two toilets, with enough space for a kitchen. CNI helped organize self-help groups among the residents of Jorgama and presented a number of different livelihood opportunities. CNI then found experts to conduct training sessions at the request of the self-help groups, who now independently manage these income-generating activities.

### Lessons & Promising Practices

- Community participation increased the effectiveness of the program.
- Good health and sanitation practices were missing in the village, and this should have been addressed as part of the project. Initially, beneficiary families used their new bathrooms as storage space, so community meetings on the benefits of using toilets took place, leading to changes in behavior.
- Empowering women was a key component of the project, and this led to positive changes in the socioeconomic status of the village.

**Right: Homeowner partners made bricks for their houses.**



## Tien Phuoc, Vietnam

### PROJECT NAME AND LOCATION

Typhoon Ketsana disaster response  
Tien Phuoc district, Quang Nam  
province, Vietnam

### YEAR

2009

### TYPE OF INTERVENTION

Provision of new roofing sheeting  
Housing repair  
Construction training  
New house construction

### YEAR

2009

### PROJECT TARGET

605 families

### SHELTER/HOUSING SOLUTION SIZE

131 feet square

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Vietnam

### FUNDING

United Nations Office for the  
Coordination of Humanitarian Affairs  
through United Nations Development  
Program  
Electric Schneider  
Holcim Ltd.  
Exxon Mobil

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## Vietnam



## Summary

Typhoon Ketsana struck Vietnam's central and highland provinces on Sept. 29, 2009, killing more than 150 people and affecting 14 of Vietnam's 58 provinces. Quang Nam province in the south central coast region was hit hardest, with damage estimated at US\$177 million. Habitat for Humanity Vietnam supported 662 families in Quang Nam by distributing roof sheeting, ridge caps, screws and wire; and by providing technical assistance on safe house repair, replacement and reinforcement. In addition, five new homes were built and 270 people were trained in disaster-resilient construction techniques.

## Timeline

- Early October 2009 — Four members of an assessment visited affected areas.
- Nov. 1, 2009 — Volunteers trained in construction techniques.
- Nov. 6-13, 2009 — Home partner families selected.
- Nov. 9, 2009 — Roof sheeting distribution began and technical assistance provided.
- Dec. 24, 2009 – Project completed.

Recognizing this need, Habitat for Humanity Vietnam cooperated with local authorities to assist.

## Project Overview

HFH Vietnam chose Tien Phuoc district because it was the most affected district in Quang Nam province, which was hit the hardest of all Vietnam's provinces, and worked in 49 villages in six communes in Tien Phuoc to support 662 families.

## Background

Vietnam is a disaster-prone country, because of its long, low-lying coastline and location in the western Pacific, one of the biggest storm centers in the world. Every year, Vietnam experiences six to 10 storms or tropical depressions of varying intensities, usually between June and November.

Most of the families affected by Ketsana were already marginalized and could not afford to repair or rebuild their homes.

Through the assessment process, HFH Vietnam realized that roof sheeting was an overriding priority. In almost all the areas visited during the assessment, large numbers of houses, in some cases 80 percent to 100 percent, had collapsed and were missing their roofs. For example, in village 1 of Tien Phong commune, of the 53 households, all but two lost their roofs after Ketsana. Residents and local authorities emphasized the need for steel sheeting as a priority. That prompted HFH Vietnam to focus its response effort on providing



Top: Home repair training.

Bottom: A damaged house with a new roof in Tien Phuoc.



roof sheeting, building five new homes and training 270 volunteers in disaster-resilient construction techniques.

### Implementation

HFH Vietnam collaborated with local government and residents on the project while taking a lead role in providing materials, technical assistance, supervision and training.

Home partner families were selected based on income, the extent of roof damage and financial need, and attempted roof repair that did not meet construction standards. HFH Vietnam's partners at the community or district level collected information about potential family partners and HFH Vietnam conducted random assessments to verify the information. If incorrect information was found, partners had to submit another list.

Home partners were involved with the delivery, supervision and evaluation of the project, and provided sweat equity. Construction materials and house designs followed local traditions and customs, based on requests of residents.

### Lessons & Promising Practices

- It was important for HFH Vietnam to conduct its own assessment after Typhoon Ketsana, because government figures did not provide information on specific housing needs and the most vulnerable groups. This required HFH Vietnam to be well coordinated, to quickly mobilize staff and finances, and develop expertise in rapid needs assessments.
- Many of the residents had limited access to information and were illiterate, so explaining project criteria and requirements took longer than originally expected.

**Right: A Vietnamese family in front of their repaired home.**



## Typhoon Response, Philippines

### PROJECT NAME AND LOCATION

Ketsana, Parma and Mirinae disaster response  
More than 100 barangays (villages) or towns in provinces of Pangasinan, Bulacan, Rizal, La Union and Benguet, and cities of Marikina, Quezon, Pasig and Valenzuela in Metro Manila, Philippines

### TYPE OF INTERVENTION

Home repair kits  
Toilet and bathing unit construction in evacuation centers  
Food for Work plans  
House rehabilitation  
New core house construction

### YEAR

2009-2010

### PROJECT TARGET

75,000 people/15,000 families

### SHELTER/HOUSING SOLUTION SIZE

21 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Philippines

### PARTNERS

Save the Children  
Philippines Red Cross  
The Charitable Foundation  
ABS-CBN Foundation  
Nagkakaisang Nasyon Neighborhood Association  
Gulod Neighborhood Association  
Foundation for development Alternatives  
Community Organizing Multiversity  
Active Citizenship Foundation  
Commission on Service within the Diocese of Malolos and Novaliches

### FUNDING

Ayala Foundation  
ABS-CBN Foundation

### SUBMITTED BY

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## Philippines



## Summary

In 2009 the Philippines experienced its worst Pacific typhoon season in decades. The deadliest of the typhoons occurred within a month of one another when typhoons Ketsana, Parma and Mirinae struck in quick succession. Habitat for Humanity Philippines responded to the multiple disasters, helping more than 15,000 affected families, providing home repair kits, supporting Food for Work plans, rehabilitating homes, constructing toilets and bathing units in evacuation centers, and building new homes.

## Timeline

- September 2009 — Assessment done.
- September-November 2009 — Food for Work program conducted.
- October 2009-May 2010 — Home repair kits distributed.
- November 2009-January 2010 — Toilet and bathing stations built.
- November 2009-April 2010 — Homes rehabilitated.
- February-April 2010 — New houses built.
- April 2010 — Project completed.

## Background

The Philippines straddles the typhoon belt, an area in the western Pacific Ocean where nearly one-third of the world's tropical cyclones form. This area is not only the most active in the world, but also has the most intense storms globally. Approximately 19 typhoons enter the

Philippines area each year, and six to nine make landfall annually. Of the islands that make up the Philippines, northern Luzon and eastern Visayas are most commonly affected. Ketsana and Mirinae affected areas in the center and south of Luzon Island, whereas Parma struck northern Luzon.

## Project Overview

Typhoon Ketsana struck on Sept. 26, 2009, making landfall on the border between Aurora and Quezon province, and moved over metro Manila. A state of calamity was declared in metro Manila and 25 other provinces. More than 450 people died, many from severe flooding and landslides. HFH Philippines immediately started its disaster response operation.

Then Typhoon Parma struck on Oct. 1, sparing the capital but crossing northern Luzon Island twice, making it the costliest

Philippines typhoon and killing 450 people. Just three weeks later, Typhoon Mirinae struck the same areas as Ketsana, rapidly passing over the island. About 1,000 people were killed in total and hundreds of thousands affected.

Habitat for Humanity Philippines' disaster response operation involved working with partners in the relief, repair and rehabilitation and resettlement stages.

### Implementation

HFH Philippines' first disaster response after Ketsana and Parma was to build toilet and bathing units for evacuation centers because facilities could not handle the number of people in need of shelter. In partnership with Save the Children, the Philippines Red Cross and others, HFH Philippines built 312 toilet and bathing units at 25 evacuation centers by January 2010.

In the repair stage, HFH Philippines distributed home repair kits to 10,000 families in four of the cities of metro Manila (Marikina, Quezon, Pasig and Valenzuela) and five neighboring provinces (Pangasinan, Bulacan, Rizal, La Union and Benguet). Each home repair kit cost US\$153 and included

roofing material, lumber, plywood sheeting, nails, sealant, and bags of cement. HFH Philippines also worked with The Charitable Trust of Australia to distribute Food for Work items, including rice, canned goods and bottled water.

In the rehabilitation and resettlement stages, HFH Philippines worked with ABS-CBN Foundation to help relocate 4,000 families to Laguna, a province south of Manila. HFH Philippines refurbished 4,095 homes and built 693 new housing units.

### Lessons & Promising Practices

- HFH Philippines learned that being a facilitator in the disaster response operation, and empowering affected communities help find solutions to the housing need, worked best. Local government support provided the environment to do this, expediting the process for receiving materials and allowing construction to start.
- Local governments do not often have available land for resettlement. HFH Philippines brought together several partners, including media organizations and national government, to secure land and develop the sites.

**Right: Habitat homeowner partner Anelia Lleo with her grandson, Jowen, in her Habitat house in Calauan.**



## Upolu, Western Samoa

**PROJECT NAME AND LOCATION**  
Tsunami Response, Western Samoa

**TYPE OF INTERVENTION**  
New homes

**YEAR**  
2009-2010

**PROJECT TARGET**  
91 new homes built

**SHELTER/HOUSING SOLUTION SIZE**  
50 square meters

**IMPLEMENTING ORGANIZATION**  
Habitat for Humanity New Zealand

**PARTNERS**  
600 volunteers from New Zealand

**FUNDING**  
Habitat for Humanity New Zealand  
World Vision New Zealand  
Caritas Samoa  
Digicel Samoa  
Air New Zealand

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## Samoa



### Summary

In late September 2009, a tsunami hit the southeast coast of the island of Upolu in Western Samoa, killing 150 people (including New Zealand tourists) and destroying many homes along the coast. Habitat for Humanity New Zealand approached the Samoan government and offered to be the primary rebuilders of new homes using New Zealand volunteers. By June 2010, HFH New Zealand had sent 600 volunteers to rebuild 91 new homes, or Fale.

### Timeline

- Sept. 29, 2009 — A tsunami hit the coast of Western Samoa.
- Nov. 15, 2009 — New Zealand volunteers began building the first house.
- June 30, 2010 — 91 homes completed.

### Background

The southeast coast of Upolu was a favorite tourist destination, with many tourist accommodations (Samoan traditional homes with poles and open sides during day, tarps rolled down at night) on the popular beaches. Villages dotted the coastline and many local residents operated tourist businesses or worked in the industry. On Sept. 29, 2009, an earthquake in the Pacific Ocean caused a 46-foot tsunami to hit Upolu in three distinct waves. The southeast coast was the worst hit, because it had high cliffs directly behind the beaches. The waves hit the cliffs, then instead of continuing inland, washed back toward the beaches and destroyed many buildings weakened by the first wave.

### Project Overview

Roughly 350 new homes needed to be rebuilt to replace those destroyed by the tsunami. Many Samoans were afraid to rebuild on the coast, fearful of another tsunami, so the government tried to build roads and infrastructure inland in the hills behind the coast. The capacity of the local building industry for massive reconstruction was minimal, as were transportation, labor, water and electricity for construction.

### Implementation

Within 24 hours of the tsunami, HFH New Zealand decided to help Samoa, and staff members were in Samoa within three days. They met with the Samoan prime minister, other elected officials, building material suppliers, village chiefs, the United Nations' Office for the Coordination of Humanitarian Affairs and NGOs. In New Zealand, the office was swamped with offers to volunteer. By the end of October, the Samoan government had approved Habitat as the primary shelter provider; by mid-November house plans were drawn,



**Top: Tsunami-affected beneficiaries perform sweat equity for their home in Samoa.**

**Bottom: A home being built with help from New Zealand volunteers.**



suppliers chosen and volunteer teams booked. Habitat arranged volunteer accommodations in the church hall in the village of Lepa in the middle of the area that was hardest hit, housing up to 70 volunteers at one time.

The first volunteer team built a block with toilets and showers, and renovated the kitchen of the hall. Women from Lepa were hired for the next eight months to cook for the volunteers. A Habitat Resource Center was established near the hall as Habitat's base of operations and served as storage for tools and materials and as a prefabrication factory. As cash became available, four-wheel drive trucks and tandem trailers were bought in New Zealand and shipped to Samoa. New Zealand volunteers traveled in teams of 25 per week, staying for two weeks. Teams overlapped so those who had been there one week could instruct the new teams.

Funding for project management, vehicles and tools was provided by World Vision New Zealand and church groups. Local charity Caritas Samoa and local cellphone business Digicel provided funding for the 91 Fale. Air New Zealand halved the price of round trip airfares to Samoa for volunteers; volunteers paid their own way and costs were kept very minimal with no donations solicited.

## Lessons & Promising Practices

- Our immediate response was essential to all aspects of volunteer recruitment, fundraising and liaison with the government and NGOs.
- We started with nothing but completed the project with surplus funds, surplus tools

and vehicles, extreme goodwill with the people and government of Samoa, and a massively increased awareness and profile in New Zealand. This was our journey of faith.

- We formed multiple ongoing partnerships with NGOs and Samoan and New Zealand corporations and donors.
- We built excellent relationships with media.
- We have US\$40,000 worth of tools and US\$40,000 worth of vehicles remaining, which we are keeping in Samoa as a rapid response kit available for future DR work in the Pacific Region.
- We have the opportunity for further disaster mitigation work (cyclone strapping) and new housing for lower income families.
- We gained our first DR experience. Now we are establishing strategies and capacity to be the primary shelter provider for DR in the Pacific region.
- We were surprised at the extent to which we enabled and oversaw mass volunteer engagement; this has prompted us to aim higher in plans for sending volunteers overseas, whether on Global Village trips, big builds or DR work.
- We learned capacity limitations; for instance, we received the funds for vehicles in time to get them to Samoa when the project was half finished; nonetheless there was no other way of doing it and it all worked out.
- We learned about striking a good balance between empowerment and efficiency. Too much emphasis either way led to lesser outcomes in the other.

## Karnataka Flood Response, India

### PROJECT NAME AND LOCATION

Karnataka Floods disaster response  
Karwar town and surrounding  
villages, Uttara Nannada district,  
Karnataka state, India

### TYPE OF INTERVENTION

New house construction  
House rehabilitation  
Disaster mitigation and preparedness  
training  
Construction training

### YEAR

2010

### PROJECT TARGET

191 families/1,166 people

### SHELTER/HOUSING SOLUTION SIZE

250 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India

### PARTNERS

Habitat for Humanity International  
Karwar Diocesan Development  
Council

### FUNDING

Habitat for Humanity International  
United Way  
Karwar Diocesan Development  
Council

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## India



## Summary

Continuous rainfall and the breaching of river embankments from a surge in water from upstream reservoirs led to devastating flooding and landslides in northern Karnataka state in October 2009. The town of Karwar and its neighboring villages were particularly affected. Habitat for Humanity India built 100 new homes and rehabilitated 61 homes to assist families affected by the flooding. Training sessions on disaster mitigation and preparedness were organized for 30 families with the assistance of local government departments, and 20 people were trained in construction skills.

## Timeline

- February 2010 — Assessment.
- April 2010 — House construction and rehabilitation started.
- March-April 2010 — Construction training conducted.
- October 2010 — Disaster mitigation and preparedness training conducted.
- December 2010 — Project completed.

## Background

The torrential rain, leading to severe flooding, lasted from Sept. 30 to Oct. 4, 2009, affecting about 18 million people, the most severe rain and flooding in more than 100 years. Fourteen districts in Karnataka were flooded, and most of the people affected were small-scale farmers, agricultural laborers, daily wage earners and slum dwellers; 229 people were killed. The rainfall and floodwater led to multiple landslides. At the peak of the flooding, on Oct. 2, the worst of the landslides hit

Zariwada, in Kadwad village, about 7 kilometers from Karwar. The huge 4.5- to 6-meter mud mound covered about five hectares, killing 22 people.

## Project Overview

The Karwar Diocesan Development Council was the first non-governmental organization to help those affected. With limited resources, it was able to provide some food, fuel and utensils to families. Government district authorities selected KDDC to monitor, supervise and construct houses for those who lost homes or needed to repair homes in Karnataka.

KDDC approached HFH India's Habitat Resource Center in Bangalore, asking it to help Karwar and surrounding areas. A joint assessment of the shelter needs was conducted and information verified with government records.



Local officials assess damages from floods in Karnataka.

KDDC handled the selection process, based on a needs assessment that was verified. Criteria for support included families whose houses were damaged or destroyed, female-headed households, families with long-term ill members, and/or families with young children or elderly members. Based on the assessment and resources, 161 families were selected, and HFH India and KDDC developed a shelter intervention project together.

## Implementation

The goal was to build or rehabilitate homes while training residents to mitigate the effect of future disasters.

Working in partnership, HFH India and KDDC constructed 100 houses and repaired 61 damaged houses. Each new house consisted of a bedroom, kitchen, toilet and hall. Houses were built with locally available laterite blocks; cement; clay tiles; and Palmira and country wood for rafters, windows and doors. In some houses, reinforced concrete was used.

HFH India provided project management support and technical input for the project, while KDDC organized the project with the participation of community members. KDDC was responsible for organizing training sessions for volunteers and community leaders in construction processes and the purchase and management of materials. HFH India organized training sessions on disaster mitigation and preparedness for 30 families, with the assistance of government departments.

Training sessions on construction skills were held and 20 young adult residents learned new skills. In return, these residents provided free labor to build and rehabilitate houses.

## Lessons & Promising Practices

- Strong NGO and government links were established, and local village councils strengthened through collective planning, decision-making and working together. This meant that local residents felt empowered to steer their own development, as they gained bargaining power to demand basic amenities such as roads, water and streetlights. Residents are now participating in development programs organized by NGOs and government agencies.
- Because of the high level of construction activity after the disaster, there was a shortage of skilled and unskilled laborers. By training local residents in construction skills, HFH India and KDDC helped to bridge the gap, while saving on costs and ensuring timely completion of the project.
- There were initial setbacks because transporting construction materials to build sites was hampered by road damage and a lack of vehicles. In some cases, construction materials were not available or only at increased cost, and so budgets had to be readjusted many times.

## Andhra Pradesh Floods, India

### PROJECT NAME AND LOCATION

Andhra Pradesh Floods disaster response  
Bobbara Lanka, Varpu, Bandikolla Lanka, K Kothaplalam and Gangivanipalem village in Krishna district; and Bairmaply and Korvipad village in Mehbubnagar districts, Andhra Pradesh state, India

### TYPE OF INTERVENTION

New house construction  
House repairs

### YEAR

2010-2011

### PROJECT TARGET

306 families (1,836 people)

### SHELTER/HOUSING SOLUTION SIZE

220 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India

### PARTNERS

Society for National Integration through Education and Humanizing Actions, India  
Society for Help Entire Lower and Rural People, India

### FUNDING

Habitat for Humanity International

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## India



## Summary

In November 2009, massive floods struck the districts of Krishna, Guntur, Nalgonda, Mehbubnagar and Kurnool in Andhra Pradesh state, as the Krishna, Tungabatra and Attrie rivers burst their banks. Approximately 559 villages, including all island habitats, were inundated with floodwater, killing 59 people and leaving 400,000 people homeless. Low-lying areas along riverbanks were the worst affected. Habitat for Humanity India built 106 new houses and repaired 200 homes to help families affected in Bobbara Lanka, Varpu, Gangivanipalem and Bandikolla Lanka village in Krishna district, and Bairmaply and Korvipad village in Mahbubnagar district.

## Timeline

- November 2010 — Assessments.
- May 2010 — House construction and repair work started.
- June 2011 — Project completed.

## Background

Low-income families living in villages or low-lying urban areas in Andhra Pradesh were affected the worst, with 100,000 homes damaged by the floods and 180,000 people forced to relocate to safer places or relief camps. The area was inundated with debris and mud. Families lost livelihood opportunities because cultivable lands were immersed and fishing nets and boats lost. Houses were damaged or washed away. In most areas, water remained for two days before receding.

## Project Overview

The Andhra Pradesh government gave approximately US\$1,300 through the Housing Board's Awaz Yojana program to families whose houses were washed away, but that was not enough for many low-income families to construct a house; an additional US\$288 was usually required to complete a house. Families asked a local nongovernmental organization — the Society for National Integration through Education and Humanizing Action — for help to rebuilding their homes. SNEHA asked HFH India to be its partner. Together, HFH India and SNEHA constructed 106 houses in Bobbara Lanka, Varpu, K Kothaplalam, Varpu and Bandikolla village in Krishna district.

Although the government had offered support to families that had lost their homes completely, there was no support for families whose homes were damaged. HFH



Ed Venkadeshwarrao in front of his old and new house in K Kothaplalam village.



India addressed this need in partnership with SNEHA and another local NGO, the Society for Help Entire Lower and Rural People. HFH India, SNEHA and HELP repaired 100 homes in Bobbara Lanka, Gangivanipalem and Bandikolla Lanka village in Krishna district, and 100 homes in Bairmaply and Korvipad village in Mahbubnagar district.

### Implementation

The project operated from HFH India's Habitat Resource Center in Chennai. HFH India developed policies on financing, technical and social reporting, with frequent reviews.

HFH India and its partners assessed damage to homes and consulted with village leaders before finalizing a list of families, then educated home partners about repairs or new core house construction plans. Home partners were selected on the basis of need, land

ownership and government lists.

Repairs focused on floors, walls, windows, doors and roofs, and included plastering and painting. New houses with a living room, kitchen and toilet were built according to Andhra Pradesh government design with bricks and concrete. SNEHA and HELP built the homes, and HFH India provided technical input, project supervision and a financial contribution to the 306 homes.

### Lessons and Promising Practices

- HFH India could not reach more families because of a lack of money.
- Fundraising in India should have started immediately after the disaster in order to secure corporate donations, rather than waiting until the relief phase was over and the rehabilitation phase began.
- Government support was crucial and helped with funding.

**Right: Rajuku Patti Swnathri Pothuraju in front of his new house in Varpu village.**



## Hiep Duc, Vietnam

### PROJECT NAME AND LOCATION

Safer future for families and communities exposed to natural disasters

Hiep Duc district, Quang Nam province, Vietnam

### TYPE OF INTERVENTION

House renovation and rebuilding  
Disaster-resilient construction training  
Community-based disaster risk management and community awareness-raising

### YEAR

2010-2012

### PROJECT TARGET

184 families — renovation  
15 families — rebuilding  
600 construction workers trained  
600 community members trained  
15,000 residents benefit from information, education and communication activities on reducing disaster risk

**SHELTER/HOUSING SOLUTION SIZE**  
40 square meters

### FUNDING

Habitat for Humanity Greater San Francisco

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## Vietnam



## Summary

Typhoon Ketsana struck Vietnam's central and highland provinces on Sept. 29, 2009, killing more than 150 people and affecting 14 of Vietnam's 58 provinces. Quang Nam province in South Central Coast region was the hardest hit, with damage to Quang Nam estimated at US\$177 million. Habitat for Humanity Vietnam aimed to support about 200 families with rebuilding or housing renovations by June 2012, to provide construction training for 600 people, community-based disaster risk management training for 600 residents, and to conduct information, education and communication activities befitting more than 15,000 people.

## Timeline

- November 2010 — Construction training began.
- December 2010 — Home partner families identified.
- December 2010 — Rebuilding and renovation started.
- December 2010 — CBDRM training.
- March 2011 — IEC activities.
- June 2012 — Project completed.

## Background

Vietnam is a disaster-prone country because of its long, low-lying coastline and its location in the Western Pacific region, one of the world's biggest storm centers. Vietnam experiences six to 10 storms or tropical depressions of varying intensities every year, often occurring between June and November. Most of the families affected by Ketsana were already marginalized, and could not afford to repair or rebuild their homes.

## Project Overview

Hiep Duc district in Quang Nam province, South Central Region, was the area worst affected by Ketsana in Vietnam. Local government units in Hiep Duc were amenable to volunteer participation in reconstruction.

Habitat for Humanity worked in 59 villages in 10 communes in Hiep Duc district. HFH Vietnam chose a holistic long-term disaster response and preparedness project, spanning two years, to not only help those affected after Ketsana but to assist communities to prepare for and mitigate against future disasters. The project included housing renovation and rebuilding, CBDRM and disaster-resilient construction training and awareness-raising for high-risk communities.

HFH Vietnam worked with the Hiep Duc District People's Committee, the Vietnam



Top: Awareness-raising event.

Bottom: Entry for a drawing competition.

Red Cross' Hiep Duc chapter and Quang Nam Province's Foreign Affairs department. Three HFH Vietnam staff ran the project from an office in Hiep Duc, supervised by a project manager.

