TROPICAL STORM DANIELLE
GRENADA – SAINT VINCENT – SAINT LUCIA, 1986

GRENADA
Although by some good fortune Grenada was out of the immediate path of tropical storm Danielle, Grenada did not get away unscathed. The storm skirted the North Eastern part of the island dangerously and mischievously enough to damage some banana plantations, farm roads and other agricultural crops.

Reports show that in its brief intervention on September 8, 1986, 68,000 banana plantmatts, equivalent to 100 acres were destroyed. The Ministry of Agriculture puts the total cost to the agricultural industry at approximately EC$813,000.

The Eastern Agricultural District accounted for 81.5% of the banana trees destroyed. The overall loss in banana trees represented approximately 3.3 million lbs. or 18% of the estimated exports for 1986.

There were also some minor damages to other agricultural crops. Sixty-five coco trees, and 12 nutmeg trees were destroyed with a total cost of EC$413,000.

In addition to the damage to crops, 18 farms roads currently being repaired or constructed were damaged. The estimated cost of damage to roads is put at EC$400,000.

Source: Alphonse C. Redhead National Disaster Coordinator Grenada

ST. VINCENT
Tropical Storm "Danielle" on September 8, 1986 and continuous torrential rains on September 20, 21 and 22, 1986 resulted in widespread damage to agriculture, housing stock, other buildings and infrastructure. The overall cost of the damage caused by tropical storm “Danielle” is now estimated at approximately EC $21 million.

The banana industry has suffered considerably, with some 40% of cultivation either totally destroyed or seriously affected. The loss to the banana industry is estimated at EC $16.5 million computed as follows:

a) loss of St. Vincent Banana Growers Association = $7.5 m
b) loss to the farmers = $9.0 m
TOTAL = $16.5 m

Bananas are the single most important export crop accounting for 22% of all export earnings. Given the importance of the banana industry to the national economy, the tropical storm caused economic and social difficulties of an exceptional nature to St. Vincent and the Grenadines.

The losses to other sectors of the economy caused by the tropical storm are estimated at $2 million for agricultural crops.

Continued on next page
other than bananas, $2 million for housing and other buildings and about $0.5 million for infrastructure.

The prolonged cloudburst from 20 to 22 September 1986, dumped some 211mm (8.34 inches) of rain on St. Vincent and the Grenadines and caused land slides and heavy floods in the rivers on both the Windward and Leeward sides and in the interior of St. Vincent. Land slides released thousand of tons of boulders, trees and debris which were carried away by the flow of flood water in the rivers. This debris not only seriously damaged many highway bridges but the flood waters also washed away embankments, retaining walls and sections of roadways. In addition, land slides blocked roads and disrupted traffic in many places. More than 120 animals were killed and over 100 houses completely destroyed.

The water supply and electricity systems of the country suffered serious disruption and damage. The pipe-borne water supply to the capital city of Kingstown and its suburbs was completely cut off. Other major water supply networks were severely damaged and the supply of drinking water was interrupted in many districts.

Land slides washed away a considerable length of woodstave pipeline at the two hydropower stations at South Rivers and Richmond. As a result, the supply of electricity was reduced by 36%. In addition, considerable damage was caused to high and low-voltage transmission and distribution lines throughout the country.

The most serious devastation caused by the torrential rains was in the Fitz Hugh, Chateau Belair and Sharpes areas where six homes were washed away and forty seven houses completely destroyed. Consequently, 142 persons had to be evacuated to four emergency shelters. Five persons were also seriously injured and had to be taken to the Kingstown Hospital by sea. The Leeward Highway near Chateau Belair was blocked by lands slides and the main line of communication therefore cut off. Fitz Hugh bridge was destroyed and a section of the jetty at Chateau Belair collapsed. Water supply, electricity and telephone systems in this area broke down. Since adequate space was not available in community centres, three schools were utilised to provide shelter to the newly homeless people.

In view of the extremely serious situation, Government has declared the Leeward area a disaster zone and immediate steps have been taken to provide water, food, clothing and first aid to the people who were rendered homeless.

A meeting of the sub-committee of the National Emergency Organisation responsible for Rehabilitation and Reconstruction was held on 23 September 1986. The sub-committee reviewed the data, information and reports received from various agencies, determined the extent of damage to different sectors of the economy and prepared cost estimates for implementation of a rehabilitation programme.

