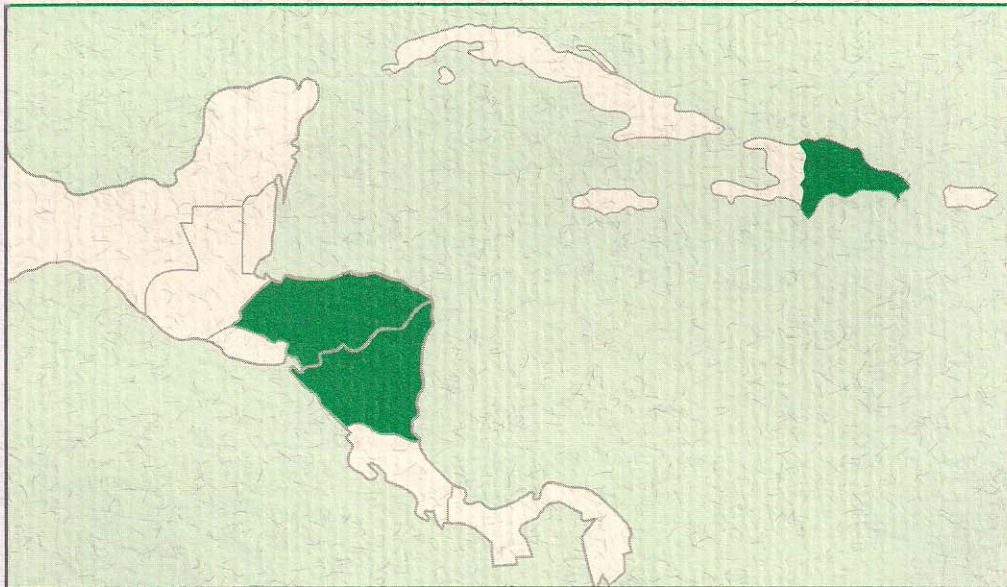


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INSTITUTIONAL RESPONSE,  
AND  
DISASTER POLITICS  
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This report is based on 1999-2000 field visits and interviews in the Dominican Republic, Honduras, and Nicaragua by authors Alvarez, Baird, Gawronski, Olson, and Sarmiento, individually and in varying combinations in the different countries. Ricardo Alvarez took the lead on the Nicaragua chapter, and Amelia Estrada was primarily responsible for the media analysis.

## EDITOR'S NOTE

Ideally, the current report should be read after reading Special Publication 36 in this series, which focused on institutional response problems and political dilemmas in the Andean countries associated with the 1997-1998 El Niño-Southern Oscillation (ENSO) event. That report, *The Marginalization of Disaster Response Institutions: The 1997-1998 El Niño Experience in Peru, Bolivia, and Ecuador*, is available in English from the Natural Hazards Research and Applications Information Center, University of Colorado, 482 UCB, Boulder, CO 80309-0482, and on the World Wide Web at <http://www.colorado.edu/hazards>.

Special Publication 36 is also available in Spanish from the Regional Disaster Information Center (CRID), P.O. Box 3745-1000, San José, Costa Rica, and at <http://www.crid.or.cr>.

## ABSTRACT

The 1998 Atlantic storm season will be remembered principally for two hurricanes: Georges and Mitch. Hurricane Georges was a September storm that was especially damaging to the Dominican Republic and then Haiti before making U.S. landfall in Mississippi. Hurricane Mitch was an October storm that followed an unusual track out of the southwest Caribbean and then over Central America, where it inflicted catastrophic losses, especially in Honduras and Nicaragua. Indeed, Mitch has joined that relatively small number of terrible storms whose names have been retired.

This study examines the impacts, institutional response, and the “disaster politics” (including media attention) associated with Hurricane Georges in the Dominican Republic and Hurricane Mitch in Honduras and Nicaragua. A particular focus is the marginalization or “sidelining” of agencies in the three countries that were supposed to be the official response and coordinating organizations.



# I

## INTRODUCTION

### Disasters in Context

A major assumption underlying this study revolves around what scholars call “event-context interaction,” which is a sophisticated way of saying that disasters never occur in societal vacuums. Much more often than not, and especially in less economically developed countries, disasters occur in—and affect—sensitive and already stressed socioeconomic and political systems. In addition, and as much as professional disaster managers and humanitarian organizations would prefer nonpolitical host country environments in which to work, disasters and disaster response almost always become domestically politicized. For that reason, a disaster, its impacts, and the response must be “contextualized”—examined and understood in the sociopolitical context in which the disaster occurs.

To extend this point, disasters and catastrophes are not only physical or scientific phenomena but also economic, social, political, and psychological events. As such, they are “constructed” (described, interpreted, and given

meaning) in large part by the media. In addition, the media play a vital role in reporting—and sometimes distorting—the nature, level, and importance of both domestic response and international assistance. For better or for worse, the media have a major influence on how societies “remember” their disasters. Thus, analysis of domestic media coverage (attention levels, attention spans, and blame themes) in the affected countries is necessary to more fully explain event-context interactions.

Apart from the scholarly analysis here, it must also be added that a rather hard-edged institutional response proposition (explained below) may lead to difficult questions and uncomfortable conclusions about 1) Latin American and Caribbean host government disaster management capabilities, and 2) consequent international assistance options. In fact, as will be shown below, the experiences with Hurricane Georges in the Dominican Republic and Hurricane Mitch in Honduras and Nicaragua lead to precisely that problem.

### HDI, HPI, and TI's Corruption Index

For reasons that will become obvious later in this study, it is important at this point to locate the three countries in question (Dominican Republic, Honduras, and Nicaragua), not geographically, but rather in terms of their level of development. From the United Nations *Human Development Report 1999*, Table 1 (p. 11) reproduces the Human Development Index (HDI) scores and the global and regional rankings of the Dominican Republic, Honduras, and

Nicaragua. The HDI is important because it seeks to measure not the “wealth” of a country but rather the quality of life (“a decent standard of living”) for average citizens. For that reason, the HDI components are an interesting mix: life expectancy, adult literacy, school enrollment, and real GDP per capita. The Dominican Republic ranks 88th worldwide on the HDI (14th among 19 Latin American countries). Honduras and Nicaragua are far behind, the former rank-

ing 114th worldwide (17th in Latin America), the latter 121st worldwide (dead last in Latin America, 19th).

Table 2 (p. 12) takes an even sharper look at the three countries: their place on the Human Poverty Index (known in the literature as HPI) from the 1998 *Human Development Report*. The HPI comprises the following: percentage of the population not expected to survive to 40 years of age; adult illiteracy; population without access to safe water, health services, and sanitation; percentage of underweight children; various measures of income disparity; and population percentage below the poverty line. Of the 77 developing countries ranked worldwide, the Dominican Republic was 18th, Honduras was 25th, and Nicaragua was 32nd. Separating out just the 15 Latin American countries

covered, the Dominican Republic ranked 8th, Honduras 11th, and Nicaragua 13th. That is, all were below the numerical midpoint, with Honduras and Nicaragua near the bottom.

Finally, Table 3 (p. 13) presents the Transparency International (TI) 1998 Corruption Perceptions Index. The 1998 TI index covered 85 countries, and Table 3 shows the corruption scores for most countries of the Western Hemisphere (including the U.S. and Canada) as well as their global and regional rankings. The Dominican Republic is not covered in the TI rankings, but Honduras and Nicaragua are. Nicaragua tied for 11th of 18 in the region, and Honduras came in next to last at 17th. The corruption issue is especially relevant to later discussions of Hurricane Mitch.

## 1998: A Very Bad Year

As shown in Figure 1 (p. 14), the 1998 Atlantic hurricane season was extraordinarily active, with 14 named tropical storms, 10 of which reached hurricane category. Indeed, at one point in time, the National Hurricane Center in Miami was tracking five named storms simultaneously—the first time that had happened. Nonetheless, two particularly deadly hurricanes made landfall, and 1998 will be remembered for Hurricane Georges (in Septem-

ber) and especially for Hurricane Mitch (in October). Sadly ironic, without Hurricane Mitch, the Atlantic storm year of 1998 would be remembered mostly for Georges (track #7, Figure 1) and its destructive path through the Caribbean and into the United States. Mitch (track #13), however, made Georges pale by comparison, inflicting catastrophic losses on Central America.

## Analytic Purposes

As noted above, one purpose of this study is to summarize and contextualize disaster impacts and then profile and evaluate institutional response and change following the hurricanes of 1998. A second purpose, however, is to test a working proposition initially developed in a study of the 1997-1998 El Niño in the Andean countries of Peru, Bolivia, and Ecuador (see Olson et al., 2000). The proposition is that most Western Hemisphere national governments systematically under-fund, under-staff, and thereby render organizationally, administratively, and politically weak their disaster management agencies to the point that those agencies are incapable of dealing with anything larger than local emergencies or small-scale disasters. Truly overwhelmed when faced with a

larger event (such as a major hurricane), these agencies are replaced, marginalized, or “sidelined” by higher-profile, but temporary, organizations created ad hoc to deal with a particular disaster event. The result is 1) disaster agency loss of morale on one hand, and 2) lack of organizational continuity on the other. This problem is exacerbated by the overwhelming orientation of virtually all disaster agencies toward response and the parallel lack of mitigation mandates and capabilities, despite clear evidence that a majority—perhaps even the vast majority—of disaster losses (human and property) could be avoided by effective mitigation. Hurricanes Georges and Mitch provide exemplary case opportunities to explore this proposition and related issues.

**Table 1**

**Human Development Index (HDI) Rankings,  
Latin American Countries, 1998**

<i>HDI Rank Worldwide</i>	<i>HDI Rank Hemispheric</i>	<i>Country</i>
34	1	Chile
39	2	Argentina
40	3	Uruguay
45	4	Costa Rica
48	5	Venezuela
49	6	Panama
50	7	Mexico
57	8	Colombia
58	9	Cuba
72	10	Ecuador
79	11	Brazil
80	12	Peru
84	13	Paraguay
<b>88</b>	<b>14</b>	<b>Dominican Republic</b>
107	15	El Salvador
112	16	Bolivia
<b>114</b>	<b>17</b>	<b>Honduras</b>
117	18	Guatemala
<b>121</b>	<b>19</b>	<b>Nicaragua</b>

Source: United Nations, 1999

**Table 2**

**Human Poverty Index (HPI) Rankings,  
Latin American Countries, 1997**

<i>HPI Rank Worldwide*</i>	<i>HPI Rank Hemispheric</i>	<i>Country</i>
2	1	Chile
3	2	Uruguay
5	3	Costa Rica
7	4	Mexico
8	5	Colombia
9	6	Panama
15	7	Ecuador
<b>18</b>	<b>8</b>	<b>Dominican Republic</b>
20	9	Paraguay
24	10	Bolivia
<b>25</b>	<b>11</b>	<b>Honduras</b>
27	12	Peru
<b>32</b>	<b>13</b>	<b>Nicaragua</b>
37	14	El Salvador
39	15	Guatemala

\*Developing Countries Only

Source: United Nations, 1998

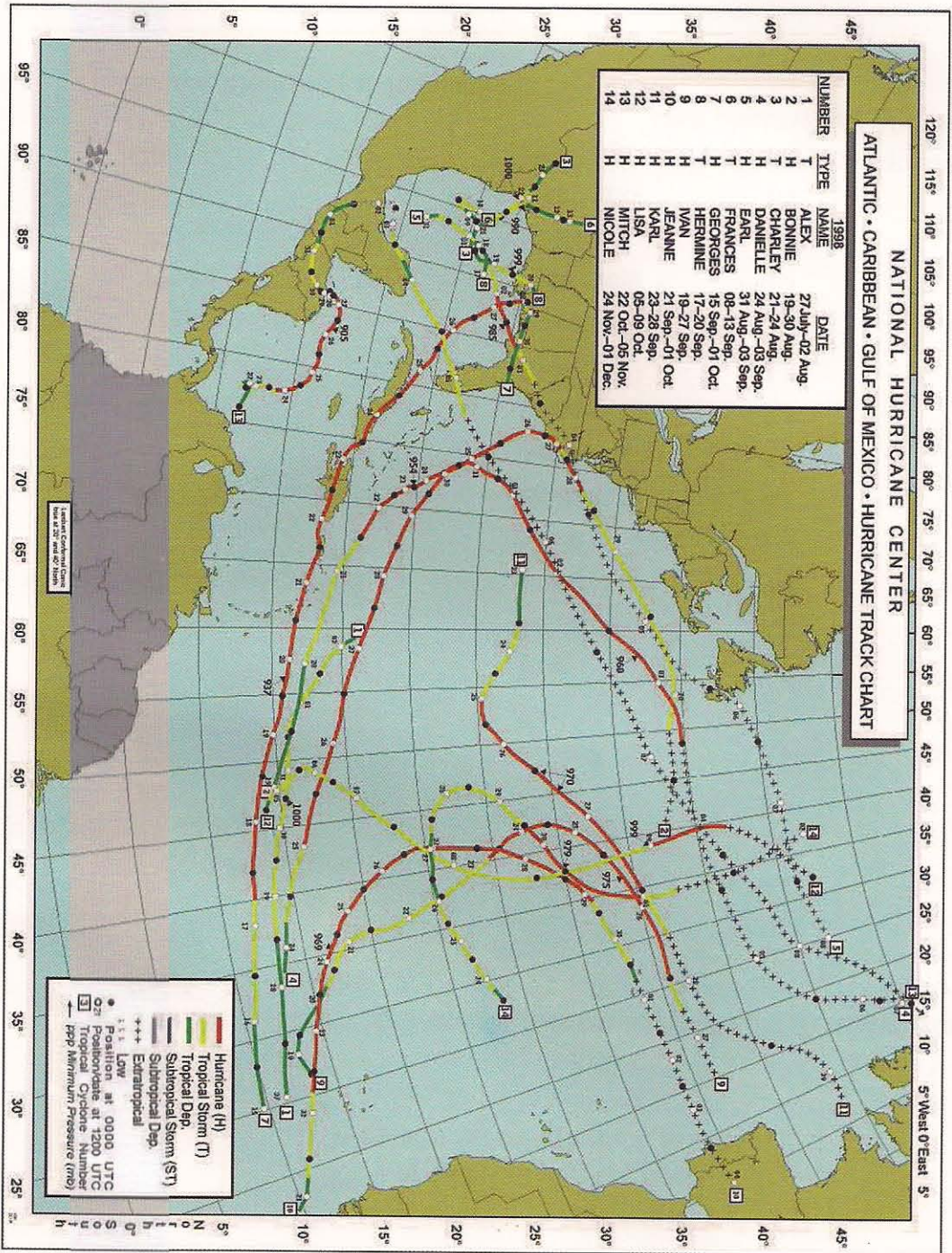
**Table 3**

**The Transparency International (TI)  
1998 Corruption Perceptions Index,  
Western Hemisphere Countries**

<i>World Rank</i>	<i>Hemispheric Rank</i>	<i>Country</i>	<i>1998 CPI Score</i>	<i>Standard Deviation</i>
6	1	Canada	9.2	0.5
17	2	USA	7.5	0.9
20	3	Chile	6.8	0.9
27	4	Costa Rica	5.6	1.6
41	5	Peru	4.5	0.8
46	6	Brazil	4.0	0.4
49	7	Jamaica	3.8	0.4
51	8	El Salvador	3.6	2.3
55	9	Mexico	3.3	0.6
59	10	Guatemala	3.1	2.5
61	11	Argentina	3.0	0.6
<b>61</b>	<b>11</b>	<b>Nicaragua</b>	<b>3.0</b>	<b>2.5</b>
69	13	Bolivia	2.8	1.2
77	14	Ecuador	2.3	1.5
77	14	Venezuela	2.3	0.8
79	16	Colombia	2.2	0.8
<b>83</b>	<b>17</b>	<b>Honduras</b>	<b>1.7</b>	<b>0.5</b>
84	18	Paraguay	1.5	0.5

Source: Transparency International (TI), 1998

Figure 1  
National Hurricane Center 1998 Hurricane Tracking Chart



## II

# HURRICANE GEORGES AND THE DOMINICAN REPUBLIC

### Impacts

What would become Hurricane Georges was born off the coast of Africa in mid-September 1998 and followed a typical path across the Atlantic and then through the Caribbean (see Figure 1 on the previous page). It first hit the eastern Caribbean islands of St. Kitts, Nevis, Antigua, and Barbuda on September 20 and 21. According to the final USAID/OFDA (U.S. Agency for International Development, Office of U.S. Foreign Disaster Assistance) Fact Sheet #9 on Hurricane Georges, the storm caused five deaths on St. Kitts and Nevis and three deaths and two serious injuries on Antigua and Barbuda. The most affected of the early islands was St. Kitts, where total dollar damage was estimated at \$445 million, with major infrastructure losses, half the sugar crop gone, 25% of the housing stock destroyed, and 60% of the housing stock missing roofs.

Hurricane Georges then struck Puerto Rico and, on September 22, the island of Hispaniola, which is divided roughly in half into the Dominican Republic in the east and Haiti in the west. Georges then made the usual turn north, raked Cuba, and crossed the Florida Keys, ultimately striking the U.S. mainland near Pascagoula, Mississippi.

On the island of Hispaniola, Haiti suffered 147 killed, 40 missing, and 34 serious injuries, with 4,500 homeless (combining reports from OFDA and the International Federation of Red Cross and Red Crescent Societies). The focus of this chapter, however, is the impacts on the Dominican Republic.

Sometimes not fully appreciated in the U.S., one of the problems for Caribbean and Central American nations is that they are often physically smaller than the hurricanes that hit them. From a satellite perspective, these “city-states” can virtually disappear under a hurricane for a day or more. (See Photos 1 and 2 on pages 17 and 18—two September 22 satellite photos, six hours apart, of Hurricane Georges. Without the islands drawn in, neither Puerto Rico nor the Dominican Republic would be visible in the first; Haiti “disappears” in the second.)

