

A MEAN SEASON: FOUR HURRICANES HIT HARD


Introduction

Focus

On the 50th anniversary of the most destructive hurricane to ever hit Canada, this *News in Review* module looks at the 2004 hurricane season, one of the most dramatic on record. Four major storms tore a path of destruction through the Caribbean and the U.S. South. We review the damage they caused, some views on why they were so powerful, and how scientists are working to better understand and predict the behaviour of these great storms.

Further Research

For more information on Hurricane Hazel, see the November 2003 issue of *News in Review*. There is also excellent audio-visual material in the CBC Archives at http://archives.cbc.ca/IDD-1-70-77/disasters_tragedies/hurricane_hazel.

 Sections marked with this symbol indicate content suitable for younger viewers.

As this issue of *News in Review* is being prepared, there is still one month remaining in the 2004 hurricane season. Fortunately, it seems that the worst is over, because it has been a mean season indeed.

For residents of the state of Florida, the season has been especially bitter. Floridians have had few major storms in recent years. Hurricane Andrew, which blasted the state in 1992, doing US\$25-billion in damages, was the exception to this rule. Florida's charmed existence ended this year when "paradise" was hit by four major hurricanes—four storms with winds over 178 km/hr—within a six-week period. Four million people faced evacuation, and thousands—especially those who live in Florida's many trailer parks—were left homeless. The total cost of the damage to the state is expected to exceed \$50-billion, with no more than half of that covered by insurance.

Floridians, at least, have the resources of the world's richest nation to assist them in their recovery. Other nations in the paths of these storms are not as fortunate. Jamaica, Grenada, the Cayman Islands, and Cuba took tremendous hits during the season. Grenada lost about 90 per cent of its housing, leaving much of its population desperate.

For Discussion

This hurricane season featured round-the-clock coverage from Florida by news networks like CNN, who kept reporters and camera operators even in areas where evacuation orders had been given. How necessary is this type of news coverage? Does it in any way trivialize the dangers of these storms? Might the presence of the media encourage some to remain in a danger zone who might otherwise have followed the order to evacuate? Would you wish to be a reporter in these situations? Explain.

But nothing can compare with the horror in Haiti, where 3 000 people were killed in the city of Gonaïves by flooding and a mudslide caused by Hurricane Jeanne. Another 250 000 were left homeless—and this in a country with few resources and no functional central government. The international community, through the United Nations and international private aid groups, have been left trying to cope with the chaos.

Despite our relative freedom from tropical storms, this hurricane season has also resonated for Canadians. It was only one year ago that what was predicted to be a relatively benign Category One hurricane named Juan caused extensive damage in parts of Nova Scotia, including environmental scarring that will last for years. And it was exactly 50 years ago that the most disastrous hurricane to ever hit Canada, Hurricane Hazel, killed 81 people in the Toronto area. Like Jeanne, it was the flooding, not the wind, that did the damage.

Hazel's legacy for Toronto was a magnificent chain of parks in all the city's ravines. Jeanne's legacy for Gonaïves is likely to be years of further poverty, hunger, and despair.

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Video Review

As you watch the video portion of this *News in Review* segment, answer the questions in the spaces provided.

Quote

According to Peter Bowyer, program manager for the Canadian Hurricane Centre in Nova Scotia, "The chances of another Hazel hitting Toronto are 100 per cent. The question is, when? That simply isn't possible to predict." — *National Post*, October 9, 2004

Did you know . . .

The last time any U.S. state faced four hurricanes in one year, it was in 1886 and the state was Texas?

1. In what month do hurricanes start forming each year? _____
2. What was the name of the last major hurricane to hit Florida before 2004?

3. In how many weeks did four hurricanes make landfall in Florida during 2004? _____
4. What was the wind speed of Hurricane Charley? _____
5. How many people were evacuated from the path of Hurricane Frances?

6. Which hurricane is described as the most powerful of this season?

7. Which nation was most punished by "Ivan the Terrible"? _____
8. What did Hurricane Jeanne trigger that caused most of the death and destruction in Haiti? _____
9. How many people were left homeless in Gonaïves? _____
10. What is generally considered to have been the worst decade for intense hurricanes? _____
11. What was most remarkable in the hurricane news of August 2004?

