Examples from the Response to Hurricanes Georges and Mitch
### THANKS

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Thanks also go to CHF International’s staff members, in particular, Lisa Pacholek, Brian Holst, Bryan Winston, and James Schenck, who led the teams that helped thousands of families put their lives back together after Georges and Mitch, and all the community leaders and other individuals who worked tirelessly to reconstruct their communities.

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### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>i</th>
<th>EXECUTIVE SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>iii</td>
<td>PREFACE: PHILOSOPHY AND EXPERIENCE</td>
</tr>
<tr>
<td>01</td>
<td>EXAMPLES FROM HURRICANES MITCH AND GEORGES</td>
</tr>
<tr>
<td>01</td>
<td>1. The Impact</td>
</tr>
<tr>
<td>01</td>
<td>- Hurricane Mitch</td>
</tr>
<tr>
<td>01</td>
<td>- Hurricane Georges</td>
</tr>
<tr>
<td>03</td>
<td>2. CHF International’s Response</td>
</tr>
<tr>
<td>04</td>
<td>3. Overview of Activities</td>
</tr>
<tr>
<td>10</td>
<td>- Dominican Republic</td>
</tr>
<tr>
<td>11</td>
<td>- El Salvador</td>
</tr>
<tr>
<td>12</td>
<td>- Guatemala</td>
</tr>
<tr>
<td>13</td>
<td>- Haiti</td>
</tr>
<tr>
<td>14</td>
<td>- Honduras</td>
</tr>
<tr>
<td>15</td>
<td>- Nicaragua</td>
</tr>
<tr>
<td>17</td>
<td>CONCLUSIONS AND RECOMMENDATIONS</td>
</tr>
</tbody>
</table>

Prepared by [CHF International](#), January 2003
EXECUTIVE SUMMARY

REFLECTING IN THE FULLNESS OF TIME, WE HAVE PREPARED THIS REPORT AS AN INSTITUTIONAL RECORD OF ACHIEVEMENTS, LESSONS, AND RECOMMENDATIONS FOR PROGRAMS DESIGNED TO BRING SOCIETIES FORWARD FROM EMERGENCY RELIEF TO RECONSTRUCTION.

When the United States Congress provided funding for relief to Central America and the Caribbean following Hurricanes Georges and Mitch, CHF International received $33 million through the United States Agency for International Development (USAID) and other funding agencies, including the Federal Emergency Management Agency (FEMA), the United States Department of Housing and Urban Development (HUD), the United States Department of Agriculture (USDA), and the Pan American Development Foundation (PADF).

This represented 5.3% of the total $621 million provided by the Emergency Supplemental Appropriations Act for Central American and the Caribbean Emergency Disaster Recovery.*

Combined with an additional $15 million leveraged in cash and in-kind contributions, CHF International’s reconstruction efforts for Hurricanes Mitch and Georges were valued at more than $48 million. Because of the large scale of this effort, tangible improvements made by our work can be seen throughout Central America. But the intangible results are equally important. Both are synthesized here.

Throughout the relief efforts and rapid reconstruction process, CHF International worked with dozens of local organizations in El Salvador, Guatemala, Honduras, Nicaragua, the Dominican Republic, and Haiti to increase the resilience of affected communities. We successfully completed the reconstruction mandate, often exceeding targeted goals. Community revitalization was done quite vividly through the renewed and improved infrastructure (housing, schools, and so forth) in damaged communities. Yet, equally important, we

* Additional CHF International results from programs MICAM and Muniplan are not covered in this report because they were not part of the original congressional act for reconstruction. Neither is our post-earthquake reconstruction, which overlapped with hurricane reconstruction.

“CHF International’s approach set the stage for further empowerment: communities developed new skills, new perceptions of themselves as capable, and new commitment to their own development.”

–Post-Hurricane Capacity Building Evaluation Report by Kimberly A. Maynard
built the capacity of these local institutions, which can continue to increase resilience.

Requiring matching contributions or incorporating loan programs is often more difficult in reconstruction than in typical development programs, but these measures can bring about better quality results. When we pay for services, we value them more. By requiring a “match” and tracking sweat equity, land donated, materials, etc., we have found that people become more engaged in the reconstruction process.

We hope this report will illustrate our experience that managerial capacity-building is critical to long-term development at the local level. Because we feel so strongly about this aspect of our work, CHF International hired an independent researcher to identify our most important capacity-building practices. This document highlights the key findings of her research.

CHF International has reached six central conclusions which are at the heart of effective post emergency or disaster reconstruction.

1. Reconstruction is enhanced in both the short term (one to six months) and the long term (six months to three years) by real engagement of the people who are being helped.

2. Rapid results are necessary to preserve hope, but do not have to occur at the expense of quality.

3. Skills transfer and local capacity building (for individuals, local governments, nongovernmental organizations and small- and micro-enterprise) can occur effectively within a reconstruction context, and can encourage lasting results.