As a result of this size mismatch, disaster response in the Caribbean and Central America is often slow, and damage assessments can be delayed 36 hours or more. For example, the OFDA Fact Sheet #1 of September 24 was actually quite brief regarding both the Dominican Republic and Haiti:

*Dominican Republic.* President Leonel Fernandez reports that 70 individuals have died as a direct result of Hurricane Georges and another 100,000 people are homeless. A full assessment has not yet taken place to ascertain the extent of damage and immediate needs in the Dominican Republic; however preliminary reports indicate that heavy wind damage and flooding have occurred in Santo Domingo. The airport is not fully functional, electricity is not available, and telephone services are limited. A curfew is being enforced by soldiers in Santo Domingo, following reports of looting and street violence.

*Haiti:* A damage and needs assessment also has not yet taken place in Haiti. The northern coastal areas that extend from Cap-Haïtien to Gonaïves are most damaged—mainly as a result of flooding. Some damage to roofs has been reported. The Haitian Civil Protection Directorate reports 27 deaths, 29 serious injuries, and 9 missing persons.

It should be noted, however, that U.S. Chargé d'Affaires Linda Watt in the Dominican Republic anticipated the developing damage pattern and declared a disaster on September 23 (as did U.S. Chargé d'Affaires Margaret Jones in Haiti). Such a declaration is formally required for the United States government to begin responding to an overseas disaster.

Indeed, OFDA Fact Sheet #3, on September 26, reflected a worsening picture. It reported that the Dominican Department of Defense Damage and Needs Assessment Commission was listing 201 killed, 551 injured, and 90 missing. OFDA also said that "the final death toll is almost certain to exceed 500." The casualty figures remained essentially unchanged until Fact Sheet #6 on September 30, when OFDA began to note, and report on, data problems:

Reports of hurricane-related damages continue to vary. Figures from the State Secretary's Public Health and Welfare Office indicate 208 deaths and 134,836 displaced persons . . . whereas the Pan American Health Organization (PAHO) reports 865,510 displaced and 400,000 homeless.

The final OFDA Fact Sheet for Georges (#9) repeated that the casualty figures continued to "vary." It then added, however, that "the American Red Cross reports 2,000 missing persons and 300 deaths," but the detail was even more interesting:

The death toll is almost certain to rise [to or past the previously mentioned 500] because many unregistered migrant workers [a code term for Haitians] are missing after being swept away by flood waters and mudslides. The areas hardest hit by the hurricane include La Romana, San Juan de la Maguana, and San Cristobal. While the greatest wind damage to housing is in the coastal areas of Santo Domingo and to the east, most flood damage to homes is in the south and west. Critical shortages of food, water, and shelter have resulted in poor urban neighborhoods

and rural areas throughout the country. . . . Infrastructure damage includes schools, hospitals, health clinics, homes, the main airport, and municipal water systems. In addition, approximately 100% of the road network and 60% of the bridges are damaged. . . . Total damage to the power system is \$1.2 billion. . . . The Dominican Secretary of Agriculture conservatively estimates \$260 million worth of damage or 90% destruction to the agricultural sector.

As one might suspect from the above reports, the figures concerning losses from Hurricane Georges in the Dominican Republic, especially the human losses, became a political football. The Fernandez government (from the PLD party, *Partido de la Liberación Dominicana*) consistently reported relatively low human loss figures (the 200-plus killed), while the congress, which was controlled by the opposition PRD party (*Partido de la Revolución Dominicana*), publicly discussed more than a thousand killed. It is, of course, not surprising that the incumbent administration and the political opposition would disagree over casualty estimates. In this case, the opposition wanted a high death count to make the government look inept or uncaring, while the Fernandez administration was trying to "construct" a lesser disaster.

The leading nongovernmental organizations (NGOs) were rather in the middle regarding the casualty figure (500 or so killed). On the street, however, death toll talk reached 2,000. Interestingly, this pattern is very reminiscent of the 1985 Mexico City earthquakes, in the aftermath of which, for political reasons, the PRI government held the human loss figure consistently below 10,000 while playing up the dollar damage figures.

The bottom line is that no one will ever know how many people died in the Dominican Republic as a result of Hurricane Georges. Setting aside the casualty figures, however, it is interesting to take a broader look at the storm's impacts on the country. In a late November 1998 internal report, a donor agency summarized them very succinctly:

Hurricane Georges passed over the Dominican Republic on September 22, 1998, as a category III hurricane with winds reaching 130 miles per hour. The eye of the hurricane entered the southeast portion of the country



# Photo 1 Hurricane Georges on 9/22/98 at 15:15 UTC

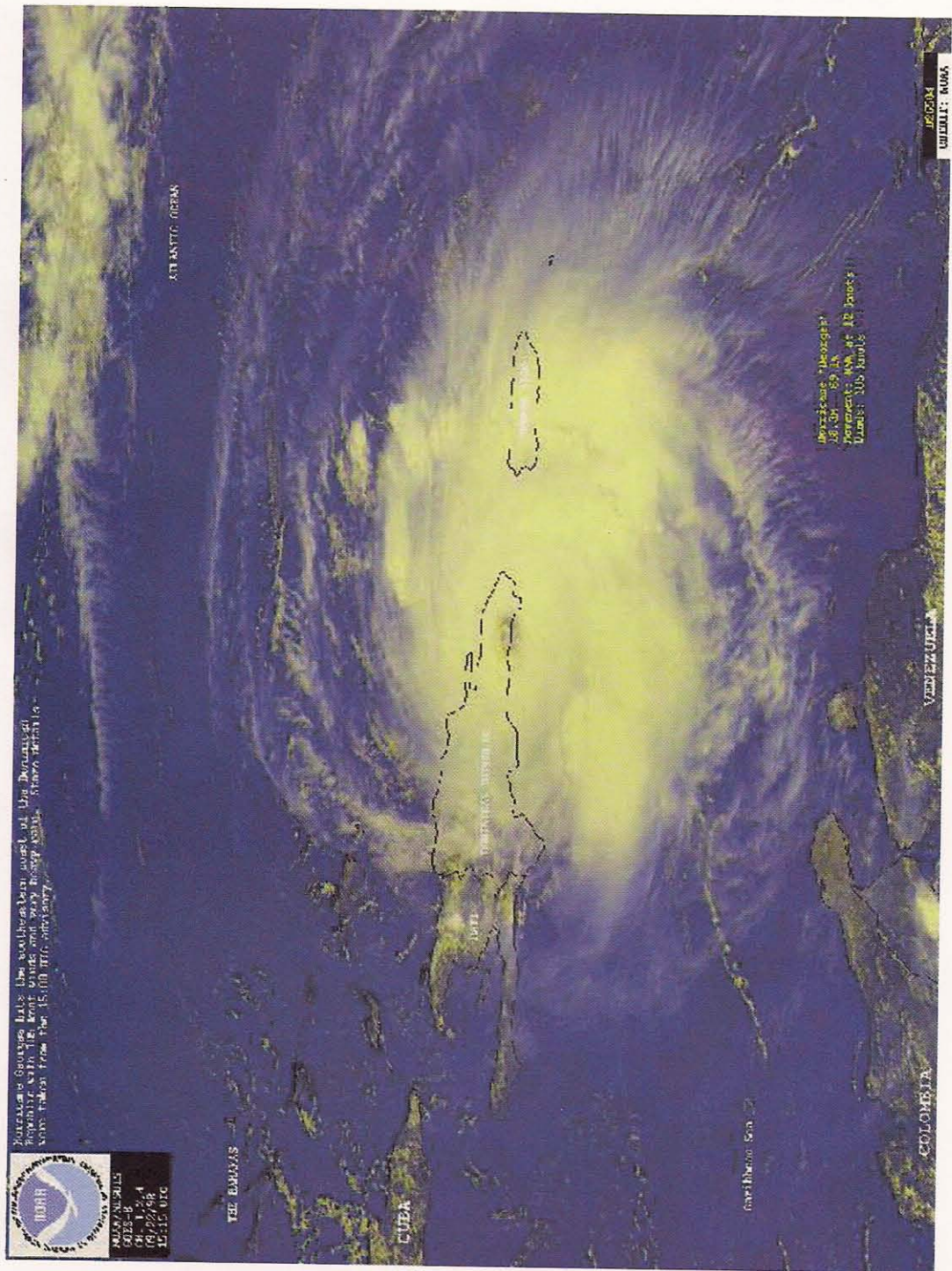
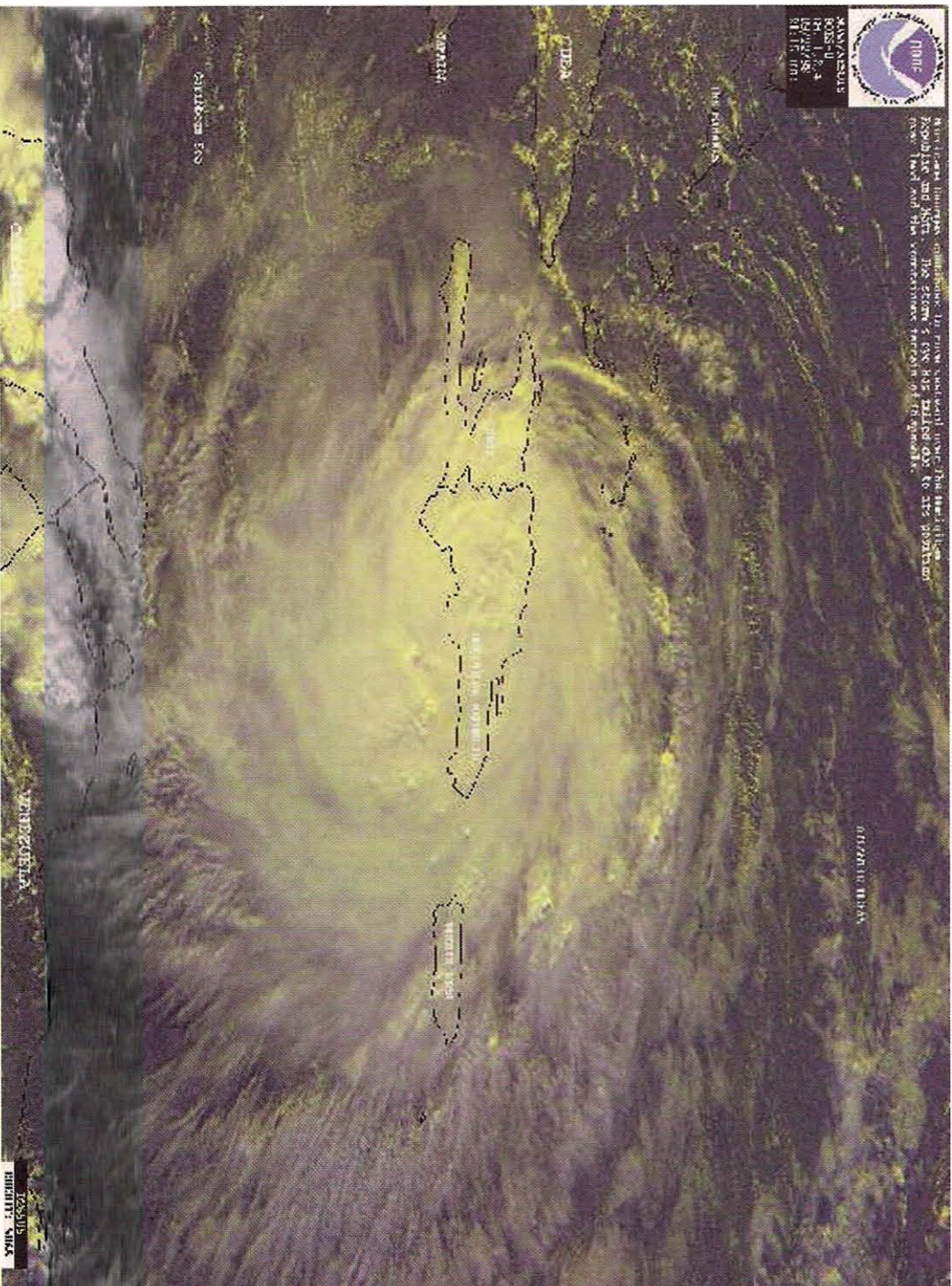


Photo 2  
Hurricane Georges on 9/22/98 at 21:15 UTC



in the morning, traversed the country at approximately 6 mph on a northwest path and arrived at the border with Haiti in the evening, downgraded to category I. The destructive winds destroyed housing, agricultural and industrial infrastructure, uprooted trees and destroyed crops, mainly in the eastern part of the country. The heavy rain was centered in the south/southwest areas of the country and led to floods and rivers overflowing with water and mud, which destroyed bridges, homes, and household and farming equipment; damaged roads, schools, health clinics and water supply systems; and washed away crops, including sugar, bananas, yucca, coffee and vegetables. Because of its diameter, the hurricane affected at least 70% of the country, equivalent to 34,000 square kilometers. . . . The death toll now stands at 235.

While prior to the hurricane the Dominican Republic had been enjoying a high rate of GDP growth, agriculture in the country sustained severe immediate losses from Hurricane Georges. The *Economist Intelligence Unit* [EIU] *Country Report for the Dominican Republic* (Second Quarter, 1999, p. 15) estimated total disaster losses at \$2 billion and noted:

The agricultural sector was clearly hard hit. Whereas crop production had experienced year on year growth of 5.4% in the first nine months of 1998, production declined by 1.4% over the year as a whole. The hurricane forced the government to resort to massive imports of basic foodstuffs such as rice, in order to prevent major price increases. Nonetheless, the effects of supply shortages were still visible in some domestic foodstuffs, such as plantains. The livestock sector, likewise, finished the year with unimpressive growth of 1.5% after a buoyant performance in the first nine months. Chicken production was severely affected by the hurricane, while pork production was hit by an outbreak of swine fever.

Another post-impact problem was inflation:

Before Hurricane Georges at the end of September, inflation had reached its lowest level for some years. Accumulated inflation in the first nine months of the year was just 2.25%, with year-on-year inflation in September of 2.91%. Most categories of goods in the basic consumption basket experienced

even lower price pressures, with prices of clothing and foodstuffs rising by an accumulated 1.26% and 1.64% respectively in the January-September period. An average increase of 3.34% in the price of housing, however, was the main factor dragging the price index upwards. . . . Inflation rose significantly in the wake of the hurricane, however, with monthly rates of 2.2% in October and 1.8% in November bringing the year-on-year rate in the latter month to 6.6%. [EIU (Dominican Republic), First Quarter, 1999, pp. 18-19]

Disasters are never lose-lose situations; in fact, some individuals and economic sectors benefit tremendously. Typical was a post-Hurricane Georges construction boom in the Dominican Republic:

Although growth in the construction sector in the first nine months of 1998 was buoyant at 7.5%, it was below the 19% experienced in the same period of 1997. The slowdown was to be short-lived, however. In the final quarter of 1998, construction output grew by 49.2% year on year, on the back of the massive reconstruction effort in the wake of Hurricane Georges. [EIU (Dominican Republic), Second Quarter, 1999, p. 16]

Overall, however, Hurricane Georges affected the nation's balance of payments in a very direct and negative way (although it was far from being the sole culprit in the balance problem):

The Dominican Republic's current-account deficit widened sharply in 1998, from a revised total of \$163m (1.1% of GDP) in 1997 to \$387m (2.5% of GDP). Most of the deterioration was accounted for by the widening trade deficit, which rose from \$2bn to \$2.6bn in 1998 as imports continued to grow rapidly and domestic exports contracted sharply. The poor outturn for the non-free-zone trade balance can be attributed largely to the impact of Hurricane Georges: import growth rose from 13.5% in the first nine months of the year to 16.8% for the year as a whole, while the decline in domestic export earnings went from -7.7% to -12.7%. [EIU (Dominican Republic), Second Quarter, 1999, p. 17]

Importantly, however, the same EIU report (p. 3) expected the Dominican Republic—“buoyed by post-hurricane reconstruc-

tion”—to maintain consistent positive GDP growth rates. The EIU forecast the economy to show 6.4% growth in 1999 before falling to a still quite respectable 5.3% in 2000.

Economic impacts aside, a recurrent problem is the widely varying political contexts within which disasters occur. The 1998 political situation in the Dominican Republic was tense and conflictive, and that context continued right into 1999. Despite the disaster, substantive collaboration between the major political parties was elusive at best. As the EIU noted:

The PRD-dominated Senate withheld ratification of emergency loans worth a total of \$215m from the World Bank and the Inter-American Development Bank, destined for post-hurricane repairs and balance-of-payments support. Although the upper house softened its position under severe pressure from public opinion, and approved a number of laws governing the economy, by mid-March the crucial loan legislation had still not been debated. [EIU (Dominican Republic), Second Quarter, 1999, pp. 10-11]

Politics in the Dominican Republic is far from simple, and understanding the political terrain helps to further contextualize the problems with the government of the Dominican Republic's institutional response to the disaster.

## Domestic Media Treatment

Covering a 13-week period (September 22-December 22, 1998) and 10 major Dominican newspapers that chronicled Hurricane Georges in the Dominican Republic, Table 4 (p. 21) reports the total number of Hurricane Georges stories published per week.

Beginning with the pre-impact week and following the evolution of the post-impact efforts, a rather astonishing 5,497 stories were published detailing Georges's track toward and then its impact on the Dominican Republic. Figure 2 (p. 22) graphs the same coverage data. Interestingly, it is an almost perfect hyperbolic curve from high/intense attention to virtual issue disappearance.