12. Where do hurricanes incubate?

13. What is the name of the worst hurricane in Canadian history, which devastated Toronto in 1954? _____
14. How many people did it kill? _____

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Profiles of Terror

Further Research

You can read about all of this year's Atlantic tropical storms and hurricanes at www.ncdc.noaa.gov/oa/climate/research/2004/hurricanes04.html.

Four major hurricanes, four different stories of devastation.

Each of these hurricanes had a tremendous effect on the lives of millions of people, but the level of suffering they inflicted differed from one storm to the next.

As you read through this section describing the rampages of Charley, Frances, Ivan, and Jeanne, use the chart at the end to organize a profile of the life and work of each of the storms.

These notes are accompanied by some “sound bites” from people who survived the hurricanes.

Charley

- became a hurricane (Category Two) on August 11, 2004
- grazed Jamaica, passed over Cuba and the Dry Tortugas
- in Cuba, caused an estimated \$1-billion in damage, and at least four deaths
- hit Florida just north of Fort Myers on August 13 as a Category Four hurricane with 235 km/hr winds
- dissipated near Cape Cod on August 15
- 1.9 million people were forced to evacuate
- damage to property and business losses are estimated to exceed \$20-billion
- 377 000 buildings damaged
- 45 000 people were forced into public shelters
- more than one million people were left without power for up to three weeks

- at least 16 people were killed in Florida
- serious damage done to citrus crops and nursery plants, Florida's second largest industry after tourism

“It was very scary. Once you go through this, you don't want to go through it again. We were huddled together, we didn't know each other, but we were huddled together for dear life.” — Robert Van Kempen, who survived the storm in Arcadia, Florida, with several others in the Heritage Baptist Church (*The New York Times*, August 15, 2004)

Frances

- became a hurricane on August 26, reaching Category Four strength on August 28
- grazed the Turks and Caicos Islands, passed over the Bahamas
- struck central Florida on September 5 as a Category Two storm with 170 km/hr winds
- though weaker, it was a much larger and slower-moving storm that deposited enormous amounts of rain
- dissipated over Pennsylvania on September 9
- one Bahamian killed; islands lost 60 per cent of their electricity; damage estimated at over \$100-million
- 9 people killed in Florida
- 4.5 million left without electricity
- Kennedy Space Center's Vehicle Assembly Building virtually destroyed
- damage to property and business losses in Florida estimated at \$20-billion

Did you know . . .

Grenada is known as The Isle of Spice? The major crop is nutmeg, and Ivan uprooted 93 per cent of the nutmeg trees. Tragically, it takes 15 years for a newly planted tree to actually bear fruit.

“Most of Florida has been consumed by complacency and has just not worried about hurricanes. Maybe they won’t ignore them now.” — Herbert Saffir, co-creator of the Saffir-Simpson Scale describing hurricane intensity (*The New York Times*, September 7, 2004)

Ivan

- became a hurricane (Category Four) on September 5
- destroyed much of the property in Grenada on September 7, with devastation estimated at 85 per cent in the capital, St. George’s. Grenada’s most significant export source, its nutmeg trees, were almost totally destroyed.
- at least 39 people killed in Grenada, one in Barbados and another in Tobago
- achieved Category Five status with winds up to 260 km/hr on September 9
- tracked just offshore by Jamaica on September 11, killing at least 15 Jamaicans, destroying the roofs on hundreds of homes and totally destroying homes and farms in some areas
- 15 000 tourists were stranded in north coast hotels in Jamaica
- struck the Cayman Islands on September 12 with 255 km/hr winds
- passed just off Cuba’s western tip on September 13
- one million Cubans (in a population of 11 million) were evacuated
- thousands of Cubans lost their homes, much flooding
- came ashore on the Gulf Coast, doing some of its worst damage to Pensacola, Florida, and the surrounding area
- at least 40 killed in Florida and neighbouring states

- an estimated \$5- to \$10-billion in damages in Florida alone
- dissipated over eastern Texas on September 24

“We already suffer so much. I wonder why God makes us suffer more?” — Maria Montenegro, whose village of Boca de Galafre, Cuba, almost disappeared during Hurricane Ivan (*The New York Times*, September 15, 2004)

