INTRODUCTION

Kick'em Jenny is the only known active submarine volcano in the Lesser Antilles. It is located at 12.30 degrees North and 61.63 degrees West, about one and a half kilometers to the west of the Sister rocks which are themselves three kilometers west of the Ile de Ronde in the Southern Grenadine Islands.

The name Kick'em Jenny is used on all maps for a small near by island which has no connection with this volcano. The name is slightly confusing since some yachtsmen refer to the whole area between the north coast of Grenada and the Ile de Ronde and Diamond Rock as Kick'em Jenny. At times the winds and currents in this area are said to be extremely difficult. At the present time the summit of the volcano is about 160 meters below the surface of the sea.

HISTORICAL ACTIVITY

The first known eruption of Kick'em Jenny submarine volcano occurred on July 24th 1939, and was observed from the village of Sauteurs by the well known local historian Father William Debas. Strong earth tremors were felt in the northern part of Grenada and the Grenadines on the morning of July 24, and just after midday, a column of black smoke rose from a point in the sea about eight kilometers north of Sauteurs.

The column contained solid dark-coloured objects of considerable size which fell back into the sea. Further explosions occurred a little after six in the evening of the same day and earth tremors continued for several days.

On the 5th and 6th October 1943, a similar eruption took place. A similar episode again occurred on October 30th 1953. There was no disturbance of the sea surface, but strong earth tremors were felt in northern Grenada.

The volcano erupted yet again in October 1965 this time on the 25th. Again on the 6th August 1966, 5th July 1972, 5th - 6th September 1974 and 4th November 1977. The 1974 eruption again ejected material above the surface of the sea. Further surveys on the volcano were carried out in 1976, 1978 and 1983 and showed that the volcano grew towards the surface by more than thirty meters during these most recent eruptions.

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DISASTER NEWS BRIEFS

GUYANA: Drought

A drought across the Caribbean Basin has reduced farm output, forced widespread water rationing and inspired prayers for rain in Guyana. These prayers were answered with rain in June but the drought was one of the worst dry spells in Guyana in a decade. The drought's economic impact is expected to be particularly felt in the sugar harvest and the rice harvest which are expected to fall 17 percent and 32 percent respectively.

(Reuters)

GUYANA: Fire

Quick action by workers at a city petrol station and efforts by fire fighters on Friday 20th May, averted what might have developed into a major disaster in the city. The petrol station workers reported an explosion followed by a fire in the tyre repair area shortly after mid-day. A fuel tanker was at the time delivering 6,000 gallons of gasoline, an exercise which was quickly abandoned and the tanker removed.

Firemen who quickly arrived on the scene were able to bring the fire under control before any major damage was done.

(CANA)

JAMAICA: Earthquake

An earthquake of Mag. 4.3 on the Richter scale strongly affected Eastern and Central Jamaica at 11:24 a.m. on Monday 9th May. Three people were injured and there was slight damage reported in the Kingston, Linstead and lower St. Andrews areas. It was reported to be the strongest event felt since March 1st, 1957 and lasted for just over 90 seconds. An after-shock measuring 3.6 on the Richter scale was felt eight days after on 16th May but there were no reports of damage.

CUBA: Flood

The start of the hurricane season was heralded by a tropical depression which formed in the Northwest Caribbean on May 31st. Heavy rains which started 31st May, continued over five (5) days and affected the Central region of Cuba causing severe floods and serious damage to the national economy.

The provinces most affected were Sancti Spiritus, Cienfuegos, Ciego de Avila and Camaguey. Rainfall recorded was 634 mm in Cienfuegos, 587 mm in Villa Clara and 556 mm in Sancti Spiritus in an eight (8) hour period.

Loss and damage were reported as 22 dead, 1 missing, several dozens injured. 90,000 people were affected of which 31,000 were evacuated. 131 roads were impassable and 55 major railway lines were cut off. 5,700 houses were damaged, 15 schools and hospitals and a number of agricultural silos were also damaged. Thousands of livestock were lost.

CUBA: Storm

A brief, violent storm hit the municipality of Manati in Oriente province in June, tearing the roofs off about 300 homes and damaging a sugar mill, bus station, a warehouse and seven schools, Cuban radio reported.

(Miami Herald)

TRINIDAD: Explosion

On Tuesday 3rd May at Camp Omega in Chaguaramas, there was a major explosion of some 25 tons of gelignite which caused the death of four firemen and two soldiers who were fighting a bushfire nearby. A Committee has been set up to investigate the circumstances surrounding the incident and to establish what caused the explosion.

CUBA: Train/Bus Accident

At least 27 people were killed and 87 injured on June 25th when a passenger train crashed into a bus on the outskirts of Havana. This was the worst road accident in Cuba in over a decade and all of those killed, were on the bus and mostly teenagers. The packed bus was returning from nearby beaches and was split in two by a train at a level crossing. Witnesses could not explain why the
driver failed to see the oncoming train.
(CANA)

NEVIS: Fire

A 39 year old Nevisian man was burnt to death at his home on the 19th April in a blaze which completely destroyed his wooden house in Combermere Village, eight miles outside of Nevis. When firemen arrived on the scene, little could be done to avert the destruction.
(EC News)

ST. THOMAS, USVI: Fire

The Budget Office in Charlotte Amalie, a one-storey wooden building on Government Hill, was destroyed on Wednesday 29th June, 1988, by a fire that also caused an electrical outage in the neighbourhood. The building's roof and floor caved in and interior walls collapsed. It was not immediately known whether budget records were destroyed. The cause of the fire is being investigated.
(B'dos Advocate-AP)

BAHAMAS: Heavy Rainfall

Some 7.6 inches of rain drenched the Bahamas during the first five days of June - the highest recorded for a similar period in at least 20 years. Meteorological Department officials reported.

