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**COUNTRY REPORTS**

**PROGRAM EVALUATION OF THE PAN-CARIBBEAN  
DISASTER PREPAREDNESS AND PREVENTION PROJECT**

Submitted to:

Office of Foreign Disaster Assistance

Agency for International Development

Under Contract No. OTR-0000-I-00-3540-00

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## ANTIGUA AND BARBUDA

### 1. OVERVIEW

Antigua is a 108 square-mile island located in the heart of the Caribbean. The island's name is derived from the Santa Maria la Antigua Church in Seville, Spain.

Antigua is renowned for its ideal temperatures that range from 76° F. in January/February to 83° in August/September. Although rainfall has an average of 45 inches per year with a 79 percent average humidity, it is also clear that the island faces drought conditions in a cyclical occurrence every 6 to 8 years. The most recent drought occurred in 1983 and its severity was alarming and detrimental to the population, and to its main business activities, particularly tourism and agriculture for domestic food consumption.

St. John's headquarters base of the PCDPPP and capital city of the Republic of Antigua and Barbuda is located on the island of Antigua.

Antigua is not unaware of potential disasters. Cyclical droughts have threatened and damaged the islands repeatedly. The earthquake of 1974 had its epicenter just a few miles off Antigua's shores and made its inhabitants much more aware of their vulnerability. The earthquake activity cracked buildings, destroyed some, and frightened a large portion of the population. The fact that the earthquake took place at 6 am rather than during the active business day is one reason that its effects were not considerably more devastating.

## 2. PROFILE OF THE DISASTER MANAGEMENT ORGANIZATION

In Antigua and Barbuda, the organization responsible for overall disaster management is the National Disaster Committee, headquartered in the Ministry of Health. In this organizational arrangement, the Minister of Health is the Chairman of the Committee. Other members include: all permanent secretaries, high-ranking national police officials, and defense force; transport and communications managers; hospital and public health officials; representatives from labor federations, religious organizations, and Commerce in Exhibit 1 illustrates the structure of the national disaster management organization in Antigua and Barbuda.

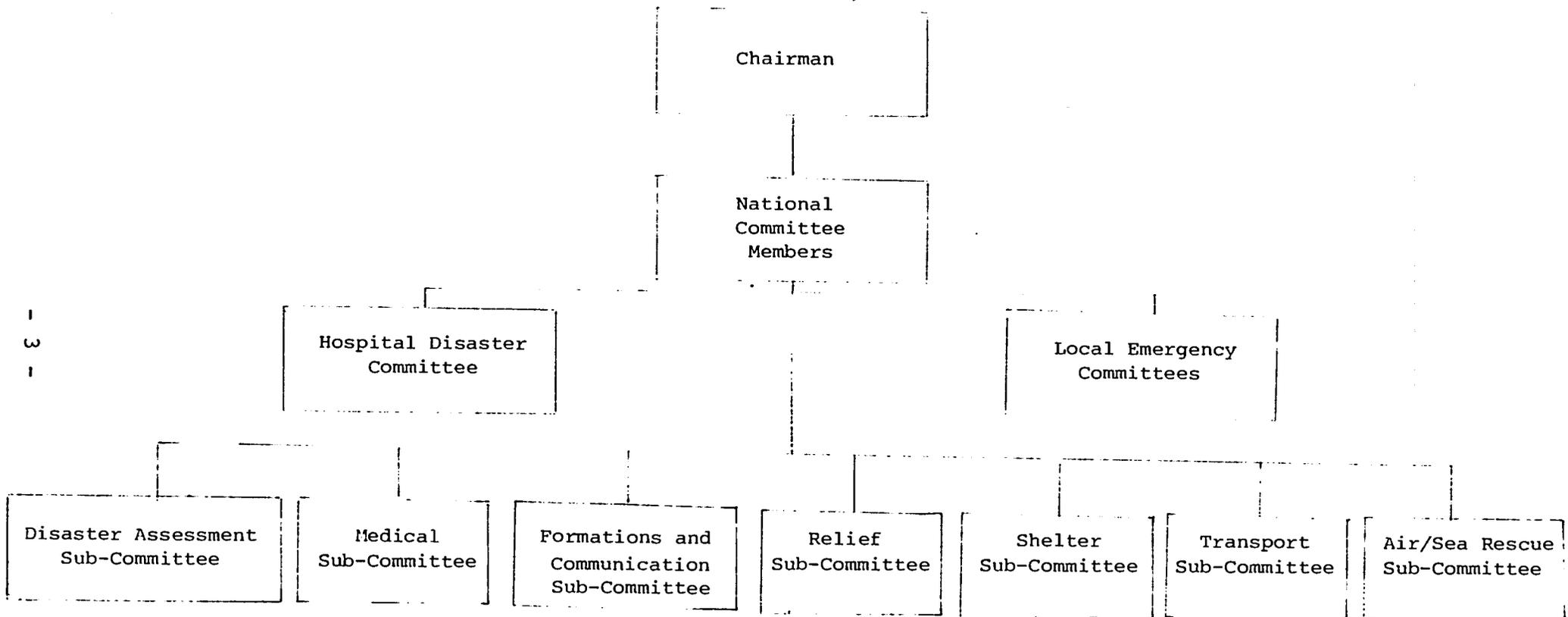
The National Disaster Committee meets at least once a year during normal times, but when a disaster threatens and immediately after a disaster the Committee meets at the police headquarters where an emergency operations center is set up.