Jeanne

- Jeanne was barely a hurricane when it hit Haiti and the Dominican Republic on September 16
- heavy rainfall and flooding caused significant problems in northern Haiti, especially in the city of Gonaïves
- 250 000 people were left homeless
- over 3 000 people dead or missing in Haiti; 24 dead in the Dominican Republic
- Gonaïves’ major hospital was destroyed by the storm
- Jeanne moved over the Bahamas, then hit Florida as a Category Three storm on September 25, almost exactly where Frances had earlier come ashore
- five people were killed in Florida
- further damage was done to major agricultural areas
- losses were estimated at an additional \$6- to \$14-billion in Florida and Alabama
- rainfall associated with the storm caused flooding as far north as New Jersey until moving out over the ocean on September 29

“It felt like God had emptied his bathtub on the entire city.” — Chrismene Prever, Gonaïves resident (*Toronto Star*, September 23, 2004)

Four Strong Winds

Criteria	Charley	Frances	Ivan	Jeanne
Category and Wind Speed				
Countries/States Most Affected				
Description of Damage Caused				
Number of Lives Lost				
Estimated Monetary Losses				

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Why Such a Mean Season?

Definition

The *Saffir-Simpson Hurricane Scale* is a tool used to measure the force and damage capacity of hurricanes. The categories are:
Category One:
Winds 119-153 km/hr
Category Two:
Winds 154-177 km/hr
Category Three:
Winds 178-209 km/hr
Category Four:
Winds 210-249 km/hr
Category Five:
Winds 250+ km/hr
A full explanation of the scale is available at www.nhc.noaa.gov/aboutsshs.shtml.

The 2004 hurricane season may have been spectacular, but it was not totally unexpected.

The hurricane season in the Atlantic Ocean runs for six months, from June 1 through November 30. In 2004, pre-season forecasters generally predicted an above-average season, with the U.S. National Oceanic and Atmospheric Administration's (NOAA) forecast a typical one. In May, it called for 12 to 15 tropical storms, with six to eight hurricanes, two to four of which would be major hurricanes (Category Three or higher on the Saffir-Simpson scale). A "normal" season sees nine or 10 storms, five or six of which develop into hurricanes, and two or three of which become major hurricanes.

Since 1995, the number of storms forming in the Atlantic has exceeded the seasonal average, and forecasters anticipated that this trend would continue. It did, indeed. There were 13 named tropical storms, and one subtropical. Eight of these developed into hurricanes; of the eight, six developed into major hurricanes, making this one of the most devastating seasons on record.

Records show that weather systems in the Atlantic tend to follow a cycle of 20 or more years of relatively calm storm seasons followed by 20 or so of more frequent and severe tropical storms and hurricanes. With the current cycle having begun in 1995, meteorologists believe that the frequency and intensity of storms will continue above average for at least the next 10 years before a decline begins.

One reason why this season seemed so unusually intense is the number of

storms that struck in one location—Florida. There have been 35 major hurricanes between 1995 and 2003, but only four of these hit the U.S. Between 1966 and 2003, only one major hurricane devastated south Florida (Andrew in 1992). In the previous highly active period, 1926-1965, 14 major damaging hurricanes hit the area.

Two of the major factors that meteorologists examine in determining the likelihood of Atlantic storms are surface temperatures in the tropical Atlantic and low-level trade winds in the Atlantic and Caribbean. In 2004, both of these were considerably above average, and are believed to have contributed to the intensity of the storms.

The Role of Global Warming

Is global warming playing a role in the increase in number and intensity of tropical storms, in the Atlantic or elsewhere? Experts mostly say it is not—or, at least, not yet. Experts say that 2004's increased activity can all be explained by a natural hurricane cycle.

In 2001, the Intergovernmental Panel on Climate Change presented a report indicating its expectation that global temperatures would increase by 1.4 to 5.8 degrees Celsius by 2100. One area the panel specifically examined was the effect that such an increase in temperature might have on major storms.

The panel anticipated that major storms—hurricanes, cyclones, and typhoons—might produce higher winds and heavier rains in some areas, but reported that current science offered no indication whether the frequency or location of such storms might change. The report did note that no global

Did You Know . . .

The terms *hurricane* and *typhoon* are area-specific names for storms generically called tropical cyclones? Hurricanes take place in the North Atlantic Ocean and the eastern Pacific Ocean; the storms are called typhoons in the Northwest Pacific.

changes had been noted in the 20th century in either the number of storms or their strength.