Source:
Preliminary Report on Damage Assessment and Relief and Rehabilitation Requirements resulting from Tropical Storm Danielle and Torrential Rains September 1986

Government of St. Vincent and The Grenadines
Ministry of Finance and Planning

ST. LUCIA

On Sunday, 7th September, 1986 the National Co-ordinator for Disaster Preparedness arrived at the Emergency Operations Centre at 9:45 a.m. to participate in an Emergency Telecommunications Simulation Exercise and found the following Telex weather report from the St. Lucia Meteorological Office:

At 9.00 a.m. on Sunday a Tropical Wave was located East of the Windward Islands with maximum winds of 35 miles an hour. Conditions were favourable for strengthening and may be up-graded to a Tropical Storm later in the day.

At 10.05 a.m. the first Advisory issued by the Meteorological Office stated that the Tropical Depression east of the Windward Islands had been up-graded to Tropical Storm Danielle.

The National Co-ordinator immediately proceed to activate the Emergency Operations Centre and Phase 1 Advisory of the National Disaster Plan.

At noon the Meteorological Office issued a second advisory that Tropical Storm Danielle located 350 miles east/south east of Saint Lucia was moving towards the

SEE PAGE 4
REGIONAL EXCHANGE PROGRAMME

BACKGROUND:
The Pan Caribbean Disaster Preparedness and Prevention Project in its effort to expand and improve the knowledge of Emergency Management among National Disaster Co-ordinators, introduced a Regional Exchange Training Programme. Barbados and Jamaica were identified as training centres for the South-Western and North-Eastern Caribbean respectively. Among the aims and objectives of the programme are the following:
- to provide on-the job administrative experience in Disaster Management Organisation,
- to expand the level of awareness and regional commitment to Disaster Preparedness,
- to improve and, where necessary, initiate regional communication between all participating countries of the PCDPPP.

SEE PAGE 4

Picture shows exchange participants from Anguilla; Bahamas; and Turks & Caicos along with Judy Thomas, Supervisor CERO, Barbados and Mr. Deighton Best, Director of Met Services.
GRENADA WORKSHOP

A Workshop on Shelter Management, District Coordination, and Evacuation Procedures was held at the University Centre (Marryshow House) St. George’s September 24-26, 1986, and conducted by Mr. Roy Ward, Preparedness Advisor, PCDD/PCB/UNDRO.

The twenty-eight persons who participated were drawn from throughout Grenada and Carriacou.

The Workshop was opened by Mrs. Margaret Dowe, Permanent Secretary of the Prime Minister’s Office, and a vice-chairman of the National Emergency Relief Organization; who was also present for the closing ceremony.

The programme was coordinated by the National Disaster Coordinator, Mr. Alphonson Redhead, who chaired the opening the closing sessions.

Source: Alphonson Redhead
NDC - Grenada

<table>
<thead>
<tr>
<th>PARTICIPATING STATES</th>
<th>Barbados</th>
<th>Jamaica</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>Dominica</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>St. Lucia</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>Montserrat</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>St. Vincent &amp; The Grenadines</td>
<td>Barbados</td>
</tr>
<tr>
<td>August</td>
<td>Turks and Caicos Islands</td>
<td>Barbados</td>
</tr>
<tr>
<td>September</td>
<td>The Bahamas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barbados</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barbados</td>
<td></td>
</tr>
</tbody>
</table>

FROM PAGE 3 (Regional Exchange)

FEEDBACK AND COMMENTS

All of the participating National Coordinators were of the opinion, that the programme facilitated many of their needs, including establishing closer working relationships with the Barbados and the Jamaica Offices of Disaster Preparedness.

Information was also gathered on the establishment or upgrading, where appropriate, of their respective secretariats, and included examination of the documentation facilities that exist in the Jamaica and Barbados Offices of Disaster Preparedness.

All coordinators have indicated in their report support for the continuance of the second phase of the Regional Exchange Programme. Suggestions have been made for the expansion of the work assignment during phase two, to a more detail and specific area of disaster management. The Jamaica and Barbados Training centres, have also indicated their support for the continuance of the programme, but have indicated that there is a need for refining of the work assignment during the two week programme.