More specifically, during the first four weeks of the disaster, 4,567 stories were published, in sharp contrast to 898 published in the subsequent nine weeks. Week four to week five

To start, democracy is not fundamentally rooted in the Dominican Republic, and, as noted above, the Fernandez government faced a vocal opposition majority in the congress. The EIU described the post-Georges situation this way:

The coming year will be an important one for Dominican democracy, which has been in a state of halting transition for the past 35 years. Tension between the ruling Partido de la Liberación Dominicana (PLD) and the majority party in Congress, the Partido Revolucionario Dominicano (PRD), has heightened considerably in recent months. . . . But the persistence of such disputes—stemming from the struggle for political power rather than from any ideological differences—flies in the face of the country's many pressing needs, both in terms of reconstruction in the wake of September's Hurricane Georges and in terms of economic and political modernisation. The population seems increasingly disillusioned with the country's political leaders. [EIU (Dominican Republic), First Quarter, 1999, p. 7]

Because public opinion and media coverage go hand in hand, even in a fledgling democracy, below we take a look at how the Dominican newspapers covered Hurricane Georges.

appears to be a break point, Georges-related stories dropping more than half, from 633 to 302.

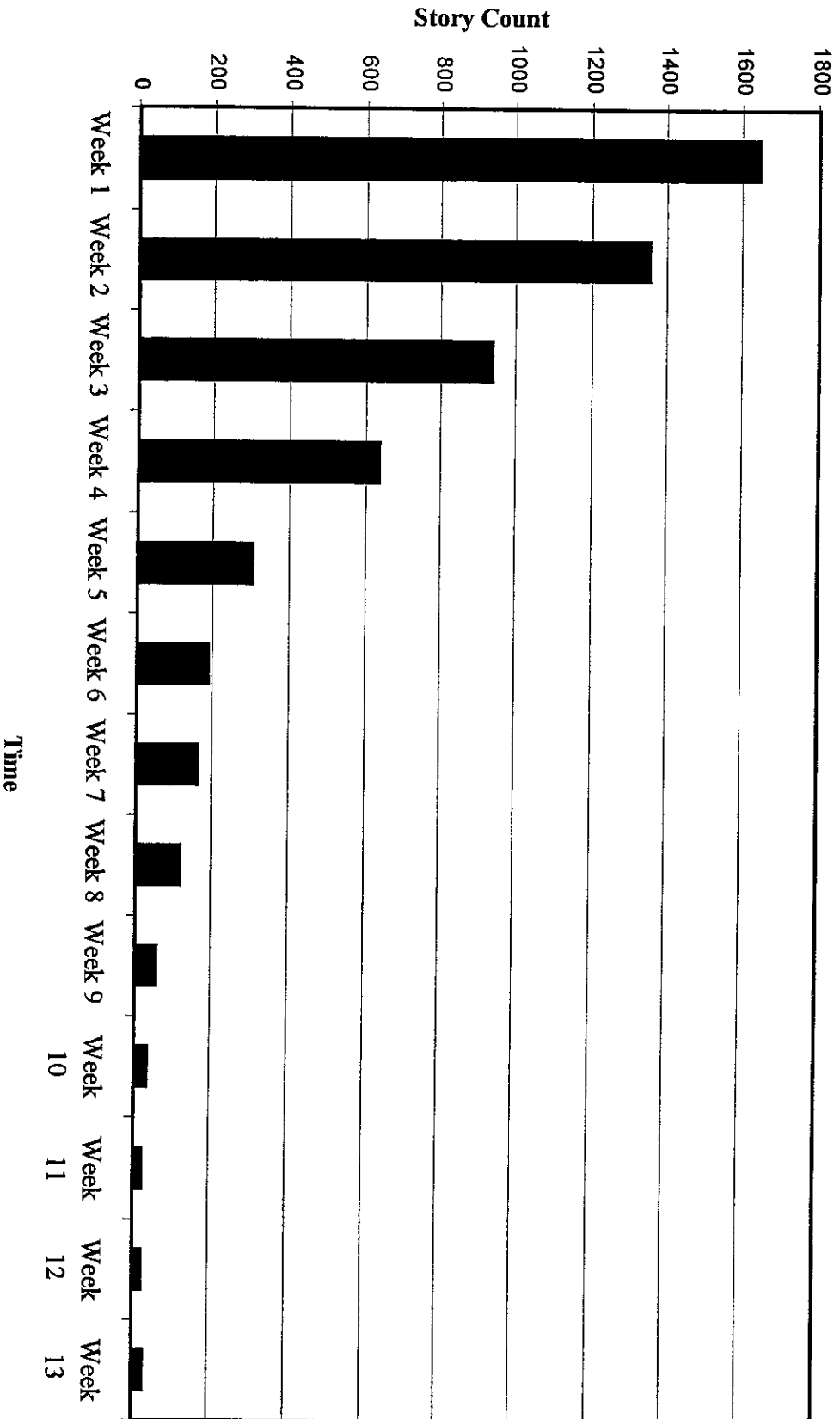
To the extent that media play an important role in the creation of the collective memory of a disaster, the break point is interesting. Unlike media treatment of the 1997-1998 El Niño (more properly, ENSO [El Niño-Southern Oscillation]) in the Andean countries, coverage that went up and down with specific impacts and lasted months, the attention span of domestic media to the quick-onset disaster of Hurricane Georges was really only a few weeks, a month at most. This relatively brief but intense span of attention perhaps explains why disasters become so political so quickly: the window for both official and competing explanations of what happened and why is not open very long.

**Table 4**  
**Hurricane Georges Coverage:**  
**Ten Dominican Newspapers**

*Number of Stories Published*

Week 1 (September 22-28)	1643
Week 2 (September 29-October 5)	1353
Week 3 (October 6-12)	938
Week 4 (October 13-19)	633
Week 5 (October 20-26)	302
Week 6 (October 27-November 2)	188
Week 7 (November 3-9)	163
Week 8 (November 10-16)	115
Week 9 (November 17-23)	56
Week 10 (November 24-30)	34
Week 11 (December 1-7)	22
Week 12 (December 8-14)	22
Week 13 (December 15-22)	28

**Figure 2**  
**Hurricane Georges Coverage:**  
**Ten Dominican Newspapers**



To better understand the role of the media, we also examined the way in which international disaster assistance was reported and specifically how much attention was given to various donors. Tables 5 and 6 (pp. 24, 25) are “story counts” of how assistance by source (donor) was reported. Table 5 contains the story counts for assistance identified by country of origin. The most noted donor was the United States, which was featured in 116 stories, followed by Spain in 47 stories, and France in 44. Among the 116 stories that mentioned the United States, interestingly, OFDA was specifically mentioned in 12 stories, USAID was noted in 29, and the Peace Corps was mentioned in 25. The remainder simply cited the

United States or the Clinton administration as the donor.

Table 6 contains the story counts for assistance from nongovernmental organizations (NGOs), international intergovernmental organizations (IGOs), and multinational corporations (MNCs). Most often mentioned were Dominicans in New York (in 28 stories), followed by Dominicans in Miami (in 10 stories). Interestingly, the Inter-American Development Bank (IADB) was also mentioned in 10 stories.

Finally, we also assessed, if only generally, how the domestic Dominican media attempted to apportion blame for the disaster. To appreciate those findings, however, one must first analyze the government’s disaster response, which left a great, great deal to be desired.

## Responding to Georges: A Tragedy of Errors

Keeping in mind the context outlined above, let us return to our focal questions: How well did the government of the Dominican Republic respond to the threat and then the actuality of Hurricane Georges? What was learned and/or changed as a result of the experience? How well does the disaster agency marginalization or “sidelining” proposition hold in this case?

To begin, we have, in typically understated bureaucratic language, a November 1998 international donor agency report. It notes that the government of the Dominican Republic “acknowledged . . . serious shortcomings in its emergency management” and would be seeking external assistance for a reconfiguration. Given what happened, this should not come as a surprise. Hurricane Georges exposed major intra-organizational and interorganizational shortcomings.

The line between denial/wishful thinking on one hand and poor judgment on the other is often blurry in a disaster situation, and the government’s problems with the threat of Hurricane Georges were no exception. The first set of problems was “intra-scientific.” Several interviews and a review of Dominican newspapers in the week prior to impact reveal major differences between the assessments and forecasts of the U.S. National Hurricane Center (NHC) in Miami and the government of the

Dominican Republic’s National Meteorological Office (*Oficina Nacional de Meteorología*, ONM). The same review also shows major inconsistencies in the way that the ONM was assessing the threat posed by Hurricane Georges.

While as a standard practice the NHC in Miami shows what they consider the most likely future track for a particular hurricane, they are careful to include a “fan” of possibilities that widens with time (up to 72 hours). They also emphasize that it is dangerous to focus attention on the storm’s eye, often reiterating that more important is the totality of the storm (wind, storm surge, rain, flooding). Indeed, as would be the case with Mitch in Nicaragua, a hurricane can kill thousands without the eye even touching national territory.

At any rate, the initial problem was that the Dominican media were reporting, as late as September 20, contradictory statements from the ONM, sometimes in the same article (“prepare” versus “it will just be some rain and thunder”). The media were also picking up contradictions between the ONM (“Georges will probably turn north and won’t affect the country”) and the NHC in Miami (which was repeating that the Dominican Republic was well within the 72 hour fan of track possibilities). The Weather Channel in the U.S. was taking the same position as the NHC.

**Table 5**  
**Hurricane Georges:**  
**Dominican Media Recognition of Assistance, by Donor Nation**

<i>Country</i>	<i>Number of Stories</i>
USA	116
Spain	47
France	44
European Union	18
Cuba	15
Puerto Rico	11
Japan	10
Chile	9
Venezuela	7
Costa Rica	6
Mexico	6
China	5
Israel	5
Argentina	4
Italy	4
Martinique	4
Panama	4
Canada	3
Aruba	2
Colombia	2
El Salvador	2
Germany	2
Denmark	1
England	1
Taiwan	1



**Table 6**  
**Hurricane Georges:**  
**Dominican Media Recognition of Assistance,**  
**by NGOs, IGOs, and MNCs**

<i>NGO/IGO/MNC</i>	<i>Number of Stories</i>
Dominicans in New York	28
Dominicans in Miami	10
Inter-American Development Bank	10
United Nations	6
American Express	5
AT&T	5
Catholic Church	5
ENRON	5
Pan American Health Organization	3
Orden de Malta	3
Red Cross	3
DHL	2
World Food Program	2

The following NGOs, IGOs, and MNCs were mentioned in one story: American Airlines, Iberia, IICA, Menonites, Sprint, World Vision.

To make a long story short, the ONM maintained its optimistic forecast until the trees literally began going down on the eastern tip of the island. Interestingly, it was revealed in a September 22 Dominican newspaper that the ONM was completely without an operating Doppler radar. (It had one, a gift from Germany, but it had been shut down for three years for lack of both technical personnel and an adequate maintenance budget.) That is, the ONM was relying on the same images and data as the NHC and the Weather Channel but was coming to different conclusions. It turned out that the chief of the ONM, Felix Abel Abreu, was rejecting forecasts from his own people that agreed with the NHC. He was quoted in defense as saying that he “didn’t want to alarm the people” (Abreu was later dismissed from his position).

Unfortunately, this desire to avoid a possible “cry wolf” problem also directly affected, and reinforced a bias within, the Dominican government’s Civil Defense (CD) system. That story is also very interesting and exemplifies both interorganizational and intra-organizational problems in responding to Georges.

Although the NHC was issuing strike probabilities for the Dominican Republic for days prior to impact and at least some people in the ONM agreed that the threat from Hurricane Georges was real, Dominican Civil Defense was slow to heed the warnings. Indeed, two days before Georges struck, the Dominican media reported that Civil Defense was saying that the Dominican Republic was in no danger. That the newly appointed head of Civil Defense, Elpidio Báez (a former communications professor and journalist) had no formal training in meteorology or disaster management only contributed to the problem. (It was reported that Báez himself was surprised when he was designated as the head of Civil Defense.)

Until very near impact, Báez publicly insisted that Georges would turn northward, as the majority of hurricanes had done in the past—despite information made available by the NHC, CNN, and the Internet. Even as the hurricane was making landfall, Civil Defense was still claiming that that they could not be sure of the hurricane’s trajectory.

Accused of hiding the true gravity of the situation, Báez did a poor job of defending himself and demonstrated how little he knew of disaster management, meteorology, and hurricane strike probabilities. He was quoted in every major newspaper as saying, “*El Meteorólogo dio su opinión, opinó y teorizó, yo no me meto en eso, yo me metí en mi prevención*” (“The Meteorological Service gave their opinions and theorized; I didn’t involve myself in that; I immersed myself in prevention”).

Apparently Báez did not understand the difference between opinion and scientifically determined probabilities, as well as the importance of advance warning. Fearful of “panic,” Civil Defense issued no official warning until the storm was literally on top of the country.

Civil Defense also seemed to confuse the eye of the storm with the potential impact area. Baez himself stated on television that “we have to wait and see what path it takes” even as the outer bands of Georges were beginning to impact the country. “They were looking at the eye’s wobble and not the entire storm,” one NHC official in Miami said, adding that he had told officials in the Dominican Republic, “Forget the eye. A storm the size of Texas is headed your way.” As the EIU summed it up later:

The government has been heavily criticised for its handling of the hurricane, which hit the island on September 22<sup>nd</sup>, killing at least 280 people and leaving a further 300,000 homeless. The authorities contradicted the forecasts of the National Hurricane Center in Miami, which warned of a direct hit on the island and failed to inform the poor of arrangements for shelter. [EIU (Dominican Republic), Fourth Quarter, 1998, p. 29]

Especially troubling was the Civil Defense delay in divulging information about the location of evacuation sites. The list of approved evacuation sites was kept confidential until, in some areas, less than 24 hours before impact. Apparently, the government was fearful that “professional victims” (*refugiados profesionales*) would take advantage of the shelters and set up permanent occupancy (this concern had some basis in fact, given the response to Hurricane David in 1979). In order not to give away the location of the shelters until it was absolutely necessary, the shelters were also not

stocked adequately with food, water, and medical supplies ("people would follow the trucks and find the shelters"). When Hurricane Georges eventually struck the island, people became desperate when they could not locate the shelters or found them ill-equipped at best.

In the end, the Dominican Republic was ill prepared to deal with the disaster not only because vital information was not disseminated soon enough to the population, but also because Dominican Civil Defense had never been allocated sufficient funding. In fact, at one point and under media and political attack, Báez stated that the organization had only its "hands" to work with, lacking even the most basic resources to deal with a major hurricane.

To be fair, in early September 1998, soon after being appointed, Báez had proposed the creation of a more professional and better funded civil defense structure, including a *Comisión de Prevención y Mitigación de Desastres* (Disaster Prevention and Mitigation Commission) and a much better equipped emergency operations center. Nothing had been done, of course; it was a proposal by an official *very* far down in the political hierarchy.

With Civil Defense failing and being faulted everywhere, responsibility quickly gravi-

tated to the Armed Forces, which set up its own operations center in the capital to deal with Georges and became the *de facto* leader of the governmental response.

In conclusion, it is safe to say that Dominican Civil Defense was underfunded, understaffed, and organizationally, administratively, and politically weak prior to Hurricane Georges—and thereby unable to effectively coordinate response to the hurricane. Civil Defense and its chief, Elpidio Báez, bore the brunt of criticism, especially from the media and the opposition, and became the scapegoat for the poor disaster response. Indeed, for several days after impact, Báez was reported to be staying in a series of hotels because he was afraid to go to his house. (He was also later dismissed from his position.)

Interestingly, President Fernandez did his best to distance himself from Civil Defense, instead focusing his attention on international aid and reconstruction issues. While not within the scope of this study, Fernandez presents an interesting contrast to other, more "activist" presidents of disaster-stricken countries (Fujimori in Peru would be a near polar opposite given his handling of the 1997-1998 El Niño).

## Blame Themes

It is clear that opportunities for political or social credit in the Georges disaster were nonexistent in the Dominican Republic, which is hardly surprising because nearly everything went wrong. Post-disaster blame, however, is always abundant, and reviewing the major Dominican newspapers, we isolated a set of five themes that appeared repeatedly in the three months following Georges's impact.

The first blame theme revolved around the forecasting problems noted above. The local media were scathing in their attacks on the national weather service, the *Oficina Nacional de Meteorología*, accusing them of ignoring the National Hurricane Center in Miami as well as the Weather Channel "track forecasts" that showed Georges bearing down on the country. (As suggested above, this criticism was partly because of serious disagreements within the ONM.)

According to some press accounts, ONM "incompetence" cost lives.

The second blame theme encompassed the warning and evacuation problems. The media devoted considerable attention to the failure of the government, especially Civil Defense, to issue timely warnings. The problem of unclear or inconsistent mandates and responsibilities surfaced, and the heads of both the ONM and Civil Defense were faced with explaining why it took so long for an official warning to be issued and why so little information was disseminated regarding the location of evacuation sites.

The third blame theme focused on dams and flooding, especially in the high casualty areas around San Juan de la Maguana and Mesopotamia, which are below a dam. Dam officials had to explain why there was so much death and destruction, even after they sup-

posedly undertook normal precautionary measures. Stories in the press attacked dam officials and the government for negligence, incompetence, and even manslaughter.

Fourth, the seemingly inevitable theme of corruption surfaced. Numerous stories appeared questioning the apparent discrepancy between what was arriving from international sources and what was being distributed and where. However, it should be noted that the international donor community was not being questioned or blamed. Rather, the questions concerned what happened to assistance once it arrived in-country and was in Dominican hands.