The functions of the Committee are as follows:

- to organize a survey of the extent of damage.
- to organize and coordinate emergency relief services
- to organize local appeals for funds, food, and clothing
- to be in charge of any relief stores, and the allocation of funds which which may be raised or received by the Government for relief purposes, and to arrange for the distribution of such stores in the most beneficial manner to the stricken areas.
- to arrange educational and training programs.
- to coordinate assistance, if required, to other countries struck by disaster.
- to review regularly the terms of the Emergency Plan.

EXHIBIT 1

ANTIGUA AND BARBUDA NATIONAL DISASTER ORGANIZATION



- to advise on legislation to mitigate the effects of disasters.
- to decide on what precautionary and preparedness measures should be taken when a major disaster threatens
- to advise the Government on what measures should be taken after a serious disaster has occurred
- to coordinate the activities of voluntary agencies within the territory and to assign the role of those agencies in the event of a disaster.

The committee is supported nationally by two other committees: (1) the Hospital Committee, responsible for the planning and operations of hospital services in the event of a disaster, and (2) the Local Committees, which coordinate activities with the National Disaster Committee through Community Development Officers.

In addition the Committee is supported by sectoral sub-committees. These are: Information and Communications; Medical; Relief; Shelter; Transport; and Air/Sea Rescue.

## 2.1 Functions of the National Disaster Coordinator

National disaster coordination in Antigua and Barbuda is the responsibility of the National Disaster Coordinator (NDC). The current NDC is an experienced administrator well-connected with the public and private sectors of the nation. Her role and work is supervised by the National Disaster Committee.

The National Disaster Coordinator's Office heads a network of functional sub-committee (refer to Exhibit 1) responsible for critical areas of national activity whose viability and operations are vital to the nation's welfare in case of emergency.

Mrs. C. Michael, the current NDC, sits in a small office and gets limited clerical support from the Ministry of Health personnel. She admits that the expansion of her office is severely limited by the budget allocated to operations. She was reluctant to provide specific budgetary allocations for current and past years, but the evaluator was able to deduce that it was a small amount since Mrs. Michael is the only employee of the NDC office.

One other problem noted by the NDC is the lack of definition of her functions in the National Disaster Plan. Without a clear delineation of responsibilities, most of her work is planned ad hoc. The NDC hopes this condition will be changed in future updates of the national disaster plan, and she is lobbying to make sure this occurs.