4. To increase longevity of program interventions, even in relief situations, subsidy and loan components (rather than strict grant programs) can be used.

5. Even when temporary solutions are necessary, strategies can be employed to link these to permanent solutions (e.g., constructing temporary shelters on permanent foundations).

6. Local economic activity associated with reconstruction should be optimized to boost economic recovery.

PREPARING PEOPLE FOR THE FUTURE

When the earthquakes of January and February 2001 struck, communities attended to by the Mitch Integrated Reconstruction Activities program had been well prepared by CHF International and partners.

Local emergency committees demonstrated enhanced capacities in four primary ways:

1. Their immediate reactions to the quakes were well-organized.
2. They used established methods to evaluate and measure the damage caused by the quakes and the resulting needs.
3. They had a mechanism to communicate effectively to the national emergency network.
4. Their requests for assistance were organized, and assistance received was properly managed.
Consistent with our mission to serve as a catalyst for long-lasting positive change, CHF International’s emergency reconstruction programs take near-term action with longer-term recovery strategies in view. The engagement of the people and their leaders is central in reconstruction planning and implementation.

CHF International’s development philosophy is grounded in the belief that the degree to which we involve people in helping build their own strong, stable communities, the more self-sufficient these communities become. Our view of process and product being highly interrelated is manifested not only in our daily efforts, but even under fast-paced, high-pressure, critical emergency situations. Even when circumscribed by emergency conditions, we still hold community participation to be an important value. CHF International’s response to Hurricanes Mitch and Georges provides an illustration of the effectiveness of the participatory model we use.

When the United States Congress provided funding to provide relief for Central America and the Caribbean following these disastrous storms, CHF International undertook a large part of the challenge to reconstruct damaged communities.

Throughout the relief efforts and rapid reconstruction processes, CHF International worked with dozens of local organizations in the Dominican Republic,
El Salvador, Guatemala, Haiti, Honduras and Nicaragua to increase the resilience of affected communities.

Following these programs, CHF International wanted to see whether in the process of providing shelter, roads, and schools, it had in fact also reached its goal of developing the capacity of its partners, beneficiaries, and staff. To answer this question, we commissioned an independent evaluation by an expert in emergency assessments and post-conflict resolution, Kimberly A. Maynard, Ph.D., President of the Cuny Center, in the fall of 2001 and carried out internal reviews.

This paper focuses on hurricane reconstruction work in six countries in Latin America as illustrative examples of our work. Hurricane reconstruction represents only one facet of CHF International’s recent emergency management efforts.

As of this writing, CHF International transition initiatives are ongoing in war-torn Afghanistan, post-Milosevic Yugoslavia, and the politically destabilized areas of Colombia, Lebanon, and West Bank/Gaza—just to name a few. Whether we are working on civil society development, construction projects, microlending or agriculture, we are all working to stabilize politically uncertain areas by engaging people. We respond to disasters as needed, but our dedicated staff members are on the ground implementing development programs every day. In each case, we are striving to help families build better lives for themselves.

All of CHF International’s work takes place within a complex geo-political context over which we (and others) have little control. We acknowledge that fact. Nonetheless, CHF International and our local partners directly manage programs intended to prevent, manage, mitigate, and, sometimes, resolve conflict.

We do not profess our work to be a panacea, but CHF International helps provide ways for individuals in communities to advance their claims in fair, inclusive ways and to develop pluralistic, democratically-based processes in conjunction with physical reconstruction.
CHF INTERNATIONAL EMERGENCY MANAGEMENT OVER THE LAST DECADE