### Implementation

Fifteen families were supported in rebuilding their houses and 145 families helped to upgrade or repair their homes. Families took on microloans secured by HFH Vietnam and managed by HDDPC. House building costs were subsidized for families who had lost their homes. Repayments go into a revolving fund and are used to help more families. All families will have paid off their microloans by June 2014.

In order to increase knowledge of disasters and efforts to mitigate their effects, HFH Vietnam project staff worked with a CBDRM expert to devise and construct awareness-raising activities. As of May 2012, 606 construction workers had attended 15 training sessions on disaster-resilient building techniques and 920 students and teachers in five primary schools had participated in awareness-raising activities, including an art contest.

HFH Vietnam designed and produced a video on disaster-resilient construction techniques that was broadcast on the Quang Nam Provincial Radio and Television station. More than 5,000 leaflets on disaster preparedness and safe housing construction techniques were distributed.

### Lessons & Promising Practices

- HFH Vietnam learned how important it was to have home partner families involved at every stage of the project, because that led to greater understanding and appreciation of how to protect their homes and removed dependence on others.
- Families and communities accepted the houses because HFH ensured that construction materials and housing designs met local traditions and customs and met the needs of home partners.
- Hiep Duc was pretty inaccessible after the typhoon, making it difficult to find and transport material. This made it difficult to meet usual standards and requirements of construction.
- Some training sessions were not well attended because men and young adults were busy working and earning money, so the sessions were attended predominantly by women and the elderly. Furthermore, without incentives of money or visible support, villagers were reluctant to attend training sessions because they did not recognize the benefits.
- It takes time to change mindsets and routines, but CBDRM training was a step in the process to achieving this and ensuring people are better prepared when disaster strikes.

## Huong Khe, Vietnam

### PROJECT NAME AND LOCATION

Disaster relief and early recovery from flooding in Central Vietnam  
Huong Khe district, Ha Tinh province, Vietnam

### TYPE OF INTERVENTION

Roofing renovation  
Housing repair and rebuilding  
Construction training

### YEAR

2010-2011

### PROJECT TARGET

400 safer roofs  
150 repaired houses  
20 new houses  
513 households, seven local construction workers and 10 government staff trained in disaster-resilient construction techniques

**SHELTER/HOUSING SOLUTION SIZE**  
40 square meters

**IMPLEMENTING ORGANIZATION**  
Habitat for Humanity Vietnam

### FUNDING

Jersey Overseas Aid Commission,  
Electric Schneider, Holcim Ltd.

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## Vietnam



## Summary

Flooding is a regular occurrence in Vietnam, but 2010 brought more severe flooding than usual with water levels reaching six meters in some areas. More than 100 people died in September and October, and more than 600,000 people in seven provinces were affected. Habitat for Humanity Vietnam responded to the need for housing repairs, providing better roofs and floors. Training in disaster-resilient construction techniques was also provided to limit damage from more flooding.

## Timeline

- Early December 2010 — Three-person assessment team visited affected areas.
- Dec. 10-15, 2010 — Home partner families identified.
- Early January 2011 — Roof and floor repair work started.
- January 2011 — Training on disaster-resilient construction techniques started.
- June 30, 2011 — Project completed.

## Background

Vietnam's flat topography and its long, low-lying coastline make it particularly susceptible to flooding. Vietnam has more than 2,860 rivers, with the Red and Mekong rivers the most significant. The river network is about 25,000 kilometers long, and the majority of Vietnam's population lives near rivers. Vietnam is extremely vulnerable to natural disasters and extreme weather. Many of the families affected by the flooding in Huong Khe were from low-income families, and could not afford to repair or rebuild their homes. Recognizing this need, Habitat for Humanity Vietnam

cooperated with local authorities to support families with housing assistance.

## Project Overview

HFH Vietnam focused its disaster response and early recovery activities in Huong Khe district in Ha Tinh province because it was one of the worst hit areas.

Because funding that was promised did not materialize, HFH Vietnam was not able to meet all the project targets, but still worked in 79 villages in 10 communes in Huong Khe. HFH Vietnam assisted 186 families with safer roofs and floors, constructed using disaster-resilient techniques, and built two new homes. Members of 188 families were trained in disaster-resilient construction techniques and 14 local government staff (at least one from each commune) also benefited from similar training.

HFH Vietnam focused on slightly longer-term support of more substantive upgrading and repair work because many



families had already patched up their houses as best as possible immediately after the flooding. This meant that the repair and upgrading work could incorporate disaster-resilient features and protect families against future flooding.

### Implementation

HFH Vietnam worked in liaison with Huong Khe district's People's Committee, a local state management entity set up to mobilize the district's resources to develop social economy and to respond to and mitigate against natural disasters.

HFH Vietnam staff from northern and central areas of Vietnam conducted the program, with HFH Vietnam construction supervisors handling the disaster-resilient construction technique training sessions.

All 188 families that HFH Vietnam worked with either to rebuild, repair or upgrade homes benefitted from the training sessions. Clay tiles and cement were used to construct

safer roofs and floors. Home partner families were shown how to repair or replace roofing firmly, to reduce the likelihood of leaking during heavy rain or being blown away in strong winds. Home partners were also trained in how to strengthen house frames so that roofs are better supported.

### Lessons & Promising Practices

- Because of decreased funding, the scale of the project had to be reduced. Despite this, 188 families were supported to rebuild, repair or upgrade their homes with safer roofs and floors, while also being trained in disaster-resilient construction techniques to better protect themselves against future disasters. These families can share these skills with neighbors and relatives who live in disaster-prone areas.
- The 17 local government staff and construction workers trained in disaster-resilient construction techniques are now able to inform and support the wider community so that more people are better prepared when disaster strikes.

**Right: Tran Thi Lai's new home.**



## Katahari, Nepal

### PROJECT NAME AND LOCATION

Morang disaster preparedness and mitigation  
Katahari Village Development  
Committee in Morang district in Koshi  
zone, Eastern Region, Nepal

### TYPE OF INTERVENTION

Disaster preparedness and mitigation  
training  
Disaster mitigation housing  
construction training  
Community disaster mitigation  
activities

### YEAR

2010-2011

### PROJECT TARGET

1,200 families/4,000 people

### IMPLEMENTING ORGANIZATION

HFH Nepal

### PARTNER

Jeevan Bikas Samaj, Nepal

### FUNDING

Habitat for Humanity International

### SUBMITTED BY

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## Nepal



## Summary

Every year, monsoons cause the Lohandra River to burst its banks, flooding homes, roads and other infrastructure. Communities along a three-kilometer stretch of the riverbank are most at risk. Habitat for Humanity Nepal implemented a disaster preparedness and mitigation program to help these communities minimize the damage from flooding.

## Timeline

- June 2010 — Program coordination meeting.
- July 2010 — Disaster friendly houses training began.
- November 2010 — Disaster preparedness and mitigation awareness raising activities started.
- January 2011 — Disaster preparedness and mitigation activities started.
- February 2011 — Program completed.

## Background

Nepal is a landlocked country, prone to natural disasters, with flooding the most prevalent. With more than 6,000 rivers and streams, many flowing north to south at high velocity because of steep river gradients, heavy rains cause particularly destructive floods and landslides. The Lohandra River in eastern Nepal, close to the border with India, floods annually.

HFH Nepal saw an opportunity to help communities along the banks of the Lohandra River before disasters strike, to lessen or prevent the burden of annual flooding and other disasters, such as fires

in the dry season. With the support of the Katahari Village Development Committee, which is part of the local development ministry, HFH Nepal implemented the program.

## Project Overview

HFH Nepal partnered with a local non-governmental organization, Jeevan Bikas Samaj, on the three parts of the program: training sessions on “disaster friendly” houses, awareness-raising sessions on disaster mitigation and preparedness, and organizing some disaster mitigation and preparedness activities to better protect at-risk communities. JBS is a regular partner with HFH Nepal, working mainly in disaster prone areas.

JBS supported initial discussions with 25 communities, helped identify community needs and sourced groups to support the street drama and poster printing. HFH Nepal worked in 10 villages in Katahari Village Development Committee, all of which were villages with JBS savings groups, selected in coordination and consultation with the District Disaster



**Women trained to make improved cooking stoves.**

Relief Committee, the government entity responsible for disaster response.

The program focused on flooding but included sessions on fire safety, including how to build safer hearths.

### Implementation

A coordination meeting at the start of the program included social workers, farmers, women, members of a microfinance group and representatives of the community. A nine-member volunteer coordination committee was formed, which organized two meetings with community members so issues could be addressed. Supporting committees handled project activities.

In total, 22 training sessions on “disaster friendly” houses were held, which were attended by more than 4,000 people. Disaster mitigation and preparedness awareness-raising took the form of posters and street drama sessions, reaching more than 12,000 families.

In order to be better prepared for disasters and to limit their impact, local residents constructed an embankment using gabions near the landmark of Kali Temple so the area could be used as a refuge in times of disaster. Bamboo was planted along the river to prevent the banks being cut away, which leads to soil erosion.

### Lessons & Promising Practices

- Initially some political bodies in Morang district were reluctant to implement the program, because they thought it was a giveaway program and didn't want to create a dependency mentality among residents. After HFH Nepal staff and JPS explained the program involved community-based activities and awareness-raising, there were no further problems and the program continued unhampered.
- Local community residents were active participants in awareness-raising and construction activities, realizing the benefit of knowing more about improved hearths and disaster mitigation techniques.
- Planting bamboo not only acted to prevent the Lohandra River from carving away banks and encroaching into local communities, but also provided an income opportunity through the production of bamboo handicrafts. The bamboo can be used as a construction material when disasters strike because it can be used to build homes quickly.
- Empowering communities by mobilizing women is crucial in order to implement program activities with the full participation and approval of communities. Women who participate in social work are well regarded in their communities.

**Right: Embankment built by community for disaster mitigation.**



## Noah's Ark, Malanday, Philippines

### PROJECT NAME AND LOCATION

Noah's Ark disaster preparedness  
Malanday village, Marikina city, metro  
Manila, Philippines

### TYPE OF INTERVENTION

Adapt safe zones as evacuation  
centers when disaster strikes

### YEAR

2010

### PROJECT TARGET

600 people/120 families

### SHELTER/HOUSING SOLUTION SIZE

Kitchens - 24 square meters  
Toilets - 36 square meters

### IMPLEMENTING ORGANIZATION

HFH Philippines

### PARTNERS

Corporate Network for Disaster  
Response, Philippines  
World Wildlife Fund  
Ayala Foundation

### FUNDING

Ayala Foundation Inc.

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## Philippines



## Summary

The damage from typhoons Ketsana and Mirinae in metro Manila in the Philippines in 2009 focused this project on disaster preparedness. Habitat for Humanity Philippines joined a consortium of 15 organizations to develop a sustainable way to prepare for disasters. In 2010, HFH Philippines played an integral part in the pilot project, designing standardized models of kitchens and toilets to be added to schools, community or parish centers that would be used as evacuation centers during disasters. HFH Philippines built four kitchen units and 20 toilets at the pilot site of Malanday Elementary School.

## Timeline

- October 2009 — Consortium formed.
- May 2010 — Sites visited and final selection determined.
- September 2010 — Construction of toilet and kitchen units began.
- October 2010 — Construction completed.
- December 2011 — First flood evacuation drill.

## Background

The Philippines straddles the typhoon belt, an area in the western Pacific Ocean where nearly one-third of the world's tropical cyclones form. This area is not only the most active in the world, but also has the most intense storms globally. Approximately 19 typhoons enter the Philippines area each year, and six to nine make landfall annually. When typhoons strike, high winds and driving rain destroy homes and lead to landslides. Heavy rain causes rivers to swell, and

flooding is common. Typhoon Ketsana killed more than 450 people, many from flooding and landslides.

## Project Overview

Typhoon Ketsana, known locally as Ondoy, struck on Sept. 26, 2009, and affected the national capital region (metro Manila). A state of calamity was declared in metro Manila and 25 other provinces. HFH Philippines joined a consortium of public, private and nonprofit organizations committed to the idea that the effects of disasters can be greatly reduced, if not completely prevented, if people are prepared.

The project involved identifying safe places in communities where people could go in times of disaster, adapting the sites so they could handle greater numbers of people, and implementing disaster response systems so residents knew where to go and what to do when disaster strikes.



Workers finish 20 toilets at Malanday Elementary School. New kitchen units were also part of the pilot program.



The pilot location of Malanday Elementary School was chosen because it was an evacuation center after Ketsana. The pilot location and other Noah's Ark sites were required to meet certain criteria: They are particularly vulnerable to disasters because of substandard housing in a low-income community, or they are in a high-risk area, or they are communities not already supported by other nonprofit or government organizations, or an active local organization is prepared and willing to conduct disaster preparedness training and workshops.

### Implementation

Each organization in the consortium was responsible for certain aspects of Noah's Ark. The Ayala Foundation was responsible for overall project management.

HFH Philippines, Corporate Network for Disaster Response and the foundation identified standards for each site and the steps needed to achieve them. Locations were selected based on criteria established by the consortium.

HFH Philippines designed standardized modules of kitchen and sanitation facilities (toilets and bathing areas) to be easily

replicated and installed at schools and community and parish centers to help them better cope with a sudden influx of evacuees. For every 600 people expected to use a site, a minimum of four kitchen areas measuring 24 square meters, and five clusters of toilets and bathing areas, measuring 36 square meters, were necessary.

Habitat for Humanity Philippines built and installed these units at Malanday Elementary School.

### Lessons & Promising Practices

- Officials of the Barangay Disaster Risk Reduction and Management Council were trained in disaster risk reduction and management.
- The technology developed to build decent and strong sanitation facilities using steel frames can now be used by HFH Philippines in other projects after a disaster.
- After the success in Malanday, the Noah's Ark project was implemented in San Mateo and Mutinlupa city.
- Malanday Elementary School was an evacuation center after Tropical Storm Meari and Typhoon Nesat. No one in Malanday died from those storms.

**A restored classroom in Malanday Elementary School.**



## Karawang Flood Response, Indonesia

### PROJECT NAME AND LOCATION

Karawang Floods disaster response  
Anggadita village, Karawang regency,  
West Java province, Indonesia

### TYPE OF INTERVENTION

Home improvement — upgraded  
flooring

### YEAR

2010

### SHELTER/HOUSING SOLUTION SIZE

118.1 square feet

### PROJECT TARGET

78 families/390 people

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Indonesia

### PARTNERS

Local government

### FUNDING

Habitat for Humanity International,  
Asia-Pacific office

### SUBMITTED BY:

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## Indonesia



## Summary

In March 2010, heavy rainfall caused the Citarum River to overflow. This caused severe flooding in Karawang, a regency in West Java province, about 111 kilometers (60 miles) from Jakarta, Indonesia's capital. Habitat for Humanity Indonesia supported 78 families in Anggadita, the hardest hit village in the area, to help them upgrade the flooring in their homes and minimize the impact of annual flooding.

## Timeline

- March 2010 — Assessment.
- March 2010 — First community meeting.
- April 2010 — Concrete floors poured.
- April 2010 — Project completed.

## Background

Three hydroelectric dams are on the Citarum river, and about 5 million people live in the river basin.

The flooding in Karawang submerged more than 8,000 houses in seven districts, home to approximately 32,000 people. Houses were submerged in 30 centimeters to 2 meters of floodwater. More than 10,000 people were displaced in two of the most severely affected sub districts: Telukjambe, where about 7,400 people were displaced, and West Karawang, where 3,200 were displaced.

## Project Overview

Habitat for Humanity Indonesia and the Indonesian Red Cross conducted assessments in Jakarta and its surrounding

cities. Following the assessment, HFH Indonesia decided to work in Anggadita in Karawang regency, because it was the hardest hit in the area. Because of funding limitations and staff resources, HFH Indonesia's Jakarta branch decided to support 78 of the most vulnerable families in the village.

Anggadita is in the Kari sub-district of Karawang. The village occupies 478,800 hectares, nearly 60 percent of which is used for settlement and nearly 5 percent for agriculture. Anggadita's population is approximately 12,000 people, of which more than 1,000 families are classified as low-income.

The Karawang flood severely submerged three neighborhoods in Anggadita, affecting 250 families, 80 percent of whom were low-income. The floods damaged houses and increased the vulnerability of the community to post-flood diseases. This disaster response project aimed to reduce the damage caused by the flooding and



Home damaged by Karawang floods.

increase the community's resilience to future disasters.

## Implementation

The home partner families were selected based on low incomes, those living in a house with a dirt floor, and land ownership. The family selection process was very transparent, involving the community, its leaders and the local government. HFH Indonesia staff interviewed each family to verify information before selection, and an announcement was made to the whole community. This helped to prevent jealousy.

HFH Indonesia chose to support families by installing concrete floors. Families in homes with dirt floors repeatedly suffer from various diseases after floodwater subsides.

The maximum floor area was 36 square meters per house. HFH Indonesia used two concrete mixers to produce the concrete. Construction workers supervised families to

transfer the concrete mixture to the floor. In addition to providing construction workers, HFH Indonesia also involved suppliers from the community to supply sand and gravel for the project.

## Lessons & Promising Practices

- Using concrete mixers was very efficient, enabling HFH Indonesia to control quality, thus reducing project costs.
- Sweat equity' from homeowners was a major contribution to the project, making it easier for supervisors to oversee construction workers and ensure the best quality of floors.
- There was not much collaboration with non-governmental organizations because the Karawang floods were not considered a national disaster and not many NGOs were involved.
- Community-based disaster risk management training was not incorporated because of a lack of experience.

## Christchurch, New Zealand Earthquake

### PROJECT NAME AND LOCATION

Earthquake Response, Christchurch, New Zealand

### TYPE OF INTERVENTION

Temporary shelter facilitation  
House repairs

### YEAR

2011-2012

### PROJECT TARGET

More than 50 families targeted for home repairs

### IMPLEMENTING ORGANIZATION

Habitat for Humanity New Zealand

### FUNDING

Habitat for Humanity New Zealand  
HFH International  
Red Cross New Zealand  
Multiple trusts and donors

### SUBMITTED BY

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## New Zealand



## Summary

After a devastating earthquake, Habitat for Humanity New Zealand launched a program to offer temporary shelter assistance through hosting families and a repair program for homes deemed repairable by local authorities. As of July 2012, a year after the earthquake, 30 houses had been repaired using paid project management and volunteer labor.

## Timeline

- Feb. 22, 2011 — Earthquake struck the Canterbury region and the city of Christchurch.
- Feb. 24, 2011 — HFH New Zealand launched a website to facilitate temporary accommodation for residents, with host families around the country.
- September 2011 — Repairs began; they continue.

## Background

The earthquake in February 2011 in Christchurch (New Zealand's second largest city, population 370,000), measuring 6.3 on the Richter scale, caused widespread damage, exacerbated by buildings and infrastructure already weakened by the earthquake in September 2010. Significant liquefaction affected the eastern suburbs, producing around 400,000 tons of silt. About 185 people were killed in the earthquake, making it the second deadliest New Zealand natural disaster recorded, with victims from more than 20 countries. The government declared a state of national

emergency. The total cost to insurers of rebuilding has been estimated at NZ\$30 billion, by far New Zealand's costliest natural disaster and the third costliest earthquake worldwide.

## Project Overview

The response initially set up a website (shelter.org.nz) to match affected families with people across New Zealand who offered temporary accommodation. After the government conducted initial studies and assessments, affected areas and houses were tagged as "green" (stable location, suitable for repair or rebuilding) or "red" (unstable location, considered too dangerous for repairs or rebuilding). Because most homeowners were covered by insurance and would have their repairs paid for, and New Zealand was a country in economic recession with the building industry looking for work, HFH New Zealand positioned itself to help those without insurance, including those in extreme vulnerability — the elderly, and people with disabilities or other serious



A damaged house after the earthquake.



health issues. Repairs were defined as those essential to make a home safer and weatherproof, averaging NZ\$10,000 per family.

## Implementation

Within two weeks of the earthquake, Habitat New Zealand had more than 1,000 expressions of interest from volunteers from around the country and the world. Habitat volunteers were not needed in the early recovery phase, thanks to a student volunteer army 20,000 strong that cleaned up the liquefaction. Repair work could not start until September because of delays caused by complex engineering and insurance issues, and lack of funding for building materials.

HFH New Zealand was project manager for repair work for the uninsured and vulnerable families, and funding for building materials for repair work was supplied by another NGO. Since September 2011, volunteers have been clearing debris, releveling houses; recladding exteriors; removing chimneys; repairing roofs, ceilings and walls; and repainting.

## Lessons & Promising Practices

- Most of the damage to residential buildings occurred to homes with unreinforced masonry built before stringent earthquake codes were introduced. While the repairs by HFH New Zealand helped with urgent habitability and weatherization, bringing old houses up to newer codes will require significantly more investment, with costs well beyond the capacity of affected households.
- The earthquake and rebuilding of Christchurch is a massive enterprise for the country of New Zealand, estimated to take at least 10 years and cost roughly 8 percent of annual GDP. In light of this, the role HFH New Zealand can play is very minor, and this has resulted in no government help, funding difficulty, and no national media coverage, which normally helps drive volunteer response.
- Funding support has been minimal and difficult to obtain.
- Some donors oppose helping those without insurance, a stigma we have worked hard to overcome.
- Most available and donated funds from the public have gone to psychosocial needs rather than housing repairs, because it is believed insurance will cover repairs. With Christchurch still enduring significant aftershocks, insurance companies are unwilling to pay for repairs that could be made too early.
- Immediately after the earthquake, the public was encouraged to give to centralized appeals run by the prime minister and the Red Cross. HFH New Zealand chose not to run an immediate television appeal for repairs. The result has been disappointing, because we have received no help from the PM Fund, and Red Cross funds come attached with difficult conditions that make repair work difficult. In hindsight, HFH New Zealand should have run its own televised appeal.
- HFH New Zealand was inundated with volunteers in the early days, but that support dropped off significantly over time as the repair project was continually delayed by a lack of funds and the government completing engineering assessments. This has resulted in disappointingly low ongoing volunteer numbers.
- The funds and volunteers have occurred in dribs and drabs, thus making it a difficult project to implement. Would we do it again? As a Christian, yes, because 30 families have been helped. As a Habitat CEO, maybe not, as it has taken a lot of time, energy and effort for limited results and impact.

# Rebuilding Thailand

## PROJECT NAME

Rebuilding Thailand  
Location  
Bangkok, Ayutthaya, Pathu Thani,  
Nonthaburi, Saraburi, Lopburi, Uthai  
Thani, Pitsanulok provinces

## TYPE OF INTERVENTION

Urgent relief efforts, distribution  
of tents, tool boxes for temporary  
shelter, small boats.  
House rebuilding and rehabilitation,  
school renovations

## YEAR

2011-2012

## PROJECT TARGET

157 families helped with emergency  
relief  
949 families supported with direct  
housing assistance (180 houses  
rebuilt and 769 houses rehabilitated)  
28 schools renovated

## SHELTER/HOUSING SOLUTION SIZE:

Steel-structure, stilt houses, 18 square  
meters, 36 square meters and 76  
square meters

## IMPLEMENTING ORGANIZATION

Habitat for Humanity Thailand

## PARTNERS

Naresuan University  
Thai Special Forces

## FUNDING:

Coca-Cola Thailand  
Government Housing Bank  
Government Saving Bank  
Siam Commercial Bank  
Bank of America  
Cisco Systems  
HSBC Bank  
Boston Consulting Group

## SUBMITTED BY

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# Thailand



## Summary

Devastating flooding in Thailand in 2011 affected more than 13 million people. Habitat for Humanity Thailand responded quickly, from the emergency relief phase to longer-term recovery efforts. To date, HFH Thailand has supported nearly 1,000 families, rebuilding 180 homes and rehabilitating 769 houses.

## Timeline

- August-October 2011 — Shelter toolboxes and temporary shelters distributed.
- December 2011-February 2012 — Family selection process.
- January-June 2012 — Procured materials; construction began.
- April-June 2012 — Housing inspected and dedicated..
- May-June 2012 — Monitoring and evaluation.
- June 2012 — Program completed.

## Background

Heavy rainfall began at the end of July 2011, triggered by Tropical Storm Nock-ten, and flooding spread through the provinces of Northern, Northeastern and Central Thailand along the Mekong and Chao Phraya river basins. In October, floodwaters reached the mouth of the Chao

Phraya River and inundated parts of the capital city of Bangkok. Flooding persisted in some areas until mid-January 2012, and killed more than 800 people. More than 13.6 million people were affected. Sixty-five of Thailand's 77 provinces were declared flood disaster zones, and more than 20,000 square kilometers of farmland was damaged.

## Project Overview

HFH Thailand focused on supporting families affected by the flooding in eight provinces: Bangkok, Ayutthaya, Pathum Thani, Nonthaburi, Saraburi, Lopburi, Uthai Thani and Pitsanulok. With a budget of approximately US\$2.3 million, HFH Thailand embarked on an extensive disaster response program to rebuild or rehabilitate damaged homes, build new homes and strengthen existing homes so they are better able to withstand floods.