Finally, the media also questioned the actual response capability of the government, appropriate roles of the president and the military, and the general lack of "leadership" (*liderazgo*) in dealing with Georges. Indeed, the best way to close the chapter on Hurricane Georges and the Dominican Republic is with a summary of a September 26, 1998, article from the country's leading daily newspaper, the *Listin Diario*. The piece captured a number of the problems. Entitled (our translation) "Poor Government, a Hurricane's Best Ally," the

article opened with a blast at both government and individual (but unnamed) authorities:

The lack of institutionalization in the Dominican state and the irresponsibility of some of its officials were the best allies of Hurricane "Georges," which has caused at least 125 deaths although hundreds of people are still missing.

The article continued by detailing the ONM's ignoring of the strike probabilities and the head-in-the-sand attitude of Civil Defense. It then turned to the issue of the government's keeping the list of evacuation centers "*confidencial*." The article also excoriated the military, noting that "evacuation orders for the most at risk zones coincided with the military going into their barracks [*acuartelamiento*]" and taking their trucks with them. Before closing with a general attack on "the absolute lack of official information" about the storm and its impacts, the article even managed to work in the problem of officials giving inadequate warning to San Juan de la Maguana. In the end, no part of the government escaped this article, but one could hardly call the story unfair.

### III

## HURRICANE MITCH AND HONDURAS

### An Erratic Path

Unlike Georges, Hurricane Mitch spawned in the waters of the southwestern Caribbean (see Figure 1, p. 14). On October 24, 1998, Mitch was upgraded from a tropical storm to a hurricane. At its height, on October 26 and 27, it had sustained winds of 180 mph and achieved category V status (the most severe level) on the Saffir-Simpson scale.

Mitch tracked generally northwest and was originally primarily seen as a threat to Belize, the government of which ordered evacuation of historically vulnerable Belize City. Mitch's route, however, was erratic, and on October 26, the storm made a hard turn to the west and began impacting the north coast of Honduras. It was at this point that, according to OFDA's Fact Sheet #20 (November 25, 1998), Hurricane Mitch became "one of the strongest and most damaging storms to ever hit the Caribbean and Central America." With excruciating slowness, Mitch's center passed over Honduras and then Guatemala, with rain affecting not only these two countries but also El Salvador and especially Nicaragua.

Briefly regaining tropical storm strength in the early days of November 1998, Mitch moved over the Yucatan Peninsula, through the Gulf of Mexico, and across southern Florida. It died in the Atlantic toward the end of the first week of November—at the very

time when its devastating impact on Central America was becoming fully appreciated.

Hurricane Mitch's impacts were related in very interesting ways to the most recent El Niño–Southern Oscillation (ENSO) event. The 1997–1998 ENSO brought major drought to Central America, including wildfires over 5% of the land (*Proyecto Estado de la Nación*, 1999, p. 271). Together with serious ongoing deforestation and unwise agricultural practices, the ENSO effects made the land even more vulnerable to hurricane-induced rains and flooding than would have been the case otherwise. This was a classic example of interaction between a prior slow-onset disaster (the 1997–1998 ENSO) and a rapid-onset event (Hurricane Mitch). One report (about Nicaragua, but it easily generalizes to much of Central America) captured at a local level the various interactions:

The people of Posoltega took the ax to the remaining forests for firewood—they could not afford gas or kerosene stoves—leaving the mountain slope like a sled. . . . Primitive slash-and-burn techniques and uncontrollable fires in the summer of 1997 [also] took a huge toll on the forests. . . . Deprived of thick vegetation, mountain slopes no longer hold back water. . . . When there is flooding, rivers overflow and create new tributaries overnight, sweeping away everything in their wake. [Bendaña, 1999, p. 17]

## A Cruel, Nasty Storm

On October 26, Mitch still appeared to be a "normal" hurricane, and the tone of a cable ("Disaster Alert") from the U.S. Embassy in Tegucigalpa to Washington was actually somewhat optimistic:

1. Honduras is bracing for a possible disaster within the next 24 hours as the effects of Hurricane Mitch reach the populated centers of the north coast.
2. No reports of damages have been received yet. Heavy rains are being reported in the department of Gracias a Dios located in the northeastern part of Honduras. Rains have also begun along the rest of the north coast of the country. Large swells are already developing along the coast and in the Bay Islands. Airports in the Islands and along the north coast have been closed to regular flights.
3. The Honduran permanent commission for contingencies (COPECO) is on top of the situation and has mobilized all the regional emergency committees located in Northern Honduras and the Bay Islands and they are executing their emergency plans. Hondurans living in Northern Honduras and in the Bay Islands have been advised to seek higher ground and to stock up with water and provisions.
4. President Carlos Flores met with his Cabinet Ministers at noon today to assess the situation and organize a response.

The initial scenario was that the islands and north coast of Honduras would bear the brunt of the storm and that the rest of Honduras, especially the capital, would receive rain but not be devastated. With the capital as a base, the government of Honduras would then organize assistance for the most affected areas.

As the damage ("heavy rains and extensive flooding") deepened along the north coast, on October 27 U.S. Ambassador James F. Creagan issued the disaster declaration required for a U.S. response. Nonetheless, the tone was still relatively low-key and requested only "helicopter and fixed wing aircraft assistance from [the U.S. military Southern Command—SOUTHCOM] JTF-Bravo for assessment purposes." However, the declaration cable then included some fateful words:

The storm is moving west along the coast of Honduras. If the current trajectory and speed is [sic] maintained we estimate that the storm will pass 60 miles north of Roatan around midnight tonight (October 27).

The problem in this cable was the forward speed assumption. Subsequent alterations in both course and speed changed Hurricane Mitch from a regional/north coast disaster for Honduras into a national and, in many ways, a Central American regional catastrophe. For more than two days (October 28, 29, and into October 30), Mitch stalled off the coast and then only very slowly (October 30 and 31) moved inland over Honduras, first as a hurricane, then as a tropical storm, and finally as "only" a tropical depression. Essentially blanketing the country (see the October 26 and 29 satellite photos on the following pages), Hurricane Mitch pumped vast amounts of rain into interior watersheds, in some places dumping more than a full year's average precipitation in just hours. As a tropical storm, Mitch passed within 15 miles of Tegucigalpa.

First because of the stall, then because of the cruel, leisurely pace of the storm, the entire situation changed. An October 30 cable from Tegucigalpa to Washington reflected increasing alarm:

Tegucigalpa got hit with bad weather today. GOH [government of Honduras] ordered the population to leave work and return to their homes as the rain waters started to cause mudslides and wash out bridges. Tegucigalpa was effectively cut in half this afternoon by raging river waters.

Three days later, the full picture was becoming clear, and both tone and content in U.S. cable traffic were totally different. Stating that "this country has been turned into an archipelago," an understandably traumatized Ambassador Creagan sent a highly personal November 2 cable to Washington, which included the following:

1. Hurricane Mitch dealt a devastating blow to Honduras and hit its neighbors as well. I saw it by air yesterday and the destruction is major. Guanaja Island looked as if it has been bombed— not a building standing.

**Photo 3**  
**Hurricane Mitch on 10/26/98 at 12:45 GMT**

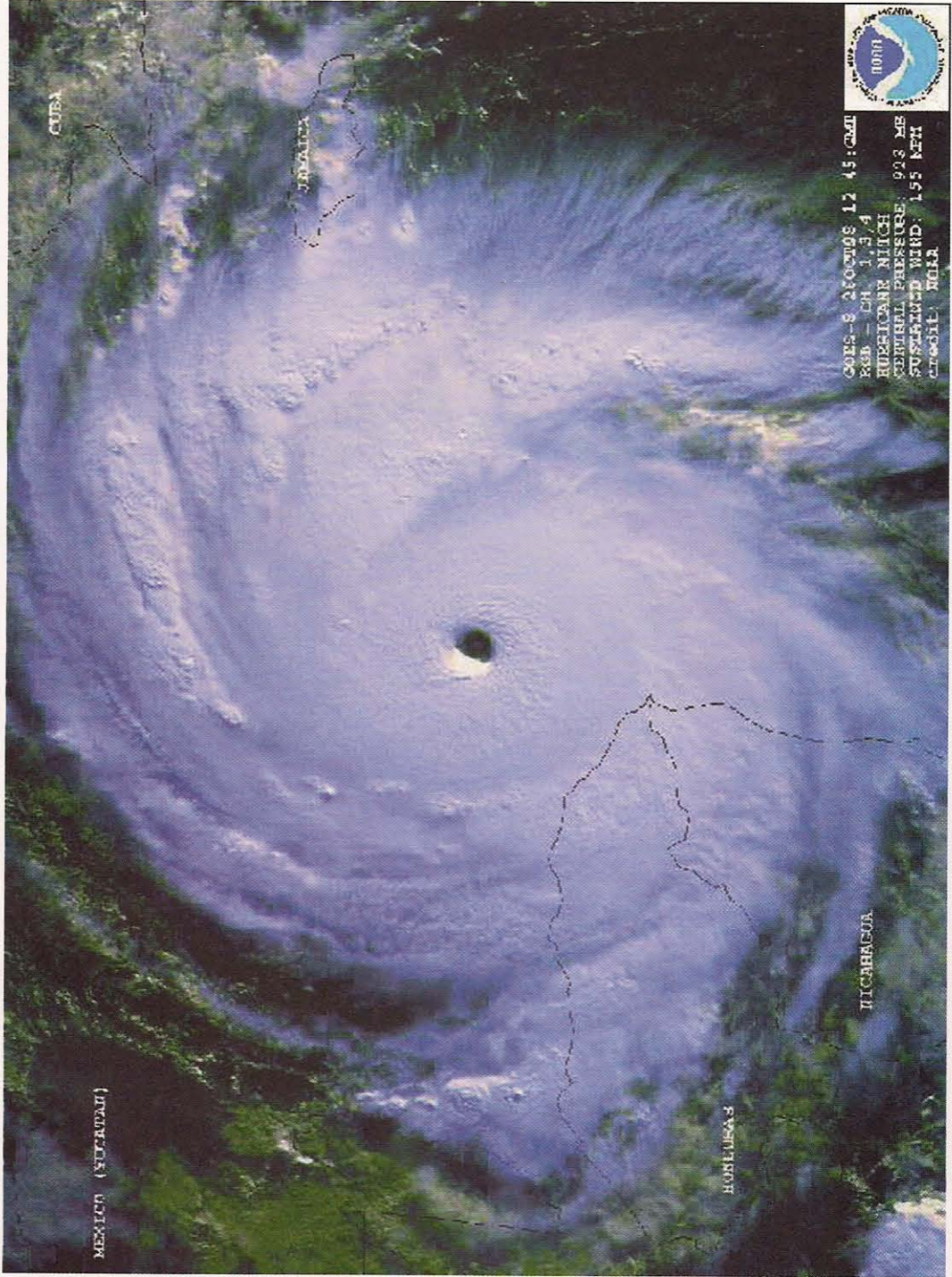
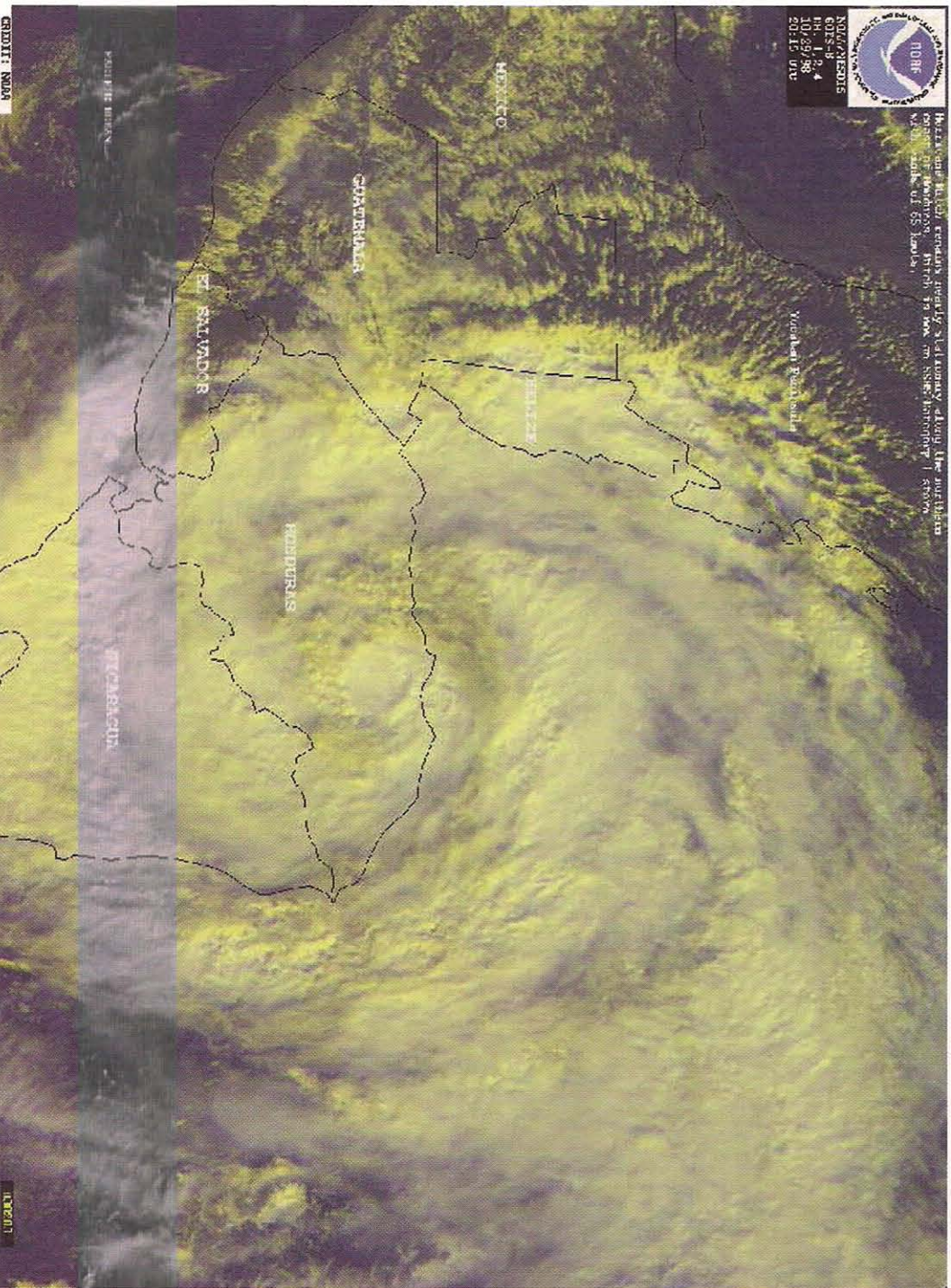


Photo 4  
Hurricane Mitch on 10/29/98 at 20:15 UTC





2. Destruction was anticipated in the Bay Islands and along the North Caribbean Coast, where normally tranquil rivers now occupy entire valleys from mountain to mountain. But the hurricane wreaked havoc in Central and Southern Honduras as well, changing the capital, Tegucigalpa, from a center for support and relief for coastal victims to a major casualty. The raging rivers and arroyos of this city built on hills destroyed whole neighborhoods, wiped out the GOH warehouse stocked with the food intended for distribution along the Caribbean, and flooded the Central City with its commercial zones and government offices. Entire hillsides collapsed, bringing down houses and snapping water pipes supplying the city. Many bridges fell from the force of water, taking with them water pipes spanning the rivers. Roads out of the capital have been cut by landslides. And so Tegucigalpa is faced with a rapidly diminishing water supply, a quickly approaching food shortage, and a lack of transportation. . . . If the situation in Tegucigalpa is not managed soon, there may well be a rapidly deteriorating social—and then political crisis. Already there is looting and killings, with gangs roaming some neighborhoods. There have been prison breaks. And to exacerbate matters the beloved mayor of this city, termed “El Gordito,” was killed yesterday as his helicopter lifted off en route to the latest crisis—a landslide which became an earthy dam in the river and threatened to inundate the center city.

Also on November 2, Honduras President Carlos Flores addressed the nation (and the international press corps) and made the now famous plea: “Heed this SOS, which we launch from Honduras, in spite of our pride and our shame.” Flores profiled the still incomplete damage reports to population (“thousands, not hundreds killed”), infrastructure (especially roads and bridges), and economy (“70% of our principal products”). He also announced a national curfew and the temporary suspension of civil liberties—notably, rights to home privacy and the removal of limits to de-

struction. The purpose was to combat looting and other episodes of “public disorder.”

Human losses notwithstanding, Hurricane Mitch will be remembered in the end as an infrastructure disaster. At one point or another, every major arterial road in the country was cut. Somewhere between 75 and 90 bridges were damaged or destroyed, and one estimate put houses lost at 70,000. For several weeks, it was impossible to consider “Honduras” as a functioning economic entity (or even as a viable nation-state). For all intents and purposes, the country went into international receivership the first week of November 1998.

The pace, nature, and design of reconstruction will determine the kind of Honduras that comes out of Mitch. Interestingly, at various points the Honduran government linked the disaster (and therefore reconstruction) to 1) NAFTA membership or a similar status with the U.S., 2) debt forgiveness or at least relief (“if the U.S. leads the Europeans and Japanese will follow”), and 3) illegal immigration (“thousands of Hondurans will be forced to flee to the United States”). The linkage arguments were especially sharp in mid-November 1998, when President Flores met separately with a group accompanying Tipper Gore, spouse of U.S. Vice President Al Gore. In this meeting President Flores was quite direct. According to a synopsis written later by a person who was present, Flores stated:

If it was hard to govern Honduras before as a poor country it will be harder still to govern a nation that has been almost destroyed. People who have lost everything will swim, run, or walk north [i.e., to the U.S.]. We need opportunities for people to work in maquiladoras. We know that President Clinton sought fast track authority, but that it was not approved. NAFTA parity would help create jobs on the North Coast of Honduras. If that is impossible, CBI [Caribbean Basin Initiative] enhancement would help the maquiladoras grow. Either outcome would give Honduras a chance to avert tension and instability.