FROM PAGE 2 (St. Lucia)

west/north west with maximum sustained winds of 40 miles per hour with conditions favourable for strengthening.

Radio Saint Lucia started hourly broadcasts of Advisories and repeated advice to the public for the protection of life and property.

Warning signals were displayed, and fishermen and persons living near the coast were advised to take action against heavy seas.

The Citizens Band Operators who were participating in the Simulation exercise were alerted to prepare to take up positions at the predetermined locations throughout the Island.

The Emergency Operations Centre continued on Tropical Storm alert and prepared to activate Phase II - Hurricane Watch.

On receipt of Advisory No:3 that Tropical Storm Danielle was expected to pass over the Grenadines during Monday morning it was considered unnecessary to continue on full alert as it was felt that the Island would not be affected during the night. However the public was kept on the alert in cases of any sudden change of direction or intensity of the Storm.

The night was quiet but about 10.00 a.m. the winds increased with gusts of about 35 - 40 miles per hour and heavy rains.

Electricity supplies were disrupted for about one hour.

There was no damage to property except for the loss of about 10 percent of banana cultivation, mainly on the large estates in the valleys.

The passage of the Tropical Storm Danielle provided a good opportunity to test our state of preparedness. The weaknesses identified in the Alert System and Emergency Telecommunication System are receiving attention.

The response of the public to the advisories was good but could have been better had the local dialect been used in the radio broadcasts.

Source: Stanislaus James
NDC – St. Lucia
FLOODS - JAMAICA

METEOROLOGICAL DESCRIPTION

Heavy rainfall associated with a complex area of disturbed weather affected Jamaica continuously for the period 23rd May to June 6. The 24-hour maximum rainfall for one station was equal to 18" and the total rainfall at most South coast stations for the whole period was between 20 and 60 inches.

Heavy rains from mid February to March, 1986 had already affected the island which had also experienced flooding during Hurricane Kate in November 1985. These above normal rainfalls were experienced between January and May in St. Catherine and Clarendon resulted in a greater extent of flooding than was observed in June, 1979.

Records from the Met Office indicated that the greatest recorded deluge in Jamaica's history occurred in November, 1909. This weather system lasted for nine days resulting in severe flooding which was confined to the south-eastern parishes, where 1245mm (49") of rainfall was reported at Hope Gardens, St. Andrew over a four-day period.

All indications are that the events which spanned the period May 19 to June 6 has surpassed in magnitude the November 1909 events. The disastrous effect of this event which has resulted in wide spread flooding and massive landslides in various parishes of the island is due to two main factors:

(1) The already saturated condition of the soil;
(2) The prolonged and intensive rainfall.

FLOOD DISCHARGES

Because of the protracted heavy rains, extensive floodings occurred along all river banks on the South of Jamaica. Among them was the Rio Minho which caused the most devastating damage, inundating entire towns, roads, crop lands, factories, and

Jamaica

most parishes with rainfall twice the normal being experienced in St. Mary and St. Ann and one and one-half times the normal in Clarendon.

The trend of heavier than normal rainfall continued in May and commencing 19th May, 1986 the island came under the influence of a very complex zone of disturbed weather involving at least three different weather systems:

* an upper level trough;

* the inter-tropical convergence zone (ITCZ)

experienced everyday throughout these areas, and an analysis of the rainfall data indicates that the rainfall produced during May - June, 1986 was at least three (3) times the normal rainfall for this time of year for most stations.

Generally, the 24-hour maximum rainfall figures were less than those experienced during the June 1979 flood. However, the prolonged period of continuous rainfall coupled with the already saturated state of the soil existing particularly in the southern and central parishes of

SEE PAGE 6
breaking bridges and power lines.

It is estimated that for the Rio Minho this represents a flood recurrence of between 75 and 100 years. For Rio Cobre it is estimated that this is a flood with recurrence near 50 years.

**IMPACT**

**AGRICULTURE**

The island suffered extensive loss of crops or livestock. These losses are estimated preliminarily at $167m, with livestock losses including chickens or fish amounting to $8m, and crops loss at over $109m. Islandwide, approximately 20,545 acres of crops were lost with maximum damage being incurred in Clarendon, St. Elizabeth and Manchester where approximately 6000 acres, 4,700 acres and 1,580 acres respectively of crops were lost.