A new home built on stilts to mitigate against future flooding in Lopburi.

**Royal Thai Army volunteers working with Habitat prepare construction materials for house repairs.**

## Implementation

HFH Thailand asked the local government, Naresuan University and Thai Special Forces in Lopburi province to collaborate. To identify the target area, HFH Thailand distributed an application form to be completed by the community leader. Families were selected based on land ownership, extent of flood damage and number of members.

After families were selected, HFH Thailand, Naresuan University and Thai Special Forces divided the construction process into two phases because of the lack of skilled laborers in the area. HFH Thailand oriented the partners on the construction timeline, housing size and locations.

HFH Thailand explained the sweat equity concept to home partner families. This

involved moving construction materials from road to build site, mixing concrete, and floor and wall installation.

## Lessons & Promising Practices

- The documents required for family selection need to be carefully prepared in order to ensure transparency.
- Working with local community leaders and government agencies is key to smooth running of the program.
- Ensure that community members are totally involved at all stages of the program.
- Purchase materials directly from manufacturers to reduce costs and develop good partnerships for future collaboration.
- Use the services of a professional construction agency to plan the construction process.



## Assam Floods, India

### PROJECT NAME AND LOCATION

Assam Floods disaster response  
Alchiga Patna Wala, Sumdirimukh,  
Khaga Jugalpur and Naharani villages  
in Lakhimpur district, Assam state,  
India

### TYPE OF INTERVENTION

Emergency shelter kits

### YEAR

2011

### PROJECT TARGET

169 families/850 people

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India – Delhi  
Habitat Resource Center

### PARTNERS

Indo Global Social Service Society  
Inter Agency Group

### FUNDING

Habitat for Humanity India

### SUBMITTED BY

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## India



## Summary

The Brahmaputra River, swollen by continuous rainfall in Assam and neighboring states of Arunachal Pradesh and Nagaland from the end of July until mid-August 2011, breached riverbanks and caused widespread flooding across the plains. The river's 34 tributaries and other rivers broke through weak embankments and swept away many villages. Habitat for Humanity India provided emergency shelter kits for 169 families in the villages of Alchiga Patna Wala, Sumdirimukh, Khaga Jugalpur and Naharani in the immediate relief stage after the disaster.

## Timeline

- Aug. 2-3, 2011 — Rapid response team assessed situation in Lakhimpur district.
- Aug. 4, 2011 — Emergency shelter designed, materials sourced and assembled.
- Aug. 5-6, 2011 — Emergency shelter kits distributed.

## Background

Assam is a northeastern Indian state, geographically isolated from the majority of the country and connected via a narrow strip of land known as Siliguri corridor. One-third of Assam's population was affected or displaced by sudden flooding in the summer of 2011. More than 1,000 villages in 12 of Assam's 27 districts were devastated by the flooding, and more than 400,000 hectares of agricultural land destroyed, posing a severe threat to livelihoods and the economy. The floodwater damaged 17 bridges and disrupted national highways and link roads,

halting transportation and communication systems for more than five days.

## Project Overview

Habitat for Humanity India's rapid response team found Lakhimpur district severely affected, and without government or nongovernmental organization assistance. The villages in Lakhimpur were widely dispersed, roads were badly affected and relief operations had not reached residents. Many homes were submerged, and families were living along embankments or in relief camps. The floodwater meant that surroundings were contaminated and people struggled to find safe drinking water and adequate sanitation facilities. India's Inter Agency Group coordinated the setup of water and health facilities.

Safe and decent shelter was an immediate need. Families that had lost everything wanted to erect temporary or transitional shelters to protect themselves from the



Emergency shelter kit materials used to make transitional shelters.



sun, cold winds and damp, while families whose homes were partially damaged needed shelter materials in order to repair their homes. Habitat for Humanity India decided emergency shelter kits were the best way to address immediate needs.

HFH India's Technical Assistance Center in Chennai developed a design plan, and materials were purchased in bulk, following HFH India purchasing procedures.

HFH India worked in four of the most severely affected villages that had been cut off by floodwater and had not been reached by other relief efforts.

### Implementation

HFH India operated the program through its Habitat Resource Center in Delhi, with staff working alongside volunteers to verify information gathered from partner organizations — Indo Global Social Service Society and IAG — and local government officials, about affected communities. Each family that needed assistance received a token that was exchanged for a shelter kit. IGSS and IAG helped HFH India overcome the challenge of transporting materials by providing local volunteers who moved ESKs to the affected sites using trucks, boats and minivans.

Families that had lost everything, or needed shelter materials to repair or upgrade their damaged homes, and that had young children or elderly family members, receive assistance first.

Orientations on how to use ESK materials were conducted, and families received practical training on how to use the tools and materials. Residents helped one another to make their transitional shelters. Some used the tarpaulin sheeting to stop their roof leaks; other used it as a wall for privacy.

ESKs were made of tarpaulin sheeting, bamboo poles, nylon rope, coir rope (made from coconut husk fibers), hammers, steel rods and a mat.

Unfortunately, without additional resources, HFH India was unable to help the families to build permanent homes.

### Lessons & Promising Practices

- By supporting families to get the privacy and security they were lacking, communities gained the confidence to work together and approach the local government and other NGOs to find a more permanent housing solution.
- Pre-positioned materials helped to prevent delays and kept down costs.

**Right: House partners receive their shelter kits.**



## Mannar, Sri Lanka

### PROJECT NAME AND LOCATION

Mannar Internally Displaced People project  
Neelaseni village, Mannar district,  
Northern province, Sri Lanka

### TYPE OF INTERVENTION

New core house construction

### YEAR

2011

### PROJECT TARGET

18 families (85 people); 18 core  
houses built

### SHELTER/HOUSING SOLUTION SIZE

82.6 square meters, comprising two  
rooms, verandah and toilet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Sri Lanka  
Habitat for Humanity Japan

### FUNDING

Japan Platform, through Habitat for  
Humanity Japan

### SUBMITTED BY

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## Sri Lanka



## Summary

During Sri Lanka's 30-year civil war, fighting was concentrated in the Northern province. Since the Tamil Tigers laid down arms in 2009, Northern province has been trying to rebuild itself. Habitat for Humanity Sri Lanka built 18 houses for families that were displaced as a result of the civil war and returned to their village, but were living in temporary accommodation.

## Timeline

- May 2011 — Home partner families identified.
- May 2011 — Community meetings held on construction process and house design.
- June 2011 — Construction work began.
- September 2011 — Construction of 18 homes completed.

## Background

The Sri Lankan civil war started in July 1983 between the government and a separatist militant organization, the Tamil Tigers, which fought to create an independent Tamil state in the northeast of the island. Around 100,000 people were killed during the civil war, which had a debilitating effect on Sri Lanka's population generally, its environment and economy.

Various ceasefire agreements were signed, then broken or withdrawn, before the Tamil Tigers admitted defeat in May 2009. The final stages of the war created more than 300,000 internally displaced persons,

many living in camps. Almost all internally displaced persons were resettled by January 2012.

## Project Overview

Habitat for Humanity Sri Lanka focused on Neelasenai village in Mannar district, a location recommended by the Sri Lankan government's Mannar district secretary in consultation with the divisional secretary and the Grama Niladhari, a government-appointed village leader. The 18 families that HFH Sri Lanka supported were displaced by the civil war and returned to Neelasenai village to live in temporary shelters provided by Caritas Sri Lanka, a nonprofit.

The incomes of the 18 families were extremely low, US\$8 and US\$15 per month. HFH Sri Lanka built a core house for each family, consisting of two rooms, a veranda and toilet. Per government requirements, homes were built with a 152.4-square meter foundation.



**Top: Home partner at her transitional shelter.**

**Bottom: Completed core house.**

Homeowner families contributed unskilled labor to the construction process, digging the foundation and toilet pit, and providing water.

## Implementation

Neelasesai is home to 50 to 75 families.

The families that were chosen had to show documents to prove ownership of land and a ration card as evidence that they had been in an IDP camp. The Mannar district secretary approved the list of families.

HFH Sri Lanka worked with the Grama Niladhari to organize community meetings at the village church, where homeowners were oriented on the design of the core house and their contribution to the construction process.

The 30-year civil war destroyed local businesses, which are only just starting to recover. As a result, suppliers were limited, and construction materials were not available locally. Materials had to be transported across great distances, which often delayed timelines.

## Lessons & Promising Practices

- Homeowners were eager to participate in the construction process, and HFH Sri Lanka staff members were very committed, despite limited facilities.
- Initially, some homeowners wanted to have bigger homes. HFH Sri Lanka staff worked with families to explain Habitat for Humanity's mission and the core house concept.

**Right: Volunteers and beneficiaries lay a foundation for a new core house.**





## Leh Floods, India

### PROJECT NAME AND LOCATION

Building Back Better  
Leh Flash Flood disaster response  
Stoklam Palam, Leh district, Jammu  
and Kashmir state, India

### TYPE OF INTERVENTION

New house construction

### YEAR

2011

### PROJECT TARGET

24 families/120 people

### SHELTER/HOUSING SOLUTION SIZE

200 square feet

### IMPLEMENTING ORGANIZATION

Habitat for Humanity India

### PARTNERS

Ladakh Ecological Development  
Group, India

### FUNDING

Habitat for Humanity India  
Ladakh Ecological Development  
Group, India

### SUBMITTED BY

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## India



## Summary

On Aug. 6, 2010, unprecedented rainfall deluged Leh (previously the capital of Ladakh) district, in Jammu and Kashmir, state, India. Eleven centimeters of rain fell in just two hours — more than 10 times the average rainfall of the region in a month. The rain created flash floods and mudslides, leading to extensive damage of homes and communication lines as highways were washed away. Habitat for Humanity India supported 24 families to build new homes in the village of Stoklam Palam.

## Timeline

- September 2010 — Assessment of damage and shelter needs conducted.
- October 2010 — Home partner families selected.
- May 2011 — House construction began.
- October 2011 — Program completed.

## Background

Because of the lack of productive land, Leh's sparse population lives along riverbanks, practicing sustenance agriculture and rearing cattle. When the sudden rain fell, rivers swelled and burst their banks, wiping out everything nearby. In many places the river changed its course completely, causing further destruction. More than 630 houses were washed away, nearly 600 houses were damaged, and more than 500 huts were affected. The estimated damage to public property was US\$35 million, and damage to shelter was US\$8.7 million.

## Project Overview

Many homes in Ladakh are built using a mud called gomfa, which keeps houses warm in winter when temperatures drop to -30 Celsius, and these were swept away or submerged. In one village that was hardest hit, mounds of mud carried by rivers were as high as electric lines; many people were buried alive as they slept. More than 500 people were buried beneath these huge mud mounds, while others who are still missing were probably swept away.

Government departments, civil organizations and international agencies provided immediate relief. The Indian army, India's Border Roads Organization and General Reserve Engineer Force played a major role in clearing debris, creating road access and constructing makeshift bridges.

Families were relocated to relief camps, the largest being Solar Colony.



Homeowners and soldiers-volunteers lay out the foundation for a new home, then dig it.



Because the floods and mudslides left a large number of people at the mercy of a very harsh climate, housing was critical to ensure that people survived the extreme winter weather. Many of the houses had been built with substandard material or without resilient technology. New homes were constructed with substantially improved material and technology.

### Implementation

Habitat for Humanity India assessed the damage and shelter needs of the area. Factors such as the extent of loss or damage to their home, the security of land tenure or alternate government land allocation, vulnerability to extreme weather conditions, or lack of economic capacity to build their own home were key criteria in the home partner selection process.

The nearest Habitat Resource Center, in Delhi, partnered with Ladakh Ecological Development Group, a local non-governmental organization, on the project. LEDeG was an NGO active in the Leh region, specializing in environmentally appropriate shelter, with an established

rural building center for research and propagation of environmentally appropriate technologies. HRC Delhi provided technical input, monitoring, reporting and overall coordination of the project; LEDeG implemented the project in Leh; and house designs, layout and technology were developed collaboratively.

The house design was developed to be culturally appropriate and used traditional knowledge, with a focus on ecology and the environment. The house design incorporated disaster-resilient features, was locally relevant, adhered to minimum Indian standards and Sphere codes, and the construction technology was environmentally friendly and energy-efficient. Each house was built with a compost toilet.

### Lessons & Promising Practices

- Using local materials meant less impact on the environment.
- Using locally available skills reduced dependence on outside resources.
- Construction based on traditional housing designs preserved cultural heritage.

**Right: House near completion.**



## Earthquake and Tsunami Recovery Program, Japan

### PROJECT NAME AND LOCATION

Rebuilding Japan: Earthquake and Tsunami Recovery Program

### TYPE OF INTERVENTION

Distribution of non-food items, care kits, debris and rubble cleanup; house repairs

### YEAR

2011-2012

### PROJECT TARGET

4,000 families

### SHELTER/HOUSING SOLUTION

Varied

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Japan

### PARTNERS

All Hands Volunteers  
Peaceboat

### FUNDING

Habitat for Humanity International  
Habitat for Humanity Japan  
Japan Platform

### ADDITIONAL INFORMATION

More than 750 local and international volunteers mobilized

### SUBMITTED BY

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## Japan



## Summary

Habitat for Humanity Japan got to work immediately after the devastating earthquake and tsunami in 2011, assessing damage, appealing for donations and partnering with local and international organizations in disaster recovery. Targeting the areas most affected by the disaster, HFH Japan has been working in various communities across northern Japan, specifically in Iwate and Miyagi prefectures. Japan's government estimates that the reconstruction will last 10 years.

## Timeline

- March 11, 2011 — Earthquake and tsunami hit Japan.
- April 2011 — Habitat for Humanity Rebuilding Japan Tsunami Recovery Program began with distribution of non-food items.
- May 2011 — First brigades of volunteers mobilized for debris cleanup.
- October 2011 — House repairs began.
- January 2012 — Plans for additional work devised.

## Background

A 9.0-magnitude earthquake struck off the coast of Japan on March 11, 2012, resulting in aftershocks and a tsunami that destroyed homes and killed thousands of people. Compounding the disaster was uncertainty about radiation leaks from the earthquake-affected Fukushima nuclear facility. As of March 2012, a reported 15,826 people were dead and 3,810 were missing. The housing landscape was severely damaged with 118,640 houses destroyed, 183,033

damaged and 52,513 temporary shelters erected. Because HFH Japan's program did not have a developed building program in Japan, and the construction of temporary housing was controlled by the Japanese government's Ministry of Land, Infrastructure, Transport and Tourism, HFH Japan focused on coordinating with government authorities and NGOs to meet related needs, such as cleanup and small repairs.

## Project Overview

HFH Japan's assessment teams moved in immediately after the disaster and launched partnerships with NGOs Peaceboat and All Hands Volunteers to mobilize volunteers to clear debris and mud from houses and community spaces, pull out wet flooring and insulation, and make repairs. HFH Japan then began the distribution of household and winter items (bedding, heaters), providing financial assistance, and building additional storage units for families living in temporary



**Top: Home owner Saeko Mizuno, 77, in front of her damaged house in Ofunato.**



**Bottom: Habitat volunteers and All Hands volunteers clear the debris at Takata School in Rikizentakata, northern Japan.**

accommodation. In 2011, HFH Japan mobilized 462 volunteers, distributed winter kits to 3,840 families, cleared 389 structures of debris and repaired 54 homes.

In March 2012, the program shifted into community revitalization activities to upgrade facilities serving families in temporary shelters, and to repair houses. Additionally, HFH Japan is collaborating with local organizations to explore possible permanent community facility design and construction projects. As of June 2012, HFH Japan had mobilized 761 volunteers through individual and corporate volunteer programs, repaired 136 homes, upgraded four community spaces and raised more than US\$3.5 million for its disaster response operations. HFH Japan launched the “Homes and Hope” project in Iwate Prefecture for house rehabilitations and “Hometown Higashimatsushima” project in Miyagi Prefecture for upgrading community spaces.

Guiding principles for all HFH Japan initiatives are to accelerate families’ return to their homes, recreate hometown spirit, rebuild community bonds and interaction through volunteer participation, and support the work of other NGOs providing social services and livelihood assistance.

## Implementation

HFH Japan supports local partner organizations with their recovery activities by providing volunteer mobilization, funding and programmatic support. Its partnership with All Hands Volunteers served to mobilize volunteers for home repairs in Ofunato city, Iwate Prefecture. A partnership with Peaceboat mobilized volunteers for distribution of home starter and winter kits (heated floor mats, portable heaters and kotatsu — heated table sets) to almost 4,000 families by February 2012.

HFH Japan’s 2012 program has included repair of 125 homes, upgrading at least five community spaces and mobilization of more than 750 volunteers. To achieve this impact, HFHJ launched “Hometown Higashimatsushima” seeking to repair damaged/abandoned community centers and provide spaces for temporary shelter of residents. Through the assistance of an international technical advisor from HFHJ’s Disaster Corps program, HFH Japan finished repairing the Kameoka Community Center in June. The “Homes and Hope” initiative in Ofunato received a \$672,000 grant from the Japan Platform to rehabilitate 100 houses and provide consulting for up to 1,000 families in Ofunato. It also aims to support community space upgrades such as 40 storage units for household items; HFHJ volunteers built them for the residents of an Odachi temporary shelter complex.

HFH Japan is also working with local organizations such as the Iwate Association of Architects and Construction Engineers, local community leaders and coordination units to provide financial subsidies and technical advice to families seeking to rehabilitate their homes.

## Lessons & Promising Practices

- Follow the guidance of local needs. Programs should be structured in the context of unfolding infrastructure and economic recovery policies, long-term support for communities and preparation to support needs not addressed by government plans.
- To build trust, geographic and mission focus are key. Grassroots relationships are critical for delivering meaningful services.
- Engaging volunteers shows support from around Japan and worldwide to help sustain morale within the affected population, particularly among older groups; an on-the-ground presence allows us to accomplish more and better work.

## Cagayan de Oro City, Philippines

### PROJECT NAME AND LOCATION

Cagayan de Oro City Rebuild Program, Philippines

### TYPE OF INTERVENTION

Distribution of emergency shelter/care/cleaning kits, emergency sanitation (latrines), new core house construction, skills and materials production training

### YEAR

2012

### PROJECT TARGET

6,000 households

### SHELTER/HOUSING SOLUTION SIZE

Quadruplex, duplex and row core houses; 21 square meters per family

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Philippines

### PARTNERS

City government of Cagayan de Oro  
Philippines Department of Public Works and Highways  
Xavier University  
St. Francis Xavier Church  
All Hands Volunteers

### FUNDING

Habitat for Humanity International  
San Miguel Foundation  
Philippines Department of Social Welfare and Development  
Philippines National Housing Authority  
Lutheran World Relief  
Cargill

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## Philippines



## Summary

On Dec. 16, 2011, Tropical Storm Washi devastated the central and southern islands of the Philippines, causing flash floods and landslides. More than half of all confirmed deaths occurred in the cities of Cagayan de Oro and Iligan in the Northern Mindanao region. Habitat for Humanity Philippines pledged to build 6,000 housing units for displaced families, distribute 5,000 shelter repair kits and deploy three construction mobilization units to repair houses and restore and communities damaged by the storm.

## Timeline

- Dec. 16, 2011 — Tropical Storm Washi struck Mindanao.
- January 2012 — Project concept, design and timeline completed.
- April 2012 — First 500 units completed and delivered. Project continues.

## Background

Tropical Storm Washi's winds reached 90 km per hour, swept entire villages out to sea and released more than 181 mm of rainfall in 24 hours, equivalent to more than a month of rainfall. According to the Philippines' National Disaster Risk Reduction and Management Council, as of Jan. 4, 2012, the flooding had affected more than 724,700 people across 13 provinces; killing 1,257 people, with 98 listed as missing. Nearly 37,300 people were living in 54 evacuation centers. With the number of damaged or destroyed houses at 48,499, there was an urgent need for shelter.

## Project Overview

HFH Philippines partnered with the Cagayan de Oro government, Department of Social Welfare and Development and the National Housing Authority to build quadruplex, duplex and row houses and communities in several barangays. The goal for each community is to be safe, clean, green, child-friendly, resilient and empowered.

Each community will have a daycare center, a multi-purpose center and environmental programs. Continuous assessment of the families' needs and development will be done with the help of volunteers and partners. Training will be offered to build resilience and to improve health and childcare programs. The primary goal of this program is to rehabilitate, rebuild and improve the living condition of damaged communities in Cagayan de Oro and enhance resilience of families for future disasters.



Partial view of Calaanan site.



The program has three components: shelter relief, shelter recovery, and disaster mitigation and preparedness. As of Dec. 30, 2011, HFH Philippines had partnered with DSWD to fund the construction of 2,948 core housing units, with San Miguel Foundation to fund 2,500, and achieved corporate sponsorship through Wilcon Builders and Cargill. Soon after, funding from government and corporate donors reached more than US\$10 million.

### Implementation

This is an ongoing program. Most projects are being completed simultaneously and implemented in partnership with the local government unit, DSWD, National Home Affairs, national and international donors, and many others. Within two days of the storm, HFH Philippines responded with assessment teams and within one week had partnered with barangay-level (neighborhood/ community level) government units of CDO to distribute tools and cleaning kits for 1,000 families.

HFH Philippines obtained materials and partnered with local agencies to identify families for distribution of emergency shelter kits (construction materials and tools), care kits (hygiene) and cleaning kits. HFH Philippines also obtained and mobilized heavy equipment and tools for the construction mobilization units to be available for communities active in cleanup and reconstruction. Latrine construction for emergency camps and school evacuation centers was also implemented in partnership with camps and school management teams.

With several partners, including the All Hands Volunteers NGO, HFH Philippines has embarked on building at least 6,000 housing units using designs for four-unit quadruplexes, duplexes and row houses on land provided by the government, which is also undertaking site development and infrastructure work for installation of water supply systems, electricity and roads through appropriate agencies.

**Right: Partners review construction plans.**

**Facing page, top: Many people moved into temporary shelters after they lost their homes to the tropical storm.**

**Bottom: Clearing debris was an important part of the process.**







HFH Philippines will offer community-based disaster risk management training, construction training in partnership with the Technical Education and Skills Development Authority, and livelihood training to cover market analysis of skills and opportunities within the community. Several organized community groups participate in an income-generating scheme for production of concrete blocks being used in the project, while transferring skills on small-business management.

### Lessons & Promising Practices

- A strong coordination with other organizations through cluster coordination and local interagency group meetings is needed to avoid duplication of products being distributed to the affected community. Multiple organizations provide similar products, such as repair kits.
- There are a limited number of skilled laborers for the core house construction in CDO. A short-term solution is to import skilled laborers from other regions and at the same time scout and train potential skilled laborers within CDO.
- Because of a lack of local construction materials and high prices, advance scouting is necessary to order from suppliers. It is important to negotiate with suppliers to prepare hollow blocks on-site to reduce time and cost on production and allocate at least 30 percent contingency/incidental in the budget.
- Planning is required for local government units and national agencies to make available tracks of land for relocation site for permanent shelter.
- The support of local and national authorities has been instrumental to the development of a rapid recovery and the implementation of the housing project. Resources such as land, site planning services and development of basic infrastructure, and assistance with family selection, are key to a successful recovery in a relatively short time.
- Electricity and water in the relocation sites are a major consideration.

**Right: A family celebrates their new home.**

**Facing page: As core houses were finished, homeowners made them their own, hanging curtains and planting gardens.**







# Europe and Central Asia



## Rasht and Kumsangir Districts, Tajikistan

### PROJECT NAME AND LOCATION

Disaster Mitigation Project, Rasht and Kumsangir Districts, Tajikistan

### TYPE OF INTERVENTION

Structural mitigation and retrofit of rural homes using renewable resources. Skills training.

### YEAR

2006-2011

### PROJECT TARGET

337 households

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Tajikistan

### PARTNERS

Jamoats (local authority units)  
Tajikistan Institute of Seismology  
Tajikistan Ministry of Emergency Situations

### FUNDING

United Nations Disaster Risk Management Program  
United Nations World Food Program

### ADDITIONAL INFORMATION

Tajikistan is an earthquake-prone country

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## Tajikistan



## Summary

After the 2006 earthquakes, Habitat for Humanity Tajikistan began testing and using an innovative, low-cost technology combining timber framing and mulberry branches as the structural reinforcing elements on walls. The technology has benefited 337 families in rural areas of Kumsangir and in Rasht District, and has been used not only in response to these earthquakes but as a retrofit in homes for disaster mitigation.