Heavy downpours caused considerable damage to overhead cables, disrupting telephone services and the electricity supply. Some roads were rendered impassable, with water knee-deep in several places.
(Barbados Advocate)

KICK EM JENNY....

Temperature probes lowered into the crater in 1976 showed that there were active hotspots around the Summit. Kick'em Jenny is at present more active than any other volcano in the West Indies. Although the 1939 eruption was the first to be described, it is probable that many previous eruptions took place before 1939 and either were not noticed or descriptions of them have not survived.

The rate of growth towards the surface between 1972 and 1983 was a little less than three meters per year so that if this rate is continued the volcano can be expected to break the surface and form a new Grenadine island within the next fifty to sixty years.

However, a simple extrapolation of the growth rate in this way is subject to very large uncertainties and it is certainly possible that the summit could reach the surface much sooner than this.

As Kick'em Jenny grows towards the surface, explosions are likely to break the surface more often and to become more violent. It is difficult to predict exactly what will happen when Kick'em Jenny breaks the surface. Although new volcanoes must have broken the surface of the sea many times previously in the geological history of the Lesser Antilles, none has done so in the relatively short period of their written history. The most recent new island was almost certainly the Ile de Camille which is very close to Kick'em Jenny, just to the south of the Ile de Ronde. This island was formed very recently, probably within the last thousand years, and the form of the island provides some clues about the probable way in which Kick'em Jenny island will form.

DISASTER PREPAREDNESS

In recent years, there have been the eruption of Capelinhos Volcano in the Azores in 1957 - 58 and the formation of Surtsey Island off the south coast of Iceland in 1963 - 64. Each of these began with fairly violent, but small-scale explosions caused by reaction between molten rock and sea-water, but eventually settled down into mild lava-flow eruptions.

If the formation of Kick'em Jenny Island follows this pattern, then the effect on nearby islands will be very slight and will be confined to a light fall of volcanic ash on the southern Grenadines and northern Grenada. However, the lava erupted by West Indian volcanoes generally contain fairly large amounts of water and other gases dissolved in them and can therefore generate large explosions even without coming into contact with external water.

Any such large explosions at Kick'em Jenny would not only present a threat to the nearby islands through their direct effects but would also present a threat to low lying areas throughout the Eastern Caribbean through the generation of large sea waves (Tsunamis). Tsunamis travel at low amplitude over the open sea but rapidly increase in amplitude as they approach land. The Tsunami generated by the 1883 eruption of Krakatan volcano between Java and Sumatra reached an amplitude of more than ten meters at distances of over 300 kilometers from the volcano.

A Tsunami of even half this scale would present a threat to all of the islands of the Eastern Caribbean particularly since so many of the major towns are on low lying land on the Caribbean side of the islands with a direct unimpeded path from Kick'em Jenny.

As long as the volcano is at its present depth of one hundred and sixty (160) meters below the sea surface, the threat is not an immediate one but when further eruptions bring the summit closer to the surface it is a threat which warrants serious attention in disaster preparedness planning.
(Prepared By: Charles H. Francis, Chairman, Earthquake, Landslide and Volcanic Committee, Grenada.

The information and opinions expressed here are those of the author and are not necessarily that of the Government of Grenada.)
AREAS OF OPPORTUNITY IN PREPAREDNESS AND RESPONSE FOR NGOS

Non-Governmental Organizations (NGOs) like all organisations, should create and maintain contingency and asset protection plans to ensure the safety of employees/clients/members and the protection of the organisation's assets including vital documents, equipment, vehicles, supplies, stock, furniture, buildings and their contents etc.

In addition NGOs should give consideration to enhancing their leadership and service capabilities by developing coordinated preparedness and response strategies with the appropriate government agency who would normally be the national disaster organisation. Some suggested areas of opportunity are set out below.