Working toward a peaceful, stable world has been at the heart of CHF International’s methodologies since its inception 50 years ago. CHF International interventions have worked to ameliorate post-conflict activities and post-disaster conditions.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFGHANISTAN</td>
<td>2002</td>
<td>Emergency relief and repatriation after war</td>
</tr>
<tr>
<td>MONTENEGRO</td>
<td>2002</td>
<td>Reconstruction following Balkans conflict</td>
</tr>
<tr>
<td>BOSNIA</td>
<td>2002</td>
<td>Reconstruction following Balkans conflict</td>
</tr>
<tr>
<td>AZERBAIJAN</td>
<td>2001</td>
<td>Assisting internally displaced persons and refugees</td>
</tr>
<tr>
<td>COLOMBIA</td>
<td>2001</td>
<td>Relief to persons displaced by political violence</td>
</tr>
<tr>
<td>SERBIA</td>
<td>2001</td>
<td>Democratic strengthening following civil conflict</td>
</tr>
<tr>
<td>EL SALVADOR</td>
<td>2001</td>
<td>Earthquake relief</td>
</tr>
<tr>
<td>KOSOVO</td>
<td>1999</td>
<td>Economic development after civil conflict</td>
</tr>
<tr>
<td>HONDURAS</td>
<td>1998</td>
<td>Relief and reconstruction of communities hit by Hurricane Mitch</td>
</tr>
<tr>
<td>GUATEMALA</td>
<td>1998</td>
<td>Relief and reconstruction of communities hit by Hurricane Mitch</td>
</tr>
<tr>
<td>NICARAGUA</td>
<td>1998</td>
<td>Relief and reconstruction of communities hit by Hurricane Mitch</td>
</tr>
<tr>
<td>EL SALVADOR</td>
<td>1998</td>
<td>Relief and reconstruction of communities hit by Hurricane Mitch</td>
</tr>
<tr>
<td>HAITI</td>
<td>1998</td>
<td>Relief and reconstruction of communities hit by Hurricane Georges</td>
</tr>
<tr>
<td>DOMINICAN REPUBLIC</td>
<td>1998</td>
<td>Relief and reconstruction of communities hit by Hurricane Georges</td>
</tr>
<tr>
<td>LEBANON</td>
<td>1997</td>
<td>Rural economic development and microfinance lending following civil war</td>
</tr>
<tr>
<td>POLAND</td>
<td>1997</td>
<td>Flood assistance</td>
</tr>
<tr>
<td>GUATEMALA</td>
<td>1995</td>
<td>Repatriation and economic development following civil conflict</td>
</tr>
<tr>
<td>GAZA/WEST BANK</td>
<td>1994</td>
<td>Home improvement and jobs creation during the Intifada</td>
</tr>
<tr>
<td>PHILIPPINES</td>
<td>1991</td>
<td>Mt. Pinatubo relief and reconstruction</td>
</tr>
<tr>
<td>INDIA</td>
<td>2002</td>
<td>Needs assessment following earthquake</td>
</tr>
</tbody>
</table>
Children in Honduras receive trees to be planted as part of a reforestation project.
Hurricane and Tropical Storm Mitch
In recorded history of the western hemisphere, there had never been a hurricane so damaging as Hurricane Mitch. From October 26 until November 1 of 1998, the powerful winds and rains of Mitch tore through Central America, causing life and property damage on a massive scale. Entire communities were flooded and badly damaged. Homes, roads, bridges, schools, clinics, and crops were damaged or destroyed by the force of the storm or the lingering rain.

More than 9,000 people were killed, and millions were displaced. By early November, more than 600,000 people were forced to seek refuge in schools, churches, and other temporary shelters.

Hurricane Georges
A month prior to Hurricane Mitch, another storm had hit the island of Hispaniola, causing severe damage to the Dominican Republic and Haiti. From September 20-22, Hurricane Georges swept through the Caribbean. Damage to the countries of the Caribbean from Hurricane Georges exceeded $1.7 billion, with the Dominican Republic bearing the brunt of the disaster. Housing was particularly devastated—more than 40 thousand people needed new homes.
Hurricane Mitch Relief

A personal testimony

The family of 72-year-old Lucilo Gonzalez Gonzalez, experienced Hurricane Mitch and worked with CHF to recover immediately after the storm. Mr. Gonzalez is 72 years old and married with 14 children, 23 grandchildren, and 6 great-grandchildren. Mr. Gonzalez lives in Las Brisas del Rio Grande, Choluteca, Honduras.

The Storm

“During the Hurricane Mitch storm, I was guarding a warehouse in the town in which I lived when a neighbor of mine arrived and announced that the river had overflowed its banks and had entered my house. My neighbor was not sure if my wife and family had been washed away. I returned home to look for them, but I was not able to enter the house as the river was surging through it. The fierce sounds of rushing water ripping through the town and carrying away everything in its path was overwhelming.

I wanted to continue looking for my wife and family, but the police arrived at that moment and forced me to leave. I was taken to a local school for refuge along with hundreds of others. Upon arriving at the school, I was told that my wife and my young children were safe in another shelter. I was greatly relieved. The next day I was reunited with my family. We stayed in that shelter for another three weeks.

Building Emergency Shelter

My family was lucky enough to obtain a new plot of land that was provided by the municipality of Choluteca. On this land, we built a makeshift shelter out of used wood and other materials that the river had thrown throughout the town. We collected anything we could find to provide us with shelter from the dust and hot sun that came after the hurricane. Our home and every family possession had been carried away by the river. We had nothing.

CHF International arrived to offer their temporary housing project to the new community and to see if we were in a position to work helping to build the homes. The community’s response was immediate and affirmative. Within days, CHF International returned to the community with materials to begin construction on the homes and latrines. We took CHF International’s advice and worked together as a community to build the homes.

CHF International arranged the “Food for Work” program to provide us with food as we were working. Thanks to this additional help, community members stayed motivated. We not only completed 150 homes, but also requested and received materials for 50 additional homes. We also worked together to combine eight housing structures to build a school so that our children can return to classes as soon as possible.
In communities where CHF International was already on the ground, we reacted immediately to provide food and shelter assistance in cooperation with other nongovernmental organizations (NGOs) and local community organizations. With funding from USAID, augmented by funds raised privately and leveraged from donors and participants, CHF International achieved the following results. The success of our physical reconstruction efforts are readily apparent, but some of the most important results, such as long-term capacity building, are less easily quantified.