## Timeline

- Late 2006 — HFH Tajikistan began research on the use of mulberry branches as reinforcement for mud brick walls.
- December 2007 — The Tajikistan Institute of Seismology certified the strength and methodology of use of mulberry branches in seismic retrofits.
- January 2008 — Retrofit of 80 homes began in Rasht, Rasht and the Kumsangir district.
- December 2008 — An earthquake with epicenter in northern Afghanistan affected the Rasht area. Homes with mulberry branch retrofits resisted damage.
- January 2009 — An earthquake hit the Kumsangir area. More than 150 homes reinforced with mulberry branches showed little damage in comparison to those not reinforced.
- May 2011 — The mulberry branch

technology was one of three winners of the Innovation Award at the World Reconstruction Conference, sponsored by the World Bank in Geneva.

## Background

Each year, Tajikistan experiences more than 5,000 tremors and earthquakes, the magnitude of which can reach between 7 and 9 points on the Richter scale. With more than 43 percent of the population living on less than US\$2 a day, very few families can afford to build reinforced homes to withstand earthquake damage. Most of the population lives in fear that their house could collapse, causing injury or death. Scientific research, certified by Tajikistan's Institute of Seismology in December 2007, showed that mulberry twigs and branches, with a diameter of 12 to 14 millimeters, have a tensile strength of 2,300 kg/cm<sup>2</sup> equivalent to 46 percent of 4- to 5-mm diameter steel rebar, and





thus can be used to retrofit mud brick walls to withstand earthquakes.

## Project Overview

This disaster mitigation project aimed to significantly reduce the damage caused by earthquakes to poverty housing. Mulberry twigs and branches can be harvested, coupled into grids and attached to internal mud walls and timber frames, using the grid to also sustain a mud plaster mixed with straw and wool. This stabilizes the walls and provides structural protection. The technology can be built into the construction of new homes or added to existing homes, even those already damaged by earthquakes. The technology is innovative (it harnesses the strength of mulberry twigs, opposed to much more expensive steel rebar reinforcement), affordable (mulberry twigs are free and the total reinforcement work costs at least 33 percent less than the rebar alternative), low-tech (because no special equipment is needed), and environmentally sustainable, because the twigs can be harvested annually. This new disaster mitigation technology has

been approved by the Tajikistan government and installed in more than 330 rural homes in eight vulnerable communities. Mulberry twig reinforcement grids can be easily installed by families and communities, and have the potential to be produced in any country where mulberry trees (or a similar variety) are found.

## Implementation

Beneficiaries were selected from the poorest and most vulnerable rural families in Rasht and Kumsangir districts. In these rural cotton-growing regions, most of the men are forced to migrate to Russia in search of seasonal work, leaving women and children behind in unprotected homes. The retrofit of homes accommodated these seasonal variances. People in target communities were also trained on disaster preparedness, to protect themselves and their homes from earthquakes and tremors, and were taught how to collect, prepare, construct and install the reinforcing mulberry twig grids. Partner organizations included the Jamoats (local authority units), community development committees, field



**Facing page:**

**Top and lower left: Preparing a grid for wall reinforcement using mulberry branches.**

**Lower right: A young beneficiary of the project.**

**Left: Unziyamoh Abulhaeva gestures “rahmat,” meaning thank you, in gratitude to those who helped her complete her house.**



units of emergency committees and local partner NGOs. In a second phase of the project, a revolving fund was established by Habitat to facilitate loans for families to finance additional repairs and access to the technology. The small loans are subsidized and payable over a two-year period.

- Intense community mobilization resulted in extended involvement beyond original project goals. In Kumsangir, a volunteer community development committee of community leaders, partner families and local authorities mobilized the community to work on such initiatives as clean drinking water (water filters) and earthquake preparedness.

**Family in Rasht district in front of their home that was retrofitted with mulberry branch technology.**

### Lessons & Promising Practices

- Sound technological innovations using local materials and technologies are possible. The mulberry twig reinforcement technology has been incorporated in the Tajikistan code for rural construction.



## Dorohoi, Romania

### PROJECT NAME AND LOCATION

Reconstruction after floods  
Dorohoi, northern Moldova, Romania

### TYPE OF INTERVENTION

Renovations and new housing,  
technical assistance, on-site  
reconstruction

### YEAR

2010-2011

### PROJECT TARGET

400 families (1,200 people)

### SHELTER/HOUSING SOLUTION SIZE

60 square meters on average

### IMPLEMENTING ORGANIZATION

HFH Romania

### FUNDING

Multinational corporations (Vodafone,  
Lafarge), UNICEF, local companies and  
individuals

### PARTNERS

Romanian Ministry of Regional  
Development

### ADDITIONAL INFORMATION

Disaster response project in multiple  
sites/locations, implemented during  
winter. Integrated approach (housing,  
school, technical assistance).

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## Romania



## Summary

The project targeted the most affected community by rebuilding social infrastructure after heavy flooding. The results consisted of 30 new houses, 50 renovated houses, 320 rehabilitated houses, one school rebuilt and two schools renovated. Town government helped to relocate 500 families in a new area with urban planning advice and land zoning. The project mobilized 497 local volunteers. It also used donated materials and gave families materials and technical assistance to support their own repairs and renovations.

## Timeline

- July 1, 2010 — Project started.
- July 9, 2010 — Partnership with central government signed.
- August 2010 — Project team formed, communities identified, families selected.
- Aug. 19, 2010 — Construction started.
- Aug. 19, 2010 — First Habitat Resource Center opened.
- February 2011 — Finished the renovation of 50 houses.
- February 2011 — Finished building school.
- May 2011 — Finished construction of 30 houses.

## Background

In June 2010, heavy rains in Romania caused severe floods, affecting 31 counties, killing 27 people and causing economic loss in the hundreds of millions of euros. Hundreds of people lost their houses, and 7,000 had to repair their homes to make them livable. Infrastructure was

seriously damaged. Because of limited financial resources, government assistance was drastically reduced. The Romanian government provided basic materials — cement, wood, bricks and roof elements, and only for the families whose homes had been destroyed. The government did not provide financial aid or money to pay for labor. For those in houses that were damaged, it cost more than 15 percent of the total house cost to make repairs.

## Project Overview

Because of the extent of damage, the Dorohoi area was selected for the first intervention. More than 400 houses were destroyed and 500 were damaged. Surrounding villages were equally affected.

A selection committee comprising two representatives from the organization, a town hall representative and a community representative. Public information meetings were held in the camp for flood victims in order to explain the housing

program, eligibility criteria, and conditions for participation and future obligations.

At the same time, social surveys were conducted for each family on the official list of victims. Through this process, 43 families were initially selected for the renovation project and 17 families for the construction of new homes during the first phase. The other 340 beneficiaries were selected in the second phase of the project because of the increased capacity of the project staff to assess new areas.

The first stage of the campaign — “Now, more than ever!” — focused on fundraising. At least 60 companies and more than 20,000 individuals raised US\$650,000 in cash and US\$290,000 in construction materials. Later stages of the response dealt with school rebuilding and renovation. The project also mobilized local 497 volunteers from the business community.

## Implementation

The city allocated a plot of land for the construction of new houses, along with the infrastructure. A warehouse was set up close to the main construction site to receive and store in-kind donations and materials, later distributed through the resource center. It also disbursed materials for the construction of new houses. Two local companies were subcontracted to perform core/specialized work with new constructions and renovations. A local team was formed to manage the project. It included a public relations specialist, volunteer coordinator, family support officer and construction site manager. For the new builds, aerated thermal blocks were chosen because of availability, climate conditions and construction costs. The houses were finished using standard quality materials for interiors, including drywall, laminate parquet, stoves and tiles. Bathrooms were equipped with sinks and showers.

**Right: Special thermal blocks were used for homes in Romania.**

**Facing page: Local construction workers help the homeowner partners build their homes.**









For the renovation of the damaged houses, solutions were selected on the spot. The bulk of work was restoring walls and insulation, reinforcing foundations, and replacing flooring and internal finishes. Technical assistance was provided to a large number of families through the resource centers. Families received materials for their own work. Transportation from the warehouse to each location was offered to each family.

Construction workers were deployed to give families design and technical support in construction, and help with the use of tools and equipment. This helped ensure the quality of construction and that health and safety requirements were met.

## Lessons & Promising Practices

Project strengths:

- Families contributed their time and labor toward construction of their new homes.
- Effective coordination and support from the national office.
- Business partners quickly provided materials and money.

- The municipality was involved from the start, which helped the project to proceed quickly.
- The government's endorsement of the campaign helped generate resources and partnerships.

Project weaknesses :

- Government delays in delivering on promises for materials.
- Logistics not adapted for working in multiple locations (10 locations simultaneously).
- Difficulty in engaging the beneficiaries selected for relocation.
- Weak involvement of local volunteers interested in renovation program.
- Severe weather conditions in winter and spring (-10 degrees Celsius in April) delayed construction and prevented more local volunteers from participating.

**Right and facing page: Habitat built 30 new houses in the Dorohoi area of Romania after the flood.**





# Latin America and the Caribbean





## Hurricanes Mitch and Georges, Central America

### PROJECT NAME AND LOCATION

Hurricanes Mitch and Georges Response Program (Guatemala, El Salvador, Honduras, Nicaragua, Dominican Republic)

### YEAR

1998-2000

### FUNDING

The James S. & John L. Knight Foundation, International Organization for Migration, Cooperative Housing Foundation, Water for People, International City/County Management Association, Common Hope, South American Missionary Society of the Episcopal Church

### IMPLEMENTING ORGANIZATIONS

HFHI, HFH El Salvador, HFH Honduras, HFH Nicaragua, HFH Dominican Republic

### ADDITIONAL INFORMATION

First multi-country disaster response program implemented by HFH

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## Central America



### Summary

In September and October 1998, Georges and Mitch, two of the most destructive hurricanes in recorded history, struck the Caribbean and Central America, killing an estimated 10,000 people and leaving nearly 1 million people homeless. Thousands more were missing or injured. The storms destroyed more than half of the vital infrastructure of several countries.

Habitat for Humanity International carried out its first significant multinational disaster response program, focusing on long-term recovery by helping victims build simple, decent, affordable and permanent housing.

### Timeline

- September 1998 — Hurricane Georges struck the Caribbean.
- October 1998 — Hurricane Mitch struck Central America.
- October 1998 — HFHI made an urgent appeal for donations to help the five countries.
- February 1999 — HFHI multinational disaster response project launched with an ambitious plan for construction of permanent homes.
- June 2000 — Program closed after surpassing by 307 the goal of building 4,644 houses.

### Background

In September 1998, Hurricane Georges struck the Dominican Republic with strong winds and very heavy rains, along with a seven-foot storm surge. Nearly 10 hours of continuous rainfall resulted in mudslides and overflowing rivers across the mountainous country, damaging many

cities along the southern coast, including the capital. High winds of 120 mph downed and uprooted trees across much of the country. Thousands of houses were destroyed. The entire country was without electricity after the storm, which damaged water systems and communications.

Hurricane Mitch was the deadliest storm to strike the western hemisphere since 1780.

After threatening Jamaica and the Cayman Islands, Mitch moved westward. Reaching Guatemala on Oct. 31, Mitch produced up to two feet of rain per day. In some regions, as much as 75 inches of rain fell. Floods and mudslides virtually destroyed the infrastructure of Honduras and devastated parts of Nicaragua, Guatemala and El Salvador. Entire villages — and their inhabitants — were swept away in the torrents of floodwaters, and deep mud rushed down mountainsides. Hundreds of thousands of homes were destroyed.

### House construction results:

|                    | Planned | Built |
|--------------------|---------|-------|
| Dominican Republic | 450     | 154   |
| El Salvador        | 494     | 451   |
| Honduras           | 1,025   | 1,042 |
| Guatemala          | 2,191   | 3,067 |
| Nicaragua          | 480     | 237   |
| Total              | 4,644   | 4,951 |



Habitat volunteers in Honduras.



The initial assessment showed the following damage:

#### **Guatemala**

- 270 dead
- 750,000 affected/displaced
- 50,000 homeless
- US\$500 million in economic losses

#### **El Salvador**

- 240 dead
- 345,000 affected/displaced
- 56,000 homeless
- US\$400 million in economic losses

#### **Honduras**

- 5,700 dead
- 1,500,000 affected/displaced
- 285,000 homeless
- US\$5 billion in economic losses

#### **Nicaragua**

- 3,050 dead
- 870,000 affected/displaced
- 65,000 homeless
- US\$1 billion in economic losses

#### **Dominican Republic**

- 380 dead
- 500,000 affected/displaced
- 185,000 homeless
- US\$2 billion in economic losses

### **Project Overview**

The context of inadequate shelter in Central America and the Caribbean cannot easily be separated from a backdrop of increasing poverty. Poverty is exacerbated in rural areas that lose their livelihoods after a disaster. HFHI responded with its first multi-country disaster response program, focusing on long-term recovery through permanent housing and by forging strategic alliances.

The program followed the traditional Habitat methodology: family selection, sweat equity, volunteer help and a repayment plan. The housing projects (particularly those that included land purchase and site development) also had subsidies to help make them affordable.

After 18 months of accelerated work in Honduras, Nicaragua, El Salvador, Guatemala and the Dominican Republic, 4,951 Habitat houses were built. Most of the work was done at the community level with groups of families and local and international volunteers organized through local Habitat affiliates.

### **Implementation**

Within two weeks after Hurricane Mitch, HFHI's urgent appeal for donations exceeded expectations, creating great opportunity and also challenges for Habitat's national organizations and affiliates. More than US\$6 million was raised.

To expedite HFHI's response, a Special Programs department was created in the Latin American and Caribbean area office. Assistance included funding, technical expertise, support for management of international volunteers, and financial management.

By February 1999, after meeting with Habitat partners in every country, the Special Programs department set an ambitious plan to build 4,644 houses in an 18-month period.

HFHI then decided to establish the Disaster Response office in Americus, to make disaster response part of its ministry. This became a legacy of the response to Hurricane Georges and Mitch.

During the projects, strategic alliances were vital for reconstruction. Alliances provided funds that supported land acquisition, site development, house construction, staffing and administrative costs in the five national organizations.

### **Lessons & Promising Practices**

- By June 2000, the project had surpassed by 307 the goal of building 4,644 houses, bringing the total to 4,951. Thus HFHI proved it could successfully put to use its expertise in house construction and the development of local grass-roots organizations in addressing the acute need for long-term housing for victims of natural disasters.
- The project illustrated a major achievement for Habitat for Humanity by organizing the construction of nearly 5,000 houses over 18 months — nearly tripling the annual building capacity of the national organizations in the five countries. Other accomplishments include the generation of more than US\$6 million in resources for HFHI programs, the start of eight new affiliates, the establishment of several strategic alliances with local and international organizations for project implementation and additional resource development, and the development of four new and integrated communities for urban residents.

## La Joya Amarateca, Honduras

### PROJECT NAME AND LOCATION

Project La Joya, Amarateca Valley, Tegucigalpa Central District, Honduras

### TYPE OF INTERVENTION

New housing construction, site development and infrastructure, school building

### YEAR

1999-2001

### PROJECT TARGET

355 households left homeless by Hurricane Mitch

### SHELTER/HOUSING SOLUTION SIZE

48-square meter duplexes

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Honduras

### PARTNERS

Municipality of Tegucigalpa

### FUNDING

Habitat for Humanity International, United States Agency for International Development through the International Organization for Migrations and the Cooperative Housing Foundation, Honduran Social Investment Fund, The Knight Foundation, International City/County Management Association

### ADDITIONAL INFORMATION

This project was part of the HFHI Special Programs department (a multi-country response to hurricanes Mitch and Georges)

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## Honduras



## Summary

In response to the damage from Hurricane Mitch in 1998, Habitat for Humanity Honduras developed several recovery housing projects that served more than 1,000 families. The biggest of these projects was in the Amarateca Valley, in the outskirts of the capital city of Tegucigalpa, where 355 homeless families relocated, mostly from temporary shelter camps.

## Timeline

- Oct. 30, 1998 — Hurricane Mitch made landfall in Honduras, causing widespread death and destruction.
- November 1998-January 1999 — Temporary shelter camps established on public land in Tegucigalpa, hosting more than 10,000 homeless families.
- September 1999 — Land secured by HFH Honduras in Amarateca Valley, 35 km from Tegucigalpa
- November 1999 — Site development began.
- January 2000 — House construction began.
- June 2000 — First families moved in, with temporary services.
- April 2001 — Project completed.

## Background

Honduras is one of the poorest and least developed countries in Latin America, with nearly two-thirds of Hondurans living in poverty. Before 1998, Honduras had shown moderate economic growth as a result of government reforms. Hurricane

Mitch killed more than 6,500 people and left 8,085 missing and 165,000 homeless in Honduras; agriculture, responsible for most exports, was the worst affected.

What made the hurricane truly devastating was that several dams broke and completely flooded a number of towns. The capital city was filled with 18 feet of mud and all activities came to a halt, including the government. Mitch did not only sit on the coast; it went inland. Towns throughout the country were affected. After the hurricane, the housing deficit increased from 63 percent in March 1998 to 66 percent, making an already dire situation even worse. Several temporary shelter camps were established in the capital city to host more than 10,000 displaced and homeless families. Schools, hospitals, bridges and other critical infrastructure were also heavily affected sending the country “50 years backward,” as the president of Honduras said in a message to the international community.



Family in Amarateca Habitat house.

## Project Overview

Project La Joya involved the construction of a permanent relocation settlement with 355 housing units of 48 square meters each in a duplex design, using self-construction and mutual help. HFH Honduras secured the land, implemented site development (roads and walkways) and built the in-project water supply network, sanitary sewerage network and electricity grid. HFH Honduras also negotiated with the city of Tegucigalpa for the connection to existing utility systems and for a sewage treatment plant. HFH Honduras relocated families living provisionally in macro shelters in the city of Tegucigalpa, who went to the camps after their homes were lost in massive landslides along the Choluteca River. Neighborhoods of origin such as Colonia El Reparto and Colonia Soto were centrally located in the city, and families faced the only option of relocating to the Amarateca Valley housing projects being built by several agencies (including HFH Honduras) 35 kilometers away. The relocation was stimulated by a voucher system financed by USAID in which families leaving the camps would receive up to USD\$600 toward a new housing solution in Amarateca Valley. HFH Honduras also built a school to facilitate relocation of families with school-age children.

## Implementation

After Hurricane Mitch, Honduras received tremendous amounts of outside help and economic and political aid. NGOs ran the bulk of the housing sector reconstruction process. The government had a role, but those that had the funds made the real decisions. The government was a side-shadow player in rubber-stamping what NGOs planned and implemented.

Project La Joya was a mix of construction contract services (site development, in-project infrastructure work), contracted

labor and “sweat equity” (participation of beneficiaries) for housing construction, and Habitat Global Village volunteer teams, which were an integral part of construction activities in Amarateca.

HFH Honduras had to grow staff capacity in a relatively short time in order to meet the demands of the project, which created internal tensions. Additionally, the expected connection to existing utility services by the city of Tegucigalpa was delayed, as was the building of an external sewage treatment plant designed to serve several housing projects in the valley. Yielding to strong pressure from families and donors, HFH Honduras allowed families to move into the project without basic services functioning, and had to implement a temporary system of water supply and latrines to address sanitation needs. Basic services (water and sewerage) were finally provided two years after the project was completed. The notable exception was electricity, which was already functioning during the housing construction phase.

## Lessons & Promising Practices

- HFH Honduras was able to leverage five-fold the original funding available for the project through the negotiations of alliances and partnerships with several international agencies and the Honduran government. The result was an increased number of families in the project and a level of subsidy (up to 60 percent) applied to the housing solution.
- The Amarateca Valley region was not prepared to accommodate the entire population of more than seven housing projects being carried out simultaneously by NGOs (including the La Joya project). Likewise, the city of Tegucigalpa was neither financially nor technically prepared to fulfill its administrative responsibilities toward the new settlements, although all of the

projects had undergone the design and construction permit approval processes.

- Separating the beneficiaries from their former social and territorial network and source of employment showed the limitations of this relocation plan. The valley’s economic infrastructure did not have the economic capacity to absorb this population, which resulted in some of the families abandoning homes or not being able to live in them immediately.
- The new project inhabitants arrived like a barrage, without previous social infrastructure or organization. They were not well-organized; families came from different neighborhoods, communities and macro-shelter camps without any common links or familiarities, which made organization and the fulfillment of their roles in the project difficult.
- Despite the proximity of the capital, it was difficult to reach the main connecting road with Tegucigalpa from some areas of the valley and thus impeded many resettlements toward the capital. This fosters settlement isolation.
- Many families not living in temporary shelters had to have their bus rides paid for by the project so they could participate in the house construction. Arrangements and administration of “sweat equity” consumed time and required a full-time staff.
- The methodology through which housing is granted to families in emergency projects should be analyzed carefully. In this case, Project La Joya facilitated credit to affected families, which caused problems for HFH Honduras’ portfolio, even with almost 60 percent of the housing solution already subsidized. A better assessment of capacity to contribute financially by disaster-affected households needs to be part of project design in order to determine realistic capacity for repayment.

## Earthquake Response, El Salvador

**PROJECT NAME AND LOCATION**  
2001 Earthquake Response, El Salvador

**TYPE OF INTERVENTION**  
Permanent house construction and repairs

**YEAR**  
2001-2002

**PROJECT TARGET**  
1,000 affected families (619 new houses and 381 house repairs)

**SHELTER/HOUSING SOLUTION SIZE**  
34.8 square meters

**IMPLEMENTING ORGANIZATION**  
Habitat for Humanity El Salvador

**PARTNERS**  
CARE International  
Local municipalities

**FUNDING**  
Habitat for Humanity International

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## El Salvador



### Summary

In response to damage caused by two earthquakes, in 2001 Habitat for Humanity El Salvador designed a response to assist families with the construction of permanent housing and repairs of damaged ones, including those of Habitat homeowners. There were 1,000 construction projects that included strengthening capabilities in affected communities through community development training and a mutual help methodology. Additionally, Habitat El Salvador worked with CARE International and local municipal councils to develop a sanitation component.

### Timeline

- January 13, 2001 — A 7.6-magnitude earthquake struck El Salvador, leaving widespread destruction.
- February 13, 2001 — A second earthquake (6.6 magnitude) hit the same areas.
- March-April 2001 — Damage assessments conducted and response plan developed.
- July 2001 — Family selection and training began; construction followed.
- July 2002 — Project finished.

### Background

El Salvador is the smallest country in Central America, with an area of 21,041 square kilometers. It is regularly affected by seismic activity because of the Cocos and Caribbean tectonic plates. Because of high population density and social and economic conditions, the country is highly vulnerable. In January and February 2001, two powerful earthquakes struck with devastating consequences. According

to the Comité de Emergencia Nacional, 163,866 houses were declared inhabitable (destroyed) and 107,787 houses were damaged. Together, these represented approximately 25 percent of the houses in El Salvador. More than 1.6 million people were affected, and the first earthquake alone caused US\$1 billion in damage. More than 270,000 families were left without shelter or were forced to live in substandard conditions.

### Project Overview

Habitat for Humanity El Salvador designed a reconstruction program to assist residents in the eight provinces that were hardest hit: Usulután, San Vicente, La Paz, Cabañas, Santa Ana, San Salvador, Cuscatlán and Sonsonate. The program lasted one year and had two main components: permanent housing and repairs. Most of the affected families came from houses built with adobe or bahareque, a combination of wood sticks and mud, which sustained severe to complete damage.



**Family in front of their new Habitat home, under construction.**



Permanent houses for 619 families were made of concrete block reinforced masonry. Training sessions educated families in such subjects as mutual help, leadership, community organization and proper use and maintenance of latrines. The program included loans payable in 10 to 15 years to cover the direct costs of constructing permanent houses.

The repair component assisted 381 families from 15 communities through technical assistance and repairs. Much of this work was targeted to current Habitat homeowners who had damaged walls and roofing tiles. The engineering design of Habitat homes was modified to make new homes better resistant to earthquakes.

### Implementation

The program was implemented by HFH El Salvador, generating contacts with the municipalities in order to prioritize the areas that needed immediate attention or had not been assisted by government programs. Municipal governments provided venues for training events, conducting meetings and to facilitate communication among community leaders.

The permanent housing component benefitted from an alliance with CARE International to provide latrines. CARE also organized training in the use and

maintenance of the latrines and other hygiene practices.

HFH El Salvador managed all of house construction and repairs. Construction involved the participation of 60 international volunteers and more than 90 national volunteers, who worked alongside local contractors and family members. It is important to note that HFH El Salvador applied new program skills learned after the response to Hurricane Mitch, which affected some of the same communities in late 1998, but it also had to learn new program design methodologies.

### Lessons & Promising Practices

- The involvement of the local municipalities was very important because it helped in selecting and prioritizing the communities and facilitated the relationship with local leaders.
- Community organization was key in achieving success through active participation of families.
- Assessments and evaluation of damages were a challenge. This activity was new to HFH El Salvador staff and took place under great pressure during a crisis.
- HFH El Salvador designed the permanent housing and the repair projects as a cost recovery program; families were expected to repay the direct costs. That limited the selection of families.