### **3. INTERACTION WITH PCDPPP**

The physical proximity between the Antigua disaster management organization and the PCDPPP core office has fostered the establishment of strong inter-organizational linkages that perhaps other more distant Caribbean neighbors have not been able to achieve.

The National Disaster Coordination office with the assistance of Mr. Joseph, Airport Sub-committee President, who has extensive experience with preparedness drills has conducted in association with the PCDPPP several drills. Actually, Mr. Joseph has had drills at least once per year at the airport for the last seven or eight years. Recent drills have been at the fire service, hospital, police, Red Cross, St. John's Brigade, and two U.S. military bases.

Also, under support from the project, and now standard practice in the country, are established procedures for ocean craft reported lost:

1. The airport control tower is informed;
2. The Harbormaster is informed;
3. Patrol boats and aircraft are informed and provided specific data;
4. Light aircraft are assigned to search operations lasting two hours at a time;
5. Information on details is elicited from the reportedly lost person(s)' family and friends;
6. Regional assistance is requested;
7. The French provide a helicopter for search purposes; the U.S. has two jet aircraft and a helicopter also for this purpose; The Dutch also make aircraft available.

The NDC staff noted that the importance of the project at this point, is its function as a clearinghouse and reservoir of technical assistance for the region in matters related to disaster or potential disaster.

An important consideration is that either the Ministry of Finance or Development be informed of the importance of the PCDPPP. The situation at this point is very delicate. According to Mrs. Michael, "it would be disastrous" for the project to stop operating in Antigua. This seems to be a critical time in which initial structural development has occurred and needs to be continued and expanded.

Mr. Burt Joseph stated that "from a national perspective, we are not prepared to respond to a major disaster." Knowledge has started to be disseminated in this area through project seminars (with English-speaking and other participants) but, in general, despite awareness of the potential for disaster, the machinery to respond to disaster is not yet in place. "We do not have that extra capability to invest now and wait for something that hopefully would not occur in 20 years or better. When we talked

to the Minister of Finance on this issue, he said 'What are you talking about?' Indeed he needs more information on all this." The NDC staff noted that the nations in the Caribbean are not yet prepared to work on their own because of resource limitation, money being the most important but not the only one. They believe that PCDPPP has contributed enormously to heighten the awareness of the NDC. For example, hurricanes in the past were the only concern of Antigua, while today they are conscious of many different threats. The hospital did not have a disaster emergency plan until Mrs. W. Patterson, former health officer of PCDPPP, helped develop one.

However, the NDC staff also noted that PCDPPP needs some restructuring. Particularly, they believe the project should pay more attention to the nation's problems and should use its resources to develop personnel. That, they believe, does not mean sending people overseas for training. On the contrary, they noted, the money should be spent locally to upgrade the capability of local people.

#### **4. ACTIVITIES SUPPORTED BY THE PCDPPP**

In addition to the role played by the PCDPPP staff in the fairly recent drought, where some of their disaster preparedness capabilities were coupled by disaster relief resourcefulness, the project has played an important role in many country specific activities and sponsorship of nationals in other regional activities. Exhibit 2 and 3 summarize these activities.