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<thead>
<tr>
<th>ORGANISATION TYPE</th>
<th>PRE DISASTER</th>
<th>POST DISASTER</th>
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<tr>
<td>TRADE UNIONS</td>
<td>Member education</td>
<td>First aid, local assistance</td>
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<td>Community plans</td>
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<td>PRIVATE SECTOR ORGANISATIONS</td>
<td>Asset protection</td>
<td>Support for rehabilitation</td>
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<td>Client education, Insurance repair, Asset protection, Protection of vital documents, Building safety</td>
<td>Needs assessment, Rehabilitation and reconstruction, Damage assessment</td>
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<td>SAVINGS AND LOAN ORGANISATIONS</td>
<td>Role of profession in national plan, Training in Public safety Ethical issues</td>
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<td>Credit Unions,</td>
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<td>Architects, Planners, Engineers,</td>
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<td>Doctors, Lawyers, Chartered</td>
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<td>Accountants</td>
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<td>&quot;TRADITIONAL&quot; VOLUNTARY ORGANISATIONS</td>
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<td>Red Cross, St. John's</td>
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<td>Salvation Army, Seventh Day</td>
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<td>Adventist Welfare Services</td>
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<tr>
<td>YOUTH GROUPS</td>
<td>Training in First Aid, Search and Rescue</td>
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<tr>
<td>Scouts, Guides, Cadets, Pathfinders, Boys Brigade, Youth Clubs</td>
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<tr>
<td>SPECIAL INTEREST GROUPS</td>
<td>Radio communication Training</td>
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<td>Amateur Radio, CB Radio</td>
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<tr>
<td>ORGANISATIONS REPRESENTING VERY VULNERABLE POPULATIONS</td>
<td>Education</td>
<td>First Aid Needs assessment Relief</td>
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<tr>
<td>The Disabled, Handicapped Elderly, Young, Occupants of high risk areas,</td>
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<tr>
<td>FINANCIAL INSTITUTIONS</td>
<td>Train staff, Secure documents, Computer security, Review financial implications</td>
<td>Rehabilitation, Damage assessment</td>
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<td>Bankers, Insurers, Accountants,</td>
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<tr>
<td>SERVICE CLUBS</td>
<td>First Aid emergency training, Public awareness/education Promoting Public Safety</td>
<td>Relief, First Aid Needs assessment</td>
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<tr>
<td>Lions, Kwanis, Rotary, Leos, Jaycees</td>
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NGOs IN DISASTER AWARENESS AND PREPAREDNESS

Continuing in its series of meetings with NGOs throughout the Caribbean, the PCDPPP and the International Voluntary Service (IVS) organised two more workshops in April to discuss the 'Role of NGOs in Disaster Awareness and Preparedness'.

The first of the two workshops was held on the 19th of April, 1988 at the OECS Secretariat in Antigua and brought together representatives of all the regional Non-Governmental Organisations (NGOs) based in Antigua. The workshop discussed past experiences of the agencies and also looked at potential mechanisms for their increased participation in disaster preparedness and prevention activities. The NGOs attending the workshop were also asked to define ways in which disaster awareness and preparedness could be integrated into their ongoing programmes.

The second of the two workshops was held on the 21st of April, also at the OECS Secretariat in Antigua, but this workshop was held for representatives of the National NGOs and Voluntary Organisations to discuss the same topic as the first of the two workshops. The main objective of this workshop was to determine what role each NGO could play in the prevention, preparedness and management of a disaster and to make recommendations as to how effectively these responsibilities could be managed. The participants discussed three main topics with a view toward formulating an NGO collaborative effort - the role of NGOs and the private sector in national Disaster Planning; public education, awareness and community action; and NGO coordination.

NGOs Meeting in Antigua on Disaster Awareness and Preparedness.

NEWS FROM THE NGO FRONT

ST. VINCENT

Plans are well advanced for the St. Vincent Red Cross Society to receive substantial assistance from the Austrian Red Cross. It is anticipated that a high powered local coordinator will shortly be in place and the programmes of technical assistance are expected to include disaster and emergency specific items including, Shelter Management, First Aid Training, Community Emergency Operations etc. It is also anticipated that telecommunication equipment will be provided. St. Vincent was impacted by Tropical Storm Danielle (1986), Tropical Storm Emily (1987) and in 1979 the Soufrière Volcano erupted causing the evacuation of the population near the center.

It is expected that the strengthening of the Red Cross Society will complement the government's renewed emphasis on disaster preparedness and loss reduction measures.

CARIBBEAN

British Red Cross Delegate Mr. James Henry recently visited several Caribbean Islands including Bermuda, the British Virgin Islands, Dominica and St. Kitts/Nevis. His visit was intended to discuss a programme of assistance to the Red Cross Societies and Branches.

HAITI

A Delegate from the French Red Cross, has been assigned for one year to implement a development plan being funded to the tune of approximately US$35,000 by 5 Red Cross Societies.

OXFAM

OXFAM Regional Representative Lilian Cabral visited the PCDPPP Headquarters on June 21st while on a round of travel including Dominica, St. Vincent and Trinidad. The opportunity was taken to bring OXFAM up to date on recent developments at the PCDPPP and the proposals for widening the involvement of development oriented NGOs in the PCDPPP promoted disaster management activities.

OXFAM headquarters in the Caribbean is located at APARTADO POSTAL 20271; SANTO DOMINGO; THE DOMINICAN REPUBLIC; TELEX NO. 3460727; TELEPHONE NO. 809-533-2514.

Readers wishing more information on OXFAM and its activities in the Caribbean may wish to contact Ms. Cabral directly.
GLOBAL ILLS AND CLIMATE POLLUTION

According to recent environmental studies, by the year 2050, the "greenhouse effect" caused by the building up of carbon dioxide and other pollutants in the atmosphere, may raise global temperatures enough to dramatically alter earth's social and economic geography. Temperatures are expected to rise up to 4.5 degrees Celsius (8.1 degrees farenheit) and to cause partial melting of the polar ice caps with a resultant rise of one metre (three feet) in sea levels.

Recent studies of these climatic changes show that:
- coastal and low lying cities may be severely flooded because of higher seas and coastal surges. The homes of some 25 to 50 million people world-wide are at risk.
- crop yields in major agricultural areas may be slashed due to altered rainfall patterns.
- low lying coastal installations including power generating and sewage treatment plants, will be threatened.