**Right: A Habitat home stands amid damaged houses.**



## Santa Fé, Argentina

### PROJECT NAME AND LOCATION

Rebuilding Santa Fé, House by House, Santa Fé, Argentina

### TYPE OF INTERVENTION

Core house construction

### YEAR

2003-2004

### PROJECT TARGET

26 families

### SHELTER/HOUSING SOLUTION SIZE

50 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Argentina

### PARTNERS

UN Development Program , Executive Reconstruction Unit University of Buenos Aires, Association of Civil Micro-engineering, Baptist Church, Free Brothers Church, Argentine Federation of Protestant Churches, Adventist Disaster Relief Agency, German Red Cross, Methodist Church, The Salvation Army

### FUNDING

HFHI, Marriott Hotel, local donations

### SUBMITTED BY

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## Argentina



## Summary

In April 2003, 30,000 families were left homeless from severe flooding in Santa Fé, in northeast Argentina. The communities were among the poorest population in this part of the country, which contributed to their vulnerability during a disaster, and the disaster exacerbated their situation. Habitat for Humanity Argentina responded by working with 26 families in the construction of core houses.

## Timeline

- April 22-24, 2003 — Salado River flooded Santa Fé.
- May 2003 — HFH Argentina responded.
- June 2004 — Project completed.

## Background

The Economic Commission for Latin America and the Caribbean reported in 2003 that the Santa Fé floods of 2003 caused enormous damage to housing infrastructure and urban services, which affected the economic strength of the city.

Santa Fé was already one of the poorest cities in the country, with the worst housing deficits in quantity and quality. A quarter of the population lived in precarious settlements surrounded by dumps and contaminated streams. The location of settlements on the banks of the Salado River and failures of a flood warning system contributed to the devastation.

The Salado basin floods every decade.

The Parana River contributes to the floods because it is a tributary of the Salado.

The floods were also caused by degraded soils in the basin from deforestation, erosion and intensive monoculture.

The floods killed 23 people, damaged 28,000 houses, closed 5,000 agricultural businesses, damaged 2 million hectares of agricultural land and cost US\$1.5 million for reconstruction.

## Project Overview

The first phase of HFH Argentina's emergency response consisted of building six houses with the support of networks in the area. Families with their own land outside of flood risk zones received help. In addition, HFH Argentina sought technical assistance from the local university to improve the dangerous sanitation conditions of four houses. A rotating fund was established during this phase.



Evacuation during flooding of Salado River.

During the second phase, HFH Argentina took into account the evaluation of the first phase, and worked with land granted by the government. The Red Cross and the United Nations Development Program cooperated with HFH Argentina to construct 20 houses for families that had been relocated to safe areas.

## Implementation

HFH Argentina worked with existing networks including NGOs and churches. A coordination group was established — five local volunteers and two hired technical experts. This group determined the details of the first stage of the project to build six houses and, in collaboration with other NGOs and churches:

- Selected the families according to land availability, needs and involvement with HFH Argentina's proposal.
- Coordinated and incorporated technical aspects for house construction.

Despite the families' notable poverty, the NGOs and churches wanted to avoid "donating" the houses, but at the same time needed a humanitarian approach. Depending on the economic circumstances of each family, a subsidy of up to US\$1,000 was created, as well as a 12-year loan with a monthly fee of 50 pesos (20 percent of the minimum salary). This subsidy was paid off by donors (churches and individuals) during the first two years, and helped reduce the families' monthly repayment fees during the life of the loan. This created a culture of regular donations and repayment.

Donations and volunteer time were abundant. Hotel Marriott donated lavatories, beds and rugs. These donations in money and products covered the US\$1,000 subsidy.

HFH Argentina had not built a single house in Argentina at the time the disaster hit. In less than three weeks, HFH Argentina had a voice in the crisis committee alongside the Red Cross, Salvation Army, Samaritan's Purse, Civil Protection and government representatives. HFH Argentina's choice of a small pilot project and the launching of a local affiliate proved to be the biggest strength. HFH Argentina built six houses within 18 months after the disaster. HFH's Santa Fe affiliate has served more than 250 families so far.

## Lessons & Promising Practices

- After the Santa Fé program, HFH Argentina was able to show concrete results of its work in Argentina and was thus able to conduct an awareness campaign.
- HFH Argentina now has an affiliate in Luján that conducts housing and training activities.
- The team responsible for the Santa Fé project was formed by volunteers and Friends of HFH Argentina, a new experience that helped HFH Argentina to design a team of volunteers and strengthen the organization's capacities for disaster response.

## Hurricane Ivan, Jamaica

### PROJECT NAME AND LOCATION

Hurricane Ivan Response Thornton, Monchioneal, Port Antonio and Manchester, Jamaica

### TYPE OF INTERVENTION

Core houses and housing repairs

### YEAR

2004-2010

### PROJECT TARGET

200 families

### SHELTER/HOUSING SOLUTION SIZE

290 square feet

### IMPLEMENTING ORGANIZATION

HFH Jamaica

### FUNDING

Habitat for Humanity International, Jersey Overseas Aid Commission, Adventist Development and Relief Agency, Diageo Foundation

### PARTNERS

Food for the Poor, Jamaica Red Cross, Adventist Development and Relief Agency Jamaica

### ADDITIONAL INFORMATION

Results: 12 core houses, 98 house repairs, materials packages training

### SUBMITTED BY

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## Jamaica



## Summary

Hurricane Ivan, one of the worst tropical storms to be recorded in Jamaica, caused significant damage, left thousands of people homeless and killed about 17 people. The effects of the storm are still being felt, and the situation was exacerbated by other storms.

## Timeline

- Sept. 10, 2004 — Hurricane Ivan passed southwest of Jamaica.
- November-December 2004 — HFHI met with community-based organizations and local builders to coordinate long-term recovery.
- 2004-2006 — First interventions by HFH Jamaica and HFHI.
- 2008 — Follow up response (new housing) with HFHI and Food for the Poor.
- 2010 — HFHI, ADRA Jamaica and Jamaica Red Cross launched a risk reduction project.

## Background

Each year the Caribbean is threatened by the devastating storms of the Atlantic Hurricane season. Between 2000 and 2008, 146 storm-related disasters were recorded in the region, an average of 16 per year. Jamaica has required disaster response attention almost annually. From Sept. 10-12, 2004, damaging winds and floods from Hurricane Ivan, a Category 5 storm, destroyed more than 8,000 houses

in Jamaica. Most of the severely affected coastal dwellers, south of the island, were extremely poor and many, especially fishermen, lost their livelihood, as well as their homes and possessions.

## Project Overview

Habitat for Humanity International supported local housing recovery efforts by partnering with community-based organizations to serve 210 families in five hard-hit villages. Habitat provided funding and construction expertise, and community groups selected participating families and organized unskilled labor. Local contractors were hired by Habitat to source materials and supervise the construction. Families received loans and subsidies based on their income; some of the poorest, whose housing could not be repaired, received subsidized 290-square-foot starter homes built by community labor.

The work was consistent with HFHI's core principles, while working toward the goal of long-term sustainable development in



areas where there was no Habitat presence. Rehabilitation/repair and core unit housing — a staged building approach beginning with a core unit for immediate shelter — were the main components of the projects.

## Implementation

This process covered three periods of response: After Hurricane Ivan, a follow up in 2008 by partner Food for The Poor, and a final intervention in 2010 in conjunction with ADRA Jamaica and the Jamaica Red Cross. In 2004-2006, HFHI started the project with HFH Jamaica, then took on the entire project after HFH Jamaica ceased operations. Habitat's duties included selection of families, purchase of materials, the hiring of skilled labor and project management. In 2008, Habitat supplied the funds and some project oversight to Food for the Poor. In 2010, projects with an emphasis on disaster risk reduction and preparedness were launched under an agreement between HFHI, ADRA Jamaica and the Jamaica Red Cross. HFHI's

primary roles were funding and technical support. ADRA and the Red Cross performed community selection, and ADRA handled individual family selection, building and project management. The Jamaica Red Cross' role was as community trainer and project enumerator.

An estimated US\$370,000 was spent on these projects.

## Lessons & Promising Practices

- Habitat's traditional house-building systems and methodology do not always work after a disaster.
- It is difficult to start a house repayment system with disaster-affected families because of loss of livelihoods.
- Inter-agency dynamics need to be understood and all groups need to know what each is doing.
- The response to a disaster can continue for years, even when the disaster is not recorded as a major event.



## Hurricane Ivan, Grenada

### PROJECT NAME AND LOCATION

Grenada Hurricane Recovery Program (Hurricane Ivan)

### TYPE OF INTERVENTION

House repairs  
New house construction  
Community mobilization  
Organizational development

### YEAR

2004-2006

### PROJECT TARGET

225 low-income Grenadian families severely affected by the hurricane.

### SHELTER/HOUSING SOLUTION SIZE

Varied

### IMPLEMENTING ORGANIZATION

Grenada Response, Recovery and Reconstruction

### FUNDING

Habitat for Humanity International  
United States Agency for International Development

### ADDITIONAL INFORMATION

30 houses rebuilt  
20 repairs completed  
5 new houses built  
Supported 13 additional families in finding funding

### SUBMITTED BY

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## Grenada



### Summary

After Hurricane Ivan struck Grenada in September 2004, Habitat for Humanity International worked with a local partner to assist families, channeling funds, organizational development training and support for the quest of additional funding. The project focused on a common goal to bring organizations together, build awareness of resources and networks, and provide training and support to a wider body of organizations participating in housing assistance after the disaster.

### Timeline

- September 2004 — Hurricane Ivan struck Grenada.
- October 2004 — Habitat team, including former U.S. President Jimmy Carter, visited the island to assess the need and meet with authorities.
- November 2004 — HFHI approved the implementation of a three-month first-phase intervention.
- January 2005 — Letter of intent signed with local partner; project began.
- 2006 — Program ended with evaluation.

### Background

Hurricane Ivan, one of the most powerful hurricanes to hit the Caribbean region in the last 10 years, ravaged Grenada on Sept. 7, 2004. Heavy rain and winds of 220 kph left behind destruction and despair on the three-island nation of 102,000 inhabitants. Thirty-seven people died and most of the population of Grenada was affected. Of the six parishes, St. Andrew, St. David, St. Georges and St. John were destroyed, and destruction was striking in other parishes.

Heavy losses in agriculture, tourism infrastructure, power and communication lines compounded the situation. Approximately 90 percent of the housing stock was damaged or destroyed.

### Project Overview

Because Habitat for Humanity did not have a presence in Grenada, and because of organizational constraints on resources, the HFHI Disaster Response office undertook a short-term disaster response program. HFHI identified a locally registered organization with which to partner to achieve specific goals: Grenada Relief, Recovery and Reconstruction, a newly formed nonprofit organization that was established in response to the disaster. In the three-month first phase in Grenada, HFHI stationed a staff member to identify sources of funding for a hurricane response program and to assess GR3 in order to define measures to increase its organizational capacity and support for seeking additional funding.



**Mother and son inside their repaired home.**

## Implementation

After the initial assessments and project development, HFHI and GR3 signed a letter of intent binding both to specific results.

There were some issues around collaboration and responsibilities on both parties, stemming from a lack of detailed expectations, that slowed implementation, mostly related to house repairs.

HFHI provided funding to send HFHI staff to operate for six months in Grenada and covered consultation fees. Habitat also provided documentation for seeking funding with USAID as support to GR3 and other CBOs involved in the reconstruction process. There were basic carpentry courses for families and training for other CBOs and NGOs, including board development, resource development, shelter program and business design.

House design and program elements were determined and estimates completed. Families were selected and local workers did the construction. In spite of some issues, other CBOs and NGOs (aside from GR3) got involved in the process of rebuilding. The second phase of the construction project was curtailed because of lack of funding. A total of 225 families were assisted with housing, from repairs to construction of new housing and

community mobilization in four of the main Grenadian towns (St. Georges, St. John, St. David, and St. Andrew).

## Lessons & Promising Practices

- In the future, there needs to be clearer communications on expectations when signing collaborative agreements between organizations. Ensure that partners or potential partners, all department and staff know from the onset what is being offered and have a consistent message.
- Have signed agreements with all parties with clear deliverables, and with every CBO and NGO under an umbrella body.
- Be aware of the time and window of opportunity for making an impact after a disaster.
- Consider staff availability for placement, and consider skills and competencies required.
- Be aware of the local environment and who is doing what. This would require early placements, and current information on local players and relationships must be established.
- Identify a person to do networking and relationship-building before disaster hits.
- Identify partners and engage them for mitigation or capacity assessment, in addition to response activities.

**House under repair in St. Andrew.**





## Hurricane Stan, Guatemala

**PROJECT NAME AND LOCATION**  
Guatemala Response Program,  
Hurricane Stan

**TYPE OF INTERVENTION**  
House construction

**YEAR**  
2005-2006

**PROJECT TARGET**  
100 families (700 people)

**SHELTER/HOUSING SOLUTION SIZE**  
35.06 square meters, including a  
bathroom

**IMPLEMENTING ORGANIZATION**  
Habitat for Humanity Guatemala

**PARTNERS**  
200 local committees,  
corporate and student national  
brigades

**FUNDING**  
\$285,000

**SUBMITTED BY**  
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## Guatemala



### Summary

After Hurricane Stan in October 2005, at least 1,500 people were confirmed dead, and up to 3,000 were believed missing in Guatemala. A total of 5,515 houses were destroyed and 7,202 houses were damaged. One hundred houses were built in collaboration with HFH Guatemala staff, national and international volunteers and local committees.

### Timeline

- October 2005 — Hurricane Stan struck Mexico and Central America, including Guatemala.
- November-December 2005 — Needs assessments conducted.
- January 2006 — Construction began.

### Background

Hurricane Stan was the 11th hurricane of the 2005 Atlantic hurricane season. Stan was a relatively weak storm that only briefly reached hurricane status. It was embedded in a larger non-tropical system of rainstorms that dropped torrential rains in the Central American countries of Guatemala and El Salvador and in southern Mexico, causing flooding and mudslides that led to 1,628 fatalities, 93 percent of them in Guatemala. The damage in Guatemala was estimated at US\$988 million.

### Project Overview

After evaluating the damage, HFH Guatemala focused on Sololá and

Chimaltenango. A national fundraising system was established. Despite the difficulties of accessibility and local supply of material, 100 houses were built.

### Implementation

A damage evaluation was carried out in the most affected departments. A system of funds was created at a national level via such organizations as Rotary Club, United Fund, Construction Chamber and individual donors. HFH Guatemala prioritized the families that would receive aid directly for home construction, and then built the houses. In addition, the families and hundreds of volunteers made a huge contribution.

Difficulties the project faced included:

- Access to main roads was obstructed by landslides and mudslides, which delayed the response.
- The local supply of materials was affected, which caused delayed the construction and raised the cost of construction materials.



Before and after Hurricane Stan.



- Lack of suitable sites for the construction. In some cases HFH Guatemala had to improve and mitigate the conditions in order to make construction easier.

### Lessons & Promising Practices

- New alliances with organizations that financed the construction were established.
- During the emergency, several institutions participated that wanted to support in other areas. However, in the transition from the emergency response to rebuilding, only

a few stayed to solve the most serious problems caused by the hurricane.

- Coordination of the response efforts with the actual government system CONRED and the humanitarian network is highly recommended.
- Because the region is so vulnerable, it should be a priority to create a HFH Guatemala Disaster Response department.
- Disaster response should be based on the guidelines of the Sphere Manual.

**Habitat homeowner Regina Tesawic and her son, Rudy.**



## KATA Project, HAITI

### PROJECT NAME AND LOCATION

HFH KATA (Konbit AK Tet Ansamn) — Building and Training Centers project, Cape Haitian, Gonaives and Cabaret, Haiti

### TYPE OF INTERVENTION

Technical and vocational training, job creation and micro-small enterprise funding and support; repairs, home improvements; shelter assistance to disaster-affected populations

### YEAR

2006–2011

### PROJECT TARGET

More than 900 people targeted for skills training; disaster-affected residents received help with repairs and shelter materials; supported response after the January 2010 earthquake

### IMPLEMENTING ORGANIZATION

HFH Haiti

### PARTNERS

CHF Haiti

### FUNDING

CHF International via USAID-funded program  
Habitat for Humanity International

### ADDITIONAL INFORMATION

Skills training and job placement program in three Haitian locations

### SUBMITTED BY

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## Haiti



## Summary

The KATA project was designed to further stability in Haiti by stimulating employment and supporting sustainable livelihoods in highly vulnerable areas: the cities of Cap Haitian (north Haiti), Gonaives and Cabaret (near Port-au-Prince). The work spanned several years and was an asset for the Haiti earthquake response in 2010.

## Timeline

- 2006 — HFH Haiti and CHF established collaborative agreement
- 2007 — First Habitat Resource Center established in Gonaives.
- 2008 — Tropical storms cause mudflows in Gonaives. Graduates of the HRC in Gonaives assisted families with small repairs and distribution of shelter materials.
- 2009 — HRCs in Cape Haitian and Cabaret established.
- 2010 — Devastating earthquake strikes Port-au-Prince in January. Graduates of all HRCs assist with HFH Haiti response projects.

highly vulnerable areas. This project required the development of networks with non-governmental organizations working in Haiti. Therefore, CHF International collaborated with Habitat for Humanity International Haiti to build construction skills and capacities, create and support micro-small enterprises and help secure long-term employment for the participants.

## Project Overview

The project focused on vocational-style training in workshop fabrication, carpentry, concrete work and masonry, arc welding and quality control.

These skills were lacking in the Haitian construction market, thus the program focused on training residents to be qualified for employment. Classes were conducted in Building and Training Centers, which are a version of the Habitat Resource Center concept. These were initially located in Gonaives and Cap Haitian, and later in Cabaret.



Mistral Vernet, left, and Evens Jean-Saint graduates of Habitat for Humanity Haiti's construction training program in Gonaives.

## Background

In 2006, CHF International Haiti secured a four-year USAID funded program in Haiti — Konbit Ak Tet Ansamn — which is the Haitian principle of working together to accomplish a common goal. This was achieved through job creation, promoting conflict mitigation and improving the livelihood of people in

In 2010, the final year of the program, a massive 7.0 earthquake hit Haiti. CHF and HFH Haiti changed the focus of the program to also include a response to the families and communities affected by the earthquake. The emphasis was now to direct trainees to some of the areas most affected, join agencies implementing shelter response, and still meet the mandate of securing employment.

## Implementation

The project began with a housing value chain analysis. This was followed by the establishment of training centers and delivery of training material aimed at developing the business and technical skills of micro-small enterprises. Training in construction skills was provided to vulnerable persons, particularly women and youth, so they could compete for jobs.

Next came development of micro-small enterprises through training and practical activities to help create awareness and job opportunities for trained people in their communities. A total of 913 individuals were trained, including women and youth living in highly vulnerable areas.

The project helped the creation of 21 new micro-small enterprises and supported 32 others. An additional 101 micro-small enterprises received business development training. Training programs were established in collaboration with existing micro-small enterprises, linking and strengthening the main business stakeholders in those communities' construction field (service providers, materials suppliers and BTC trainees with market opportunities).

## Lessons & Promising Practices

- The KATA project approach is appropriate for building human capacity, particularly for youth in highly vulnerable areas prone to conflict, and can be a tool to promote peace and stability through training and employment.
- New training programs serve as a catalyst for sustainable long-term development for individuals and their communities. For example, the new plastering technology in canal construction in Gonaives was a valuable innovation for the community. Similarly, the new block making techniques added value to techniques in housing construction.
- Providing scholarships to trainees is an effective form of assistance, considering the poverty level in Haiti.
- Because of the economic and social conditions in Haiti, training alone is not enough to close the gap in the low-income housing value chain.
- The lack of monitoring and evaluation capacity of the program resulted in poor quality of data, data gathering, measurement, recording and reporting. This caused problems in tracking and reporting long-term jobs the trainees found.
- A tangible impact for a similar project requires effective partnerships and collaboration between stakeholders; this was apparent among the NGO stakeholders that implemented the BTC/micro-small enterprise activities. Better links with employers and partnerships with the private sector are likely to improve results.
- To prevent delays, management needs to prepare for disruptions that

result from crises or unforeseen disasters, which occurred with the January 2010 earthquake.

Further support for trained and unemployed HFH beneficiaries via:

- Employment in HFH's disaster response and permanent housing construction projects
- Provision of essential tool kits for contract-competition and MSE startups
- Job/construction fairs for trainees and potential employers
- Job-search training and placement support
- Prevent extended program disruptions by:
  - Contingency and continuity of operations plan so organization's overall resources and management attention are redirected to emergency response.
  - A well developed monitoring and evaluation framework and project tracker implemented from onset of future projects with adequate system training.
  - Annual learning review evaluations by project staff and headquarters monitoring and evaluation unit for continual improvement.
  - Greater gender mainstreaming efforts at HFHI to increase participation of women in construction training and trades, and focus groups.
  - Improved program to strengthen micro-small enterprises.



## Auhya Pihni, Nicaragua

### PROJECT NAME AND LOCATION

Auhya Pihni Village  
Autonomous Region of the Atlantic Coast, Nicaragua

### TYPE OF INTERVENTION

New house construction, on-site reconstruction

### YEAR

2007-2008

### PROJECT TARGET

150 families (950 people)

### SHELTER/HOUSING SOLUTION SIZE

30 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Nicaragua

### PARTNERS

The Moravian Church  
Red de Vivienda  
HABITAR

### FUNDING

Habitat for Humanity International  
American-Nicaraguan Foundation

### ADDITIONAL INFORMATION

Indigenous community, highly organized

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## Nicaragua



## Summary

The Auhya Pihni community was ravaged in September 2007 by a powerful hurricane, leaving most of its 150 families homeless and in a state of shock. Relief agencies provided emergency shelter in order to prevent displacement. Habitat for Humanity Nicaragua, in collaboration with partners, devised a participatory methodology to design and build new homes that integrate mitigation elements while respecting local culture and customs of the indigenous Miskito population. A total of 150 homes were built.

## Timeline

- September 2007 — Hurricane Felix hit Auhya Pihni.
- October 2007 — Meetings conducted with residents and Council of Elders to agree on housing project, community commitments, house designs and priorities in family selection.
- November 2007 — Initial funding secured.
- December 2007 — Survey and enumeration of families. Materials salvaged, negotiations on timber supply by community finalized.
- February 2008 — Construction began.
- September 2008 — Project dedicated.

## Background

On Sept. 4, 2007, Hurricane Felix, a Category 5 storm, hit the autonomous region of the Atlantic Coast on northeast Nicaragua with sustained winds of 260 kmh, causing widespread devastation. In the provincial capital city of Bilwi (also known as Puerto Cabezas), the hurricane caused severe damage to houses and

services, cutting off communication. More than 160 people were killed and 600 were reported missing. In a region already characterized by dire poverty and a fragile socio-economic infrastructure, about 7,895 houses were destroyed. Affected communities included smaller indigenous settlements such as Auhya Pihni, where all houses were obliterated. Given the extent of the damage in the area, on Sept. 5 the government declared a national state of calamity.

## Project Overview

Auhya Pihni is a settlement located 55 km northwest of Puerto Cabezas, comprising indigenous Miskito people whose inhabitants frequently survive on unstable, sporadic sources of income. Many of these families were already living in extreme poverty. The Auhya Pihni community was selected based on surveys conducted by a group of Nicaraguan NGOs and meetings with local authorities, influential Moravian Church leaders and local Miskito community elders.



Top: : Plastic sheeting protects a roof.

Below: New Habitat home in Auhya Pihni.



The project included the physical layout of the settlement, the construction of 150 houses and a training and capacity-building component for community leaders and work crews in carpentry skills. The house design followed a culturally appropriate pattern and used familiar materials (timber for most of the house and corrugated galvanized sheeting for the roof). The design included mitigation features such as building the houses on stilts to reduce the risk of flooding, the use of metal straps to reinforce connections of wooden elements, and a strong structure. The design and size was decided on with the community representatives with assistance from architects from HABITAR, another local NGO.

## Implementation

Habitat for Humanity International provided US\$150,000, Habitat for Humanity Nicaragua US\$30,000 and the American-Nicaraguan Foundation, US\$120,000.

Residents of the community were hired to supplement skilled workers (carpenters) from Bilwi and other towns. A processing center for timber was set up in the community, and residents were hired to help produce construction elements (posts, wood frames, rafters, etc.), which set the stage to transfer skills to local labor. The Moravian Church provided power tools and community-owned timber processing equipment was used. Habitat Nicaragua started a public awareness program on risk reduction, training and knowledge-building for families involved in construction. Two brigades of volunteers from Costa Rica and the United States assisted for several weeks.