## Media Attention Span

Covering a 10-week period (October 20-December 29, 1998) and the three main Honduran newspapers (*El Nuevo Dia*, *La Tribuna*, and *El Heraldo*), Table 7 (p. 35) reports the total number of Mitch stories published per week. Beginning with the pre-impact week and following the evolution of the post-impact efforts, a total of 2,236 stories were published detailing the impact of Mitch in Honduras.

Figure 3 (p. 36) graphs the same coverage data, illustrating the steady increase and

then decrease in attention. Specifically, during the first three weeks, coverage rose, but at week three it began to decline. Interestingly, week six to week seven appears to be another break point, with Mitch-related stories dropping more than half, from 280 to 123.

Interestingly, there was quite an inter-newspaper discrepancy in Honduran media coverage of Hurricane Mitch. *La Tribuna* led with 912 stories over the 10 weeks, followed by *El Heraldo* with 682 and *El Nuevo Dia* with 642.

## Assistance Credit

Table 8 and Table 9 (pp. 37, 38) show how the Honduran press reported foreign assistance. Again, the tables are "story counts" of assistance reported by source (donor). Table 8 contains the story counts for assistance identified by country. The most frequently noted donor was the United States, which was featured in 116 stories, followed by Spain in 42 stories and France in 36. Among the 116 stories that mentioned the United States, OFDA was

mentioned 7 times, USAID was mentioned 15, and Peace Corps was mentioned once.

Table 9 contains the story counts for assistance from NGOs, IGOs, and MNCs. Most frequently mentioned was the IADB in 33 stories, followed by the United Nations in 26, *Escuela de Rescate "Alert"* (USA) in 18, and the *Banco Centroamericano de Integración Económica* (BCIE) in 17.

## The Casualty Issue

The human loss issue surrounding Hurricane Mitch in Honduras will probably never be settled. The official figures are now repeated so often that they are enshrined in the principal international databases (6,600 killed, 8,052 missing, 11,998 injured, etc.—see Table 10 (p. 39) for one set of official Hurricane Mitch losses for all Central American countries).

However, the Honduras casualty figures, especially for those killed, were highly exaggerated, if not frankly false. The reasons are related very closely to the reported death toll for Nicaragua and the need to compete for international media attention. That is, the Honduran government could not allow its country's needs to be overshadowed by the death toll in Nicaragua, and the government got seriously carried away with its casualty reports.

One way to disentangle the Honduran human loss figures is to track the numbers

reported through OFDA Fact Sheets. Initial OFDA field reports related only a few dozen killed, but these were clearly both preliminary and fragmentary. The first Fact Sheet that reported a number was #4, on November 2, 1998, which put the number killed at 254. Fact Sheet #5 the following day reported 258 killed and 158 missing. Interestingly, an OFDA field report of November 3 placed the human losses at 334 killed and 1,064 missing. This may have been the best and most accurate figure ever reported regarding this disaster in Honduras, because on November 4 the games began.

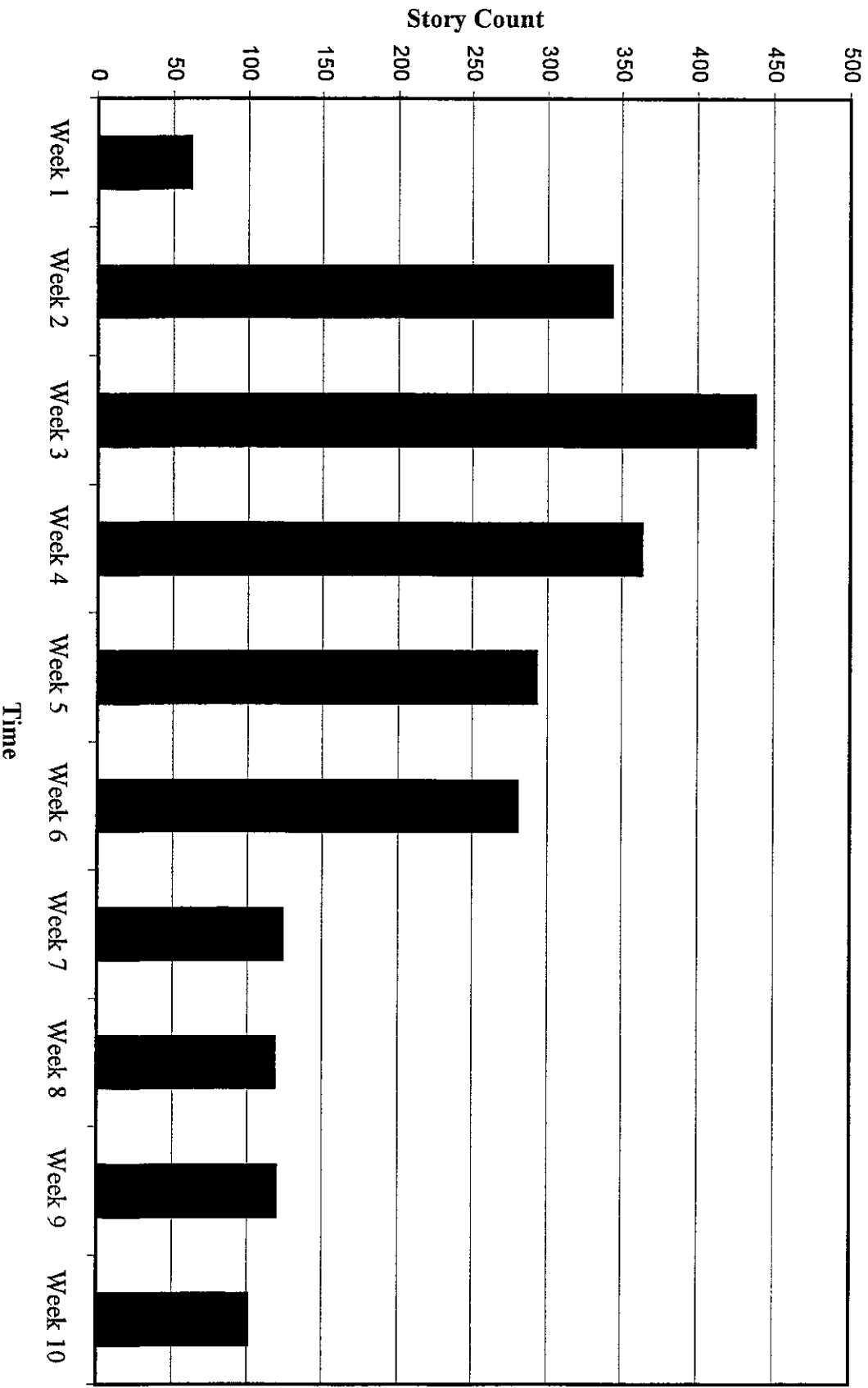
The impetus was the terrible but highly concentrated losses caused by the side collapse of the Casitas volcano in Nicaragua and the ensuing flash flood. On November 2 (Fact Sheet #4), Nicaragua reported 1,212 killed and 2,000 missing. (The Nicaraguan losses would eventually grow to 2,863 killed and 884 missing

**Table 7**  
**Hurricane Mitch Coverage:**  
**The “Big Three” Honduran Newspapers**

*Number of Stories Published*

Week 1 (October 20-27)	61
Week 2 (October 28-November 3)	343
Week 3 (November 4-10)	437
Week 4 (November 11-17)	363
Week 5 (November 18-November 24)	292
Week 6 (November 25-December 1)	280
Week 7 (December 2-8)	123
Week 8 (December 9-15)	118
Week 9 (December 16-22)	119
Week 10 (December 23-29)	100

**Figure 3**  
**Hurricane Mitch Coverage:**  
**The "Big Three" Honduran Newspapers**



**Table 8**  
**Hurricane Mitch:**  
**Honduran Media Recognition of Assistance, by Donor Nation**

<i>Country</i>	<i>Number of Stories</i>
USA	116
Spain	42
France	36
Mexico	32
Cuba	21
Japan	21
Germany	13
China	10
Argentina	8
Great Britain	7
Holland	6
Netherlands	5
Taiwan	4
Venezuela	4
Canada	3
Colombia	3
Korea	3
Switzerland	3
El Salvador	2
Ireland	2
Italy	2
Morocco	2
Norway	2
Peru	2
Uruguay	2
Belgium	1
Brazil	1
Chile	1
Costa Rica	1
Ecuador	1
Israel	1
Nicaragua	1
Paraguay	1
Poland	1
Portugal	1
South Africa	1
Sweden	1

**Table 9**

**Hurricane Mitch:  
Honduran Media Recognition of Assistance,  
by NGOs, IGOs, and MNCs**

<i>NGO/IGO/MNC</i>	<i>Number of Stories</i>
Inter-American Development Bank	33
World Food Program	31
United Nations	26
World Bank	18
Central American Bank of Economic Integration	17
International Monetary Fund	11
Organization of American States	6
Red Cross (Spain)	6
Honduran Exiles	5
Caritas	3
British Christian Organization	2
Rescue School "Alert" (USA)	2
Bimbo	2
Bolsa Samaritana (Christian NGO)	2
TZU CHI	2
Queen Sofia Foundation (Spain)	2
Paramedics for Children	2
Roman Catholic Church	2

The following NGOs, IGOs, and MNCs were mentioned in one story: Inter-American Institute of Agricultural Integration, Christian Businessmen (USA), Iberia, Continental Airlines, German Red Cross, City Bank, Catholic Archdiocese in Peru, University of Boston, CARE, Save the Children, Hondurans in New Orleans, Case Corporation, Central American Medical Reach, GTZ, Cartelone Corporation, Detroit Pistons, Fisher House, and World Vision-Taiwan.

**Table 10**  
**Social Impact of Hurricane Mitch in Central America**

<i>Country</i>	<i>Killed</i>	<i>Missing</i>	<i>Injured</i>	<i>Affected</i>	<i>Evacuated</i>	<i>Households Affected</i>	<i>Bridges Affected</i>	<i>Aqueducts Damaged</i>
Honduras	6,600	8,052	11,998	1,393,669	2,100,721	41,420	215	1,683
Nicaragua	2,823	885	254	368,261		21,625	63	79
Gautemala	268	121	280	108,607	104,016	10,372	121	60
El Salvador	240	29		84,005	49,000	965	10	155
Costa Rica	4	4		307	5,500	1,933	69	12
Panama	2			8,408	602		1	
Belize					75,000			
<b>TOTAL</b>	9,937	9,091	12,532	1,965,957	2,334,839	76,315	479	1,989

Source: Proyecto Estado de la Nacion, 1999, p. 261

Table 11

The Casualty Story: OFDA Sitreps 1-22

Sitrep	Sitrep Date	Honduras		Nicaragua		Guatemala		El Salvador	
		Killed	Missing	Killed	Missing	Killed	Missing	Killed	Missing
1	28 Oct.	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported
2	29 Oct.	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported
3	30 Oct.	Not Reported	Not Reported	19	Not Reported	Not Reported	Not Reported	144	Not Reported
4	2 Nov.	254	Not Reported	1212	2000	31	Not Reported	144	Not Reported
5	3 Nov.	258	158	1212	2000	69	Not Reported	144	135
6	4 Nov.	874	11,100	1212	2000	82	91	224	135
7/7A*	5 Nov.	5000	5000	1642	1804	186	91	239	135
8	6 Nov.	6420	5807	1652	1856	197	63	239	135
9	9 Nov.	6420	5807	1652	1856	197	63	239	135
10	10 Nov.	6546	6586	2042	1094	258	120	239	135
11	11 Nov.	6546	6586	2055	1084	258	120	239	135
12	12 Nov.	6600	8752	2055	1084	258	120	239	135
13	13 Nov.	6600	8752	2055	1084	258	120	239	135
14	16 Nov.	6600	8052	2362	970	258	120	239	135
15	17 Nov.	6600	8052	2362	970	258	120	239	135
16	18 Nov.	6600	8052	2362	970	258	120	239	135
17	19 Nov.	6600	8052	2362	970	258	120	239	135
18	23 Nov.	6600	8052	2362	970	258	120	239	135
19	24 Nov.	6600	8052	2863	Not Reported	258	120	239	135
20	25 Nov.	6600	8052	2863	884	258	120	239	135
21	4 Dec.	5657	8052	2863	884	258	120	239	135
22	21 Dec.	5657	8052	2863	884	258	120	240	Not Reported

\* The data for sitreps 7/7A are combined because 7A is a correction of the Nicaragua data.



by Fact Sheet #20 on November 25; after that they would hold steady.)

Fact Sheet #6 for Honduras on November 4 suddenly reported 874 killed and an astounding 11,100 missing, followed the next day (Fact Sheet #7, November 5) by 5,000 killed and 5,000 missing. From there the figures only increased. By Fact Sheet #20 on November 25, Honduras was listed as suffering 6,600 killed and 8,052 missing. These numbers would eventually be reduced to 5,657 killed and 8,052 permanently missing—still implying more than 13,000 killed.

Table 11, on the preceding page, presents the entire array of figures for Honduras and Nicaragua (plus Guatemala and El Salvador) compiled from OFDA Fact Sheets #1-#22. The November 3-5 numbers for Honduras highlight the radical change in casualty numbers just discussed, which we probed a bit further in field visits.

Several key actors stated that when the Casitas event occurred and with the international media moving to Nicaragua, the highest levels of both the Honduran military and government saw a major shift in international sympathy and a consequent likely change in the country's share of reconstruction funding. Shortly thereafter, the Honduran government released the 5,000 killed and 5,000 missing numbers. The numbers then went up from there.

## Economic Losses: The EIU Assessment

The breadth of the hurricane damage to Honduras, especially to production and the transportation and communication infrastructures, was extraordinary. Nonetheless, as in all disasters, some sectors tended to benefit, as the following EIU assessment made clear (also made clear is the fact that international assistance was the only thing keeping Honduras intact as a nation-state):

The EIU forecasts that the impact of Hurricane Mitch on economic activity will lead to a GDP contraction next year. Based on the preliminary data available, we expect this contraction to be as much as 6%. . . . On the supply side, there will be a sharp contraction in agricultural output with damage to basic grains in low-lying areas particularly severe.

A mid-November internal document from a donor government throws some interesting light on this data problem. As late as November 13, the report noted a "serious discrepancy" between a key ministry and the just-created National Emergency Committee of Honduras (*Consejo Nacional de Emergencia*, CONE)—to which we will return below. The ministry was reporting 1,097 killed, approximately 3,000 missing, and nearly 490,000 affected. The CONE figures, however, were 6,600 killed, 8,752 missing, and almost 1.4 million affected. In field interviews we found that the minister involved with the release of the lower figures was told, on or about November 13, to stop releasing any further casualty figures. The CONE figures then became the "official" Honduran losses.

Information uncovered in later field visits in mid-1999 corroborated the view that Honduras lost only a fraction of the implied 13,000 killed (or even of the officially reported 5,867). Without exception, local officials could only talk of dozens lost. When asked about hundreds, they would always point off vaguely toward another town and say, "*tal vez mas allá*" ("perhaps over there"). One *mas allá* always led to another, however, until we ran out of *mas allá*s. Our best and admittedly seat-of-the-pants estimate would be 3,000 killed by Hurricane Mitch in Honduras.

Manufacturing output will also contract, but less sharply, as domestic industries suffer from the damage done to plant and stocks. But production at over 80% of *maquila* companies is expected to return to capacity over the next three months, and the construction sector will expand strongly as reconstruction gets under way. The effect of the hurricane and its aftermath on the services sector activity will be mixed; some services will contract, reflecting the decline in private consumption, while others—particularly welfare services supported by aid flows—will expand.

On the demand side, private consumption will fall sharply as many Hondurans have lost their livelihoods, particularly in the worst affected areas in agriculture, manufac-

turing and services. Exports will contract, while the import bill will be high as the country imports to rebuild and to substitute for lost domestic output. Private investment will also rise as the private sector repairs damage to productive sectors and the economy is deregulated in the utilities and infra-

structure sectors, attracting some foreign investment. Offsetting these negative effects of hurricane damage on private consumption and exports will be a strong boost to public spending and investment supported by foreign aid flows. [EIU (Honduras), Fourth Quarter, 1998, p. 29]

## The Political Context of the Impacts

Hurricane Mitch exacerbated tension between the executive and legislative branches in Honduras and highlighted an enduring and embarrassing problem for the country: corruption, which in Honduras is so pervasive that it has its own denominator, *champa*. Shortly after the hurricane struck, the EIU stated:

The need to implement emergency measures swiftly will make the executive branch keen to wrest some power from Congress in order to prevent legislation from getting bogged down in political bargaining. This concentration of power may not necessarily affect the high approval rating that the president, Carlos Flores Facussé, had been enjoying before the hurricane struck. His efforts to mobilise international support for the humanitarian relief effort and to put the issue of debt relief very much on the agenda . . . have been impressive. But Mr. Flores will need to ensure that the aid flowing through government institutions is allocated transparently and effectively, and that it is distributed throughout the country to those most in need. [EIU (Honduras), Fourth Quarter, 1998, p. 28]

The corruption issue, in particular, simply would not go away for the Flores administration, and it began to be publicly linked with donor resistance to providing the massive assistance required to rebuild the country:

The Honduran government published its reconstruction plan in April . . . and is hoping to receive up to \$3.6bn over the medium term, on concessional terms, to finance the reconstruction work. However, there are likely to be some problems in attaining much of the financing. The donors will press the government to ensure that all projects are fully accounted for and that the allocation of all funds is conducted in a transparent manner, particularly in light of the recent report released by the Human Rights Ombudsman, Leo Valladares . . . which alleged 17 cases of

mismanagement of aid. [EIU (Honduras), Second Quarter, 1999, p. 28]

According to the same EIU report (p. 33), the Valladares report, also published in April, had become quite a domestic political issue:

The ruling Partido Liberal (PL) in Congress reacted by attacking Mr. Valladares for damaging the image of Honduras and the prospects of further funding, and voted to have his term of office reduced from six years to four and to reduce his mandate by excluding investigations of corruption. The public outcry that this caused prompted a U-turn by the government, which then blamed the president of the National Congress, Rafael Pineda Ponce, for attempting to stifle Mr. Valladares. The reputations of the government and of Congress have been tarnished by the affair, and transparency and accountability will now be monitored even more closely by aid donors, as the suspicion remains that the authorities are more likely to keep allegations of corruption quiet than to denounce and investigate them fully.