It is felt that these dramatic effects of global warming can be curtailed, but only if all industrialised countries immediately begin implementing tougher pollution control measures. The obvious need for countries to cooperate more actively to protect the environment was one of the points made last year by Norwegian Prime Minister, Madam Gro Brustad's landmark report to the United Nations on development and the world environment.

Governments throughout the world have taken an increasingly active role in environmental issues in recent years, one result being the signing last September of the Montreal ozone protocol to slash the use and production of chlorofluorocarbons (cfc's), industrial chemicals that destroy atmospheric ozone - earth's shield against the most lethal of the sun's rays.

In light of the above, a major international conference titled "The Changing Atmosphere: Implications for Global Security" is scheduled to take place in Toronto 27-30th June 1988, to discuss world-wide social and economic implications of climate change and other problems caused by pollution. Vital environmental issues, climate change, acid rain, and the depletion of the ozone layer, will be discussed. Ideas and policy recommendations will be advanced with a view to forging an international law of the air.

(JUNS)

COASTAL VULNERABILITY IN THE EASTERN CARIBBEAN

As a part of its public outreach mission and environmental awareness campaign, the Centre for Resource Management and Environmental Studies (CERMES), U.W.I., Cave Hill, sponsored a public lecture through the UWDITE Distant Teaching System on "Coastal Vulnerability in the Eastern Caribbean." The presenter was Mrs.Eleanor Jones of the environmental management consultancy firm, CARITECH Associates.

The presentation originated at the University of the West Indies Distant Teaching Experiment (UWDITE) facility at the Cave Hill Campus and was transmitted to the other UWDITE facilities in Saint Lucia, Dominica, Antigua and Grenada. This presentation was sponsored by the Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP).

The lecture was based on a review of Coastal Vulnerability conducted for 8 Caribbean States on behalf of the PCDPPP. The states studied were: Antigua, Barbados, Belize, The Cayman Islands, Guyana, Jamaica, Saint Lucia, and The Turks and Caicos.

The basic terms of reference for the study were: the examination of data available on the problems in the coastal zones. The influence of new settlements on the stability of the coastal ecosystems. The determination of the main hazard and vulnerability issues for each state surveyed, and the basic recommendations for appropriate action needed to mitigate or eliminate the hazard.

Among issues discussed were:
the increasing economic dependence on the coastal zone as the major resource; risk analysis in land use planning and coastal management policies and programmes and the need in some territories for development control orders regulating the use of the coastal zone in order to reduce losses in future hurricane or earthquake events.

Seventy-five (75) persons participated in this exercise. The audience included planners, engineers, civil defence officials, tourism personnel, educators and post-graduate students.

Comments received from the participants indicate that the presentation was timely as it came at a time when the islands were organizing or contemplating coastal zone management programmes. Participants from the non-campus territories were especially appreciative of their integration in such an activity and urged the organization of similar programmes on disaster management issues.

Requests were made for similar lectures to deal with such issues as evacuation, planning, chemical hazards and general disaster concerns. CERMES has noted these requests and will be seeking the continued assistance of organizations like PCDPPP in its efforts to respond to these pressing training needs.

(Jeremy Collymore, CERMES)
UNEP’S REGIONAL COORDINATING UNIT IN THE CARIBBEAN

The Caribbean Action Plan’s Jamaica based Regional Co-ordinating Unit (RCU) has been basically following up the decisions of the first meeting of the Contracting Parties to the Cartagena Convention, in Guadeloupe, 26 to 28 October 1987.

The RCU is currently finalising a report on regional environmental priorities, following a Guadeloupe meeting decision to concentrate activities on major, long-term regional programmes rather than smaller country projects.

This involves concentration on three major projects:

1. Environmental management of coastal areas and terrestrial ecosystems;
2. Assessment and control of marine pollution;
3. Training, education and public awareness programmes and campaigns aimed at improving the management of the region’s marine and coastal resources.

A meeting of 20 governmental experts, to be held in Mexico City from 7 to 9 September 1988, will review the regional marine and coastal environmental problems and priorities in the Wider Caribbean region; evaluate the development, achievements and short-comings of the Caribbean Environmental Programme as possible elements of a long-term strategy for the future development of the Caribbean Environment Programme.

The seventh meeting of the Monitoring Committee of the Caribbean Action Plan, in Mexico City from 12 to 14 September, will consider the recommendations of the experts meeting and decide on the future course of the Caribbean Action Plan.

The Caribbean Action Plan RCU office has a new TELEX No: 3672 UNEPCAR JA and FAX: 809-92-29292. Their address is still: 14-20 Port Royal Street, Kingston, Jamaica.

and analysis of measures relating to disaster prevention, mitigation, preparedness, emergency response, rehabilitation and reconstruction.

The Asian and Pacific region is exposed to almost every type of disaster - natural and man-made. Countries in this region have frequently expressed the need for assistance in strengthening their disaster management systems.

The Asian Disaster Preparedness Center (ADPC) was established in January 1986 at the Asian Institute of Technology, Bangkok. The Center’s aim is to respond to the needs of Asian/Pacific countries, looking at disaster management issues from their point of view. The most pressing needs were identified initially during the feasibility study and are reflected in the services offered by the Center, i.e., training, information, studies, planning services, technical programmes, consultancies, appropriate technology and awareness programmes. Services are available either at AIT or, upon request, in-country. Effective disaster management, being of necessity a multi-disciplinary affair, the ADPC seeks to operate at the times neglected interface between technology, the social sciences and administration.