The projects faced some difficulties at the beginning: lack of reliable electricity supply, language barriers that required interpreters, and misunderstandings/disagreements on

labor aspects (schedules, resistance to certain tasks, etc.). The contribution of the Moravian Church representatives was key to solving most of these issues.

Notwithstanding those problems, the project was completed and dedicated just before the first anniversary of Hurricane Felix, a fact the community considered a success.

## Lessons & Promising Practices

- A pre-established level of organization between communities and hierarchical structures can be leveraged for the benefit of the project. Understanding the dynamics of community governance and relationship with local authorities and other stakeholders was key for securing community participation.
- It is important to recognize and be aware of cultural and language barriers with the target population in order to have intervention methods prepared in advance: Use of ethnic language interpreters, leader orientation techniques, knowledge-transfer and community training methodologies.
- Having an ally (the Moravian Church) to mediate with the community proved key to solving implementation issues. The fact that the church was respected and seen as part of the community helped to legitimize the introduction of labor agreements between Habitat and the families.
- The reconstruction project was an opportunity to introduce an improved, more orderly layout and territorial organization for the Auhya Pihni settlement.
- The use of locally known, familiar construction materials facilitated the process of skills transfer from skilled carpenters to residents working in timber processing.

## Newen Ñeque Project, Chile

### PROJECT NAME AND LOCATION

Newen Ñeque for Chile Project, Chile Earthquake Response

### TYPE OF INTERVENTION

Distribution of non-food items, transitional housing, repairs, training, construction technical assistance

### YEAR

2010-2012

### PROJECT TARGET

2,082 households in 20 villages

### SHELTER/HOUSING SOLUTION SIZE

21-27 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Chile

### PARTNERS

Several local NGOs

### FUNDING

Habitat for Humanity International

### ADDITIONAL INFORMATION

Local and international volunteers participated in reconstruction

### SUBMITTED BY

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## Chile



## Summary

Habitat for Humanity Chile launched the Newen Ñeque para Chile (translated from the indigenous Mapuche language as “physical and spiritual force for Chile”) project after a devastating earthquake in February 2010. The project served 2,082 families with shelter in more than 20 vulnerable communities, particularly in locations that fell under the radar of government assistance.

## Timeline

- Feb. 27, 2010 — A powerful earthquake measuring 8.8 on the Richter scale hit central Chile. A tsunami ensued, compounding the devastation of cities, towns and villages along the Pacific coastline.
- March 2010 — HFH Argentina lent a group of volunteers, including engineers, architects, social workers and disaster relief coordinators, to assist with rapid assessments in areas where HFH Chile was involved.
- March 2010 — HFH Chile began distribution of emergency shelter kits.
- May-September 2010 — Habitat Chile and partner families built transitional housing, a core unit of varying sizes.
- June 2010 — Skills training program began, with a focus on training women in masonry construction and construction safety. At the same time, community leaders were trained in organizational development and skills.
- January-March 2011 — Disaster risk reduction training held for more than 180 community leaders representing dozens of villages.
- March-June 2012 — HFH Chile worked with committees for the involvement of grassroots communities in disaster preparedness and prevention, participating in a national network of civil society organizations.

## Background

The earthquake and tsunami that affected central Chile in February 2010 killed 525 people, left 800,000 people homeless and destroyed 220,000 homes; 150,000 were damaged. Although the response by the government was swift, initially the main focus of reconstruction was on major infrastructure, particularly transportation-related. Many small, isolated and vulnerable communities were overlooked, and these became the focus of HFH Chile’s assistance.



Habitat staff work on a house in Curepto, Chile.

## Project Overview

Shelter-support interventions covered emergency shelter assistance, primarily distribution of shelter kits and construction tools. For the recovery phase, survey teams coordinated by HFH Chile focused on selecting communities and coordinating with local leaders. The project had four main components.

1. Construction technical assistance: Included damage and safety assessments of houses, feasibility analysis, design and budget preparation for repairs, and technical and legal support to families that were applying for the government subsidy program.
2. Training: Consisted of training and skills transfer in several tracks, such as construction skills (masonry and carpentry), construction safety, disaster preparedness and organizational development and leadership for community representatives.
3. Construction: Included construction of core housing, pre-fab transitional housing and repairs and expansion of damaged homes to meet government safety standards relating to seismic, thermal, ventilation and fire prevention.
4. Risk reduction planning: Included work to help communities create plans for disaster preparedness and coordination with early warning systems (tsunami), in close collaboration with the Chilean National Office for Emergencies at the Ministry of the Interior.

## Implementation

HFH Chile identified families and households with the most need in 20 affected communities (Puerto Saavedra, Tirúa, Talcahuano, Lota, Coronel, Los Ángeles, Cauquenes, Curepto, Villa Pratt, Río Claro, Peralillo, Los Mayos, Rinconada de Cáceres, Molineros, San Vicente, Malloa, Pichidegua, Requinoa, Paine and El Monte) through preliminary surveys. Residents became involved in subsequent surveys and enumerations to determine damage and

habitability of homes, and other community needs. Communities measured the dimension of the problems they faced and established the basis for a community organizational process geared toward participation in the planning and implementation of reconstruction activities. It is important to highlight the high level of participation of women heads of households in the project, because they were an important majority in most communities. Participation of local volunteers (students from the Catholic university among others) and international brigades (such as Delta Air Lines' Force for Global Good) were also key players during the implementation phase.

## Lessons & Promising Practices

- HFH Chile went through a fast track learn-as-you-go experience in responding to disaster-created shelter needs. A disaster response training held just two months before the earthquake provided key response protocols and concepts. Since the earthquake, HFH Chile recognized that more investment in organizational preparedness and business continuity is needed in order to better address major emergencies.
- The earthquake inevitably generated a sharp increase in the price of construction materials and skilled labor because of high demand for both. When budgeting, it is important to include this element of uncertainty as a contingency in reconstruction projects.
- Involvement of local and international brigades of volunteers was important to the project. A well-rounded volunteer management structure is important.
- HFH Chile's national visibility was enhanced by its participation in the earthquake response. It is now recognized and has been validated as a valuable player in disaster preparedness and response issues related to shelter and housing.
- The response allowed HFH Chile to consolidate a technical team with expertise in disaster assessment and technical assistance to communities.

## Emergency Shelter Kits, Haiti

### PROJECT NAME AND LOCATION

Emergency Shelter Kits for Haiti  
Earthquake Response, Port-au-Prince metropolitan area, Haiti

### YEAR

2010

### TYPE OF INTERVENTION

Emergency shelter assistance,  
distribution of shelter items

### PROJECT TARGET

More than 28,000 earthquake-  
affected households

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Haiti

### ADDITIONAL INFORMATION

First large-scale distribution program  
by Habitat for Humanity

### PARTNERS

Assembly of kits: Habitat for  
Humanity Dominican Republic,  
Habitat for Humanity International;  
Distribution: Adventist Development  
and Relief Agency, CARE, International  
Development & Aid, International  
Rescue Committee, International  
Action Ties, Save the Children, Yele  
Haiti Foundation Inc., Première  
Urgence, All Hands Volunteers and  
Lott Carey

### FUNDING

Habitat for Humanity International,  
American Red Cross, Clinton-Bush  
Haiti Fund, United Nations Office for  
the Coordination of Humanitarian  
Affairs — Emergency Relief and  
Response Fund, Habitat for Humanity  
Germany through Humedica  
Internationale Hilfe with funding from  
the German Federal Foreign Office,  
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## Haiti



## Summary

On Jan. 12, 2010, a devastating earthquake struck Haiti, displacing more than 2 million people, destroying an estimated 105,000 homes and damaging 85,000 homes. In response, Habitat for Humanity committed to a multi-phase disaster recovery strategy that included emergency shelters, transitional housing and long-term, permanent housing. In February 2010, HFH launched the first phase of this strategy, an aggressive program focused on addressing the immediate shelter crisis by providing more than 28,000 emergency shelter kits to earthquake-affected families.

## Timeline

- Jan. 12, 2010 — Earthquake hit Port-au-Prince metropolitan area and surrounding towns.
- Early February 2010 — A shelter strategy for emergency assistance to support earthquake survivors was planned at the IASC Emergency Shelter Cluster.
- Mid February 2010 — First emergency shelter kits distributed.
- March 2010 — Distributions scaled up through partnership agreements with other agencies.
- August 2010 — Program closed.
- November 2010 — Pre-positioned, stocked emergency shelter kits distributed by HFH Haiti to families affected by Hurricane Thomas.



Emergency shelter kits sent to Haiti.

## Background

This was Habitat's largest disaster response distribution program. Although shelter kits have been used many times in the past, the scale and the logistics involved yielded a wealth of knowledge and challenges. Emergency shelter kits are becoming a core solution in disaster-prone countries where Habitat works in Asia/Pacific, Latin America, Central America and recently, Eastern Europe.

## Project Overview

In February 2010, Habitat's first phase focused on the immediate crisis by assembling and distributing emergency shelter kits. These kits were designed to help families construct temporary emergency shelter or make immediate





repairs to their homes, if possible. Habitat chose the contents of the kits in consultation with guidelines from the United States Agency for International Development's Disaster Assistance Response Team and the IASC cluster coordination mechanism (Emergency Shelter Cluster), which identified priority items after rapid assessments were conducted.

## Implementation

The first kits were assembled by HFH Dominican Republic and brought overland to Haiti (the main Haitian seaport and airport were shut down because of earthquake damage). Distribution took place in Léogâne in partnership with CARE. The kits initially were to be taken to another camp; however, the size of that camp tripled overnight, so HFH Haiti did not have enough kits to serve all the families and had to select another location.

The next round of kits were assembled and shipped from the United States. These went to the central HFH Haiti warehouse or the storage areas of partner organizations. Those

sent to the central warehouse were given to partners (or later stockpiled to address new response needs; for example, after Hurricane Thomas). The kits that went directly to partners were allocated to beneficiary communities and scheduled for distribution.

## Lessons & Promising Practices

**Preparedness:** A local program must be prepared if it is to distribute non-food items to families when they are most needed. This should include designing context-specific kit content, identifying vendors and suppliers, planning distribution options and partners, creating donor relationships to facilitate the speed of response, and the consideration of stockpiling material in strategic areas of high risk.

**Program development:** It is critical to target the criteria to the most vulnerable and ensure that it is a positive step toward a pathway to permanence.

**Use options:** Non-food items and ESKs have multiple uses, depending on the content and



**Facing page:** Volunteers assembled more than 13,000 emergency shelter kits for Haitians left homeless by the 2010 earthquake. The kits were assembled at a Whirlpool distribution center outside Atlanta, Georgia, and delivered to Haiti.

**Left:** Emergency shelter kits ready for distribution in Carrefour, Haiti.



context. Program design should take this into consideration, especially to alert donors to the multiple uses. We have seen kits used to build emergency shelters, to repair homes, to restart livelihoods and to clean homes after flooding.

**Partnerships:** Partnerships are a critical element. This includes logistical support from cluster partners and assistance in navigating customs and moving significant quantities from ports to beneficiaries. In Haiti, this included a partnership with the United Nations to use helicopters to reach inaccessible mountainous areas. Partners also helped to identify beneficiaries. A key element was the ability to reach multiple locations and for other NFIs to be added to the shelter kits (such as hygiene and kitchen kits). It is important to note the role of community committees and government agencies that are critical partners in ensuring that the interventions are coordinated and that the most vulnerable families are reached.

**Engagement with community and sector:** Bringing a tangible shelter solution to a disaster area allows Habitat to engage with the community directly and strengthen HFH's

relationship with partner organizations and donors. Habitat's increased visibility and credibility is crucial for continued dialogue and contribution for the longer-term rebuilding processes.

**Resource development:** Given the early response interventions of ESKs, donors should be chosen carefully to ensure they understand that the context and needs might change rapidly. Careful review of contractual obligations should be taken seriously before accepting funding.

**Volunteer engagement:** Many NFI programs are a positive opportunity to use the contributions of volunteers. This occurred at the stage of assembling the kits to distributing them.

**Logistics:** Depending on the quantity and number of locations, challenges include mass production, shipping, transport, customs security, and distribution. The more work that can be completed during the preparation stage helps reduce the challenges that stem from logistics after a disaster.

**Right: Workers unload and distribute Habitat emergency shelter kits in Haiti.**



## Transitional Shelters, Haiti

### PROJECT NAME AND LOCATION

Transitional and upgradable shelters in Cabaret, Léogâne and Port-au-Prince, Haiti

### TYPE OF INTERVENTION

Transitional and upgradable shelters

### YEAR

2010-2011

### PROJECT TARGET

3,665 families

### SHELTER/HOUSING SOLUTION SIZE

18.5 to 23.5 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Haiti

### FUNDING

USAID  
United Nations Emergency Relief Response Fund  
Catholic Relief Services  
American Red Cross  
United Methodist Committee on Relief  
African American Baptist Mission Collaboration

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## Haiti



## Summary

In response to the 2010 earthquake in Haiti, Habitat for Humanity deployed a range of solutions. Transitional shelters were used for families who were able to remain on their land but needed shelter while they rebuilt, and for families who had access to short-term land. For families that had "secure enough" tenure, upgradable shelters were built and were designed with a structural foundation allowing full masonry walls to be built later.

## Timeline

- January 2010 — Earthquake that measured 7.0 on the Richter scale struck Haiti.
- January 2010 — Habitat for Humanity sent emergency shelter kits to displaced families.
- March 2010 — Habitat secured funding for transitional shelters.
- March 2010 — 475 t-shelters delivered to Léogâne.
- April 2010 — 440 t-shelters delivered to Cabaret.
- September 2010 — 1,750 upgradable shelters delivered to Léogâne.
- October 2010 — 1,000 t-shelters delivered to Cabaret and Port-au-Prince.

## Background

The earthquake on Jan. 12, 2010, was a catastrophic magnitude 7.0, with an epicenter near the town of Léogâne, approximately 25 km west of Port-au-Prince, Haiti's capital. An estimated 3 million people were affected by the quake. The Haitian government reported that an estimated 316,000 people were killed,

300,000 were injured and 1 million left homeless. The government estimated that 250,000 residences and 30,000 commercial buildings collapsed or were severely damaged. Complicating factors included land tenure issues, and the upcoming rainy season and hurricane season.

The Habitat for Humanity shelter program aimed to take into consideration the different circumstances in which families found themselves, and their options about the future. Several designs were developed to address the level of land security/tenure families had.

In the three locations where shelter programs were run, Habitat Resource Centers were established for community development, fabrication and monitoring purposes.

## Project Overview

Habitat for Humanity had been working in the community of Cabaret for 10 years before the earthquake. The Habitat homes were not damaged during the



**A worker helps to build the first 10 Habitat for Humanity transitional shelters in Léogâne, in the Kada neighborhood.**



earthquake, but the rest of the community was significantly affected. Léogâne and Port-au-Prince were two new work areas for Habitat, and Habitat Resource Centers were established.

As a member of the Strategic Advisory Group and a Technical Working Group member of the Inter Agency Standing Committee Shelter Cluster, HFHI participated in the development of minimum standards for transitional shelters to be delivered by agencies in Haiti. These standards were based upon the hazards that exist in Haiti, the technical solutions to withstand these hazards, and the international minimum standards for humanitarian response.

The geographical locations of work were selected in cooperation with the Shelter Cluster and based on the need and the funded projects that were allocated to the areas.

Community engagement was a priority. Vulnerability was a key factor in prioritizing families to be assisted. Base criteria were

established by Habitat, and community committees identified vulnerability criteria. Family applicants were identified and prioritized by the committees.

A critical element of the HRC included a fabrication unit in each location. This allowed for the pre-cutting and fabrication of key elements of the shelters in order to ensure quality and increase the speed of assembly of shelter units.

Where possible and when land security allowed, an upgradable shelter was provided, and in other areas, a shelter that could be relocated, reused or recycled was provided. This is central to Habitat's pathways to permanence approach.

### Implementation

Three locations had fabrication units: Cabaret, Port-au-Prince and Léogâne. In Cabaret, a facility that was already owned by Habitat was repurposed to construct shelter elements, including windows, doors and pre-cut wood. In Port-au-Prince, the fabrication unit was

**Right: A Habitat transitional shelter in Cabaret, Haiti.**



established at the central warehouse to reduce logistics costs. In Léogâne, Habitat partnered with a number of other organizations to establish a joint logistics base, which produced paneled units and metal work for the upgradable shelters. Delivery schedules were established for families. Deliveries took place daily and families signed for the shelter elements that they received.

Contractors with a number of construction teams were given shelters to build. After training in key disaster risk reduction and quality control issues, they went out to build the shelters. Quality control was monitored and incremental training sessions took place with teams to improve quality. Contractors were paid bi-weekly after the supervising engineer signed a shelter sign-off sheet.

Two basic designs of transitional shelters were used:

1. Transitional shelter (recyclable): Habitat's transitional shelter has 18.5 square meters of covered space, including the porch. The porch is an important living area for

families in Haiti, because of the heat inside shelters during the day. Although the families do not like the heat and shadows created by the plastic material, the material is a first step toward enabling the families to upgrade their living space using their own capacities and resources.

2. Transitional shelter (upgradable): In its initial state, the shelter is already a very solid starter home with 18.5 square meters of enclosed space, a 5-square meter porch, pressure-treated plywood walls, a concrete perimeter foundation and corrugated metal roof. The structural foundation, including rebar, is designed to hold full masonry walls.

## Lessons & Promising Practices

- Continuous improvement: Each shelter design went through a number of changes based on feedback from the construction teams and families. While this was challenging from a procurement perspective, it allowed for experience to determine the incremental improvement of such items as foundations, increased



**Left: Islande Isnardin, 32, lives with her husband and two small children, including son Silvenson, who is almost 2, in a transitional shelter built by Habitat in Cabaret, Haiti.**



**A transitional shelter under construction.**

protection for flooding and wind load, and build-ability.

- Supply chain: In such a large project with constant time constraints and a difficult logistics environment (lack of vendors, lack of supply options, island and import environment), the supply chain was a constant challenge. Navigating a difficult customs environment, vendors would accept orders and then prioritize another customer, and the huge demand for raw materials (sand and gravel) was challenging. It was critical to have solid vendor relationships, safety stock supplies and a final bill of quantities as early as possible.
- Shelter types to support families' situation and pathways to permanence: While the number of designs can make procurement

and logistics difficult, it is the right thing to do. Supporting a family with an upgradable shelter on unsecured land leaves the family without either land or shelter if they are evicted. Matching the shelter to best support the family's pathway to permanence should be considered with the program design.

- Budget items: Inflation needs to be incorporated into the budget, and if possible the unit cost of critical material supplies should be explained to the donor. Inflation was significantly higher than expected. Also don't forget to include the cost of security, fuel, surge labor, fabrication setup, backup power supply and meals at the fabrication unit to encourage timely return to work.



## Enumeration Project, Simon Pele, Haiti

**PROJECT NAME AND LOCATION**  
Community-based enumeration,  
Simon-Pele, Port-au-Prince, Haiti

**YEAR**  
2010-2012

**TYPE OF INTERVENTION**  
Urban disaster response, community-based enumeration and community contracting for public works; transitional shelters

**SHELTER/HOUSING SOLUTION SIZE**  
18.5 square meters for t-shelters

**PROJECT TARGET**  
6,000+ urban households

**IMPLEMENTING ORGANIZATION**  
Habitat for Humanity Haiti

**OTHER IMPLEMENTING PARTNERS**  
Mairie of Delmas, the Simon Pele Community and Council; SODADE; Councils of Community-Driven Development Projects through ongoing engagement of UNITES; Rayjon

**FUNDING**  
HFHI, United Nations, Canadian International Development Agency, Catholic Relief Services, United States Agency for International Development/Office of Foreign Disaster Assistance

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## Haiti



### Summary

Over the last 28 years in Haiti, Habitat for Humanity has concentrated its efforts in the rural communities of the country. Following the January 2010 earthquake, the capital Port-au-Prince was significantly damaged. Working in the informal settlements of this dense urban environment, specifically Simon Pele, required a different methodology and approach. HFHI took the approach of community-based enumeration.

### Timeline

- October 2010 — Habitat committed to work in Port-au-Prince and selected the community of Simon Pele.
- January 2011 — Community based enumeration project launched.
- April 2011 — Community action plan developed.
- May 2011-June 2012 — Implementation of the community action plan, including community contracting for critical infrastructure repairs, transitional shelter building, repairs, retrofits; catalyst for inviting partners into the community

### Background

On Jan. 12, 2010, an earthquake measuring 7.0 on the Richter scale struck 10 miles west of Port-au-Prince. In October 2010, Habitat for Humanity committed to developing a Habitat Resource Center in Simon Pele, an informal community of around 26,000 people that borders Cite Soleil.

Supporting the government's action plan for national recovery and development of Haiti, Habitat's neighborhood development approach encompasses a range of interventions that directly serve families and strengthen the systems that help families find the services they need to rebuild stronger and safer communities. HFH's program interventions are community-based and operate out of Habitat Resource Centers. HRCs are used as catalysts to encourage communities to become sustainable and successful through their own efforts and to strengthen the low-income housing sector.

### Project Overview

The area called Simon Pele, an informal settlement, densely populated with approximately 30,000 people, was selected as the target community. The project was financially supported by UN-Habitat and CIDA, and Habitat for Humanity Canada was able to mobilize the community.



Children in Simon Pele, a neighborhood in Port-au-Prince, Haiti.



- Trained 30 engineers to conduct damage assessments.
- Conducted 625 damage assessments giving guidance to families on house repairs.
- Hired 40 enumerators from the community (65 percent women).
- Conducted more than 6,500 household surveys.
- Mapped 2,700 houses and land boundaries.
- Established a community database with linked maps.
- Created 36 detailed maps of the community representing different topics, including: security risk (for men and women); community capacities; critical infrastructure; flooding risk; fire risk; etc.
- Established a community action plan.
- Set up four community contracts that are managed by a community committee to address critical issues identified, including street lighting; health clinic; water kiosk improvements.

Moving forward, HFH Haiti secured further funding for more community engagement and contracting, infrastructure projects and house repairs/retrofits.

## Implementation

Community-based enumeration is a process that involves mobilizing the community to collect data about itself and use it 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 is possible to 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 process of community-based enumeration includes:

1. Building a team: A local enumeration

**Right and facing page: During the enumeration project in Simon Pele, residents planned and carried out the survey, which gave it greater credibility.**



team is selected through engagement with community representatives, CBOs and camp committees. This team is comprised of members of the target community, local authorities, academics, and support professionals.

2. 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 transportation systems. This exercise provides a general sense of issues to be addressed by the enumeration process, and informs the preparation of a questionnaire.

3. 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.

4. Launch: The enumeration exercise is launched at a public ceremony. Ministers, mayors and local leaders are in attendance to add political credibility.

5. Household survey: Each household is surveyed, 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. This data is used by the settlement in future negotiations for resources.

6. Household mapping: Using clipboards, pencils, tape measures, and GPS units, enumerators create a qualitative and quantitative map of their settlement. Their work is twofold: to survey each household, and to number and measure every structure. This information-gathering underpins the development of a physical and narrative picture of community-level challenges.

7. Community mapping: Community



mapping sessions further develop the initial rough mappings of the neighborhood. Focus remains on the big-picture elements of physical mapping, such as the mapping of social services and water and sanitation facilities. Several versions of community mapping take place, creating a more comprehensive view of the neighborhood, and different versions of a community map will be produced that highlight different key themes within the community. Each map can be laid over each other as required to build up a fuller picture of the neighborhood as a whole.

8. Community master planning: Elements of the household and the cadastral survey are combined with the community mapping in order to provide a more in-depth and comprehensive view of the neighborhood. From these elements the community makes informed decisions on what is needed and desired, how these can be prioritized, and what can be sacrificed. Through further community workshops, this is worked into a master plan developed by the community.

9. Report back: The results of the enumeration are tabulated and presented to the community in a validation event designed to test whether the results seem plausible to community members, as well as to cement relationships with politicians, etc., initiated during the launch event.

10. Action plan: The main goal of this process is to get to a position in which residents have an action plan that has been developed through their participation. This allows them to advocate for their rights, invite investments into their community, and in many cases use their skills and capacities to address issues identified.

## Lessons & Promising Practices

- This is a time-intensive process toward a long-term strategy.
- Many of the results from this process are not the traditional ones measured by Habitat. However, the outcomes have impact and can be measured.
- Institutional donors like this type of programming.
- Security issues can stop the process, but the strong community relationship can keep things moving.
- Being embedded in the community with a Habitat Resource Centre is critical.
- There are lots of “community representatives,” and navigating their agendas and influences is difficult.
- Building a relationship as a facilitator — not aid provider — takes time.
- Technology is a great asset. However, we have a knowledge gap in GIS systems.
- Establishing who owns and has access to the data is important.
- Establishing common methodologies and data collection tools between partners and other NGOs/CBOs running similar projects is important.
- Cross-cutting issues, such as land tenure and rubble removal, need to be addressed in the program design and a community/Habitat position identified before project implementation.