An estimated $6m damage was suffered by soil conservation structure. Crops suffering the most significant losses in terms of acreages were red peas, vegetables and roots and tubers.

**UTILITIES**

In all, it is estimated that damage to public utilities including water supplies, electricity, railway lines and telephone lines was approximately $10m.

**WATER**

Water supplies were disrupted in a number of areas. Generally, disruption of supplies were due to:

* Burnt out pumps
* Washed out pumps
* Destroyed mains and lines
* Lack of electricity

**TELEPHONE**

Of the six thousand (6,000) units island wide which were out of service as a result of the rains and floodings, four thousand (4,000) were located in Kingston. The other parishes most seriously affected were St. Thomas, St. Catherine, Manchester, St. Elizabeth and Clarendon. In Chapelton, Clarendon, the exchange was cut off due to extensive damage of the transmission line. The telephone pole route between Vere and Chapelton has also been severely damaged.

**ELECTRICITY**

Although estimates of damage to Jamaica Public Service (JPS) facilities are not yet available, it is known that extensive areas islandwide suffered loss of electricity due to washed out poles and broken lines.

**RAILWAY LINES**

Rail service has been disrupted due to damage to rails by washing out, inundation and undercutting of rail foundations.

**INDUSTRY**

Most sugar factories were affected by flooding. At
Monymusk there were 120,000 acres of cane still unharvested. Harvesting, transportation and factory operations generally were reportedly affected at Long Pond and Hampden.

**HEALTH SERVICES**

A number of hospitals and health centres suffered damage to their physical structures, facilities and equipment. An estimated $19.1M will be required to cover damages affecting the health sector and to provide for the environmental sanitation needs of the communities.

**INFRASTRUCTURE**

**ROADS AND BRIDGES**

Approximately 50% of parish council roads islandwide have been badly damaged and a number of them remain impassable to traffic at this time. Cost of damages are estimated at $187.5M. Roads are extensively damaged and/or blocked in the parishes of Clarendon, St. Catherine, St. Andrew, St. Elizabeth, Manchester, St. Thomas, St. Mary. Most blockages occurred between the 3rd to the 6th of June and were generally a result of landslips and break-aways.

**SETTLEMENTS/COMMUNITIES AFFECTED**

Most communities in the parishes of St. Catherine, Westmoreland, St. Thomas, St. Elizabeth, Kingston, St. Andrew, were severely affected. In central and southern Clarendon, the Rio Minho and tributaries overflowed its banks, rising to levels of up to 3 feet in the Monymusk/Lionel Town area. At the Milk River Bath, the water level rose up to 15 feet necessitating the evacuation of guests by boat.

Islandwide losses due to damage to housing is estimated at $5.95m. Of this amount, $3.45m will be needed to replace 230 units with an average

Massive landslide at Pennants, Clarendon blocking road from Chapelton to Frankfield for nearly two weeks. (PCDPPP Photo) replacement of $15,000 for indigent housing. Estimated damage to infrastructure in housing scheme is Estimated at $2.5m. Damage valued at $5m was suffered by schools in a number of areas.

The recent May-June flood rains resulted in an estimated J$415m damage; however, these figures are preliminary and will increase following complete assessment of all areas impacted. There were also 54 lives lost.

Inondations dans le Sud d'Haiti

Si la fin de l'année 1985 et le début de 1986 ont été marqués pour les sudois par les événements politiques malheureux et dont ils souffrent encore des séquelles, les trois premiers jours de juin en cours seront considérés par cette population comme l'une des périodes les plus atroces qu'elle a connues durant toute son histoire.

La presqu'île du Sud a-t-elle une épée de Damoclès sur sa tête à l'instar de celle de la partie occidentale du Nord-Ouest endurant les méfaits de la sécheresse, de l'érosion où des terres dénudées, des espaces xérophytiques constituent des entraves à l'agriculture? Parallèlement, les rivières, les ruisseaux et les ravins dans lesquels affluent des cours d'eau en période pluvieuse emportent vers la mer toutes les plantations détruisant impitoyablement ainsi la récolte de nos produits vivriers et de nos denrées de base. Tandis que les populations de Jean-Rabel, du Môle St-Nicolas, de Bombardopolis et de Baie de Henne minées par la misère meurent de faim, une faim due à la sécheresse de la zone, des Cayes, de Cavaillon, de torbeck, de Maniche, etc. connaîtront même à un degré moindre, une faim due cette fois-ci aux inondations qui ont ravagé les jardins en dépit des campagnes florissantes et des plantations luxuriantes et verdoyantes parmi cette partie méridionale du pays.