ADPC is eager to collaborate with disaster-interested organizations and individuals worldwide. The scope for international disaster management networking is enormous, and apart from the formal collaboration established with UNDRR and the United States Office for Foreign Disaster Assistance (OFDA), the ADPC works closely with many international or bilateral non-regional organisations all over the world.


DISASTER MANAGEMENT IN ASIA AND THE PACIFIC

(Editor’s Note: The Caribbean region is not the only one in which there has been a regional response to the problems of Disaster Management. This article indicates a somewhat different approach to the problem undertaken in Asia. Comments from readers on the appropriateness of such models to the Caribbean would be welcomed.)

Disasters cannot always be prevented but their effects can almost always be mitigated. The science of disaster management involves the systematic observation

SAVE A LIFE LEARN FIRST AID
NATIONAL AIRCRAFT SIMULATION EXERCISE

A National Aircraft Simulation Exercise, code-named "Emergency Coordinated Simulation" ECS BRAVO 88 was held on 15th June, in the British Virgin Islands in order to test the response capability of all the multi-disciplinary emergency response agencies in the following areas:

- Pre-disaster preparedness
- Agency response procedures
- Casually responders
- On-site management
- Logistics and transport
- Communications management and procedures
- Co-ordination of Volunteer agencies
- Manpower deployment
- Security and crowd control
- Fire response and victims rescue
- Mass Casualty Management, transport and transport
- Information systems and communications
- Security and crowd control
- Logistics, transportation and personnel
- Multi-agency activation response and equipment
- Field command procedures - Officers-in-charge
- Off-site command and communications centres

The Exercise preceded by a two-day intensive training programme which covered the following areas:

- On-site command, principles and procedures
- Establishing command posts, multi-agency coordination
- Multi-disciplinary teams responding to one incident
- Communications and net control
- Information relay and management
- Mass Casually response and victims treatment in the impact zone

- Transport, logistics and control. Accident procedures, land and sea

It should be noted that the 1988 National Disaster Plan has been expanded beyond the scope of hurricanes to include other types of disasters both manmade or natural.

An additional medical air support component which was incorporated in the plan, was effectively tested by the use of Helicopters as a response mechanism in order to support the speedy transportation of casualties from the crash site to the Hospital.

The exercise objectively tested and evaluated current procedures under emergency conditions and provided a forum to improve the technical capabilities of all the emergency services.

(Office of Disaster Preparedness, Tortola, B.V.I.)
PAHO TRAINING OF TRAINERS COURSE

Two subregional Training of Trainers Courses on "Emergency Management for Environmental Health and Water Supply Services" were held in Jamaica and Barbados 26 through 29 April 1988 and 10 through 14 May 1988 respectively. Thirty-five (35) participants from 15 Caribbean countries including Martinique and Guadeloupe attended.

The Objectives of the course were:

(i) To provide the development of disaster preparedness, emergency operations planning, and emergency response action by environmental health and water supply services.

(ii) To train trainers in the environmental health and water supply sub-sectors in the development of pre-disaster and post-disaster capability, such as emergency operations planning, vulnerability analysis, preventive measures, and environmental impact assessment.

(iii) To develop in-house training programmes in emergency management in environmental health and water supply services in Caribbean countries in order to strengthen such a component of national emergency management programmes.

For further information on the course contact: Mrs. Gloria E. Noel, PAHO Advisor, Pan Caribbean Disaster Preparedness & Prevention Project, P.O. Box 1399, St. John's, ANTIGUA.

HEALTH DISASTER MANAGEMENT TRAINING

In an effort to strengthen the knowledge and skills of health personnel in disaster management and to increase the capability of the health sector to respond in the event of disaster, the Faculty of Health Sciences, University of Guyana, decided to integrate content on "Disaster Management" into the Curriculum for education of Health Sciences Tutors and Managers.

Consequently, a "Training of Trainers Course in Disaster Management" was implemented April 11-15, 1988 by the University of Guyana in collaboration with the Pan American Health Organisation. Forty (40) persons representative of the Faculty of Health Sciences, students of the Health Science Teachers and Tutors Programme, University of Guyana; health professionals from Government and non-Government agencies; and personnel from the Ministry of Communication and Works, attended.

Participants specifically examined the existing and potential hazards to which Guyana is prone and reviewed Hospital and Regional Plans in the light of these.

Works Groups have been established to continue the development of Hospital and Regional Disaster Management Plans.

A Panel with representatives from Civil Defence, Guyana Defence Force, Fire and Police Departments, Health Sector, the Red Cross and Ministry of Communication and Works, discussed the Role of these Key Sectors in Disaster Management.

Students in the Health Sciences Programme University of Guyana will be required, as part of their learning experience, to develop training programmes which could be implemented on return to their work situation, so that a multiplier effect will be achieved and ultimately a core of health professionals would be prepared to respond to disaster situations.

For further information on this course, please contact: Dr. Claudette Harry, Director, Medical Education, University of Guyana, Turkeyen, East Coast Demerara, Guyana.