Quoted in a separate publication (Jeffrey, 1999, pp. 32-33), Valladares stated that his investigation of white-collar disaster corruption turned out to be even "more dangerous" than his previous work on human rights violations by the military.<sup>1</sup> Somewhat more colorfully than the EIU, Jeffrey (p. 33) described the maneuvering that swirled around the Valladares report:

Flores did not just get mad at Valladares, he got even. He called Congress President Rafael Pineda Ponce and ordered that Val-

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<sup>1</sup> This corresponds in interesting ways to some public opinion survey data from Mexico that have been recently published (see Gawronski and Olson, 2000).

ladares' mandate be destroyed. Late on the night of April 20, Congress cut the commissioner's terms and limited his job to passively receiving complaints. As word leaked out the next day, European ambassadors threatened possible aid cuts. *The New York Times* called for a legislative change of heart. Under attack, Pineda Ponce lived up to his nickname of "Ping-Pong" and announced a new vote. On April 27, with hundreds of pro-Valdadares protesters battling police outside, the Congress voted unanimously to leave the commissioner's mandate unchanged.

In the end, as is commonly the case with disasters, the government of Honduras was caught between a rock and a hard place and could not "win" politically no matter what it did:

The reconstruction effort following the devastation caused by Hurricane Mitch at the end of October has dominated the political scene in Honduras. Despite overseeing the restoration of vital infrastructure by the end of the first quarter of 1999, the government has been criticised for progressing too slowly with the programme. Much of the work already completed has been carried out under the auspices of an international relief effort, whereas the Honduran government, with its scarce resources, has only managed to make slow progress. Many construction companies have been unwilling to grant additional credit to the government before outstanding payments have been made, and there have also been substantial bureaucratic obstacles in processing bids for reconstruction work. . . .

The president, Carlos Roberto Flores Facussé, has come under fire from the Foro Ciudadano (FC), a civic group formed recently by intellectuals and professionals, for concentrating too many decisions within the executive. The FC claims that Mr. Flores's unwillingness to delegate responsibilities runs contrary to the urgent needs of the reconstruction effort, generating bottlenecks and huge delays. . . . Public criticism of the performance of the reconstruction cabinet has continued to rise; in March and April civic and business groups published strongly worded advertisements in national newspapers to voice their dissatisfaction with the slow progress of the work. [EIU (Honduras), Second Quarter, 1999, p. 31]

The stakes inherent in reconstruction could hardly be higher, not only for the Honduran political class, but also for the entire Honduran elite. The quality of leadership was truly and visibly on trial. Ruhl (2000, p. 63) portrayed the system as walking a tightrope:

The vast devastation caused by Hurricane Mitch . . . created a critical political challenge for Honduran elites. Effective use of international relief funds to rebuild the country and to provide aid to the thousands who had lost everything could raise the legitimacy of democratic government. On the other hand, elite corruption and incompetence at this critical juncture . . . could worsen mass cynicism and disillusionment.

At a more specific level, one especially interesting aspect of the Honduran governmental response to Mitch involved the military—civil-military relations specifically. Before Mitch struck, the Flores administration had been moving—carefully—to amend the Honduran constitution so as to place the armed forces under (at least more) civilian control. The military had governed Honduras directly for nearly 20 years prior to 1981 and had been "the power behind the throne" until well into the 1990s, so this was a very delicate issue. Two months before Mitch hit, Flores was laying the groundwork to name a civilian minister of defense, and military coup rumors began to circulate. All of the response problems associated with Mitch, however, opened a political window of opportunity for Flores, who was able to install a civilian defense minister in late January 1999. Calling the Honduran military "Mitch-weakened," Jeffrey (1999, p. 29) quoted German Calix of CARITAS (Catholic Relief), as saying:

Mitch demonstrated the total inefficiency of the military. The officials have spent all their time fighting among themselves and struggling for political power, so they were simply not prepared to confront an emergency. COPECO didn't have a clue what to do.

A somewhat unfair generalization, this statement nonetheless reflects a widespread perception.

## Institutional Change and the Politics of Honduran Sidelineing

Given the broad perception of government ineptitude in responding to Hurricane Mitch, an analysis of problems in governmental institutional response is in order.

Enacted by the Honduran National Congress in January 1991 and in typically vague language, Decree Number 9-90-E created a Permanent Commission for Contingencies (*Comisión Permanente de Contingencias*, COPECO) to

adopt political measures oriented to assist the population, rehabilitation and reconstruction of damaged areas caused by natural disasters, which have an effect on the economic activity and well-being of the population, as well as to program and develop different activities to prevent negative consequences in the areas of higher risk for disasters.

COPECO replaced Honduras's earlier COPEN (*Comité Permanente para Emergencias Nacionales*—the Permanent Committee for National Emergencies). Unfortunately, COPECO was to be managed by a conglomeration of ministries, secretariats, and commissions. Thus, it never received a mandate as a fully independent institution with administrative and emergency budgets, remaining instead dependent upon other governmental organizations for “management” and upon the presidency for appointments. Indeed, the president of Honduras did name the head of COPECO, and it was usually the vice president, with all of the real and symbolic importance—or lack thereof—which that implies.

In practice COPECO was funded, again rather vaguely, by annual contributions from the national government, national and international donations, loans, and any “resources and values provided by other sources.” One media account reported the annual COPECO budget before Hurricane Mitch at the equivalent of \$200,000. This figure was “about right” according to one person we interviewed. In short, COPECO was starved for resources.

Beneath COPECO in the institutional hierarchy were a set of CODERs (*Comités de Emergencias Regionales*) and CODEMs (*Comités de*

*Emergencias Municipales*). Composed of 11 brigades, CODERs operated as civil defense units at the regional level while the much more numerous CODEMs did so at the municipal level.

When Mitch's effects were fully felt, COPECO was overwhelmed at the national level and temporarily cut off from CODER and CODEM teams in the field. For weeks after the disaster, many officers of CODERs and CODEMs acted independently—much to their credit. In the capital, however, COPECO was bogged down not only by the disaster but also by politics.

To give it appropriate credit, COPECO did seem to do a good job of organizing the evacuation of the north coast in the early days of Hurricane Mitch and probably saved many lives in that region. The CODEM brigades really deserve the operational credit, however, because they were already active in the northern regions of Honduras to deal with the severe drought and wildfires induced by the 1997-1998 ENSO.

Interestingly, when the true scale of the Mitch disaster became apparent and with COPECO taking a lot of the blame, President Flores removed the vice president as its head and sent him to his home region to manage relief efforts there. Flores also released the various ministers responsible for managing COPECO, letting each take care of relief efforts in his/her home regions. Not strong to begin with, COPECO's organizational structure and leadership were torn apart by this action.

Gutted politically and organizationally, and with only four phone lines in its office (an interesting indicator of the office's importance in its own right) and with no institutional e-mail capability, COPECO could neither gather nor distribute the information necessary to manage a major national disaster.<sup>2</sup> By decree, President

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<sup>2</sup> In addition to the COPECO collapse hampering domestic response, Lister (2001, p. 41) notes that the lack of a “strong, central coordinating entity” also reduced the effectiveness of international assistance and that “many agencies were forced to go through the same information-gathering and needs assessment processes.”

Flores then created the *Comisión Nacional de Emergencia* (CONE) as a new umbrella organization to preside over the government's various ministries involved in the response.

Officially led by the minister of the interior but without a structure, CONE would also have likely collapsed were it not for a private sector initiative. Arturo Corrales, one-time presidential candidate and government-contracted statistical analyst, stepped in and "offered" his services to President Flores. Corrales (really the man in charge) provided a command center with 30 phone lines, faxes, computers, and what one observer called the "show" for the media. In reality, CONE was all about data (including the famous casualty figures) and information management. It was never involved in actual response operations.

With CONE totally dependent upon Arturo Corrales's infrastructure, certain problems were certain to arise. One had to do with the database. It turned out that the statistical data had been gathered for Corrales' election campaign, which resulted in the neglect of persons under the voting age of 18. When these data were used to determine food allotments for a particular area, with those under 18 not counted, shortages were inevitable.

Interestingly, no military appointees were named to the CONE management structure, leaving the military to work essentially on its own and more closely with international teams. The military had set up an independent "COC" (*Centro de Operaciones y Comando*, a Command and Operations Center). The COC was all military and included foreign military representatives from all but one contributing country. The exception was the United States, which sent an officer to the COC planning meetings every afternoon—but only to coordinate with COC, not to receive tasks or assignments. In the end, responding to Mitch was overwhelmingly a question of logistics, and as one observer noted "the military was everything."

Therefore, what happened to COPECO in responding to Mitch? In short, the answer is that it was sidelined/marginalized—not once but actually twice and from two different directions. On one side, COPECO lost its decisionmaking, coordination, and planning functions (and its chance for real organizational profile) to CONE. On the other side, it lost operational responsibilities to the all-military COC.

In retrospect, while COPECO was overwhelmed by the Mitch disaster, more importantly it was not capable of accordion-like institutional expansion. It did not have the resources and institutional capability to rise to the occasion. More poignantly, it was not *allowed* to rise to the occasion, run operations, and gain (positively) the national and international media spotlight and credit. With 1) COPECO sidelined, 2) CONE emphasizing information but not capable of real coordination, and 3) the COC particularly focusing on air logistics, international donors were often left without guidance. The operational result was "stovepipe" assistance by individual donor agencies in particular areas—very reminiscent of aid in the 1950s and 1960s.

Consistent with our marginalization proposition, both CONE and COC disappeared after the Mitch response began to wind down, leaving the discredited COPECO in place. Interestingly, President Flores' 1999 attempts to revitalize COPECO have had some unintended consequences. The new COPECO leadership structure includes both an executive president and a commissioner. Unfortunately, each believes that the other works for *him* (both answer to Flores), and each has a different vision of what the "new COPECO" should look like. The September-October-November 1999 flood emergencies in northern Honduras brought the differences to public attention, and the Honduran media began calling COPECO the "two-headed beast."

## Blame Themes

Given the tremendous impact of Hurricane Mitch on Honduras (Hurricane Georges in the Dominican Republic paled by compari-

son), there were three principal blame themes, all a bit different from those in the Dominican Republic:

1) *Weak Infrastructure, Lack of Mitigation, Poor Preparedness, and Corruption*—The media in Honduras (and President Flores) were quick to argue that the catastrophe was due to a) Honduran underdevelopment/poverty and b) the “corrupt leadership” of previous administrations. This was tied specifically to the next blame theme.

2) *Hurricane Fifi in 1974 and “Lessons Not Learned”*—The media asked repeatedly why the Honduran infrastructure was not ready for another devastating hurricane after the country’s experience in 1974. They repeatedly cited clientelism and corruption. A prominent theme was “the past,” the “old way of doing things” that had left Honduras so vulnerable.

3) *Local versus National Government*—The media gave extensive coverage to local governments (municipalities) that were blaming the central government for not providing the necessary aid.

Interestingly, again the international donor community received little or no blame. In fact, the Honduran media gave ample and positive coverage to both specific assistance efforts and the visits of many foreign dignitaries.

Finally, media attention to the failure of the country to learn lessons from 1974 and Hurricane Fifi should be kept in mind as Hurricane Mitch joins Fifi in the category of supposed “teacher” hurricanes. The implicit question is: How will the Honduran media and people react to the next great hurricane catastrophe if the government fails, or largely fails, to learn the lessons of 1998 and Mitch? This is an extremely important question not only for the Honduran government but also for the international community. The answer will largely determine social and political volatility during and following response to the next major (and inevitable) disaster in Honduras.

## In Sum

No one would ever have expected a hurricane of Mitch’s magnitude to simply stall off the Honduran coast and then meander across the country, pumping unprecedented amounts of rainfall into the nation’s (deforested) watersheds. In the end, wind and storm surge damage paled in comparison with riverine flooding, and Hurricane Mitch passed from being a disaster to a truly historic national catastrophe. The storm has certainly entered the collective memory of the Honduran people. As two journalists remarked in passing, “Just as it recarved the physical landscape, Mitch seems to have carved a fundamental sense of vulnerability into people’s psyches” (Boyer and Pell, 1999, p. 38).

For our purposes here, however, the key point is that the organization nominally in

charge of disaster response in Honduras (COPECO) did not play a significant role in the response to Hurricane Mitch. Quickly overwhelmed, it was completely marginalized by the creation of the all-military COC and by the emergence of CONE, which flourished for awhile but then disappeared. Apparently, Honduras will thus confront its next major disaster with a weak and demoralized COPECO, an agency with a history—and therefore an expectation—of being sidelined. In addition, although failure to learn effectively from one disaster (Fifi in 1974) is perhaps excusable, failure to learn from Mitch will tax the tolerance of even the historically patient Honduran people. Overall it is not an optimistic picture.

## IV

# HURRICANE MITCH AND NICARAGUA

### Death and Destruction (But the Eyewall Never Came Close)

The problem of small nations and large hurricanes is nowhere better illustrated than with Hurricane Mitch and Nicaragua. Lost in much of the media coverage was the fact that the eye of the hurricane never touched the national territory of Nicaragua. Indeed, Mitch was damaging Nicaragua technically not as a hurricane but as a slow-moving tropical storm. Coastal storm surge and wind damage were life safety and property issues only along the less populated Atlantic coast of Nicaragua. Instead, Hurricane Mitch in Nicaragua was all about rainfall, flash floods, and riverine flooding. Moreover, more than half and perhaps as much

as two-thirds of the human loss in Nicaragua occurred with the collapse of the Casitas volcano and the consequent downstream mudslide and debris flow. That is, without the Casitas “disaster within the disaster,” Nicaragua would still have had great property and infrastructure damage but probably no more than 800 killed—not the eventual 2,800 plus. Indeed, the Casitas event illustrates that we still lack critical knowledge about how hurricanes act as a *multi-hazard* and how local factors (e.g., the weakness of the Casitas volcano sidewall) can have huge impacts on the relative vulnerability of specific sites or areas.

### Nicaragua: A History of Disaster

Hurricane Mitch was hardly the first major catastrophe experienced by Nicaragua. Even more than that of other countries in Central America, the history of Nicaragua is a chronicle of natural disasters. The first western account of such an event actually comes from Columbus, whose ships were driven north along the Caribbean coast of Nicaragua by a hurricane in September 1502. Indeed, on September 12, 1502, Columbus, in distress, found more protected waters by rounding a cape in what is now northeast Nicaragua. He appropriately christened it *Gracias a Dios*. Other Nicaraguan disasters include: 1) multiple eruptions of Momotombo volcano (an event in 1606 led to the relocation of the city of Leon); 2) the great 1835 explosive eruption of Cosiguina volcano

(which was heard as far away as Colombia, Mexico, and Jamaica); 3) the 1876 Managua flash flood (“*ahuciori*”), the story of which is still handed down in the lore of many Nicaraguan families and which perhaps led to the first documented hazard mitigation project in the country (a six-kilometer floodway still in use as part of a larger structural flood control project); 4) the Managua earthquake of 1931 that killed an estimated 4,000 people and (with fires) destroyed much of the city; and 5) the 1972 Managua earthquake, which was essentially a repeat of the 1931 event but with more casualties (6,000 to 10,000 killed) and even greater damage to the government, financial, and business center of the country.

More than two dozen significant hurricanes or tropical storms have impacted Nicaragua in the last century. Recent events include Irene (1971), Joan (1988), Bret (1993), and Cesar (1996). Mitch, however, was a major disaster. Table 12 (p. 49) provides the government's official summary of losses as reported in mid-1999.

Focusing as usual on economics, the EIU made an early estimate that 30% of the second harvest of many 1998 crops in Nicaragua had been "wiped out" and that 70% of the transportation infrastructure was damaged (EIU [Nicaragua], Fourth Quarter, 1998, p. 7). The EIU also noted (p. 3) that like Honduras, Nicaragua was going into international receivership, at least for awhile:

The government's main challenge over the next 18 months will be coping with the aftermath of Hurricane Mitch, which struck in late October. Growth will fall below expectations this year, and may be negative in 1999 owing to hurricane damage, but we expect a strong rebound in 2000. Shortages associated with the hurricane will prompt a surge in price pressures in the last two months of 1998, continuing into the early months of next year. The country will find it extremely difficult to meet the current IMF targets and will be heavily dependent on emergency international assistance in order to finance its massive external imbalance.

The political impacts, however, were at least as problematic as the economic impacts. According to the EIU, the government of Nicaragua was undergoing serious criticism for not declaring a disaster early enough:

Assessments of the political impact of the hurricane are necessarily highly tentative at this stage. However, early indications suggest that in the medium term, the disaster may lead to an increase in popular opposition to the government of President Arnoldo Alemán Lacayo. For several weeks before the hurricane struck, producers had been calling for government assistance to help them cope with the impact of higher than usual rainfall through October. However, the government did not call a state of emergency until early November, after the hurricane had struck. This is likely to reinforce a growing sense among the populace that the current admini-

stration is indifferent to popular sentiment. [EIU (Nicaragua), Fourth Quarter, 1998, p. 7]

Other reports were more caustic (and interestingly similar to assessments regarding Hurricane Georges in the Dominican Republic):

This was a disaster foretold. The central government basically ignored the weather service and civil defense reports, playing down the first warnings and instead advising Nicaraguan citizens that this was a localized phenomenon with no serious national implications.