On the other hand, a study by the NOAA's Geophysical Fluid Dynamics Laboratory (GFDL) is clear in its conclusions: "The strongest hurricanes in the present climate may be upstaged by even more intense hurricanes over the next century as the earth's climate is warmed by increasing levels of greenhouse gases in the atmosphere. Although we cannot say at present whether more or fewer hurricane will occur in the future with global warming, the hurricanes that do occur near

the end of the 21st century are expected to be stronger and have significantly more intense rainfall than under present-day climate conditions."

As part of its own report, the GFDL surveys a group of several other studies on the problem and concludes: "An implication of these studies is that if the frequency of tropical cyclones remains the same over the coming century, a greenhouse-gas induced warming may lead to a gradually increasing risk in the occurrence of highly destructive Category Five storms." The report is available at www.gfdl.noaa.gov/~tk/glob_warm_hurr.html.

Discussion

Working in small "buzz groups" discuss the following questions. Be prepared to share your answers with a report to your full class.

1. If the GFDL and other scientists are correct in believing that more hurricanes at the end of the 21st century will be Category Five storms, what will be some of the outcomes of this shift in weather patterns?
2. Who will be the people likely to be most affected by this shift to more destructive storms?
3. What steps might governments take to prepare for this change?
4. What is your personal reaction to this kind of information?

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Predicting and Controlling Hurricanes

Further Research

Visit the National Hurricane Center, one of the best sources of hurricane information, at www.nhc.noaa.gov. In Canada, Environment Canada runs the Canadian Hurricane Centre in Dartmouth, Nova Scotia. Visit at www.ns.ec.gc.ca/weather/hurricanes.

One thing became very clear during the 2004 hurricane season: the science of predicting how hurricanes will develop and what paths they will follow is still in its infancy. Throughout the season, meteorologists were regularly surprised by the behaviour of many of the storms they were observing.

Charley, the first hurricane to strike Florida, was typical of the problems meteorologists had to deal with. An 11 a.m. forecast on August 13, 2004, predicted that Charley would hit Florida as a Category Two storm with winds of approximately 163 km/hr. A mere five hours later, Charley made landfall as a Category Four storm with 235 km/hr winds—just 15 km/hr short of the most destructive storm, a Category Five.

John L. Beven, a specialist at the National Hurricane Center in Miami, could only speculate on the reasons for this unexpected intensification. Some of the reasons it might have happened included “some extra pulse of energy from warm gulf waters, some shift in winds that might otherwise hinder the storm, or some chaotic change in the walls of clouds around its eye” (*The New York Times*, August 14, 2004).

Meteorologists admit that mistakes in judging intensity are common for a variety of reasons. These problems include difficulties in measuring water temperature, small changes in atmospheric conditions in the path of storms, and the complex physics of the many thunderstorms at the heart of the hurricane.

The difficulties in measuring water temperature serve as one example of what meteorologists are up against. At present, satellites constantly monitor the

surface temperature of the ocean, but are unable to measure the temperatures of the deeper layers. Hurricanes often pull these deeper layers to the surface; if the water is cold, it will tend to stifle the growth of the hurricane by reducing the energy obtained from warm-water evaporation. Data-transmitting buoys have been used in the past to study storms, but none were placed in the path of Charley.

Charley’s path was also very hard to predict. Two million people were evacuated from the west coast of Florida, but the storm tracked across the middle of the state farther south than had been predicted. As a result, many of the residents of the counties worst affected were inadequately prepared and suffered more damage than they expected.

In an editorial on August 16, 2004, *The New York Times* accurately summed up the state of current hurricane predictions. “A long, active hurricane season lies ahead of us. The tropical storms are lining up one after another, and experts predict that there’s a very good chance this season may see some six to eight hurricanes, two to four of which could be major. Charley should remind us that nature is as hard to predict as it is to control.”

Controlling Hurricanes?

With so much left to learn about the science of hurricanes, it may seem very premature to be discussing the possibility that there might be ways of controlling them. However, scientists like Ross N. Hoffman of Atmospheric and Environmental Research, a consulting firm for research and development, are

Did you know . . .

Some observers have even seriously suggested using atomic bombs to destroy hurricanes before they hit land?

already exploring ways in which this might happen. Writing in the October 2004 *Scientific American*, Hoffman describes how he and his colleagues, with funding from the NASA Institute for Advanced Concepts, are using computer models to determine how human intervention might be able to affect both the strength and paths of major hurricanes.