LIONS TO SET UP DISASTER FUND

The International Association of Lions Clubs Multiple District 60 Convention in Jamaica attracted over 1,000 delegates from around the region.

One of the highlights of the event was the decision to establish a Disaster Fund for the Caribbean District. For the Disaster Fund, Lions will have part of their dues taken out, so there would be ready cash available for any disaster in the region.

SEISMIC EXPERTS TO LOOK AT DOMINICA

TRINIDAD-BASED University of the West Indies seismic experts are to undertake a detailed study later this year of the Caribbean's biggest volcano in Dominica, seismic unit director, Dr. John Shepherd announced on Tuesday, 26th April.

Speaking at a two-day regional conference on volcanoes in Trinidad, Shepherd said Dominica's capital, Roseau, was virtually "looking into the gun barrel of a set of active and dangerous volcanoes".

"Dominica is perhaps the most complicated volcanic island in the whole of the Eastern Caribbean," Shepherd told the session.

He estimated there were at least four live volcanoes on the island, with the largest, Morne Diablotin, situated on the south of the island. The Dominica study is expected to begin in October, 1988.

(CANA)
AMATEUR RADIO NEWS

Several of the Amateur Radio Organizations in the region held Simulated Emergency Tests (SET) of their Emergency Communication Systems at the start of the hurricane season.

BARBADOS

The Amateur Radio Society of Barbados as part of its emergency preparations for the hurricane season, organised simultaneous demonstrations at four different parts of the island on Saturday 11th June from 10 a.m. until 4 p.m.

Four amateur radio stations were involved in the demonstrations and apart from the emergency preparedness value of the exercise, it was also to give members of the public the opportunity to learn, and see for themselves, what amateur radio is all about.

Amateur radio operators were present throughout the full six hours of the demonstration to explain the operational and technical aspects of amateur radio as a hobby and as a community service. They also gave to any persons interested in becoming hams, details of a course, scheduled to commence on Tuesday, June 14, to prepare students for the local licensing examination later this year.

Amateur radio operators, or "hams" as they are also known are persons who have developed an interest in radio as a scientific hobby; to further their knowledge of electronics and the behaviour of propagation conditions in the atmosphere; and for the enhancement of their skill in radio-communication techniques.

The Amateur Radio Service is well known and respected throughout the world in the field of community service in times of emergency caused by natural disasters such as earthquake, drought, flood and tidal wave; as well as manmade disasters caused by fire, explosion, power failure, and aircraft accident.

Here in the Caribbean area amateur radio operators have responded very creditably during emergency conditions resulting from the effects of hurricane Janet on Barbados in 1955, hurricane Donna on the Leeward Islands in 1960; and, more recently, the eruption of Soufriere volcano in St. Vincent in 1979 and the devastation of Dominica by hurricane David later in the same year; and in the wake of hurricane Allen in 1980.

The Amateur Radio Society of Barbados is involved in the disaster preparedness plans of the Central Emergency Relief Organisation and is represented on the Telecommunications Standing Committee. The role of the Amateur Radio Society is to assist with telecommunications at essential service points should the normal means of communication between those points be disrupted for one reason or another.


In addition, the Society will activate the Emergency Communications Centre at Oxards, St. James, which will act as a message centre and co-ordination point for local and overseas amateur radio emergency and welfare traffic.

Just about thirty years ago a regional amateur radio emergency network was established. This net, known as The Antilles Emergency and Weather net, is made up of stations throughout the Eastern Caribbean, from as far north as Puerto Rico and beyond, to as far south as the south American mainland.

The purpose of the net, which functions twice daily throughout the year, is to handle emergency situations in the area, to exchange weather information, and to pass regular amateur radio traffic. It acts as a sort of meeting place for all the amateur radio operators in the area. (Barbados Advocate)

JAMAICA:

On June 5th, the 8th annual SET organized by the Jamaica Amateur Radio Association (JARA) in collaboration with the Office of Disaster Preparedness and the Jamaica Red Cross Society was held. This SET was designed to test JARA response to a major earthquake accompanied by a tsunami. It involved the use of HF and VHF radio systems and packet radio (for the second year). As usual the JARA demonstrated their ability to assist the ODP, and to provide telecommunications support as set out in the National Disaster Plan.

The exercise was followed by a debriefing session on Sunday 12th June.

For information on the SET, interested readers may contact Dr. E.E. Monroe, the JARA Emergency Programme Coordinator, c/o Jamaica Red Cross, 7th, Arnold Road, Kingston 5, Jamaica.

(Caribbean Disaster News would like to get contributions from Amateur & CB Radio Organizations in the region so that we can have regular features on what's new in the area of private radio operating. We are particularly interested in sharing information on new technologies (like packet radio) which we believe will make significant contributions to future emergency response.)

The design and performance of flood control works normally assumes that the drainage system is discharging into the sea under "normal" conditions, that is, the sea surface is at or near mean sea level. The performance of drains and river systems may however be compromised if flood conditions coincide with the elevated sea levels associated with tropical cyclone (hurricane) systems.

This report by the WMO is concerned with the flood hydrology of the lower reaches of rivers where sea level fluctuations caused by the storm surge or astronomical tides can influence the flood levels. High river discharges can in fact be generated by the same weather system responsible for the high sea level and such conditions can affect Caribbean States particularly those of the Greater Antilles and Central America with relatively large river basins.