Strong partnerships were vital to achieve success in rapid reconstruction. Throughout the process, CHF International worked with local and, in some cases, international organizations to increase the resilience of affected communities.

CHF International required match contributions to further engage residents and to increase perceived value of services. Local partner organizations quickly saw the advantages of this. We tracked sweat equity, land donated, materials, and other community contributions. For all projects, CHF International leveraged additional, private-sector cash and in-kind contributions worth $15 million.

### Physical Reconstruction - Country Level Impact

**Dominican Republic**
- New homes built: 2300
- Repairs and improvements to houses: 1500
- Water and sanitation hookups: 700
- Partners and staff trained: 200

**El Salvador**
- New homes: 500
- Repairs and improvements: 51
- Watershed areas conserved: 38
- Areas reforested or cultivated (in hectares): 2,640
- Emergency centers established: 5

**Guatemala**
- Community members assisted: 70,000
- Municipalities systems improved: 20
- Reconstructed bridges: 22
- Kilometers of roads rehabilitated: 100

**Haiti**
- Schools rebuilt or repaired: 23
- New (starter) homes built: 635
- Repairs and improvements: 22
- Kilometers of pipes: 20

**Honduras**
- New homes built or improved: 4,500
- Repairs and improvements: 550
- Risk mitigation projects completed: 32
- Sanitation systems: 20
- Kilometers of roads rehabilitated: 100

**Nicaragua**
- Emergency shelters built: 3,300
- Sanitation systems: 20
- Additional mitigation projects: 38
- Areas protected or rehabilitated (in hectares): 130
- Partners trained: 55
- Emergency shelters built: 3,300
- Sanitation systems: 20
- Additional mitigation projects: 38
- Areas protected or rehabilitated (in hectares): 130
- Partners trained: 55

### Training and Capacity Building

**Number of People with Improved**
- Community infrastructure: 872,000
- Environment: 365,000
- Housing: 52,000
- Local government services: 1,000,000

**Training and Capacity Building**
- Trained partner organizations and staff: 3,750
- Communities better prepared for emergencies: 500

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* Includes totals for congressional supplemental act only
** Based on overall impact reports from field.
Institutional Capacity Building of Democratic Organizations

We measure our success not only by physical reconstruction or high-quality program administration, but also by the involvement, growth, and satisfaction of participants. CHF International always works through local partner organizations, and we have found that this is critical in making certain that the assistance is funneled directly to the people who need it most.

As a post-hurricane capacity building evaluation by Kimberly Maynard reported:

“While the supplemental funding specifically financed housing reconstruction and other infrastructure rehabilitation, it accomplished much more than that by increasing self-reliance, introducing new skills, building relationships, and preparing for future disasters.

CHF International’s inclusive reconstruction programming, which incorporated livelihood, infrastructure, and disaster mitigation considerations, created a smoother transition from disaster to development.

The holistic approach CHF International used to implement its programs—involving governments, farmers, and communities—improved relationships and inter-group interaction.

CHF International’s assisted self-help methodology encouraged a positive attitude towards self-improvement and discouraged dependency and a welfare mindset.

The participatory manner in which CHF International conducted its programs created a sense of ownership, community, responsibility, and commitment.”

Preparing for Future Disasters

An important consideration for any reconstruction program is preparation for future disasters. In addition to rebuilding damaged infrastructure and/or upgrading its resistance, “disaster mitigation” entails training people to be prepared. Putting emergency response systems in place can reduce future spending on rescue and response efforts.
CHF International worked to raise awareness and educate thousands of farmers and community leaders to better manage natural resources so that future disasters could cause less damage. Communities built terraces to slow water and planted trees to reforest areas and stop erosion. Together, we built at least 48 water reservoirs in various communities, and implemented many micro-irrigation projects.

We formed community committees and trained them to assess their highest community needs, develop proposals for financing, and complete priority infrastructure projects such as new roads, levees, and bridges.

We worked with municipalities and community leaders to prepare early alert systems and disaster response action plans. This included informing residents about how to prepare for evacuations, and where to find a “safe area.” We also oversaw the installation of radio systems to help in quick response.

We trained families to reduce their vulnerability to disasters through natural resource preservation projects. CHF International promoted water conservation and protective storage practices.

Examples of disaster preparation projects:

- **Project Impact**, funded by the Federal Emergency Management Agency (FEMA), helped communities in El Salvador, Honduras, and Nicaragua increase resilience to disasters and prepare for emergency situations. Risk mitigation training helped community committees prioritize projects. Impact also funded model programs.
- The United States Department of Agriculture (USDA) provided funding for watershed management and water and soil conservation efforts.
- The Mitigation Initiative for Communities and Municipalities (MICAM) in El Salvador, Guatemala, and Honduras (funded by USAID’s Office of Foreign Disaster Assistance) reduced vulnerability for more than 100,000 people.
- Funding from the Organization of American States (OAS) helped establish an early alert program.