President . . . Alemán resisted the recommendations of many, including several ministers, to declare a state of national emergency and proceed with mass evacuation and rescue efforts. No, he said, such a mobilization would be something that the Sandinistas would do—and he was certainly no Sandinista. [Bendaña, 1999, p. 18]

This "Sandinista" issue was of major importance, and we will return to it below, but the fact remains that it was only on October 30, 1998, that Nicaragua's National Emergency Committee was formally convened and a disaster declared (and then only for nine of Nicaragua's main subdivisions, *departamentos*). Several interview subjects in Nicaraguan governmental weather and disaster-related agencies brought up the problem of governmental slowness or delay ("*demora*") in recognizing Mitch as a disaster/catastrophe—and by government they meant the president.

As in the Dominican Republic with Georges and in Honduras with Mitch, emergency aid distribution led to additional political problems. The EIU captured an entire set of interrelated issues:

The immediate aftermath of Hurricane Mitch, which struck Nicaragua in late October, was marked by local-level infighting among members of the ruling Partido Liberal Constitucionalista (PLC), and between PLC members and the Frente Sandinista de Liberación Nacional (FSLN, the main opposition party) over distribution of aid to the hurricane-stricken areas. This damaged the reputation of both the president [Alemán] . . . and of the Sandinistas. Mr. Aleman's swift transfer of responsibility for the relief effort from local mayors to the Catholic church helped to improve aid delivery but did not entirely



**Table 12**  
**Hurricane Mitch:**  
**Government of Nicaragua, Official Losses**

Dead	3,045
Affected population	1,000,000
Population still requiring assistance 07/99	400,000
Houses damaged or destroyed	151,215
Schools damaged or destroyed	512
Health centers damaged or destroyed	140
Roads damaged or destroyed	5,695
Bridges damaged or destroyed	1,933
Physical damage	US \$1.3 billion

neutralise the political fall-out from the disaster. An opinion poll by CID-Gallup found that only 48% approved of Mr. Alemán's handling of the disaster, while 45% disapproved. Many felt that he had been wrong not to declare an official nationwide state of emergency. Many also objected to him ordering the dismantling of the ad hoc hurricane emergency committee as early as the end of November. [EIU (Nicaragua), First Quarter, 1999, p. 10]

Another report was a bit more explicit about the immediate post-impact assistance:

Donors have long harbored serious doubts about the cronyism and corruption that characterizes central government in Nicaragua. In effect, the first deliveries of relief aid had a way of winding up in the hands of Liberal Party-dominated entities while having strange difficulties reaching Sandinista municipal governments. [Bendaña, 1999, p. 22].

Walker (2000, p. 84) highlighted several pre-Mitch personal scandals affecting both Daniel Ortega (FSLN) and President Alemán and then for the latter pulled a number of the problems together:

Support for Alemán and the Liberals was also hurt by their poor handling of . . . Hurricane Mitch. Over twenty-four hundred people were killed and nearly a fifth of Nicaragua's population left homeless. Economic damages totaled over \$1.5 billion. Working with a civil service stripped to the bone by a decade of neoliberal downsizing and further debilitated by corruption, cronyism, and incompetence, the Alemán administration was painfully slow in helping those hurt by the disaster. Further . . . Alemán channeled Nicaraguan public relief through local governments where Liberals were in power or through Liberal party organizations where they were not. He even attempted at first to deflect the flow of international assistance away from NGOs (seen by him as Sandinista) that he could not control.

Not all these criticisms were fair, but they formed part of the context in which memories and the "meaning" of Hurricane Mitch were being constructed. It should be noted, however, that the Nicaraguan government ultimately set up a much more open, accountable, and transparent relief receipt and distribution system, giving a prominent role to the more widely trusted Catholic Church. Nonetheless, this response mechanism was outside the government and temporary, and necessarily marginalized the Nicaraguan Civil Defense, which also found itself on the outside of the relief effort looking in.

Meanwhile, longer-term recovery and reconstruction—and the hundreds of millions of dollars involved—sparked enormous interest among civil society in Nicaragua (even more than in Honduras). Literally hundreds of organizations emerged and/or coalesced to press for roles in reconstruction decisionmaking, and considerable political conflict ensued over how they were to relate to the National Reconstruction Commission (*Comisión Nacional de Reconstrucción*), which was formed in the aftermath of Mitch, based on an organizational model from the 1972 Managua earthquake (hopefully with better results). Indeed, an interesting observation in this regard was that in post-Mitch Nicaragua, "the bulk of the grassroots organizations created during Sandinista rule [1979-1990] simply gave up on both their government and the FSLN—instead vigorously pulling together with national and international NGOs to confront the common disaster" (Walker, 2000, p. 85).

Setting aside the relief, recovery, and reconstruction issues, it is now useful to step back and examine the question of institutional disaster response and post-Mitch change. This is a particularly interesting issue, in part because Nicaragua is exceptionally complicated historically and politically.

## Institutional Evolution: From *Somocismo* through Civil War to *Sandinismo*

Nicaragua can actually trace its history of organized disaster response to the 1876 Managua *ahuyón*, when various committees were created to provide independent oversight of the receipt/expenditure of funds, manage relief, and plan mitigation (including the flood control channel noted previously). It was also in 1876 that the Presidential Guard was deployed in a disaster response role, an interesting Nicaraguan precedent for military involvement in disaster, but also a common model in most of Latin America and in other developing countries. In essence the 1876 disaster set the foundation for an emergency management model that included a response and a recovery phase and that incorporated such advanced concepts as risk assessment and hazard mitigation.

Following the 1931 Managua earthquake, the central government followed the 1876 pattern (including the independent oversight of relief funds) but with important differences—most notably a declaration of a state of war and the imposition of martial law “until the constitutional order shall have been restored.” With a significant U.S. military presence at the time, the Nicaraguan National Guard (Army) was charged with providing the command structure and logistics to carry out all response, recovery, and many of the reconstruction/restoration activities. The event contributed to the rise to power of the first member of the Somoza family, with the backing and full support of the U.S. government—highlighted by the presence of U.S. Marines, military aviation units, and warships anchored off Corinto, the main Nicaraguan port on the Pacific coast.

The 1931 disaster and its aftermath thus laid the foundation not only for the Somoza dynasty but also for armed resistance against foreign military intervention—historical developments not often appreciated outside Nicaragua. In essence, the combination of the rise of the first Somoza and the political-military presence of the United States sparked the famous guerrilla movement lead by Cesar Augusto Sandino, whose deeds (including having U.S. Marines chase him fruitlessly over half the country) inspired the modern leftist *Frente*

*Sandinista de Liberación Nacional* (FSLN) or simply “*los sandinistas*.”

After the 1972 earthquake, the central government (officially a three-member junta) declared a state of national emergency, again imposed martial law, and formed a National Emergency Committee comprising all the ministers of government, following the model from the 1876 and 1931 disasters. The one crucial difference in this case was that there was no independent oversight of funds. The director-in-chief of the National Guard, General Anastasio Somoza Debayle (yet another Somoza, 41 years after the 1931 earthquake), was designated as head of the committee. A separate advisory body, the National Reconstruction Committee, was subsequently formed and incorporated private sector and church leaders as well as public officials. This committee played an essential advisory role and was responsible for important policy recommendations, but final decisions were still the responsibility of the National Emergency Committee chaired by Somoza.

The omission of the independent and transparent committee and the centralization and control of all international and local relief efforts, combined with actual acts of mismanagement and misappropriation, resulted in widespread corruption in the aftermath of the 1972 disaster. These transgressions fueled discontent with the regime on one hand and strengthened the Sandinista guerrilla movement on the other. Despite these negatives, the work of the National Emergency Committee and the National Reconstruction Committee resulted in major emergency management and mitigation initiatives, including a 1973 building code for Managua and a legal base for disaster response (the 1973 Law of National Emergency, which gave the council of ministers authority to declare a state of emergency in cases of “public calamity”).

In May 1976, the Law of Civil Defense was enacted, establishing the *Instituto de Defensa Civil de Nicaragua* under the authority of the Presidency of the Republic (still Somoza). This law clarified many of the concepts and objec-

tives of the 1973 law and mandated a *Plan Nacional de Prevención y Control de Desastres* (a National Disaster Prevention and Control Plan), which also attempted to define the role of departmental and municipal governments in emergency management.

In July 1979, after a bitter and enormously destructive three-year civil war to oust the Somoza regime, the FSLN (the Sandinistas), with considerable overt and diplomatic support from the U.S. government, took power in Nicaragua. In 1981, the Sandinista government created the *Instituto Nacional de Estudios Territoriales* (INETER, the National Institute of Territorial Studies). INETER grouped under one structure different entities that had previously been dispersed. It also created new ones. INETER is currently responsible for providing government of Nicaragua technical support in geodesy and cartography (mapping), meteorology (weather services), water resources, geophysics, land use, and natural hazards.

A year after INETER was established, the Law of 1982 was enacted, creating the *Estado Mayor de Defensa Civil* (General Staff of Civil Defense) within the structure of the *Ejército Popular Sandinista* (EPS, the “new” Nicaraguan army). In truth, the basic function of Nicaraguan Civil Defense at the time was “defense of the revolution” during the war with the U.S.-backed *contras*. As such, it was an essentially political body, nominally civil but obviously closely connected to the EPS (a relationship that would prove problematic in 1998). To organize national (and civil) defense, the Sandinista government eventually divided the country into seven regions, each with considerable autonomy.

Importantly, a specialized curriculum was developed for military officers serving in Nicaraguan Civil Defense, and the program included several courses in emergency management. Therefore, by the late 1980s, Nicaragua for the first time had a cadre of at least rudimentarily trained emergency managers. The civil defense system was put to the test during Hurricane Joan, which traversed Nicaragua from Caribbean to Pacific in 1988. The new system was recognized as having helped to keep loss of life minimal during that disaster (only 25 dead). The system also worked effectively in the

response and recovery efforts after the Pacific coast tsunami of 1992.

Nicaraguan Civil Defense was strengthened in 1992 under a regional cooperation agreement (Centro de Coordinación para la Prevención de los Desastres—CEPREDE-NAC), with funding from the European Community (mainly Germany and Sweden). A “CEPREDENAC NACIONAL” was subsequently formed as an umbrella organization for civil defense in Nicaragua, which included various government departments and, importantly, INETER.

Another event test, Hurricane Cesar, traversed Nicaragua from one coast to the other in 1996, but loss of life and damage were again minimal. The new structure, combining the efforts of INETER and Civil Defense, was credited with effecting good preparedness and raising public awareness through timely, clear, and specific warnings issued through a range of printed and electronic media.

Therefore, Nicaraguan Civil Defense was the apparent lead organization in the response to Hurricane Mitch in 1998. On paper, Civil Defense has a permanent staff of 58 officers distributed in seven regional offices. Field reports, interviews, and observations indicate, however, that Civil Defense was stronger on paper than in reality (perhaps on the order of 40%). Bendaña offered this more general observation about the state of preparedness at the local level in Nicaragua on the eve of Mitch:

The elementary foundations of government presence—such as civil defense structures, police, fire brigades and health clinics, not to mention minimally empowered municipal entities—simply did not exist or were woefully understaffed, undertrained and underpaid with little or no communication links with the capital or with central authorities. [Bendaña, 1999, p. 18]

Thus, despite its previous relative successes with earlier disasters, Nicaraguan Civil Defense was overmatched by Hurricane Mitch and its cruel, leisurely, and moisture-laden path through Central America. Operationally, Nicaraguan Civil Defense was almost immediately overshadowed by the regular military; then it was further marginalized when relief was rechanneled away from government and instead sent through the church and NGOs.

In part because of the losses at Casitas volcano, Hurricane Mitch will never be forgotten in Nicaragua. While life loss due to the hurricane was not on a par with the 1931 and 1972 Managua earthquakes, the casualties,

homeless, and national infrastructure damage have earned Mitch a spot in Nicaragua's notorious history of disaster. The hurricane was also undoubtedly the most well-covered disaster by the media in the country's history.

## Media Attention Span

Covering a 10-week period (October 20-December 29, 1998) and the three main Nicaraguan newspapers (*La Prensa*, *El Nuevo Diario*, and *La Tribuna*), Table 13 (p. 54) shows the total number of Mitch stories published per week. Beginning with the pre-impact week and following the evolution of the post-impact efforts, 942 stories were published detailing the impact of Mitch. The accompanying Figure 4 (p. 55) graphically displays the same data.

As can be seen, coverage naturally rose as Mitch neared the country and began having impacts (week one), then rose steeply in weeks

two and three as the storm's full effects became clear. Coverage sharply declined from week three (178 stories) to week four (68 stories) and continued to decline until week seven and eight, when reconstruction issues, especially financing, became paramount concerns (coverage actually tripled from week six to week seven, from 27 stories to 88 stories).

As in Honduras, there was a significant difference among newspapers regarding Hurricane Mitch coverage. *La Prensa* led with 356 stories, *El Nuevo Diario* had 216, and *La Tribuna* carried the least—170.

## Assistance Credit

Tables 14 and 15 (pp. 56, 57) show how the Nicaraguan press reported foreign assistance. Again, these tables represent story counts of assistance reported by donor. Table 14 contains the story count for assistance by country. The most noted donor was the United States in 44 stories, followed by Spain in 19 and France in 11.

Table 15 contains the story count for NGO, IGO, and MNC assistance. The most noted donor in this category was the World Food Program (WFP) in seven stories, followed by the IADB in five stories, and the Red Cross in four. CARE and the World Bank follow with three each.

## Blame Themes

In contrast to the direct and highly visible involvement of President Flores in Honduras, Nicaragua's President Alemán tried to distance himself from Mitch and its consequences, in part because the media in Nicaragua are much more partisan than in Honduras, especially *El Nuevo Diario*, which is closely associated with the FSLN (Sandinista) party. *El Nuevo Diario* was constantly and consistently critical of the president and a major source of blame assignment. In contrast, *La Tribuna* and the *La Prensa* were more sympathetic and became primary mechanisms for blame deflection,

emphasizing national "solidarity" and chances for "reconstruction of the society."

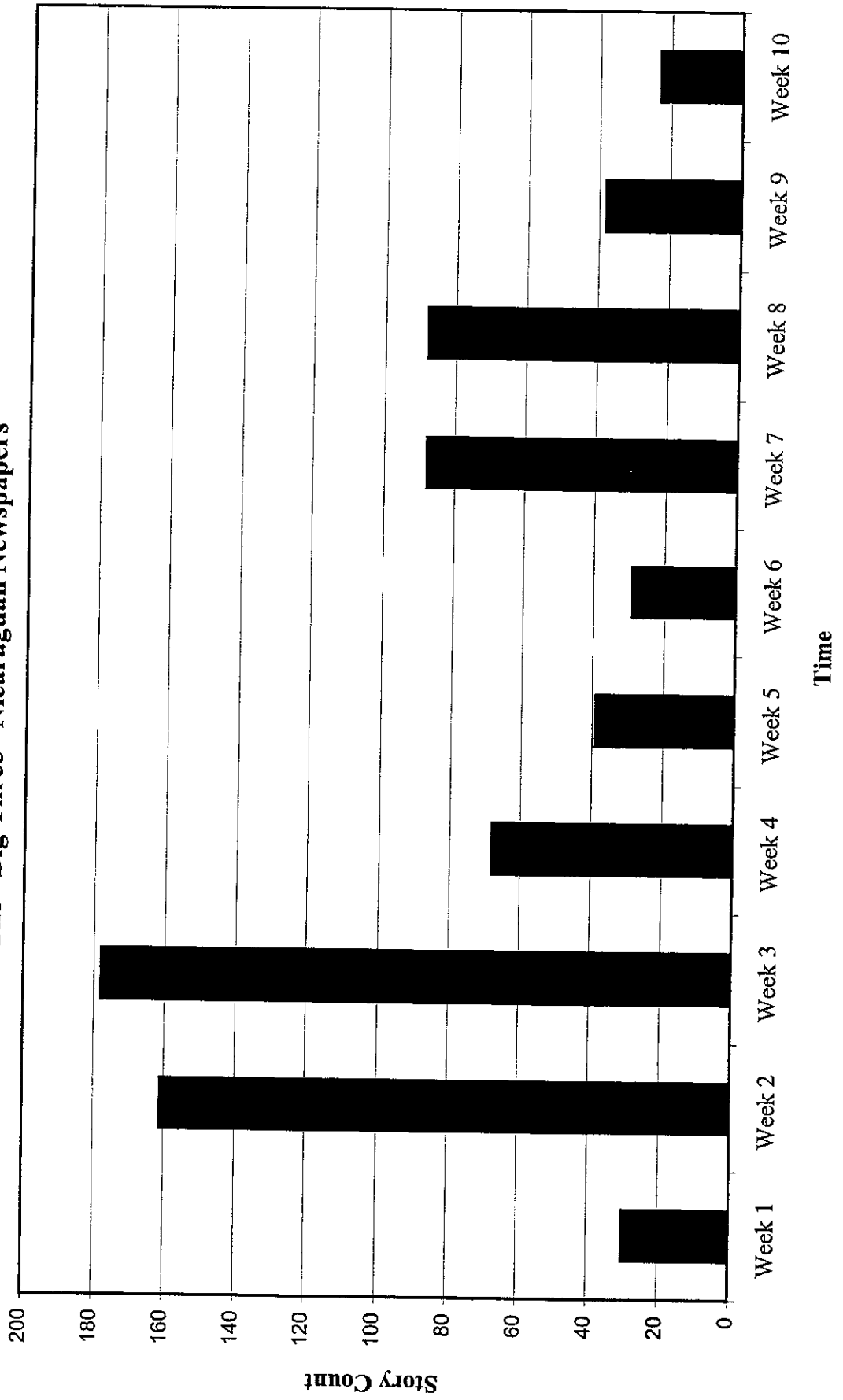
Stepping back and reviewing blame themes in general, however, we can identify the following:

1) *Lack of a Declaration*—President Alemán was pilloried, especially by the opposition, for taking so long to declare a national state of emergency. He tried to deflect this criticism by saying that he was concerned that the entire country was not even close to being equally affected and that "opportunistic" institutions and individuals might use an emergency declaration as a pretext to default on loans.