#### **INTERVIEWS**

Mrs. Cornelia Michael

Mr. Burt Joseph

EXHIBIT 2

COUNTRY ACTIVITIES SUPPORTED BY THE PCDPPP  
Antigua and Barbuda

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Objectives</u>
Workshop: All Subcommittee Members	3/2/84	Antigua	To establish the level of disaster preparedness in all major sectors.
Workshop: Water Supply & Environmental Aspect of Disaster Management	3/21-25/84	Antigua	To develop properly trained local Health Personnel to react promptly and effectively to an environmental disaster.
Meeting: Hurricane Committee Meeting and Final Planning for National Disaster Coordinators	5/12-14/84	Barbados	Participation in the World Meteorological Organization Region and Meeting on Development activities and National Disaster Coordination Plans for Meeting in Antigua.
Meeting: Caribbean Coordinators Meeting	7/11-13/84	Antigua	To review National Work Program and discuss PCDPPP long-term plans.
Simulation Exercise	8/20-24/84	Antigua	Simulation to test effectiveness of Airport Plan and Hospital Plan for mass casualty.
Workshop: Hurricane Vulnerability and Construction Industry	10/16-19/84	Antigua	Demonstrate to contractors, architects, and planners elementary measures to reduce earthquake and hurricane damage.
Training: Antigua and Barbuda Red Cross Disaster Preparedness Training Day	12/13/84	Antigua	To introduce Red Cross Disaster Plan and to broaden the knowledge of Red Cross regulations.
Drought	On-going		Attended meetings on the water shortage.

EXHIBIT 3

ACTIVITIES PERFORMED BY PROJECT  
IN SUPPORT OF ANTIGUA AND BARBUDA

PAHO:

Hospital Emergency Plan  
Testing Plan  
TRG Staff/Hospital  
Emergency Procedures  
Mass Casualty Simulation - Hospital  
Mass Casualty Simulation - Airport  
Mass Casualty Simulation - Fire  
Mass Casualty Simulation - Police  
Environmental Health  
Trng Emergency Operation  
Water Supply Techniques

UNDRO:

Development and Distribution of Public Awareness Material  
Poster(Impact Report); Mass Casualty Exercise  
Strengthening National Institution Disaster Plan  
Study Feasibility Provision  
Tankage for Low-Income Population  
Telecommunications Equipment  
(two systems: Intra- and Inter-Island).

LRCS/RED CROSS:

Trng First Aid  
Strengthening Local Branch of Red Cross  
Development of R.C. Relief Plan  
Provision Trng. Material for nurseries, schools  
First Aid, part. Nat. Committee

## BARBADOS

### 1. OVERVIEW

An informed outside source noted that Barbados has by far the most advanced Disaster Preparedness and Prevention (DPP) system among the smaller Caribbean nations. Nevertheless, government representatives portray it as a weak contender in the competition for limited government resources and funds and highly dependent upon donors of funds and equipment abroad and volunteer community labor at home. This parsimonious domestic resource base can be largely attributed to a dominant perception at all levels that the expected frequency and cost of disasters is not sufficiently high to warrant more than minimal investments in additional resources for DPP activities. This attitude appears to prevail despite an ongoing public awareness and education program.