The report is a comprehensive technical review of the hydrological aspects of the combined effects, covering data acquisition, flood modelling, risk evaluation, the establishment of forecasting and flood warning systems and also provides Case Histories of the phenomena caused by both astronomical and cyclonic systems. A summary of research needs and conclusions is also included.

Copies of this report may be obtained from your National Meteorological Service or from the WMO Secretariat, Geneva, Switzerland.

REVIEW OF NGO PUBLICATION

"Environmental Education in the Context of Disaster"

Published by the Indian Institute of Youth and Development (IIYD) (A Non-Governmental Organisation) 1987.

This publication resulted from a workshop I.I.Y.D. organised with the support of the Department of Environment, Government of India, which sought to show that "Development, Environment and Disaster have to be treated like the three sides of a triangle of Human Progress."

While man cannot do much about eliminating the destructive forces of nature, he has however contributed much to the impact of these disasters in a negative way. Through the degradation of the environment, as a result of lack of attention to the process of development and its consequences, man has even altered the environmental balance in this world.

Deforestation, the unchecked growth of human settlements, modern systems of production without the back-up pollution protection have all combined to make disasters more damaging than they need be.

This is the recurring theme of the papers presented at the workshop, be it on flood or drought or cyclones. The book is also full of useful information on the system of Civil Defence which caters to disaster relief in India, the various Disaster days observed in India, some statistics about effects of past disasters, a brief but important do's and don'ts of Bio-gas production etc. It has also listed some of the Resource persons associated with the workshop as well as some information on the institutions which provide Disaster Management Training.

The book, on the whole, is somewhat limited in scope and details, but nevertheless provides much useful information, seeking to draw attention to the proposition that "though ecology covers all species of life, the species which occupies the center of the stage is man because he alone, of all species, has set a confrontation with nature."

Copies of this book are available at a cost of US$5.00 (+3 US for postage) from the Joint Assistance Centre H-85 South Extn-1, New Delhi, 110049-INDIA. The JAC also publishes the Journal "Disaster Management" and is a source of other literature on the state of the art of Disaster Management in India.

HURRICANE PREPAREDNESS KIT FOR THE MEDIA

The Central Emergency Relief Organization of Barbados has produced a Hurricane Preparedness Kit for the media titled "Hurricane Preparedness: A Must for You."

This information folder contains quick reference briefs on emergency numbers, shelters, First Aid Posts, weather warnings, flood and water storage and what to do Before and During a Hurricane. Persons should find it a very useful quick reference guide this hurricane season, which, it is predicted, will be an active one.

The Disaster Preparedness office in Montserrat has also produced a similar information kit for public information.

DISASTER MANAGEMENT A JOURNAL OF CONTINGENCY PLANNING

This is an international journal designed to embrace all aspects of contingency planning for large-scale emergencies. Its launch coincides with a time of increasing concern at the all-too-apparent problems of dealing with major incidents such as accidents at nuclear power stations;
hijacking of commercial airliners; mine disasters; and fire in high-rise buildings. Its readership is likely to embrace Government departments; civil defence agencies; Police authorities; fire departments; security agencies; Local Government departments; hospital boards; insurance companies; inspection authorities; famine relief and charity organizations; and planning agencies.

The Journal provides a broad spectrum of authoritative papers, reviews and articles which include aspects of planning related to the following subjects: air crashes; shipwreck; rail crashes; multiple roadway accidents; industrial explosions; nuclear accidents; chemical spillage; river and ground-water pollution and contamination; mine disasters; civil defence planning; gas explosions; earthquakes and subsidence; non-clinical aspects of hazards involving infectious and virus-related diseases; tornado, hurricane and flood emergencies; fires (industrial, hotel, office, forest, etc); space emergencies; hijack incidents; terrorist attacks; drought and volcanic eruption.

The technical and scientific presentations will cover such important factors as: evacuation; medical services; communications; rescue; logistics; investigation; organization of press and TV announcements; identification of victims; fire fighting; emergency and disaster containment site and incident clearance; security and relief and aid services.

The editor has indicated interest in carrying papers from Caribbean researchers.

FOR FURTHER INFORMATION PLEASE CONTACT: MR. C. McCOMBIE, EDITORIAL DIRECTOR, F & M Scientific and Technical Publications Division, Queensway House, 2 Queensway, Redhill, Surrey RH1 1QS England. Telephone: (0737) 768611; Telex: 948669 TOPJNL G.
The completed Speightstown Hazard Study was presented on May 26th to Mr. Arthur Saper, Head of Aid at the Canadian High Commission in Bridgetown by Dr. Mark Griffith. For the past year, Dr. Griffith has led a team of four young environmentalists, all from within the northern parishes, in studying the flood prone areas of the Speightstown district, the commercial centre of the developing northern areas of Barbados. Their aim was to devise means to ensure that the area can be made more safely habitable and that the effects of flood hazards experienced in the past could be minimised or eliminated.

The study was sponsored by the Lions Club of Barbados North through a contribution of BDS$10,391 in February 1987 under CIDA’s Canada Fund Programme. The Lions Club appointed a resource committee including engineers, agriculturalists and soil conservationists to support the study group.