**Table 13**  
**Hurricane Mitch Coverage:**  
**The “Big Three” Nicaraguan Newspapers**

	<i>Number of Stories Published</i>
Week 1 (October 20-27)	30
Week 2 (October 28-November 3)	161
Week 3 (November 4-10)	178
Week 4 (November 11-17)	68
Week 5 (November 18-November 24)	39
Week 6 (November 25-December 1)	29
Week 7 (December 2-8)	88
Week 8 (December 9-15)	88
Week 9 (December 16-22)	38
Week 10 (December 23-29)	23

**Figure 4**  
**Hurricane Mitch Coverage:**  
**The "Big Three" Nicaraguan Newspapers**



**Table 14**  
**Hurricane Mitch:**  
**Nicaraguan Media Recognition of Assistance, by Donor Nation**

<i>Country</i>	<i>Number of Stories</i>
USA	44
Spain	19
Cuba	11
France	9
Mexico	9
Brasil	7
Taiwan	7
Germany	6
Italy	6
Netherlands	6
Finland	5
Austria	4
Argentina	3
Canada	3
China	3
England	3
Japan	3
Denmark	2
European Union	2
Sweden	2
El Salvador	1
Panama	1
Russia	1
Uruguay	1



**Table 15**

**Hurricane Mitch:  
Nicaraguan Media Recognition of Assistance,  
by NGOs, IGOs, and MNCs**

<i>NGO/IGOMNC</i>	<i>Number of Stories</i>
World Food Program	7
Inter-American Development Bank	5
Red Cross	4
World Bank	3
Care	3
GTZ (Germany)	2
Nicaraguans in Miami	2
Organization of American States	2
Pan American Health Organization	2
United Nations	2

The following NGOs, IGOs, and MNC's were mentioned in one story: ADES, ADRA-Denmark, Aldeas SOS, American Airlines, American Express, BCIE, Catholic Church, Green Peace, IDSM (Moravos), IMF, and Western Union.

2) *Lack of Presidential Commitment*—Alemán was nicknamed the “come and go president” (“*el que llegó y se fue*”), as he traveled to different sites with caravans of advisors and press—but left without offering any significant response to the devastation.

3) *Refusing Cuban Doctors*—The Alemán government was strongly criticized, again primarily by *El Nuevo Diario*, for refusing assistance from a Cuban medical team and for halting their entry into Nicaragua at the Honduran border.

4) *Partisan Favoritism*—This criticism was complicated, but it seemed that everyone was blaming everyone else (fairly or unfairly) over aid distribution patterns. Local governments blamed the central government for lack of immediate assistance. The central government accused municipalities of distorting the facts, and the opposition Sandinistas chimed in with complaints about aid going only to the Catholic Church and primarily to municipalities controlled by the government party or one of its close coalition partners. (In the end, the IMF and other donors publicly urged an end to the bickering.)

In contrast to blame, all three newspapers praised the Nicaraguan military (and the U.S. military, which was a startling turnaround since the days of the *contra* war) for their efforts

in rescue and assistance after Mitch. As in Honduras, international assistance received positive and essentially blameless coverage.

The Nicaraguan case is the acid test for media fairness in the treatment of international assistance, especially from the United States. If criticism and blame of international/U.S. assistance were to be found anywhere in the storms of 1998, it would have been with the opposition *El Nuevo Diario*, closely associated with the Sandinistas. Hearteningly, the Nicaraguan media, including *El Nuevo Diario*, gave extensive and positive coverage to assistance from the international community, and the U.S. received at least its fair share. Perhaps because of the disaster and the U.S. role in responding (including that of SOUTHCOM), it appears that a new era may indeed have begun in U.S.-Nicaragua relations.

As in both the Dominican Republic and Honduras, however, the media were much more critical, even scathing, of their own government. This increasing domestic politicization of disasters and disaster response is in interesting contrast to 20 years ago, when criticism of the international community in disaster response was extensive. That problem appears to have abated considerably, at least in the Western Hemisphere.

## A Policy Work in Progress: Nicaragua's Post-Mitch Changes and Proposals

Several important policy measures that bear monitoring have been undertaken in Nicaragua since Hurricane Mitch. The most important are the following:

1) *Decentralization of emergency management by a) developing, through training and exercises, the capabilities of municipios, based on the 1992 Law of Autonomy of the Municipalities, and b) further regionalizing Civil Defense.*

2) *Reactivation of a law originally proposed—but not passed—in 1995. This legislation, known as the Law Creating the National System of Civil Defense for the Prevention, Mitigation and Management of Disasters, was debated and passed in the 1999 legislative session. It potentially*

changes emergency management in Nicaragua in a very significant way by providing a budgeted *disaster fund* for the first time in Nicaraguan history. This legislation and its implementation should be monitored closely, especially since conflict appears to be developing between INETER and Nicaraguan Civil Defense over the role each institution should play in emergency management.

3) *Creation of a Natural Hazards Unit within INETER.* This unit is responsible for providing technical support for studies involving risk assessment, vulnerability assessment, and disaster preparedness and mitigation. This new unit has already undertaken several pilot studies and other projects with support from central

government agencies, the municipal government of Managua, CEPREDENAC, and the Swedish Agency for International Development.

4) *A central government commitment to the creation of a "national culture of disaster prevention and mitigation."*

The vice president of Nicaragua has been charged with leading this effort, and one goal is to move from thinking only about response and reconstruction to considering "transformation of existing structures."

## In Sum

Nicaraguan Civil Defense was overwhelmed by Hurricane Mitch and subsequently marginalized by the military itself and a combination of the church, NGOs, and in broad terms, Nicaraguan civil society. Indeed, even within the government, Nicaraguan Civil Defense had a problem, its long association with the EPS (and therefore the Sandinistas) causing the Alemán administration to view it with distrust. While this is peculiar to Nicaragua and a residual artifact of the civil war and then the *contra* war, it was important. The fact that Nicaraguan Civil Defense was not completely integrated with the army (it was, after all, nominally civil and reported officially to the presidency) meant that it was not viewed as "military" either. In sum, it was in an institutionally untenable position when faced with a catastrophe the size of Mitch.

More specifically focusing on the Nicaraguan response to the disaster, the following conclusions can be offered: 1) the tracking of the storm and the advising of central government authorities was accurate and reasonably timely; 2) however, central government recognition of the threat and activation of emergency plans was quite slow; 3) the initial response phase was less than effective because of the severity of event impacts; and 4) the tragic Casitas volcano debris flow/mudslide "disaster within the disaster" caught everyone by surprise.

It is still too early to tell (laws and plans are one thing; programs, projects, and budgets are the real test), but Hurricane Mitch may have finally focused Nicaragua (society and government) on a far more important issue: the interdependency of hazard vulnerability and effective emergency management structures in such diverse national activities as land use, planning,

environmental management, development practices, and—above all—policy making.

In the past, to take an example, lack of coherent and responsible land-use policies clearly resulted in Nicaraguan centers of population being located in highly vulnerable areas. Hurricane Mitch revealed just how tragic that inattention can be. Mitch also demonstrated that infrastructure designs, even when they met broad engineering standards, often failed to take into account the relative vulnerability of specific sites. Unfortunately, these examples can be easily generalized to other countries—not just those in Central America—including such developed countries as the United States, which has experienced dramatically increasing urban development in coastal communities, floodplains, and other vulnerable locations.

Finally, describing one of the larger issues that bedevils Central America, and the world for that matter, the EIU offered this perspective:

One of the key lessons learned from hurricane Mitch was that the pace of deforestation—currently estimated at some 100,000 ha per year—and the continuous advance of the agricultural sector into tropical forest reserves . . . has greatly magnified the destructive potential of natural disasters. . . . Post-hurricane assessments by [the UN, World Bank, and Inter-American Development Bank] have all emphasized the importance of a comprehensive environmental protection strategy to Nicaragua's long-term development. But to the dismay of the diplomatic community in Managua, when the [government of Nicaragua] presented its final list of projects to a public conference . . . not one project from the environmental commission had been included. [EIU (Nicaragua), Second Quarter, 1999, p. 18]

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<sup>3</sup> Nonetheless, it bears mentioning that deforestation was not a contributing factor in the Casitas volcano debris flow/mudslide. An on-site inspection in early November 1998 and subsequent scientific study conducted by INETER point to a combination of geologic and hydrologic causes as the source of the debris flow and mudslide. It appears that a landslide at the top of the volcano, with an approximate volume of 130,000 cubic meters, became the triggering factor in the tragedy. The same study also identified similar landslides to the west and to the north of the Mitch-induced event, with approximate respective volumes of 400,000 cubic meters and 600,000 cubic meters, that go back to prehistoric times.

## V

### CONCLUSION

#### Losses (Still) Going Up

Despite some successes during the United Nations International Decade for Natural Disaster Reduction, it was sadly ironic that even as this much-publicized event was coming to a close, Hurricane Georges and especially Hurricane Mitch would devastate three countries. Indeed, Mitch has now joined the pantheon of legendary hurricanes (including Agnes, Andrew, David, Gilbert, Hugo, and others)

whose names have been retired because they inflicted such horrific losses.

With this in mind, we need to step back and look at the entire situation for the Dominican Republic, Honduras, and Nicaragua (and many other countries, for that matter). A relatively simple equation can outline why disaster losses are going up, not down:

Population Growth
+
Urbanization
+
Mass Poverty-High Inequality
+
Deforestation and Other Environmental Degradation
+
Lack of Mitigation (Land-Use and Building Standards)
+
Institutional (National Emergency Organization/Civil Defense) Weakness
=
Increasing Vulnerability and Eventual Catastrophe

As a list, this is hardly novel, but the combination of the first three variables sets the stage for Mitch-type catastrophes. In many countries population growth continues at a rate that doubles population in less than 30 years. Moreover, most of the growth takes place in urban areas, pushing the population—particularly the poor, who are always the most vulnerable and almost always the most affected by extreme events—into ever more hazardous zones. Environmental degradation and deforestation in particular weaken natural defenses

against extreme events (in a hurricane, for example, valleys in denuded watersheds become flood “highways”), and the lack of effective land-use regulation and building standards allows people to occupy the wrong places and substandard structures. Weak national emergency institutions then cannot deal with the ensuing vulnerabilities and generally collapse or are marginalized when they try to respond to a major event. Again, the result is Mitch-type mass casualty events.

## PAHO's "Event Lessons"

Interestingly, in mid-February 1999, the Pan American Health Organization (PAHO) conducted a three-day "Evaluation of Preparedness and Response to Hurricanes Georges and Mitch," in Santo Domingo, the Dominican Republic. Drawing from the presentations and written reports, PAHO summarized nine major lessons:

- 1) While vulnerability analyses are essential for disaster management, the required data are "sketchy or non-existent."
- 2) Response coordination "within countries and between countries and international agencies and with donors" was inadequate.
- 3) Real-time evaluation of assistance was poor, resulting in it being "misdirected and inappropriate or [even] detrimental."
- 4) High levels of personnel turnover in disaster management agencies was problematic. ("The coordinating agencies within countries are subject to changes with politics, and consequently it is difficult to achieve continuity in preparedness and mitigation.")
- 5) Contingency plans for future emergencies "are inconsistent or non-existent."
- 6) Community and civil society involvement in disaster response is not "clearly defined" and is generally underdeveloped.
- 7) International help generally arrives "too late to be of assistance during the immediate post-

event phase, and communities and national organizations must rely on local and national resources during this period."

8) "National and international policies and guidelines on disaster management often are too difficult to understand at the community and individual level."

9) Hurricanes Georges and Mitch essentially recentralized disaster response and "interrupted ongoing efforts at sectoral decentralization."

Perhaps PAHO's most important finding, however, came in a separate and more general discussion:

It has been concluded that despite the advances achieved in some sectors in the field of disaster preparedness, they are still not sufficiently developed to have a permanent institutional capacity. [PAHO, 1999]

The PAHO recommendation is also hard to dispute:

A single coordinating institution for all disaster management activities should be present in each country. Representatives of all sectors and the civil society in disaster-prone areas must participate in the planning and implementation of coordination activities and must have a clear definition of their respective roles in the process. The national coordinating agency is responsible for coordinating all interactions between each of the stakeholder agencies and with international organizations. [PAHO, 1999]

## Our Conclusion and the "Accordion Option"

We agree with all of the PAHO lessons and recommendations but would take an even stronger position. First, as we demonstrated in our previous study (Olson et al., 2000), disasters must be understood as innately political events because they place enormous demand and decisionmaking stresses on governments that rather suddenly find themselves in situations of fluctuating resources, creating a variety of opportunities and constraints. While resources are indeed lost in disasters, others are freed up internally or

are supplied by external donors, generating both political conflict and cooperation.

Second, institutional readiness is the result of political and policy decisionmaking, because such decisions authoritatively allocate resources (personnel, budget, access, public/political profile) among competing agencies and different social groups. Unfortunately, disaster management agencies are usually low in the political hierarchy and have a hard time competing for priority status in "normal" time. Then, because they are weak, and as we have

seen with the Dominican Civil Defense, COPECO in Honduras, and Nicaraguan Civil Defense, disaster management agencies are then marginalized in times of disasters and catastrophes, which tends to make them even weaker, especially with regard to public esteem and internal morale. This is more than a vicious circle; it is a downward spiral.

Therefore, the international community and national governments must pay more attention to disaster management institution building in “normal time” so that they can have stronger national counterparts in “disaster time.” This will, however, require a more proactive—and more overtly political—strategy. Without such institution building, the international community and national governments will continue to see, most of the time in most of the cases, the marginalization/sidelining of the very organizations upon which they are supposed to rely for disaster leadership and coordination. The situation actually becomes quite absurd: temporary, ad hoc response “organizations” try to carry out/coordinate disaster management while simultaneously inventing the very processes and structures required to achieve that coordination—all during a period of national calamity and (often) media frenzy.

The ideal solution, of course, would be strong, well-connected, well-funded, and high-profile disaster management institutions capable of both pre-event (mitigation, preparedness) and response missions. Standing in the way of this ideal solution are two problems, one obvious, one less obvious and quite delicate: 1) host country lack of resources, and 2) a possible institution-building disincentive.

On the first point, all governments point out that even in “normal” time there are far more demands and programs than they can possibly meet or fund, and the problem is more acute as one moves down the economic development ladder to such countries as Honduras and Nicaragua. Given pressing daily priorities and competition for resources, it is difficult to entertain seriously proposals for a strong national emergency organization that will spend most of its time on stand-by (or at least will be perceived that way), regardless of the number and severity of a country’s hazards. As one national expert opined when the possibility of a strong national emergency organization was

posed, “That won’t happen here” (“*Eso no pasará acá*”).

Again, the second point is delicate and revolves around the question of whether or not the international donor community has created expectations of post-disaster assistance that actually work *against* host countries building strong, or at least stronger, national emergency organizations. The issue is simple: if countries with major natural hazards are reasonably certain of emergency assistance and then recovery and reconstruction funding from the international community in the event of disaster, where is the incentive for their governments to build stronger domestic institutions capable of effective mitigation, preparedness, and response? As we saw with Nicaragua and especially Honduras, there can even be “competition” for international relief and reconstruction funding after a disaster (funds that often dwarf traditional international development investments). With this pattern now apparently well established, what motivation is there for mitigation and preparedness that actually holds down disaster losses?

A middle ground or more practical solution is the “accordion option” for national emergency organizations that we suggested in our previous ENSO study:

Under this option, as an event approaches the emergency-disaster firebreak, it is civil defense [or a national emergency organization] itself that articulates something like the following: “Mr. President, the situation is beyond our capabilities and requires a national-level response and attention from the highest levels of several ministries. We have anticipated this contingency, and here is a plan to organize the required response. We have also drafted most of the necessary decrees and procedures and stand ready to become the core, the infrastructure, of this higher-level organization.” [Olson et al., 2000, p. 36]

The accordion plan has several advantages. First, it does not require major additional resources in normal or non-disaster time. Second, it does not affect the existing power relationships between ministries and offices in most executive branches, again at least in normal time. Third, it provides a blueprint for institutional expansion—but one that is only

temporary for the national emergency organization and therefore not (permanently) threatening to other actors in the government. Hence, after the disaster is “closed,” the national emergency organization contracts back to more or less its original size.

From our point of view, and based on the varying experiences of Peru, Ecuador, and Bolivia with the 1997-1998 El Niño, the Dominican Republic with Hurricane Georges, and Honduras and Nicaragua with Hurricane Mitch

in 1998, the accordion option merits further exploration for three primary reasons: 1) the *status quo ante* is not acceptable morally (we know too much to let these losses continue to rise); 2) the ideal solution is still politically impossible; so 3) the only politically and financially feasible step forward would be to improve the capabilities of national emergency organizations in Latin America to expand (or contract) as the situation dictates—the accordion option.



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