## Santo Community Project, Léogâne, Haiti

### PROJECT NAME AND LOCATION

Santo Community Project, Léogâne, Haiti

### TYPE OF INTERVENTION

Permanent core houses in a greenfield development

### YEAR

2011-present

### PROJECT TARGET

500 homeless, vulnerable families affected by the 2010 earthquake in Léogâne

### SHELTER/HOUSING SOLUTION SIZE

22 square meters

### ADDITIONAL INFORMATION

155 core houses built during the first phase of project

### PARTNERS

Haven Community Foundation  
Architecture for Humanity

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Haiti

### FUNDING

Multilateral Investment Fund of the Inter-American Development Bank, Samenwerkende Hulporganisaties Cordaid, SAP AG, African-American Baptist Mission Collaboration, Lott Carey, Minuto de Dios, Urban Zen Foundation, New York City Housing Authority, Habitat for Humanity Great Britain COINS and Jersey Overseas Aid Commission, Diageo Foundation, Progressive Haitian American Organization, Deerborn Charitable Trust, First Institutional Baptist Church, Ocean Reef Foundation, St. Brigid Catholic Church

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## Haiti



## Summary

On Jan. 12, 2010, an earthquake measuring 7.0 on the Richter scale struck near Port-au-Prince. The town of Léogâne was hit hardest, with almost 90 percent of buildings and houses severely damaged or destroyed. After emergency shelter kits were distributed and nearly 2,000 transitional shelters built, Habitat secured land from the Léogâne government to design and create a permanent housing project for up to 500 families left homeless by the disaster. In the first phase, 155 core homes were completed in partnership with families and international volunteers.

## Timeline

- January 2010 — Earthquake struck Haiti.
- September 2010 — Obtained land from the city of Léogâne.
- November 2010 — Community-based participatory design began.
- September 2011 — Groundbreaking ceremony at site.
- November 2011 — Jimmy and Rosalynn Carter Work Project brought hundreds of volunteers to work alongside families to complete the first 155 homes.

## Background

After the earthquake, about 300 homeless families settled in a displacement camp near the Santo site, living in temporary shelters cobbled together from tarpaulins, sticks, straw and concrete rubble. Habitat started its involvement with these families

by holding meetings and inviting families living in two adjacent communities. These families constituted the base from which the Santo Project beneficiaries were been selected.

Access to land, facilitated by the city, helped to spur the project because issues related to land tenure are very complicated in Haiti. At every step of the project, Habitat and community members worked together to ensure the most vulnerable families were identified and the specific needs of the community were addressed. With technical planning and design support from Architecture for Humanity, residents provided feedback to proposals related to family selection, site and house design, sanitation and other vital services. Habitat for Humanity Haiti and its partner, Haven, are the only nongovernmental



Beneficiary works on the roof of his future home.



organizations building permanent housing for disaster-affected families in Léogâne.

## Project Overview

In its final stage, the Santo project will create permanent housing for up to 500 homeless families, along with vital infrastructure. The project follows Habitat's model of greenfield resettlement, in which vacant land is donated and residents are involved from the beginning in the design, planning and decision-making for a new urban neighborhood. A full range of focus groups, community charrette presentations, discussions and dialogue governed the design process. Site planning includes an area for houses, small spaces for home-based agricultural activities, roads, public spaces for two future schools and a public market. Provisions were made for water supply, sanitation (septic solutions) and electricity. A community-managed waste management scheme is included, in coordination with the municipality. The core houses were designed to be culturally appropriate and disaster-resistant. Each provides approximately 23 square meters of living space for an average Haitian family of five and comprises a traditional front porch with a roof, combination

plywood/concrete masonry walls, concrete floor and a corrugated metal roof. Each house will have a separate sanitary unit. The core house can be expanded as the needs (and the capacity) of the family grow.

## Implementation

Habitat's project methodology is based on learning by doing, where community members have a stake in and sense of ownership of the project and its outcome. Habitat does this by delivering a host of construction-related services through its community-based Habitat Resource Center in Léogâne, including training in construction skills, disaster preparedness, financial literacy, and health and hygiene.

Habitat Resource Center activities support the development and sustainability of the local construction sector — as well as economic recovery — with job creation and business development. More than 120 community members have been employed by Habitat on the Santo project site, helping to prepare the land and foundations for the first 155 houses. Through the project, families, local businesses and the wider community learned new construction and fabrication skills and

**Far right: Rosemie Dodo lived with her infant daughter in a temporary shelter. In November 2011, she participated in the Jimmy & Rosalynn Carter Work Project and now lives in a new, sturdy home.**

**Right: A new neighborhood of core houses.**







**Haitian homeowner partners at the Santo site start work.**

disaster-risk reduction techniques, improved hygiene and sanitation practices, and how to create a safe, healthy environment for generations to come. Training involved more than 155 families and 200 construction workers.

Nearly 500 volunteers for the 2011 Jimmy & Rosalynn Carter Work Project helped complete 100 core houses in one week. Fifty more Habitat houses were built in partnership with the Haven Foundation. International volunteers worked alongside the new homeowners, who were required to contribute 250 hours of sweat equity. Besides the brightly painted homes, Habitat is working with partner organizations to provide latrines for each house and 26 community water points to provide clean drinking water.

One hundred houses will be completed during the 2012 Jimmy & Rosalynn Carter Work Project, with the rest (for a total of 500) scheduled to be built in the coming years.

## Lessons & Promising Practices

- The commitment of Habitat and the community to work together proved essential to the success of the project. Mutual trust and understanding paved the way for lasting change for the families of Santo.
- Land access and secure tenure are issues that need prompt resolution to allow for new recovery projects. This type of project cannot succeed without decisive involvement of local authorities to clear tenure-related issues.
- Greenfield developments require a comprehensive approach to address land tenure, basic infrastructure and livelihood support and community governance.
- Families' participation in construction is essential to create a sense of ownership, engagement and belonging toward the project.
- Participation of high-profile volunteers helped to raise awareness of pressing housing needs in post-earthquake Haiti.



## Cumana, Trinidad and Tobago

### PROJECT NAME AND LOCATION

Cumana, Trinidad and Tobago:  
Community Awareness through  
Responsible Preparedness and  
Empowerment

### TYPE OF INTERVENTION

Vulnerability and capacity assessment  
of the community  
Capacity building  
Roof repairs and strengthening

### YEAR

2010-2012

### PROJECT TARGET

The coastal township of Cumana with  
emphasis on low-income families  
whose roofs were damaged by heavy  
winds in 2009

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Trinidad and  
Tobago

### PARTNERS

Trinidad and Tobago Red Cross  
Citizens for a Better Trinidad & Tobago

### FUNDING

Habitat for Humanity Trinidad and  
Tobago  
Habitat for Humanity International  
Canada Caribbean Disaster Risk  
Management Fund CCDRMF (funded  
by the Canadian International  
Development Agency)  
Unemployment Relief Program  
Adventist Development and Relief  
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## Trinidad & Tobago



## Summary

Thirty families had their roofs retrofitted to withstand winds up to 125 mph. Skills and capacity training for at least five construction workers living in the affected community was included, and 25 people were trained in disaster risk reduction through the vulnerability and capacity assessment methodology of community mapping and documentation. Finally, through a tree-planting program, the project focused on reducing vulnerability to heavy winds.

## Timeline

- Late 2009 — Heavy winds damaged roofs in the Cumana area.
- 2010 — The governmental Office of Disaster Preparedness and Mitigation invited Habitat Trinidad and Tobago to apply to the CCDRMF to help the community.
- 2010 — Stakeholders identified and proposal submitted.
- 2011 — Proposal approved after the mapping and documentation was completed and the families identified.
- 2012 — Training for capacity and roof retrofitting was completed.
- 2012 — Tree planting program.

## Background

In 2009, heavy thunderstorms in Cumana tore off nine roofs and damaged 18 homes. HFH Trinidad and Tobago strengthened the community as part of its Building Safer strategy, with assistance from the Trinidad and Tobago Red Cross Society.

## Project Overview

The “Community Awareness through Responsible Preparedness and Empowerment” project was designed to identify needs of the Cumana rural community and to empower its members through training to start addressing these needs with special focus on their primary shelter.

In close collaboration with the Trinidad and Tobago Red Cross Society and the Adventist Development Relief Agency, HFH Trinidad designed a project that included the Vulnerability Capacity Assessment methodology and a Community Disaster Response Team comprised of community leaders and members to be trained in disaster risk management. TTRCS's role was to lead the administering of the VCA, while ADRA, as an experienced partner in disaster mitigation, supplied support to HFH Trinidad for the community mapping activities and training events.



Members of the Trinidad Red Cross prepare to conduct interviews in Cumana community.



One of the VCA outputs was designed to be the identification of vulnerable families with the most need in order to provide them with roof retrofits. The project also included a reforestation component to be implemented in collaboration with Citizens for a Better Trinidad and Tobago. This group will also provide the volunteers to work along with the members of the community in the planting and care of the trees.

### Implementation

Phase I: The Red Cross provided entry into the community. The assessment helped to identify the potential hazards that might affect the community. The most vulnerable homes, which would require roof retrofitting or hurricane strapping, were identified. Budgets were set for the cost and type of work required.

Phase II: Education of the families and the community of the work that Habitat planned came next, in addition to analysis of the risks posed by soil erosion and high winds that are specific to the Cumana area. Hiring of contractors, ordering of materials and actual construction work on the roofs was started and completed in four months. The tree-planting program was delayed because the Ministry of Agriculture delayed approval by a few months.

Phase III: The training for builders, families and community was spread out to coincide with the corresponding work. When the planting of trees is completed in the near future, this will mark the end of the project.

### Lessons & Promising Practices

- When funding is received from international agencies, flexibility is needed to allow for review of the project before approval.
- Caution should be exercised in determining the extent of roof retrofitting needed. Sometimes the leaking roof is only part of a more serious structural problem.
- It is essential to understand the cultural nuances of the community you work with — the vulnerability and capacity assessment was a crucial step in gaining the community's confidence.
- This project identified a clear need for HFH Trinidad and Tobago to articulate a disaster response protocol, because it was the first major deviation from the traditional program model of HFH.
- Bringing several partners together required a significant amount of time for organizing and meetings; these factors and their potential cost should be considered.

**Right: Residents attend a disaster preparedness training in Cumana.**



## Tropical Storm Agatha, Guatemala

### PROJECT NAME AND LOCATION

Tropical Storm Agatha Response Project, Chimaltenango and Sacatepequez, Guatemala

### TYPE OF INTERVENTION

Clean up activities, transitional housing, preparedness training

### YEAR

May 2010

### PROJECT TARGET

40 families

### SHELTER/HOUSING SOLUTION SIZE

23.75 square meters

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Guatemala

### PARTNERS

CONRED, Cementos Progreso, Camara de la Industria Guatemalteca Fondo Unido

### FUNDING

HFH Guatemala, Cementos Progreso and ConstruRed

### ADDITIONAL INFORMATION

US\$200,000 was raised in Guatemala

### SUBMITTED BY

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## Guatemala



### Summary

In May 2010, after two days of a volcanic eruption that affected Guatemala City, Tropical Storm Agatha devastated nearly the entire country, damaging or destroying more than 53,000 houses. Habitat for Humanity Guatemala did a rapid assessment to evaluate damage to Habitat houses. HFH Guatemala and its partners launched a national fundraising campaign, and 40 houses were built with vulnerable families.

### Timeline

- May 27, 2010 — Pacaya volcano erupted; covered Guatemala City in ash and black sand.
- May 29, 2010 — Torrential rains from Agatha affected nearly the entire country; HFH Guatemala staff mobilized to evaluate damage to Habitat houses.
- November 2010 — National fundraising campaign, “A mí me importa (I do care),” launched.
- Early 2011 — Forty permanent houses completed.

### Background

Tropical storm Agatha covered Guatemala with torrential rains, the worst in 60 years. The Naranjo and Motagua rivers overflowed and destroyed bridges, roads, houses and lives. Guatemala’s mountainous territory was hit by numerous landslides, particularly the upper lands, such as Quetzaltenango and Sololá.

Guatemala city, which had just been covered in ash and black sand from the

Pacaya volcanic eruption, struggled as its drainage systems tried to cope with the enormous amount of water and ash. Zone 2 of the capital suffered a massive opening, 30 meters deep and 20 meters wide, which swallowed three buildings and an intersection.

More than 150 people died, 98 were reported missing and 142,096 people were evacuated from their homes. About 53,000 houses were damaged, from flooding to complete destruction, according to CONRED, the Guatemalan agency for emergency management.

### Project Overview

HFH Guatemala first checked the state of Habitat-constructed houses. Most damaged houses were, fortunately, only slightly affected. Three homes were unsafe to occupy. HFH Guatemala’s assistance focused on 40 families via two national programs: Casa en Progreso (House in Progress) and Programa de Mejora (Program for Improvement).

## Implementation

HFH Guatemala cleared mud from the houses, identified communities and surveyed families. Awareness-building and training was conducted with families and local committees. Construction was delayed in areas still considered to be at risk. All 140 staff at HFH Guatemala participated in the reconstruction process, with 1,200 permanent volunteers from HFH Guatemala's 200 local committee partners. National corporate and student volunteer brigades also participated.

A donation campaign called "A mí me importa (I do care)" was launched during the last two months of 2010 by two sponsors, Cementos Progreso and ConstruRed.

Forty families that lost their homes were assisted with transitional housing solutions in the municipalities of Santa Apolonia, San Jose Poquil, Tecpan and San Martin Jilotepeque, in Chimaltenango, and Ciudad Vieja of Sacatepequez.

## Lessons & Promising Practices

- Funds were raised by organizations and by a national campaign with the support of local corporations.
- The traditional HFH Guatemala housing design was changed to a transitional housing solution of 23.75 square meters.
- CONRED agreed to train HFH Guatemala staff and revise the HFH Guatemala disaster response manual in order to meet local standards.

**Right: Volunteers start a new home site in Guatemala.**



## San Rafael del Sur, Nicaragua

### PROJECT NAME AND LOCATION

Disaster Risk Reduction Project,  
Municipality of South San Rafael  
Managua, Nicaragua

### TYPE OF INTERVENTION

Disaster Risk Reduction and  
Mitigation (housing improvements,  
community reorganization and community skill-  
building)

### YEAR

2011

### PROJECT TARGET

1,000 families; approximately  
5,411 people in three communities

### IMPLEMENTING ORGANIZATION

Habitat for Humanity Nicaragua

### PARTNERS

PLAN Nicaragua  
Engineering National University  
Local government,  
community committees

### FUNDING

Habitat for Humanity International  
Habitat for Humanity Nicaragua

### SUBMITTED BY

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## Nicaragua



## Summary

Homes that were severely damaged by a tsunami that struck Nicaragua in 1992 still needed repairs. Recurring frequent floods after the tsunami killed many people and destroyed shelter and infrastructure. The extreme damage is attributed to increasing numbers of natural disasters; overcrowded informal settlements in high-hazard sites along rivers, streams and floodplains (representing approximately 10 percent of shelters in the settlement); poor construction practices; and lack of disaster response training and planning. Habitat for Humanity Nicaragua started a disaster risk reduction project to train local committees.

## Timeline

- September 1992 — Tsunami hit San Rafael del Sur.
- 2007 — National government entities established a tsunami early warning system in Masachapa.
- 2010 — HFH Nicaragua identified a need for DRR activities through local authorities. Funding was received.
- March 2011 — Training began for local committees and government technicians.
- October 2011 — Tropical Storm E12 hit, and committees responded.
- November 2011 — In alliance with Plan Nicaragua, school children attended DRR camp.
- December 2011 — Project activities ended in a public event.

and other locations. One hundred seventy people were killed, the tourist infrastructure was seriously damaged and the marine ecosystem disturbed. The threat of a reoccurrence exists because of frequent seismic activity along the Nicaraguan Pacific coast.

In La Gallina, residents are exposed to small landslides as well as house floods. HFH Nicaragua's projects for housing and disaster prevention include possible community reorganization and community skill-strengthening with the goal of mitigating these risks.

## Project Overview

In 2007, local disaster response committees were established, as was a tsunami early warning system. After four years, however, neither was fully functioning because of lack of money. HFH Nicaragua started work in the area in 2010, and in



Community members attend preparedness training and create a plan of action.

## Background

In September 1992, a tsunami hit the Nicaraguan Pacific coastline, affecting the spa towns of Pochomil and Masachapa



**Facing page: Waswali project built for hurricane-affected families in Nicaragua.**

consultation with local authorities decided to strengthen local capacities for an adequate response. Local government technicians were trained in site planning and evaluation, and DRR forums for local authorities were held. A DRR camp was organized with Plan Nicaragua that trained 70 students. Three local DRR committees were organized and recognized in a public event. They put their skills to use during the tropical depression E12 that hit in October 2011.

### Implementation

Habitat for Humanity International allocated US\$8,000 and Habitat for Humanity Nicaragua, US\$8,000.

Three DRR local committees were elected in neighborhood assemblies. Using the vulnerability and capacities assessment methodology, they identified their historical disaster profile, analyzed their vulnerabilities and resources, then mapped them. These committees developed a plan and implemented some of the activities, such as first aid training. They also participated in safe shelter awareness training in 2012.

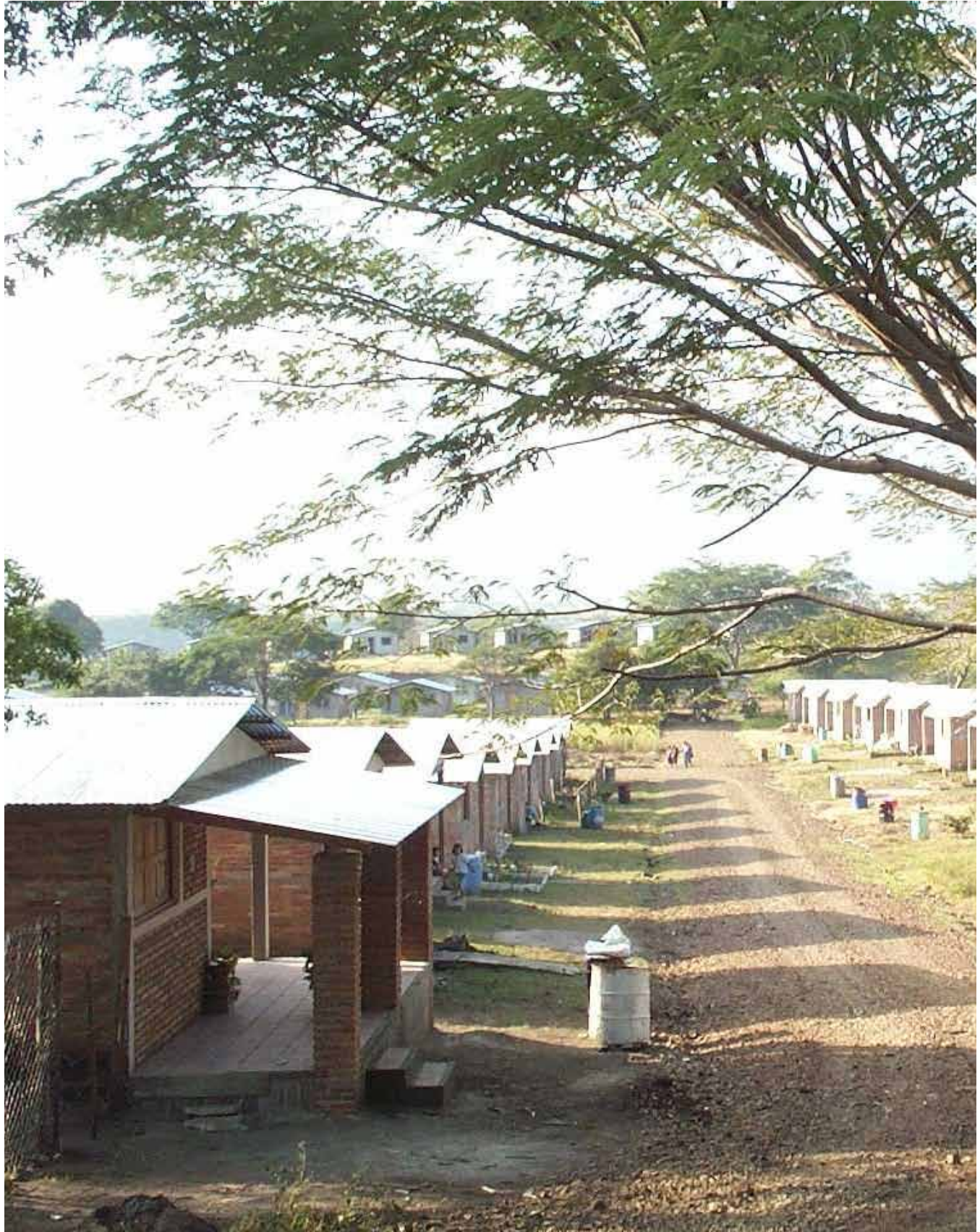
In October 2012, tropical depression E12 hit Central America, and San Rafael del Sur was affected. Members of local committees helped their neighbors evacuate to shelters and were key factors in removing debris and providing tools.

Site analysis and adequate planning training were organized for local government staff. With the support of architecture students, many sites were risk-analyzed before houses were built.

Seventy children from seven disaster-prone schools attend a two-day camp, learning risk mapping, evacuation planning and first aid. Plan Nicaragua is committed to working with the students in complementary DRR efforts.

### Lessons & Promising Practices

- Training and skill building of local leaders was considered as a key strength of the project. Collaboration with the national university and Plan Nicaragua was crucial.
- The DRR project was an opportunity to pilot and document community methodologies and tools of risk evaluation as well as the growth of the DR institutional profile. Public awareness of the need for joint collaboration with government organizations and private sector was identified as another key strong aspect of the project.
- Difficulties to consider: Activities coincided with government elections (restructuring of the work timeline), not all activities that were planned were completed because the plan was too ambitious, and the beginning of the project was delayed.
- It is important to take advantage of local organizations to promote the involvement of local people in the project. In this case, the Protestant church was an ally in organizing community meetings.
- Gather resources by forming relationships with institutions or NOGs interested in regional work.
- Establish cooperation agreements with the university community, which will facilitate important lessons learned.
- Count on a network of local university volunteers to support specific activities.





# United States and Canada



## Hurricane Floyd Response, North Carolina, United States

### PROJECT NAME AND LOCATION

Hurricane Floyd Recovery Program  
North Carolina, United States

### TYPE OF INTERVENTION:

New House Construction

### YEAR

2000-2002

### PROJECT TARGET

60 families

### SHELTER/HOUSING SOLUTION SIZE

1,100 square feet

### IMPLEMENTING ORGANIZATION

North Carolina Habitat for Humanity affiliates

### PARTNERS

State of North Carolina

### FUNDING

Habitat for Humanity International  
State of North Carolina

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## United States



## Summary

Hurricane Floyd caused considerable damage to communities in eastern North Carolina in September 1999. It was a challenge for local and state government, and HFHI, which had only recently started a Disaster Response department, to rebuild and repair homes. Fortunately, the state of North Carolina, HFHI and several HFH affiliates created a unique partnership to assist families with 60 new homes over a two-year period.

## Timeline

- September 1999 — Hurricane Floyd made landfall at Cape Fear, North Carolina.
- September 1999 — North Carolina Governor Jim Hunt established the N.C. Hurricane Floyd Relief Fund for families in need.
- January 2001 — Habitat blitz build of 12 homes in Princeville, North Carolina, with help from Federal Emergency Management Authority and Mennonite Disaster Service.

## Background

Hurricane Floyd was considered one of the most destructive hurricanes to hit North Carolina. Its damage to houses in eastern North Carolina was unprecedented. According to FEMA, the storm destroyed 4,117 uninsured and under-insured homes (13 percent of the homes affected had flood insurance.) Flooding caused the damage, not wind.

The state of North Carolina tried to move quickly to obtain federal and private resources to help communities rebuild but faced challenges in getting its requests met by FEMA and other federal agencies.

## Project Overview

Habitat created a collaborative effort between affiliates, HFHI's Regional Support Center for the area and the recently formed Disaster Response department. Five HFH affiliates in the region suffered severe flood damage to 16 houses during Hurricane Floyd. Fourteen Habitat families were forced out of their homes; two houses were unoccupied at the time.

The North Carolina's Legislature approved \$870 million in housing funds from the federal government. Some of the money was available to Habitat to build new homes. One town particularly hit hard was Princeville, the oldest U.S. town incorporated by freed black slaves, located on a floodplain. Floyd destroyed about



1,200 of its nearly 1,480 homes, but local officials declined a buyout offer from FEMA and were interested in rebuilding the community.