Hoffman identifies three areas on which researchers need to focus: “To even consider controlling hurricanes, researchers will need to be able to predict a storm’s course extremely accurately, to identify the physical changes (such as alterations in air temperature) that would influence its behavior, and to find ways to effect those changes.” Hoffman goes on to say that “the very thing that makes forecasting any weather difficult—the atmosphere’s extreme sensitivity to small stimuli—may well be the key to achieving the control we seek.”

In the early 1960s, experiments were actually performed by the U.S. in which attempts were made to slow the devel-

opment of hurricanes using cloud seeding techniques. Few scientists would now expect such an approach to work. What does seem likely to work, according to Hoffman’s research, is using small changes in temperature in and around hurricanes to do two things: shift the path of the hurricane to a predictable course, and slow the hurricane’s winds.

Hoffman acknowledges that the energy required to heat the atmosphere to do either of these things would be huge, but he also believes that orbiting solar-powered satellites could supply this energy. The satellites would be tuned to frequencies that would be best absorbed by water vapour at different levels in the atmosphere.

There are other methods that Hoffman thinks might be useful in hurricane modification, and these are also discussed in his article. He predicts that what he describes as “modest trials” in weather modification—efforts to enhance rainfall—using his techniques, could begin within 10 to 20 years.

Analysis

1. Why do scientists find it so difficult to accurately measure and predict hurricanes?
2. What methods have been suggested for hurricane control?

Extension Issue

One danger of humankind’s ability to modify the weather that Hoffman identifies would be its use as a weapon. A United Nations Convention in the 1970s banned the use of weather modification as a weapon. How likely do you think it is that countries would be able to resist using this weapon should it become available? How might a so-called “weather weapon” actually be used?

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Pity the Poor

One of the hardest-hit communities during this terrible hurricane season was Maple Leaf Estates, a trailer-park community home to thousands of wintering Canadians. Charley destroyed half the homes on August 13, 2004.

Did you know . . . Most trailer parks are considered 'private'? The roads and services inside are left to the managers and owners of the park homes to clean up. They must also restore their own power. Thus, it usually takes much longer to restore these communities.

A hurricane, like any other natural disaster, wreaks its worst havoc upon those who are least prepared for it. Those who always suffer the most are the poor; and it doesn't matter whether they are residents of a developing country like Haiti or of a rich state like Florida. In both cases it is the disadvantaged who suffer most.

Florida

The "Sunshine State" is home to some very affluent people, but it is also home to many less-than-wealthy retirees who have come south to escape the cold weather that exists for much of the year in many parts of North America.

Florida has the highest percentage of residents 65 and older in the United States—34.7 per cent in the last census. Many of them are on fixed incomes, and many are in poor health. It is also home to many refugees.

Many poorer people live in communities of mobile homes—the very communities that were hardest hit during the hurricane season. Charley, which came ashore on the west coast of Florida, was especially hard on these communities. The west coast usually does not bear the brunt of major hurricanes, and building codes are more relaxed than they are in areas subject to more frequent storms.

A preliminary Red Cross assessment determined that Hurricane Charley alone destroyed or made uninhabitable a total of 31 000 residences. Some of these belonged to snowbirds (residents of the northern U.S. or Canada who make their winter home in Florida), but most were year-round homes. As a result, thousands had to move in with

friends and relatives, or move into motels, shelters, or even their automobiles.

Worst off are those on welfare or fixed incomes. Those who lived in damaged housing projects have been told that it could be up to two years before the buildings are repaired—and there are no guarantees that alternate housing will be found for them until then.

For the elderly who fall into this category, the situation is even worse. These are people who rely on the community, who follow structured routines, and often find it difficult to adapt to change. Most came to Florida because it promised an inexpensive and relatively carefree retirement. Few could afford to carry the kind of insurance that would replace what they have lost in a catastrophic storm. Many have now lost everything they had and face an uncertain future.

But it could be worse. As Ruth Birge, whose trailer home in Harborview Park was badly damaged by Charley, said: "Nobody here got hurt. I am thankful for that. Things can be repaired, but lives cannot be fixed" (*The New York Times*, August 15, 2004).

Haiti

In Haiti it was much worse. Haiti is one of the poorest countries in the world. Many of its people live on less than one dollar per day. The country has been in political turmoil for months. A violent revolt drove its president, Jean-Bertrand Aristide, into exile in March 2004.