Resources for the study were available from the Central Emergency Relief Office, the Caribbean Meteorological Institute, the Pan Caribbean Disaster Preparedness Project and the University of the West Indies. This environmental study includes an evaluation of the social, agricultural and infrastructural factors which could have contributed to the problem. It also presents recommendations for a comprehensive flood management strategy for Speightstown and its environs including beautification and maintenance of the Whim Gully and of other areas bordering the town.

Mr. Simon Charles, Secretary General of the Grenadian Red Cross Society visited Jamaica (May 28 - June 5th) and the Bahamas (June 5th - 11th) for the purpose of observing their ongoing programmes, administrative arrangements and activities (including disaster preparedness).

The visit was sponsored by the Icelandic Red Cross who are in the process of considering entering into a longterm "twinning" relationship with the Grenada Red Cross Society similar to that being developed between the St. Vincent and Austrian Red Cross Societies.

Arrangements for the visit were made by LRCS Regional Delegate Audrey Mullings and it is hoped that the development of the Red Cross Society will positively contribute to and complement the Disaster Management Programme being organised by National Disaster Coordinator, Mr. Alphonous C. Redhead.

In 1987 the Red Cross Societies of Haiti and the Dominican Republic appealed for international assistance following natural disasters. Haiti appealed for help following torrential rains experienced in June 1987. The appeal received US$281,369 in cash and donation of goods valued at US$448,631, to assist 650,000 persons many of them young children affected by the floods.

Following Hurricane Emily in late September the Dominican Republic’s Red Cross Society made an appeal for assistance for 2,000 victims and donations received included US$82,449 in cash and goods valued at US$16,725.

(Source: LRCS Review, 87)
THE HURRICANE SEASON IS HERE

PREPARE
PREPARE
PREPARE

- CHECK BUILDINGS
- EMERGENCY SUPPLIES
- BUY EXTRA FOOD
- LISTEN FOR WARNINGS
- STORE WATER

A MESSAGE FROM
UNDRO-PAN-CARIBBEAN DISASTER PREPAREDNESS
AND PREVENTION PROJECT • ST. JOHNS ANTIGUA

TEN STEPS TOWARDS IMPROVING WEATHER COMMUNICATION

(1) Understand the weather needs of users;
(2) Tailor forecasts to meet user needs;
(3) Select the proper medium to reach users;
(4) Use language familiar to users;
(5) Resist the temptation to add information the user does not need;
(6) Stress that advanced technology is being used in observation, prediction or communication whenever appropriate;
(7) Use graphic presentation when possible;
(8) Present forecast information with enthusiasm and good humour;
(9) Encourage user response to forecast;
(10) Modify presentations as indicated by user reactions;

CREDIBLE EMERGENCIES IN THE CARIBBEAN AREA

Earthquake
Major Fire
Explosion
Tidal wave (Tsunami)
Hurricane
Flood
Civil Disturbance
Refugees/Displaced Persons
Failure of Water Supply
Sabotage
Hostage Situation
Labour Problems
Fuel Shortage
Electrical Power Failure
Product Contamination
Disease Outbreak (Human)
Disease Outbreak (Plant)
Disease Outbreak (Animal)
Food Contamination
Volcanic Eruption
Major Transport Accident
Aeroplane Crash
High Winds
Nuclear (Radiation) Incident
Nuclear War
Sewerage Failure
Failure in Communication
Links
Hazardous Materials Spill or Leak
Bomb Threat
Dam Failure
Building Collapse
Drought
Landslide
Land Subsidence
Call for Assistance from other island

Pan-Caribbean Disaster Preparedness & Prevention Project
P.O. Box 1399
St. John's
ANTIGUA
TEL: (809) 462-4432/2235
TLX: 2195 AK
FAX: (809) 462-4431
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COMMON PROBLEMS IN CARIBBEAN EMERGENCY PLANS
How does your country measure up?

* Many plans are out of date or too limited in scope (Limited to hurricane only etc.) and many are "One-man shows" prepared by one person or within one agency with little or no involvement by others;

* Many fail to address the needs for Public Information or Media relations;

* Some fail to address the issue of who will make major operational decisions such as evacuations, calling out the military or requesting external assistance.

* Plans often lack basic resource information - what resources exist, where they are, who is in charge etc.;

* Few plans adequately involve the private and voluntary sector. Non-governmental Organisations can greatly facilitate national and local response;

* Plans generally lack reference to the specific laws and regulations which exist (Emergency Powers, Essential Services Act, Communication, Coordination etc.);

* The chain of command is often not clearly specified and there is often inadequate attention paid to keeping the political directorate (Government and opposition parties) informed of both the preparedness and emergency response systems;

* Inadequate attention is given to alert warning and mobilization procedures and the needs of particularly vulnerable sectors (fishermen, marine interests, the tourist industry, etc.);

* Impact, needs and damage assessment arrangements are often vague. Emergency repair, recovery and reconstruction arrangements are largely neglected;

* Inadequate attention is given to mitigation and loss reduction opportunities and few formalise simulation or learning from the past events;

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EARTHQUAKES...VOLCANOES...HURRICANES...FLOODS...FIRES...OIL SPILLS...AIR CRASHES...

SUPPORT DISASTER PREPAREDNESS
A MESSAGE FROM THE PAN-CARIBBEAN DISASTER PREPAREDNESS AND PREVENTION PROJECT (PCDPPP)

Caribbean Disaster News

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