Overall, the projects made a difference through direct infrastructure and agricultural improvements, but also through participation. The majority of people working on the projects were volunteer community members.

**Reconstruction: Strengthening Communities through Housing**

In Honduras, the Dominican Republic, and El Salvador, CHF International built 9,500 permanent houses. We did this through an assisted self-help methodology with use of appropriate technology. We provided construction supervision and quality control and ensured that the designs were hurricane, flood, and earthquake resistant.

**Appropriate Technology in Emergency Temporary Shelters**

While intended as a bridge to permanent housing, CHF International’s experience shows that temporary shelters are often used much longer than originally intended. Even after permanent shelters are constructed, large or extended families don’t have the resources to rebuild space for everyone immediately. Families may use the shelters for animals or storage. Extended use or reuse of materials demands that the frame be stable.

In Honduras, CHF International teams designed a shelter frame that could be built in four hours but that could last up to ten years. Leaders assembled core teams of seven people each, and beneficiaries contributed several team members to work on each home. Staff and beneficiaries
developed simple yet functional and effective construction techniques.

CHF International’s flexibility during construction allowed for innovation in Honduras. When workers saw that staples would not keep the siding in place due to high winds, they sent children to gather bottle caps and hammer them flat. Once nailed to the frame, these bottle caps became “washers” with a large enough surface area to ensure the siding would stay in place, even in strong winds.

Sloping roofs were designed to allow ventilation, keeping sub-tropical daytime temperatures at bay. Screens covered the ventilation areas to guard against mosquitoes. Corrugated zinc roofs were sloped to keep out the rain. After the project’s completion, CHF International staff revisited the sites to document construction successes and designs to be altered in future relief efforts.

We now have a design and procedure for temporary shelters that is highly adaptable to a wide variety of circumstances. The shelters have been adapted for victims of hurricanes, earthquakes, and civil unrest in at least three countries.

Increased Resiliency for Existing Homes and New Permanent Homes

While we believe that safe, affordable housing is the foundation upon which families can build a livelihood, a healthy community, and a peaceful, democratic society, CHF International takes a broad view of housing. Experience has taught us that we must work to improve the overall habitat, and the community’s whole environment. Wherever we built housing, each unit had sanitation services built in. Whether drinking water was in each home or at a shared location nearby, every family had access to potable water.

CHF International’s permanent houses employed the same “assisted self-help methodology” as the temporary ones, with family members contributing to the construction where possible. Permanent houses were constructed with sturdy blocks and roofs of local materials. The house designs allowed for progressive upgrading—building on one room at a time.

To strengthen homes in areas vulnerable to hurricanes, CHF International developed a technical manual on hurricane-resistant construction practices, based on information from the Organization of American States (OAS). The changes enable homes to withstand hurricane winds of up to 150 mph.

As an alternative to reconstruction through grants—which are important during immediate relief—CHF International’s home improvement loan programs offer technical assistance provide low-income families with opportunity to improve, strengthen, reconstruct their houses, using existing technology and construction materials. During reconstruction, credit (such as home improvement lending) can be an important tool to help families develop long-term self-sufficiency, especially when loans are repaid in a short period of time. Some lending programs were incorporated where feasible, but loans always have a tough time competing where grants are available.

Reaching Beyond Shelter to Infrastructure, Water, Sanitation, and Health

As noted above, CHF International’s holistic approach to community development means that we work to improve more than just housing. Our infrastructure programs reconstructed roads, bridges, schools, potable water systems, solid waste management and sewer systems.
In El Salvador, we built schools, clinics, and a number of other infrastructure projects. In Guatemala, efforts focused on vehicular bridge and road construction. In Haiti, the emphasis was on strengthening schools and improving potable water systems. In the Dominican Republic and Honduras, as elsewhere, water and sanitation efforts were critical. CHF International’s holistic approach to community development means that we work to improve more than just housing. Our infrastructure programs reconstructed roads, bridges, schools, potable water systems, solid waste management, sewer systems and more.
Developing CHF International’s Umbrella Grant Management Methodology

Based on lessons learned in the wake of Hurricanes Mitch and Georges, CHF International’s offices in Honduras, El Salvador, and the Dominican Republic jointly developed an umbrella grant management methodology.

The comprehensive manual, “A Guide to Developing and Implementing Umbrella Grant Management,” assists CHF International managers to develop and implement a transparent and competitive process for receiving sub-grant applications. The process prompts managers to disburse funds to qualified applicants rapidly and track them efficiently.

The manual helps CHF International field offices understand their options when managing numerous sub-grants with multiple organizations simultaneously and helps them apply common principles to diverse tools. The information provided is not country or program specific, allowing for easy adaptation. CHF International ensures that policies and procedures of the donor agencies are met, while granting funds to local organizations to maximize project effectiveness.