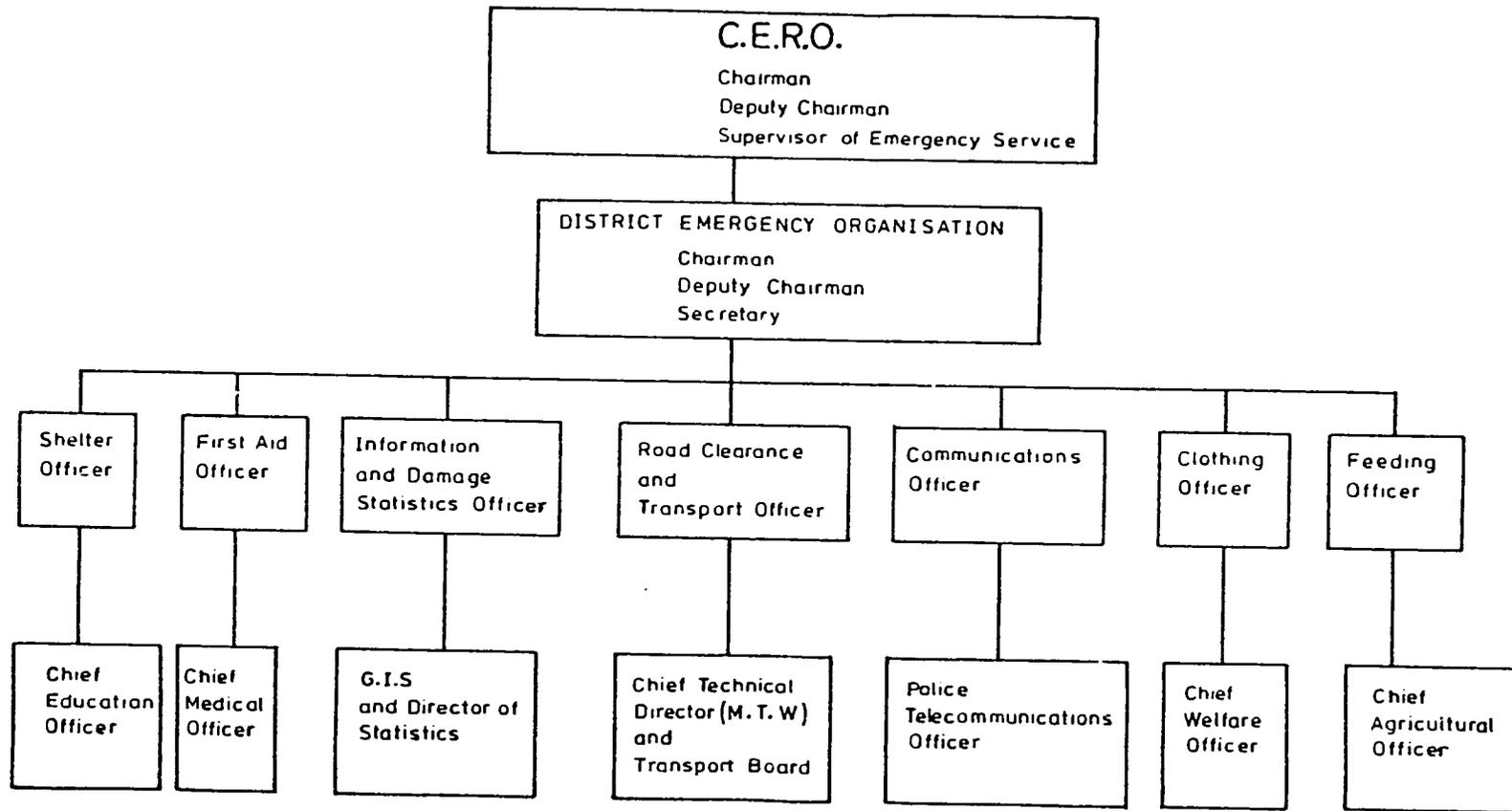
### 2. PROFILE OF THE NATIONAL DISASTER PREPAREDNESS AND PREVENTION ORGANIZATION

#### 2.1 Structure and Activities

Exhibit 1 and 2 summarize the organization of DPP in the Barbadian government. Exhibit 1 depicts this organization at the national level and indicates that a great deal of the responsibilities implemented for preparedness and prevention plans lies at the local (district) level. The Central Emergency Relief Organization (CERO), located in the Prime Minister's Office, has overall responsibility within the government for coordinating the planning and execution of disaster preparedness and prevention activities at national and district levels involving the public, voluntary and private sectors. At the national level, these responsibilities are carried out by the various ministries whose