## Implementation

The state provided \$2.25 million to Habitat affiliates toward 30 two-home packages. At that time HFHI prevented affiliates from receiving this type of funding directly from the government, so the funds had to first go to a local sponsor. Another interesting aspect of the project was that 10 percent of state funds were intended to be tithed to a sister flood recovery build in Hyderabad, India.

A panelized house plan was adopted from a Habitat affiliate in Michigan (3 bedrooms, 1 1/2 bathrooms) and could be configured five ways. North Carolina Emergency Management contracted with the state prison system to build the walls and roof trusses, which were delivered to municipal governments for roughly the cost of the lumber. The local governments were free to partner with builders of their choice to build the houses, and all houses built to this plan were appraised for the same amount, \$70,000. Affiliates completed the building of these houses for about \$35,000 and they received \$75,000 at closing, so they actually funded two houses with every one that was built.

One of the key HFHI staff members working on the project had recently retired from state government and had positive relationships with key state officials. The Central Atlantic

Regional Support Center of HFHI provided program and construction staff support to affiliates. Interestingly, there wasn't full understanding of the HFHI role in the beginning of the project except for the relationship between the regional office and the Disaster Response department.

Special effort was made to help the community of Princeville recover with a blitz build sponsored by Lowe's. There were some challenges in acquiring all of the lots and sponsorships that were targeted, but the community recovered at a steady pace with support from numerous entities.

## Lessons & Promising Practices

- Affiliates not directly affected by the disaster supported neighboring affiliates by adopting families and aiding in reconstruction.
- There were issues with drawing state funds and identifying eligible families through the approved sources. This became common with later responses, but Habitat continued to move toward being freer with using government funds, compared with other domestic nonprofits.

## 2004 Hurricane Response, Florida, United States

### PROJECT NAME AND LOCATION

2004 Florida Hurricane Challenge Grant, Florida, United States

### TYPE OF INTERVENTION

Repairs and new construction

### YEAR

2004-2006

### PROJECT TARGET

61 families

### IMPLEMENTING ORGANIZATION

Florida Habitat for Humanity affiliates

### FUNDING

Habitat for Humanity International  
Case Foundation  
Charlotte County (Florida)  
government

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## United States



### Summary

The year 2004 was devastating for the state of Florida, as four major hurricanes caused significant damage in numerous communities. Residents know the risks of living in a hurricane-prone area, but did not expect so much damage in one hurricane season. Habitat for Humanity worked with some of the affected communities in Florida to build more than 60 new homes, thanks in large part to a challenge grant from the Case Foundation.

### Timeline

- August 2004 — Hurricanes Charley and Frances hit.
- September 2004 — Hurricanes Ivan and Jeanne hit.
- September 2004 — HFHI sent team to assist Punta Gorda community in Charlotte County with cleanup and stabilization of Habitat and non-Habitat homes.
- Sept. 15, 2004 — Case Foundation challenge grant announced to help American Red Cross and Habitat for Humanity International with \$500,000 each to raise funds for those affected by Charley, Frances and Ivan.
- October 2005 — 18 homes completed with the Case Foundation matching grant funds.
- November 2012 — Charlotte County government gives its remaining \$875,000 in federal hurricane funds to local affiliate to use for 25 new/rehabbed homes.

### Background

In 2004, four hurricanes hit the state of Florida between Aug. 13 and Sept. 25. Hurricane Charley made landfall on the southwest coast near Punta Gorda, Hurricane Frances on the southeast coast near Stuart, Hurricane Ivan in the panhandle near Pensacola, and Hurricane Jeanne nearly retraced the route of Frances. Hurricane Charley was the strongest, a Category 4 storm. Property damage from Charley alone was estimated by the National Hurricane Center at \$14 billion. At the time, Charley was the second costliest hurricane in U.S. history.

The four storms left a path of destruction that killed 25 people and destroyed or damaged more than 31,000 homes. Besides the physical destruction, Florida residents were psychologically affected. The four made landfall within a small period of time, leaving little time for preparation.



Hurricane Charley damage in Charlotte County, Florida, was severe.

## Project Overview

Habitat for Humanity International established a disaster response coordination center in the Regional Support Center in Jacksonville, Florida, after Charley and Frances hit. The regional HFHI staff established contact with affiliates, collected needs assessment information and coordinated volunteer teams to assist homeowners with short-term needs. Damage assessments revealed a significant need for permanent housing. In the hardest hit counties, affiliates suspended mortgage payments on an as-needed basis to provide some relief to families that temporarily lost income. HFHI also sent hundreds of volunteers and thousands of dollars to affiliates for cleanup and repair and to help homeowners with short-term needs.

The key piece of Habitat's 2004 Florida hurricane response was a joint request from the American Red Cross and HFHI to the Case Foundation to provide matching funds for relief and recovery.

## Implementation

The goal of the Case Foundation matching grant established by HFHI was to help affiliates that were in disaster response mode by offering a 1:5 match (affiliate pays \$10,000, grant pays \$50,000) to build new homes.

Sixteen affiliates received funds through the matching grants. HFHI and the affiliates had to raise \$1.5 million in order to obtain the Case Foundation funds.

HFHI set up criteria for proposals to use the hurricane grants for new homes, repairs/insurance deductibles, and tools for construction. HFHI provided \$1.4 million toward the response and the affiliates contributed \$380,000.

A year into this response, HFHI's U.S. Office went through a massive reorganization, which was followed by hurricanes Katrina and Rita. The Indian Ocean tsunami also occurred a few months after these hurricanes. The efforts in Florida got minimized in importance to a certain extent because of those circumstances.

## Lessons & Promising Practices

- Rapid occurrence of storms highlighted a need for organizational preparedness at the affiliate and U.S. Office levels. Some of this effort was deterred by the U.S. Office reorganization because regional offices were closed in favor of a new system of support to affiliates.
- The number of significant responses at the global level during this period highlighted the need to build capacity outside of HFHI to help steer future responses.

**Right: Volunteers re-opened the local Habitat ReStore to help raise funds for hurricane victims.**



## Hurricane Katrina, United States

### PROJECT NAME AND LOCATION

Hurricanes Katrina/Rita Home Repair Partnerships, Texas, Louisiana, Mississippi and Alabama, United States

### TYPE OF INTERVENTION

Home repair and rehabilitation

### YEAR

2006-2008

### PROJECT TARGET

994 families

### SHELTER/HOUSING SOLUTION SIZE

Varied

### IMPLEMENTING ORGANIZATIONS

Church World Services  
Rebuilding Together

### FUNDING

Habitat for Humanity International

### SUBMITTED BY

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## United States



## Summary

After hurricanes Katrina and Rita, Habitat for Humanity International leveraged funds raised for the Operation Home Delivery program to assist 994 families with repairs and rehabs done by Church World Service and Rebuilding Together. By tapping into other organizations with experience and skill in this arena, Habitat was able to focus on its strengths while assisting with these critical needs in Gulf Coast communities.

## Timeline

- April 2006 — HFHI and Church World Service announced US\$3 million partnership to repair 500 homes in the Gulf over a two-year period.
- June 2006 — 88 home projects were funded through the first round of the CWS grant application.
- June 2007 — HFHI and CWS received 2007 National VOA Award for Excellence for this partnership; 236 homes completed.
- October 2007 — 210 home projects were funded through the last round of the CWS grant application.

building homes that would be sent down to Gulf Coast affiliates. These initial goals would evolve over the next three years.

## Project Overview

In the early days of developing the strategy behind OHD, it was clear that home repairs and rehabilitation would have to be addressed because of the staggering amount of damage to owner-occupied residences. For HFHI, this raised important concerns:

- Flooding in the greater New Orleans area and coastal communities raised the issue of mold remediation.
- Increasing the scale of affiliates just to meet new construction was taxing enough, especially in terms of volunteer labor. To address these concerns, Habitat partnered with other organizations to focus on repair. In March 2006, negotiations culminated in a relationship with Church World Service to facilitate home repair.



East St. Tammany homeowner, Burnette Bailey, in front of her repaired house.

## Background

Habitat for Humanity International launched Operation Home Delivery to provide a recovery/rebuilding response to hurricanes Katrina and Hurricane Rita. OHD was intended to help affected affiliates re-open, serve as a catalyst to create low-income housing on a scale that Habitat alone would be unable to achieve, and implement a new project to engage Habitat affiliates around the country in



## Implementation

HFHI was in the unique position of being the funder of affordable housing repairs because of the generosity of current and new donors that supported Habitat's vision for long-term recovery along the Gulf Coast. This generosity had interesting effects in the domestic Habitat community and with the broader networks of domestic response organizations.

The Disaster Response department managed the CWS project on behalf of Operation Home Delivery because it helped drive the development of the relationship. OHD staff handled the Rebuilding Together partnership.

The bulk of the funds for the home repair partnerships went to CWS, which distributed grants to 53 local long-term recovery committees and organizations throughout the region. It received funds from HFHI and accepted applications from community organizations in four rounds. Grant recipients used the majority of funds for building materials and contract labor to aid clients that also received support for other needs through the long-term recovery committee/organization. CWS had previous experience working with (and in some cases fostering the creation of) many of the long-term recovery

committees that received funding.

The Rebuilding Together relationship did not end up being as productive as the CWS partnership and was cut short of its planned target. The CWS commitment was extended for an additional round because of the productive results and remaining funds available.

## Lessons & Promising Practices

- This project allowed HFHI to truly be a catalyst for recovery efforts without the burden of pushing affiliates to ramp up their production of repaired and rehab homes along with their core focus on new construction.
- The CWS partnership was highly successful in terms of engaging a broad range of actors that could deliver results with the support of an organization with a large amount of experience dealing with long-term recovery issues.
- Developing partnerships at the national level with peer organizations will benefit Habitat in future responses. Effort must be invested, however, to make sure that those partnerships are recognized and embraced by the local counterparts, especially in the long-term view, when the recovery effort becomes more localized.

**Right: A Katrina-affected home that was repaired in Bay St. Louis, Mississippi.**



# Hurricane Katrina, United States

## PROJECT NAME AND LOCATION:

Hurricanes Katrina/Rita Modular Housing Project, Texas, Louisiana, Mississippi and Alabama, United States

## TYPE OF INTERVENTION

New house construction

## YEARS

2006-2007

## PROJECT TARGET

100 families

## SHELTER/HOUSING SOLUTION SIZE

1,022-1,161 square feet

## IMPLEMENTING ORGANIZATIONS

HFH affiliates in Louisiana, Mississippi, Texas and Alabama

## FUNDING

Habitat for Humanity International

## ADDITIONAL INFORMATION

Factory-built housing shipped to affiliates

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## United States



## Summary

After hurricanes Katrina and Rita, Habitat for Humanity International determined that modular housing was a way to increase the pace of building in affected communities. With help from outside consultants, an ambitious plan was created to build 1,000 homes in the Gulf with modular homes. But experiences in the field eventually tempered expectations of the number of places that could use this approach. One hundred hurricane-affected families received Habitat homes that started out as factory-built homes.

## Timeline

- August 2005 — Hurricane Katrina made landfall near Grand Isle, Louisiana.
- September 2005 — HFHI CEO Jonathan Reckford announced Operation Home Delivery response effort.
- September 2005 — Hurricane Rita made landfall near Sabine Pass, Texas.
- January 2006 — OHD and the Construction and Environmental Resources department asked for-profit manufacturers to help them better understand how modular housing could increase construction efforts.
- June 2006 — After extensive negotiations, OHD opted to pursue partnerships with three system-built manufacturers — Crossroads Development, Palm Harbor Homes Inc. and All American Homes.

to hurricanes Katrina and Hurricane Rita. OHD was intended to help affected affiliates re-open, serve as a catalyst to create low-income housing on a scale that Habitat alone would be unable to achieve, and become a new project to involve Habitat affiliates around the country in building homes that would be sent to Gulf Coast affiliates. These initial goals evolved over the next three years.

## Project Overview

Habitat affiliates had been using factory-built and panelized housing systems for years before the hurricanes. But the challenge of working with affiliates at limited capacity to meet ambitious goals led HFHI leaders to seek innovative ways to serve more families in rapid fashion. While volunteer interest was high to help the Gulf Coast communities, there were initially limited numbers of skilled volunteers and skilled construction supervision on the ground to help increase house production. Some of the keys to making modular



Modular houses are built in a factory and transported to a lot. A crane places the modular on its permanent foundation.

## Background

Habitat for Humanity International launched Operation Home Delivery to provide a recovery/rebuilding response

housing work for the hurricane response included coordination between affiliates and HFHI to source the homes and schedule foundations, and ensuring that there was still some element of sweat equity left on the construction site for volunteers and partner families to make significant contributions to the builds. HFHI hoped that 200 of the 1,000 planned homes in the Gulf would come from modular factories and be completed by June 2007.

### Implementation

HFHI attempted to do as much due diligence as possible to devise a strategy for supporting affiliates in the region. Discussions were held with several modular vendors and with other nonprofits, such as Thrivent and Lutheran Social Services of the South, that were interested in the project. The research showed that while purchasing modulares from manufacturers might be 10 percent to 30 percent higher than through a factory co-owned by HFHI and LSSS, there would probably be significantly less overall risk by working with for-profit production. OHD negotiated prices that were comparable to those of affiliates' stick-build costs.

OHD leaders assigned a staff person to work with affiliates on procuring modular units through the vendors and tracking shipments to the field. OHD leaders also worked early on to secure agreements with several affiliates to devote some of their projects to using modular units purchased by HFHI. This was delayed as staff realized that modulares were

handled differently in each state. Besides concerns about local codes, in some cases the modulares had to be approved by state insurance regulators before being installed.

Ultimately the costs to build modular homes for Habitat families ran significantly higher than estimated versus traditional stick-built homes, with a negligible difference in the time of completion. Some of the local skilled trades that had worked with these affiliates for years saw problems with the modular units from factories in Indiana and Texas, and advised affiliates to remedy the problems themselves or ask HFHI for additional funds. Communication between HFHI and the affiliates on the foundations had to be crystal clear to prevent sending the wrong home to the wrong site. Despite these challenges, the modular homes looked like regular Habitat homes and served as an opportunity for at least one affiliate to be seen as a local innovator for using new building technology to meet the need for affordable housing.

### Lessons & Promising Practices

- Issues with transfer of responsibilities from HFHI to affiliates on homes (for example, the definition of turnkey).
- Affiliates had a harder time following up on warranties with manufacturers because they were not originally part of the buyer and seller relationship — HFHI was.
- Hard to introduce a new technology in a situation in which communities were dealing with a great deal of other confusion.



## Disaster Corps Legacy Leadership Initiative

### PROJECT NAME AND LOCATION

Disaster Corps Legacy Leadership Initiative

### TYPE OF INTERVENTION

Creation of Disaster Corps volunteers program, training and deployment of skilled volunteers

### YEAR

2006-2007

### PROJECT TARGET

Gulf Coast Habitat affiliates participating in long-term recovery

### IMPLEMENTING ORGANIZATION

Habitat for Humanity International

### FUNDING

Corporation for National and Community Service, HFHI

### PARTNERS

University of Maryland Center on Aging

### SUBMITTED BY

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## United States



## Summary

After hurricanes Katrina and Rita, the Disaster Corps Legacy Leadership Initiative was launched to develop a trained volunteer corps aimed at assisting Habitat for Humanity disaster response, recovery and reconstruction efforts in the Gulf Coast. This initiative allowed HFHI to establish a program infrastructure for specialized disaster response volunteers still used today.

## Timeline

- March 2006 — The Corporation for National and Community Service awarded HFHI a challenge grant to launch the Disaster Corps Legacy Leadership Initiative.
- September 2006-February 2007 — 95 participants attended the Disaster Corps Legacy Leadership Institute, a two-week training session at four locations across the U.S.
- October 2006-May 2007 — 81 Disaster Corps Legacy Leaders were deployed at affiliates throughout the Gulf Coast to participate in long-term recovery.

## Background

After 2005, an increasing number of disasters brought into focus the importance of disaster response, mitigation and preparedness because of more requests for technical, financial and human resources assistance by Habitat affiliates. HFHI saw a need to build and expand an infrastructure to support overwhelming numbers of volunteers wishing to help Habitat's Hurricane Katrina response.

Intended to build upon HFHI's experience in volunteer mobilization, Disaster Corps was proposed to develop a consortium of volunteer professionals to support HFHI disaster response and recovery initiatives throughout the Gulf, and to create a platform to be expanded to affiliates nationwide.

## Project Overview

Targeting the Baby Boomer generation, HFHI implemented creative recruitment strategies aimed at appealing to the diversity in this population. In order to leverage Baby Boomers with Habitat affiliates' disaster response and recovery needs, HFHI developed a training program to strengthen skills and knowledge related to effective nonprofit management in post-disaster situations. Disaster Corps leaders were then assigned volunteer leadership opportunities with affiliates engaged in disaster recovery activities in areas affected by hurricanes Katrina and Rita and part of the Operation Home Delivery program. Providing field and technical support to affiliates, these deployments covered



a range of focus areas, such as strategic planning, volunteer coordination, finance, resource development, family services and selection, and construction site supervision. Continued engagement of these DCLLs after the grant period effectively fostered a volunteer corps prepared to mobilize for disaster response needs, aid in long-term recovery activities, and ultimately support preparedness initiatives to help mitigate the impact of disasters nationwide.

## Implementation

Four HFHI staffers were hired to carry out the proposal and manage the program. Their marketing and recruitment campaign reached out to the targeted population through multiple and integrated communication channels, including media, direct contact with affiliates and outreach to social and community networks. The Disaster Corps Legacy Leadership Institute, a two-week training curriculum developed in partnership with the Lifelong Learning Institute at the University of Maryland's Center on Aging, was launched in West Palm Beach, Florida; Phoenix, Arizona; Las Vegas, Nevada; and College Park, Maryland. Ninety-five DCLLs completed 60 hours each of comprehensive training, resulting in 5,700 hours of volunteer training. After graduation, 81 DCLLs were deployed to affiliates in the Gulf Coast to work on recovery activities designed to provide permanent housing to those affected by the hurricanes. Sixteen affiliates in Louisiana,

Mississippi and Alabama participated in hosting DCLLs, resulting in 10,965 hours of service. To close out the program, HFHI staff visited affiliates, conducted volunteer and affiliate evaluations and hosted volunteer recognition events.

## Lessons & Promising Practices

- This opportunity allowed HFHI to connect more with disaster-affected affiliates through identifying potential, sharing a vision and developing alliances through our DCLLs. These connections must be nurtured in order for continued partnership and advancement of long-term recovery.
- The psychology of disaster, and dealing with grief and sorrow, emerged as important topics in the training institute and should be explored thoroughly in all volunteer training, not only through curriculum but also through firsthand experiences by those affected by disasters.
- This initiative set a platform for future expansion and growth by creating a program infrastructure that effectively engages highly skilled volunteers with disaster response and preparedness initiatives. Today, Disaster Corps is becoming an integral part of the resources that HFHI's Disaster Response can use to support the work of Habitat affiliates, greatly increasing the organization's overall ability to respond to and assist more families vulnerable to disaster.

**Right: Disaster Corps leadership participants in Washington, D.C.**



## Iowa Flooding, United States

### PROJECT NAME AND LOCATION

Midwest Flooding Response, Cedar Rapids, Iowa, United States

### TYPE OF INTERVENTION

New home construction/repairs

### YEAR

2008-2010

### PROJECT TARGET

60 families

### IMPLEMENTING ORGANIZATION

Cedar Valley Habitat for Humanity

### PARTNERS

Iowa State Support Organization  
HFHI

### FUNDING

Habitat for Humanity International  
Aegon  
Ticketmaster

### ADDITIONAL INFORMATION

Cedar Valley HFH supported a number of other affiliates in their response efforts.

### SUBMITTED BY

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## United States



## Summary

In 2008, Iowa experienced the most devastating series of natural disasters in the state's history. Between May 25 and Aug. 13, floods, tornadoes and other severe weather affected more than 90 of Iowa's 99 counties. In Cedar Rapids, the hardest hit community, Cedar Valley HFH served 20 families with back-to-back blitz builds with help from the state support organization and neighboring affiliates.

## Timeline

- June 2008 — HFHI began coordinating with the Habitat for Humanity of Iowa State Support Organization to assess status of several affiliates whose areas were hit hard by flooding.
- October 2008 — Habitat for Humanity of Iowa met with several affiliates near Cedar Rapids to discuss plans for a blitz build.
- January 2009 — Cedar Valley HFH and Habitat for Humanity of Iowa received the 2009 AmeriCorps Build-a-Thon grant from HFHI and the Corporation for National Community Service.
- June 2009 — Cedar Valley HFH hosted its first HFHI AmeriCorps Build-a-Thon and built 20 homes.
- November 2009 — Cedar Valley HFH received a second AmeriCorps Build-a-Thon grant, to build, rehabilitate and renovate 20 homes.

## Background

The combination of unusually severe winter storms and heavy spring rains

resulted in extensive flooding throughout the Midwestern United States in early 2008. By June, a number of major rivers washed over their banks and levees for several weeks at a time. About 36,000 people were left homeless by the floods, with approximately 24,000 homeless in the city of Cedar Rapids alone. Also, 4,000 homes were damaged by fast-rising water.

## Project Overview

Ninety percent of the state of Iowa was declared a federal disaster area. With 36 affiliates around the state, it was a challenge to grasp the extent of the damage and the capacity to respond to it. The flooding directly affected the offices of two HFH affiliates, and many partner families suffered material losses and damage to their homes. Arguably the hardest hit (and highest profile) of these communities was Cedar Rapids. In addition to being one of the affiliates with office damage, Cedar Valley HFH lost its executive director and several board members in the following months. Despite these setbacks, the

remaining board members and the executive director of the state support organization started plans in July 2008 for a blitz build in 2009 with support from local businesses and neighboring affiliates. One of the project sponsors, Aegeon, was honored for being a leader in the flood recovery effort.

### Implementation

The Iowa Habitat for Humanity state organization played a significant role in this response from the beginning, by helping to collect updates from Habitat staff and volunteers as they assisted local communities with sandbagging, cleanup and minor repairs. The Iowa Heartland affiliate had nine partner families with flood damage and assisted them in repairing their homes. The North Central Iowa affiliate (which also housed the state organization) supported several partner families as they worked through buyouts with the local government.

In Cedar Rapids, the initial challenge of securing short-term capacity to assist the affiliate after the executive director left fell to a husband and wife team from HFHI's Disaster Corps program. While the board went through the process of selecting the new director, these volunteers tried to recover as many files as possible and recreate affiliate manuals and processes. HFHI's organizational development staff helped get the affiliate ready to qualify enough families to do the blitz build in June. Because of the circumstances, the SSO acted as the fiscal agent for the project and helped with fundraising efforts. The National Service department of HFHI played a significant role through the winter and spring of 2009 to prepare for the blitz.

The 2009 AmeriCorps Build-a-Thon was successful, and it returned to Cedar Rapids the following year with an emphasis on repairs and rehabs, plus new construction.

**Right: Damage from the floods that struck Iowa in 2008.**

**Facing page: More than 500 Habitat for Humanity AmeriCorps National Direct and VISTA members came to Cedar Rapids, Iowa, for the Habitat for Humanity AmeriCorps Build-a-Thon.**









## Lessons & Promising Practices

- This was the first response where an SSO played a significant role in Habitat's efforts and showcased what an SSO could do: capitalize on its local connections to state emergency management and VOAD, work with state finance authorities eager to promote self-help housing, distribute a donation of \$250,000 worth of carpet, and provide free transportation to homeowners looking to repair and rebuild their homes through several ReStores across the state, etc.
- At multiple levels, Habitat realized there was potential to get more Iowa affiliates involved with rehabilitating and repairing homes than it probably would have if the floods hadn't occurred.
- After the Iowa response and the support provided by the Iowa SSO, HFHI's U.S. Office asked HFHI Disaster Response to focus on supporting and leveraging SSOs in future responses as well as promoting preparedness to affiliates. Disaster preparedness and response became one of the four pillars for SSO operations.



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For 14 years, Habitat for Humanity has been working in Disaster Response, offering a variety of interventions to help vulnerable families and communities recover from devastating disasters and conflicts. This Disaster Response Shelter Catalogue seeks to give a meaningful overview of our efforts. The reports here span the globe and every possible metric, from modest local efforts to help one village to huge undertakings that involve multiple countries, partners, complex logistics and millions of dollars.

Some responses have been unqualified successes. Others met with significant challenges, and the partners involved had to adapt as they went, sometimes having to re-think original goals. Those latter responses can provide valuable lessons learned, both for Habitat and for our fellow humanitarian organizations, and those lessons are included. We hope they will contribute to the institutional memory of Habitat and assist others who work in similar arenas.

-From the foreword by Mario C. Flores



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