Once a lush country, Haiti has lost almost all of its trees. Many of them were cut down to make charcoal for

cooking, the only fuel readily available for an impoverished population.

On September 16, Hurricane Jeanne passed over the northern part of the country. The rain accompanying the storm released huge quantities of mud in the bare hills over the city of Gonaïves. The mud literally buried the city. The death toll has been determined at over 3 000, and more than 250 000 people have been left homeless. Thousands of acres of crops in the most fertile part of the country were also destroyed.

The United Nations, with a small force of UN soldiers, directed the relief effort. They received little help from the Haitian government or the local police, who fled the city without warning. Supply trucks were attacked and looted. Tear gas was needed to control rioting crowds desperately seeking assistance.

The city's main hospital was destroyed in the storm, and the chief

sources of medical aid included a makeshift clinic put together by Chilean soldiers and three others staffed by foreign doctors. The main worry for most medical personnel was the threat of water-borne illness, especially cholera and typhoid.

Unlike Florida, Haiti has little hope of rapid recovery from its disaster. Professor Henry Carey of Georgia State University, an expert on Haiti, summed up the situation: "Haiti's situation right now is a catastrophe. The state collapsed in February and it remains unreconstituted. Without a functioning state, you can't build stronger houses, repair infrastructure, build control dams. Routine hurricanes and storms lead to catastrophic loss of life" (*The New York Times*, September 26, 2004).

For some ideas on how you might help the Haitian recovery, see the next section, "How Can We Help?"

To Consider

Many people, including Florida governor Jeb Bush, (brother of President George W. Bush) have said that this year's multiple hurricanes should at least serve to make blasé Floridians more aware of the dangers of catastrophic storms everywhere in the state. Given conditions in Haiti, is Hurricane Jeanne likely to make any difference in the way Haitians live their lives? Do foreign governments and international agencies have any responsibility to intervene for such change?

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How Can We Help?

Further Research

Appeals for aid to Haiti have been made by several charitable organizations. To read the UNICEF appeal, go to www.unicef.org/emerg/haiti/index_23793.html. Information on CARE's effort in Haiti is at http://care.ca/work/emergency/haiti/haiti_e.shtm. The Canadian Red Cross has its information at www.redcross.ca/article.asp?id=010612&tid=001.

The pictures of the devastation caused by Hurricane Jeanne in Haiti are stunning. Without them, it would be almost impossible to believe how desperate the lives of its victims have become. With them, it is almost impossible to resist the urge to somehow get help to those in need.

One organization hard at work in the Haitian relief effort is UNICEF (United Nations International Children's Emergency Fund). A focus of its efforts is a campaign to get the children of the ravaged city of Gonaïves back to school, and they are making a major effort to raise money for this purpose. This is one area in which Canadian students can be of real assistance.

One Person's Contribution

Consider the efforts of Bilaal Rajan, a Grade 4 student at The Giles School in Don Mills, Ontario. He read an appeal from UNICEF in a local paper and decided he would play his part. Rejecting his father's suggestion that he donate his allowance as too small a contribution, Bilaal convinced him to donate boxes of cookies from his company so that he and a team of 12 friends could sell them as a fund-raiser at lunch, after school, and on weekends. He and his team have raised over \$6 000 for UNICEF.

Says Bilaal: "I think that children in other parts of the world that are really poor should have exactly what we have. . . . I hope that they have the same type of education we have here, clean water to drink, food—all the stuff that they need" (*The North York Mirror*, October 27, 2004).

Organizing an Activity

If you share Bilaal's hope, you may wish, as a class, to organize an activity to raise money for UNICEF or one of the other charities active in Haiti (see the suggestions in the sidebar and use the organizer on the next page to help you decide which group to help).

The type of fund-raising activity you choose to organize may be very different from Bilaal's; just remember to arrange any necessary permission with your school administration and students' council.

Once you have selected your activity, you may find the following chart useful to help organize the various tasks required to complete the fund-raiser and to ensure the participation of all your classmates. Under the "Tasks" heading, assign further responsibilities as required.

Selecting an Activity

Use the chart on the next page to identify some charities and activities that you might consider.

Information About Charity and Contact Information	Possible Fund-raising Activities

Once you have agreed on a charity and activity, move on to organizing this event.

Tasks	Student(s) Responsible	Complete By (Date)
1. People to Contact		
2. Information to be Gathered		
3. Permission to Arrange		
4.		
5.		
6.		