Private Community Investment

Adapting program models to various funding and administrative arrangements,

CHF International incorporated a variety of creative techniques to get beneficiaries, local governments, central government agencies, and other donors involved in projects – leveraging additional resources to increase the impact of U.S. government investments.

We had great success in mobilizing the donation of construction materials, equipment, and labor from municipalities and beneficiaries. Even private construction companies contracted to build works were required to involve community labor.

CHF International leveraged an additional $15 million in contributions.
Tropical Storm Mitch severely flogged the community of El Pichiche, El Salvador. At first, families built canopies with cane, wood, and scraps of roofing, or plastic sheeting to keep their valuables above water, but after three days of flooding, the situation was worsening. The water level continued to rise and people began to dread something yet more serious. The rapid flooding soon reached life-threatening levels. Some families began to evacuate the community, but, aggravating the situation, other families did not recognize the danger and refused to leave. The Government eventually forced them out, evacuating them to the neighboring town of Zacatecoluca, via an Air Force helicopter.

After the immediate flood danger had passed, the families began to return. They found their houses damaged and most of their livestock drowned. Contaminated water remained in El Pichiche for more than a month.

As one community member said, “During Tropical Storm Mitch, nobody in the community was prepared for a disaster of such magnitude.”

Several families were ready to leave the community, but when they saw that several service institutions, including CHF International, were arriving to help them, they decided to stay, organize, and redevelop El Pichiche. They confronted problems so that each day would be better than before.

They first formed a work committee that was entrusted to clean the place. They rid the community of the drowned animals to avoid pollution and disease, then cleaned wells and streets.

CHF International, in conjunction with Partners of the Americas, conducted disaster preparation training sessions to guide the communities in areas hardest hit by Tropical Storm Mitch. We worked with municipal governments to prepare and strengthen local emergency preparedness plans. Disaster preparedness was just one of many components of USAID-funded Mitch Integrated Reconstruction Activity project.

Today, following the international support, El Pichiche community members have prepared for future disasters. Following disaster preparedness training sessions, they have a well-organized emergency committee that knows what to do in disaster situations. They have elaborated a disaster risk map of the community, know the critical disaster points in and around the community, know where and how to accomplish an effective evacuation, and know who to call in case of emergency. The committee is multiplying the knowledge that they received by training others and continuing to prepare for future disasters.

Deciding to Rebuild
One Community’s Story

Some 3,000 people are now trained in disaster preparedness
Country Profile
Dominican Republic

Hurricane Georges cut a wide swath across the Dominican Republic, causing widespread damage estimated at $2 billion. The agricultural sector was severely affected, as were basic infrastructure (roads, bridges, water and electrical systems) and housing. An estimated 48,000 homes were destroyed and another 123,000 homes were in need of major repairs and/or rehabilitation.

CHF INTERNATIONAL PROJECT AND PROJECT FUNDER
Post-Hurricane Georges Housing Reconstruction Program - USAID

TIMELINE
October 1999 - December 2001

BUDGET
Post-Hurricane Georges Housing Reconstruction $8,267,000
Cost sharing from municipalities, government agencies, beneficiaries $5,300,000*

* This is some $3 million more than what was required under contract.

ACCOMPLISHMENTS
CHF International accomplished the following under its Hurricane Georges activity in the Dominican Republic.

- Made 50 sub-awards to 13 local partner organizations to build houses at 48 project sites throughout the country
- Conducted seven training workshops for staff of the local partners on construction and supervision methods
- Prepared six technical assistance manuals for the local partners
- Repaired or retrofitted 1,541 houses through partner organizations
- Built 1,219 new in-fill houses and 745 core houses in new urbanizations through partner organizations
- Constructed directly 284 houses in new urban settlements
CHF INTERNATIONAL PROJECT AND PROJECT FUNDER
Mitch Integrated Reconstruction Activity - USAID
Watershed management project - USDA
Project impact project - FEMA
Municipal planning and community development project - HUD

TIMELINE
Watershed management. May 2000 - December 2001
Project impact. December 2000 - December 2001
Municipal plan/community development. September 2000 - December 2001

BUDGET
Mitch Integrated Reconstruction Activity $11,304,000
Watershed management $169,362
Project impact $250,000
Municipal plan/community development $575,000

Cost sharing from municipalities, government agencies, beneficiaries
Mitch Integrated Reconstruction Activity $3,329,567*
Watershed management $111,983*
Total $15,627,929
* 976,000 more than required
** 91,000 more than required

ACCOMPLISHMENTS
CHF International accomplished the following under its Mitch-related activities in El Salvador in over 200 communities in 12 municipalities