En effet, les 1er, 2 et 3 juin, des pluies diluviennes se sont abattues dans toute la région provoquant une grande inondation. Les eaux ont dévasté tous ceux qu'elles ont trouvé sur leur passage bouleversant les habitants et causant des dégâts matériels considérables et de pertes en vie humaine. Sur la route nationale no. 2, de Zanglais à Cavaillon, des montagnes se sont ébouillantées et affaissées rendant ainsi la route presque impraticable. A l'entrée de Cavaillon, des maisonnées sont immergées dans les eaux et les cours ont donné l'aspect de petits lacs dans lesquels on navigue des familles en détresse. Des bananiers et d'autres fruits sont tombés au sol et dans nos marchés la rareté était prévisible. Le pont jeté sur la rivière l'îlet est attaqué. A quelques kilomètres des Quatre Chemins des couches d'asphalte sont enlevées. A Charpentier un pont en maçonnerie s'est effondré sous la colère de la rivière Samedi qui a transporté une camionnette Kanter Isuzu. A Bergeau, une famille s'est noyée et pérée; on a retenu les noms suivants: Dieufête, Lamercie, Ti-Madame, Désirante, Jean Toutou, Michelet. Nous avons aussi appris qu'à Cavaillon un homme âgé de 40 ans est mort noyé après avoir aidé deux autres personnes à traverser une rivière en crue.

Toutes les plantations de Tamassé
sont ravagées. De l’îlet, on a pu contempler l’île à Vache tant que les champs sont devenus libres. A Charpentier, à Mapou et aux Gabions, des maisons sont inondées. Plusieurs centres d’hébergement sont aménagés pour accueillir les sinistrés. Près de 1510 y se sont installés non compris ceux qui ont pris refuge dans des résidences privées.


Source : Organisation Pré-Disastre et de Secours Ministère de la Sante Publique et de la Population

Delmas, Avenue Jean-Claude Duvalier, Haiti,
COMMUNITY FIRE PREVENTION SEMINAR

A Community Fire Prevention Seminar was held in the Grays/Green Community. It was well attended by a wide cross-section of people in that Community including Community workers, Members of Grays/Green Community Association, housewives, teachers and senior students of that Community, Public Health Nurses and Public Inspectors, Fire Police Officers and the Salvation Army.

The Workshop was organised by the National Disaster Coordinator of the Ministry of Health with the assistance of the Pan-Caribbean Disaster Preparedness and Prevention Project.

National Fire Prevention Association consultant - James Dalton presented a five step process on Public Fire Education Planning. A summary of these five steps are as follows:

Step One - Identification

The Identification step involves identifying the most important local fire problems so that the fire education effort can focus on those specific problems. The activities include gathering information on subjects ranging from the most frequent location of fires to high risk behaviour. The decision is to agree on the major fire problems in your community. Once the major local fire problems have been identified, effective solutions can be developed.

Step Two - Selection

While Identification defines a community’s needs for fire education, Selection is an inventory of community resources available to meet those needs and selection of achievable objectives.

The activities of Selection include conducting an inventory of community resources, available materials, and potential audiences, as well as estimating costs and benefits of different educational strategies. The decision is selecting program objectives that meet your community’s needs and resources.

Step Three - Design

The Design step moves the fire education process from planning towards implementation. The activities of Design involve determining the specific content and format of fire safety messages and packaging the program for delivery to the community. The decision is to outline and approve the education program package.

Step Four - Implementation

The fourth step is implementing the education program designed for your community’s specific needs and resources. Implementation activities include producing and distributing materials, training personnel, and involving target audiences in the education process. In addition, an organisation or individual will monitor the problems for smooth day-to-day operation. The decision is an agreement of exactly how the fire education program will be implemented, monitored and, if necessary, modified in your community.

Step Five - Evaluation

The final step is measuring the impact of the fire education program. Among the activities are comparing baseline and new data on fire deaths, injuries, losses and incidents. Old and new information on awareness, knowledge, and behaviour in the community will also be compared. The decision is to review the program’s impact and determine its impact. If the program is successful, measures to illustrate its success should be explored. On the other hand, if the program is unsuccessful, it may be necessary to modify its focus. In this way, Evaluation returns you to the Identification or Selection steps to adjust your program.

