

# Hurricane Gilbert

*At the 1988 Hurricane Conference, held in the USA last April, a prediction was made that the Caribbean region, which had experienced an unusually low number of hurricanes for almost a decade, was likely to be affected by several of these severe weather systems in the course of the coming months. Participants at the conference, including a number of emergency management officials from the Caribbean, wondered how the countries of the region would cope when "normal" hurricane behavior resumed.*

*The period since 1980 had seen a significant investment in disaster management training, technical assistance, improved telecommunication resources and the strengthening of national institutional capacity for disaster response, through the UNDRO/PAHO/LRCS Pan Caribbean Disaster Prevention and Preparedness Project (PCDPPP). The following article summarizes the effects of, and response to, Hurricane Gilbert, when it swept through the Caribbean region in mid-October.*

Hurricane Gilbert, developed from Tropical Depression No 12 of the 1988 Hurricane Season, will go down in the record books as the most powerful and one of the most devastating North Atlantic cyclones. Gilbert's intensity and impact will ensure that it is not soon forgotten. The name Gilbert will probably be retired, or not used for several years, from the list operating in the Atlantic region.

## Jamaica

Described as the worst natural disaster in Jamaica's history, Hurricane Gilbert struck the country with an impressive force on Monday, 12 September, leaving a trail of destruction never before experienced. Two days earlier UNDRO had already issued an information report warning of the probability of Gilbert hitting the country.

On the island, the Jamaican authorities declared a Hurricane Watch on Saturday evening 10 September, and a Hurricane Warning the following day. Arrange-

ments were made for shops which would normally close on Sundays to remain open to ensure that the public could stock up on emergency items, and plans which the Jamaican authorities had been preparing since 1980 were implemented.

It appears that although many Jamaicans heard the watch and warning information they did not take them seriously until late on Sunday the 11th. As a consequence some avoidable losses occurred, when Gilbert struck with winds of up to 125 mph. The hurricane moved across Jamaica from East to West tearing off roofs, destroying vegetation and damaging the infrastructure. The hurricane winds lasted approximately 10 to 12 hours with the eye passing directly over the country.

Shortly after the disaster, the Project Manager of PCDPPP arrived as UNDRO's delegate to support Government efforts in assessing the damage and ascertaining the type and amount of external assistance needed.

The number of deaths was low considering the intensity of the Hurricane; only 43 dead and hardly any injured. The damage to the island was estimated at over US \$800 million. An estimated one-fifth of the housing sector was either wrecked or severely damaged. Thousands of Jamaicans were forced to seek refuge in emergency shelters which soon became overcrowded. The situation was made worse by the fact that many designated shelters were damaged by the hurricane. At least 500,000 people were made homeless.

Electricity and water supplies were cut off and many water mains were broken. Telephone and communication services, both national and international, were severely disrupted.

Gilbert left the streets of Kingston, and many other towns and highways throughout the island, littered with downed utility poles and power lines, fallen billboards, trees, branches, street signs and traffic lights. After a few days, electricity and water supplies were

restored in some areas as the country struggled to return to a semblance of normality.

#### Other countries affected

Other Caribbean countries were affected to a lesser degree. Flooding and landslides occurred in St. Lucia, damaging roads and bridges and destroying about three percent of the banana plantations. Guadeloupe and Martinique suffered similar losses.

Two persons were killed in Puerto Rico, while the Dominican Republic reported eight deaths, 3,000 homeless and severe damage to the coffee, banana and cotton plantations as well as to food crops. On Haiti, thirty lives were lost.

Apart from Jamaica, the most severe damage occurred in Mexico. The small offshore islands were particularly badly affected, with the hurricane damaging or destroying approximately 23,000 homes, blocking roads and causing several deaths. After crossing the Gulf of Mexico, Gilbert had been reduced to a tropical storm when it struck the northeast states of Mexico. It was in this area that the highest loss of life took place, with several

hundred persons reported missing after the passage of the storm. The single largest loss of life was near the city of Monterrey, where four buses transporting evacuees were overwhelmed by the floodwaters of the Santa Clara River; it is estimated that nearly 200 people were killed in this single incident.

In the wake of Gilbert, international assistance to Jamaica was immediately forthcoming both from other countries in the Caribbean region and from the rest of the world.

In all emergencies the most difficult task is to introduce priorities. Relief officials have to work in an environment which, by definition, is disorganized, without telephones, electricity, and with little or no transport facilities. This is why it is important for all donors — governments, the United Nations, and non-governmental organizations — to follow the lead of the central, national, authority.

UNDRO has now begun evaluating the effectiveness of its assistance, and that of the United Nations system, to the Government of Jamaica. Preliminary findings suggest that pre-disaster prevention

and preparedness measures, supported by the PCDPPP project, were effective. Although Gilbert was the most powerful hurricane observed in the region this century, it did not lead to the loss of life associated with past hurricanes, such as David in 1979 or Flora in 1963. Without adequate precautions by the population, the number of casualties undoubtedly would have been much higher. However, the disaster revealed a number of weaknesses: the heavy reliance of early-warning systems on electricity and telephone lines, for instance, caused problems when the electrical supply was cut off and telecommunications broke down.

The principal problem in disaster mitigation which still remains largely unsolved is how to reduce the economic impact of major disasters. Although there are, of course, ways of reducing the vulnerability of buildings and of the infrastructure, effective means of protecting standing crops may never be found. ■

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*This article is based on material provided by Mr. Franklin McDonald, Project Manager of the PCDPPP, and Mr. Philippe Boullé, Director, UNDRO Office in New York.*

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*Ruined houses and vegetation in Portland, Jamaica.*

*J.S. Tyndale-Biscoe Photo*