EXHIBIT 1

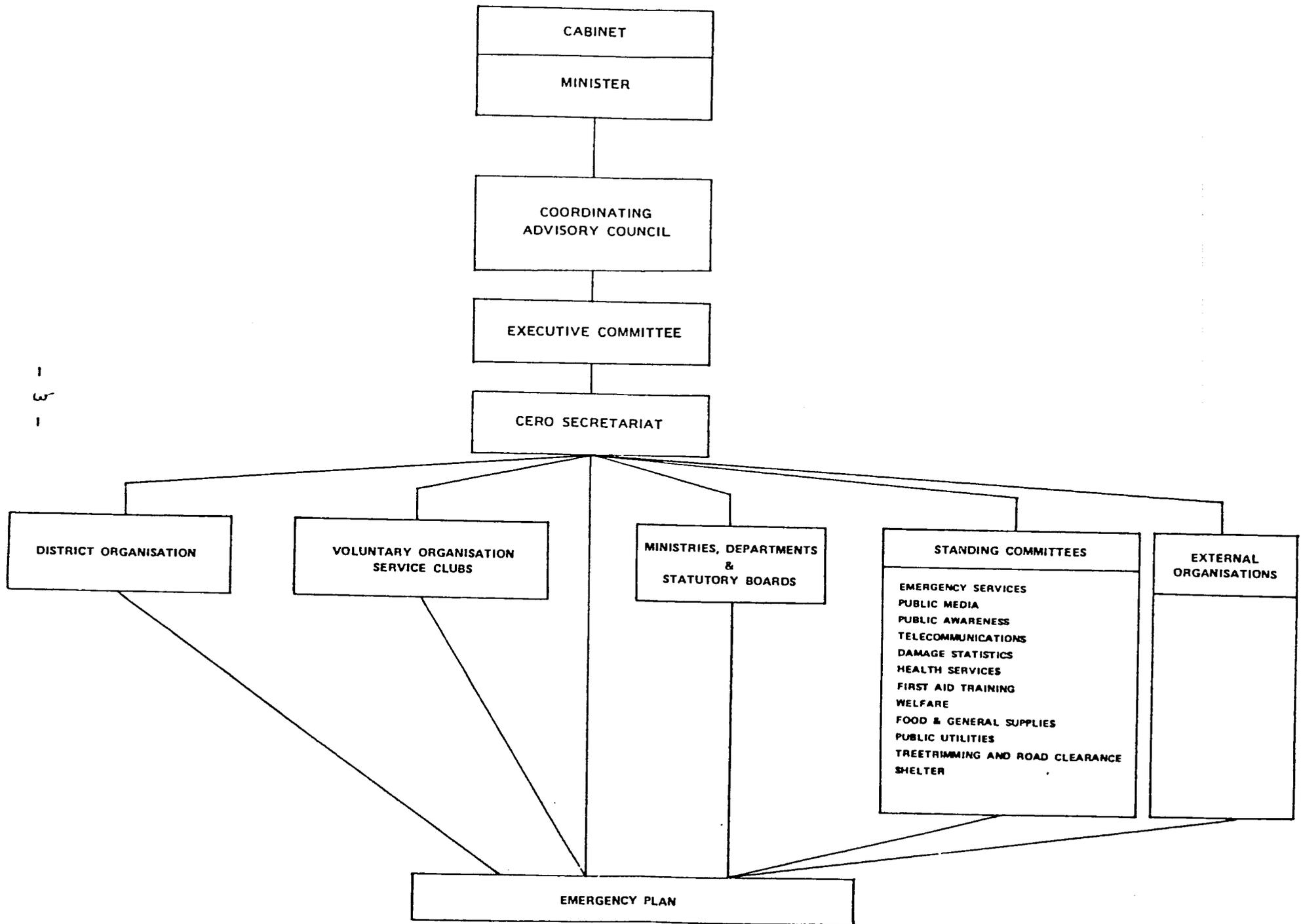
BARBADOS DISASTER MANAGEMENT ORGANIZATION



Some links between D.E.O. and C.E.R.O.

EXHIBIT 2

# ORGANISATION CHART FOR EMERGENCY PLANNING



1  
3  
1

12

functions include activities relevant to disaster preparedness and prevention. Each of these ministries is required to develop disaster plans in accordance with guidelines provided by CERO. CERO is also charged with ensuring that these plans are updated annually (before the start of the hurricane season) to take account of changing disaster planning priorities (e.g., the increased priority now assigned to fire disasters), resources and key personnel. At the district level, CERO encourage the establishment and operation of District Emergency Organizations (DEO) by local volunteer organizations such as village, district or parish organizations or any other community groups who are willing to arrange with CERO appropriate training programs for their members in the techniques of disaster preparedness. CERO provides DEOs with guidelines for organization and planning, reviews functioning and resources availability, and provides technical assistance both directly and with other resources. DEOs are generally organized according to electoral district boundaries.