- **Home construction:** in 30 communities, built 500 houses that mitigate future natural disasters.
- **Education Sector Activities:** assessed over 250 schools for damages, repaired, built, and equipped more than 80 schools to benefit approximately 19,000 students.
- **Farmer Assistance:** helped 5,500 small farmers to prepare land and access fertilizer and seeds to increase their agricultural production and net income.
- **Infrastructure Projects:** repaired or constructed almost 50 small infrastructure projects.
- **Reforestation:** Trained 800 individuals in reforestation techniques, wooded 1,300 acres, and established community nurseries that furnished trees for additional 700 acres.
- **Disaster preparedness:** trained 50 municipal officials and 150 trainers, helped more than 100 communities establish emergency committees, and helped develop emergency plans.
- **Agriculture and Environment:** trained more than 400 individuals in soil and water conservation techniques improved some 40 micro watersheds. Managed water flow in nearly 1000 acres of land through irrigation ditches, installation of barriers such as rocks and live plants, and constructing water filtration pits.
- **Solid Waste Management:** trained 3,751 people and improved waste conditions in 10 municipalities.
- **Risk mitigation:** trained leaders, prepared community plans, identified projects, and establish Risk Mitigation Committees to help remove environmental hazards.

Country Profile
El Salvador

Tropical Storm Mitch generated intense rainfall in El Salvador. It flooded approximately 161,000 acres and displaced over 55,000 people. It caused severe flooding and landslides that destroyed or damaged physical and social infrastructure. Damage to agriculture was significant.
Country Profile
Guatemala

Hurricane Mitch caused considerable damage in Guatemala. The agricultural sector was severely impacted, as were basic infrastructure such as water and electrical systems, roads, and bridges. In the area where CHF International has been working since 1995, the Ixcan, vehicular and pedestrian transport corridors were particularly affected.
Hurricane Georges cut a wide swath across the Haiti and the Eastern Caribbean causing considerable destruction and damage to houses and social infrastructure. In response, USAID funded a Hurricane Georges Reconstruction and Support Program to enhance the capacity of selected communities to recover from the economic impact of Hurricane Georges and to adequately prepare for future natural disasters in targeted areas of southern Haiti.
Country Profile
Honduras

Hurricane Mitch smashed across Honduras destroying more than 33,000 houses and damaging another 50,000. Its winds and flooding destroyed considerable physical and social infrastructure and crops.

CHF INTERNATIONAL PROJECT AND PROJECT FUNDER
Post-Mitch Housing Reconstruction Program - USAID
Starter Home Program - USAID
Project Impact Mitigation Activities - FEMA

TIMELINE
Post-Mitch Housing Reconstruction Program. October 1999 - December 2001
Starter Home Program. October 1999 - December 2001

BUDGET
Post-Mitch Housing Reconstruction Program $7,808,057
Starter Home Program $1,774,513
Project Impact Mitigation Activities $250,000

Cost sharing from municipalities, government agencies, beneficiaries
Post-Mitch Housing Reconstruction Program $2,902,559
Starter Home Program $687,432

ACCOMPLISHMENTS
CHF International accomplished the following under its Mitch related activities
Post-Mitch Housing Reconstruction Program
• Made sub-awards to 14 local partner organizations to build houses
• Trained staff of 15 local partner organizations in construction and supervision methods and micro credit operations
• Trained staff of 15 municipal local partner organizations in construction and supervision methods and micro credit operations

Starter Home Program
• Built 635 starter houses
• Generated 866 person-months of employment

Project Impact Mitigation Activities
• Organized and trained Project Impact Management Committees in three municipalities
• Helped committees conduct community meetings to prepare Action Plans
• Helped committees identify and prepare proposals for risk mitigation activities
• Implemented 32 risk mitigation activities
CHF INTERNATIONAL PROJECT AND PROJECT FUNDER
Watershed reclamation and hazard mitigation project - USDA
Impact disaster mitigation activities - FEMA

TIMELINE
Watershed reclamation. May 2000 - December 2001
Project impact. December 2000 - December 2001

BUDGET
Watershed reclamation $525,958
Project impact $250,000

Cost sharing from municipalities, government agencies, beneficiaries
Watershed reclamation $47,562

ACCOMPLISHMENTS
CHF International accomplished the following under its Mitch-related activities in Nicaragua

Watershed reclamation and hazard mitigation project
• Constructed 403 reservoirs
• Constructed 253 small

Country Profile
Nicaragua

Hurricane Mitch affected Nicaragua for a period of ten days. Torrential rains produced flooding and landslides. Human lives were lost, corps destroyed, major environmental damage occurred and the physical and social infrastructure was damaged.
• The way in which you respond and the choices that you make in immediate response will affect long-term development. Things need to happen at both the community and the national level in a way that will prepare people to build their own futures. Individual initiatives must be linked with larger outcomes for mitigation and preparedness over time.

• There is often a dearth of technological and institutional information available to communities pertaining to various risks and threats. Often, risk maps that depict slopes prone to slides, wind, and soil erosion, or fault areas for earthquakes, do not exist. Community leaders must actively pursue development of such tools to be used widely at time of need.