Fire Chief Nicholas gave a general overview of fires in Antigua and participants were then requested to function as a Committee and apply the five-step process to develop a Proactive vs Reactive program on Fire Awareness/Education for the Greenbay community.

The Delphi technique was effectively used to accomplish this aspect of the seminar objectives.

Participants evaluation reveal this seminar to be a very worthwhile exercise. They have been exposed to a very simple but quiet effective process for dealing with their identified problems/needs at the community level - Fire is one such problem/need.

Source: NDC - Ministry of Health Antigua
MASS CASUALTY SIMULATION EXERCISE IN MONTSERRAT

Although forewarned members of the public were alarmed by the sounds of sirens and rumours on the streets of Plymouth of a serious vehicular accident which resulted in death and injuries.

This was in fact part of the scenario which also involved the movement of ambulances and Health and volunteer services personnel, who were all taking part in a simulation exercise in the handling of mass casualty accident.

The exercise which took place on August 5 took roughly 41 minutes to stage, and depicted the collision of a full school bus with a motor car carrying 4 passengers.

The Planning Committee for the exercise consisted mainly of Health and Police Departments personnel, the Montserrat Defence Force, the Red Cross and the First Aid. Two experts from Oswego, New York, Mr. John Phillips and Mr. Michael McDonald, collaborated with the Committee.

Members of the First Aid were tested on techniques and the handling of emergency victims.

At the evaluation meeting held later by the Committee, along with Montserrat's National Disaster Co-ordinator, Miss Rachel Collis, it was generally held that the simulation was handled in a fairly satisfactory manner. Chairman of the Committee, Dr. Vernon Buffonge, complimented the services for their efforts and also thanked the groups and indivi-
FROM PAGE 11

...duals who assisted in the exercise, thought to be the first of its kind conducted on the island. Dr. Buffong however emphasized certain areas which need improvement. These were mainly the need for proper on-site control, better communication links between the services and proper handling of patients.

Recommendations were made that the Police should have an ambulance service and also receive training in management at accident sites; and that proper channels of communication be established primarily between the Police, Hospital and Volunteer Services.

Audrey Mullings, First Aid Advisor of the PCDPPP, also collaborated with the Planning Committee on the staging of the exercise.

Source: Government Information Unit Office of the National Disaster Co-ordinator Plymouth, Montserrat.

Some Natural Disasters:
Earthquake, drought, hurricane, land-slide, volcanic eruption, flood, tidal wave.

Some Man-related Disasters:
Fire, explosion, pollution, power-failures, nuclear fallout, exposure to radiation, aircraft accident, oil spills.

Countries Participating in the Project

ANCUILLA
ANTIGUA AND BARBUDA
THE BAHAMAS
BARBADOS
BELIZE
BRITISH VIRGIN ISLANDS
CAYMAN ISLANDS
CUBA
DOMINICA REPUBLIC
FRENCH GUIANA
GRENADA
GUATEMALA
GUAYANA
HAITI
JAMAICA
MONTserrat
NETHERLANDS ANTILLES
PUERTO RICO
SAINT LUCIA
ST. CHRISTOPHER/NEVIS
ST. VINCENT AND GRENADINES
SURINAME
TRINIDAD AND TOBAGO
TURKS AND CAICOS ISLANDS
US VIRGIN ISLANDS

NAME OF HURRICANES FOR 1986

* ANDREW
* BONNIE
* CHARLEY
* DANIELLE
* EARL
* FRANCES
* GEORGES
* HERMINE
* IVAN
* JEANNE
* KARL

LISA
MICH
NICOLE
OTTO
PAULA
RICHARD
SHARY
TOMAS
VIRGIN
WALTER

The Caribbean Disaster Preparedness Newsletter is published by the Pan Caribbean Disaster Preparedness and Prevention Project; Editor: Abdool N. Hoosein, P.O. Box 1399, St. John's, Antigua, 01.
Telephone 462-4431 - 2 - 1, Telex AK 2195 Cable: DISPREP — Printed by Antigua Printing & Publishing Ltd. Factory Road.