• Production schedules must take into account seasonal changes and other factors in the initial stages of relief. In Central America, for instance, erosion-preventing trenches should be completed during the dry season so as not to interfere with agricultural activities.

EXAMPLES OF LESSONS APPLIED

CHF International has been identifying, learning, and applying practical lessons for decades. We constantly monitor these to stay on the cutting edge of development. Here are a few examples of how CHF International’s experience from past relief and reconstruction efforts, as well as the lessons from CHF International’s recent experience, has enhanced our performance.
CONCLUSIONS AND RECOMMENDATIONS

PRIMARY CONCLUSIONS

1 | **Ensure the real engagement of the people** who are being helped. Community participation enhances reconstruction in both the short term (one to six months) and the long term (six months to three years) and paves the way for longer-term community development.

2 | **Show rapid results** to preserve hope, but know that quick results do not have to occur at the expense of high-quality programs. Rapid visible results can motivate a community and encourage additional community involvement.

3 | **Transfer skills and build local capacity** (for individuals, local governments, nongovernmental organizations and small- and micro- enterprise). This can occur effectively within a reconstruction context. Donors and assistance providers should continue to include disaster preparedness training in reconstruction activities.

4 | **Develop long-term sustainability through credit**, where applicable. Aid recipients are capable of wealth creation. Therefore, aid programs should incorporate mechanisms assisting that process and developing long-term sustainability. In future relief situations, USAID could consider subsidy and loan components rather than strict grant programs. A genuine opportunity to make “sustainable” credit programs was missed. $8 million was invested through grant programs. Had these been credit programs, they could have had a wider impact with a more sustainable outcome. Grant programs can also have an undesirable effect of eliminating interest in pre-existing loan programs. Interrelationship between grant and credit mechanisms and their impact on long-term sustainability should be considered.

5 | **Continue mitigation work with long-term effects.** When possible, temporary solutions should be minimized. Include training activities, and allow time to involve local community in decision-making process. Long-term plans should be developed to counter short-sighted relief efforts (handouts) which tend to foster dependency and offer little incentive for the to the community to become stable and economically viable.

6 | **Optimize local economic activity** associated with reconstruction to boost economic recovery. This could be done by incorporating jobs creation into construction programs, as one example.

Key findings by an independent researcher

- **CHF International has a strong track record of capacity building and follows good practices.**
- **The technical knowledge that CHF International passes on engages communities, helps them develop priorities, and—through participation and knowledge transfer to community leaders—rebuids lives and livelihoods.**
RECOMMENDATIONS FOR NATIONAL AND LOCAL GOVERNMENTS

**Actively engage the community.** The success of reconstruction projects directly depends on the level of community participation in identifying and preparing an action plan to address concerns. All stakeholders must be actively involved from the beginning of planning to the end of project implementation.

**Construct local alliances.** Communities need to forge alliances with both private and public entities to raise the funds necessary to continue development efforts. The process of building local alliances for risk mitigation requires time and dedication. It also requires patience and sensitivity on the part of all involved.

**Create national risk management policies.** The absence of national policies for risk management seriously impedes reconstruction efforts. Policies must allow for coherent interventions at the local, community, and institutional levels.

**Recognize the need to taper off programs.** Programs must provide planned support to sustain program results over the long term through national emergency management policies and through national agencies and departmental emergency committees made responsible for preparing and implementing emergency responses.

**Introduce risk management into overall municipal development planning.** It is necessary to promote a change of methodologies and practices for local development efforts. Advocates should introduce risk management into overall development planning for municipalities. At the very least, each municipality should have a risk mitigation plan for the short- and mid-term. When multiple programs and institutions engage in the reconstruction process, we must promote greater integration of goals and objectives in municipal risk mitigation plans. Too often there is a lack of institutional support in the local communities for the application of the prevailing norms and regulations.

**Invest in risk prevention and mitigation.** Continuous investment in risk prevention and mitigation, no matter how large it may seem, always pales in comparison to the costs necessary to rebuild after a disaster strikes. Communities and municipalities must be willing to commit human and financial resources prior to disaster and work towards developing viable mechanisms of institutional support.

**Promote the construction of communities resistant to disasters.** One of the greatest challenges in disaster response is maintaining development momentum into the future. To strategically promote resistance to disasters, communities need to strengthen environmental management within their municipalities by engaging technically-skilled human resources. Forming local alliances and inter-sectoral representation bodies can best serve the coordination and management functions. Community groups must maintain a strong linkage with the environmental units of the mayors’ offices. This can ensure effective follow-up and continued risk mitigation activity within municipalities.

**Develop culture for risk prevention and mitigation at all levels.** A culture for risk prevention and mitigation needs to be developed—beginning with education in the schools, which currently do not cover these areas. Natural and other disasters vividly show the deficiencies of the current lack of such culture. Local leaders and governmental and non-governmental representatives must promote risk prevention and mitigation at all levels and through all available media.