The general direction and control of CERO resides with the Prime Minister. The day-to-day functioning of CERO is under the overall direction of the Permanent Secretary to the Prime Minister in his capacity as Chairman of CERO's Coordinating Advisory Council and its Executive Committee (see Attachment A, Mobilization Procedures, for a listing of other members of this Council and its Executive Committee.) The Supervisor of Emergency Services is the National Disaster Coordinator and the Secretary to the Advisory Council, and is responsible for the day-to-day functioning of CERO. She is supported by two assistants and a clerk/typist. The Council normally carries out its supervisory functions through its Executive Committee of which the Secretary is a member.

Much of the planning function is carried out through a number of Standing Committees. (See Exhibit 2.) The chairmen of these committees are appointed by the Executive Committee of CERO. The primary function of the committees is to promote

coordination of effort and they are not intended to affect in any way the responsibilities allocated to their member Ministry Organizations. Reports on the Standing Committee are submitted to the CERO Secretary (Director of Emergency Services).

## 2.2 Functions of National Disaster Coordinator

As described in Mobilization Procedures, CERO's functions can be divided into the following categories:

- Informing---the development and dissemination of information which will enhance the capability of the individual or the private organization to avoid or reduce risk, to cope with emergencies or to get help when needed.
- Warning---the analysis and forecasting of the nature of potential emergencies and the development of systems designed to maximize warning for the benefit of both victims and helpers.
- Coordinating---the development of systems to enable resources to be effectively applied to emergencies.
- Providing---the provision and maintenance, when necessary, of extraordinary resources as well as the diversion of normal resources to meet emergency needs and thus to promote the rehabilitation of any area affected by disaster.
- Evaluating---the review of the performance of the organization (CERO) with a view to its improvement.

In short, CERO functions within the government as the prime coordinating organization for disaster preparedness and prevention. It coordinates the development and execution of

approved disaster plans of government and private organizations and promotes the enhancement of resources available for this purpose.

### 2.3 Internal Coordination

As CERO does not have unilateral authority to develop and execute plans and allocate resources, much of its efforts are devoted to coordinating the work of ministries and volunteer organizations making their contributions to the national disaster plan. This involves working with organizational contributors to the plan to eliminate duplicative actions and fill gaps in needed activities. CERO, with a full time National Disaster Coordinator (NDC), two assistants and clerical support, appears to have an adequate number of positions to maintain adequate levels of coordination. While CERO believes that it is achieving central coordination of disaster planning and preparedness, it would like more staff to advance the overall level of disaster preparedness.

The primary area where coordination could be improved is in emergency health care planning. This activity, along with general health care and resource development needs, is carried out by the Ministry of Health in conjunction with PAHO and LORCS. These organizations enjoy a long and stable relationship and CERO regards itself as generally excluded from their planning and program activities.

CERO believes that regional coordination of disaster planning and preparedness through the PCDPPP is possible in the Caribbean. The source of this belief lies in the view that PCDPPP, because of its overarching position, would be a logical repository for all country plans and resources. With this information and its technical expertise, PCDPPP could devise various coordination and resource and technology sharing strategies to maximize the regional effectiveness of disaster preparedness and relief actions.

## 2.4 Resources and Expenditures

CERO was established in 1978, at least three years prior to the advent of the PCDPPP. During this early period, its staff resources consisted only of the Director of Emergency Services with the part-time support of the Permanent Secretary to the Prime Minister. In recent years, two staff assistants and a clerk/typist have been added. The NDC is a trained nurse, and some of the staff have received some short-course formal training in DPP.

The most recent budget shows an allocation of about \$BDS70,000 (US \$45,000) plus about \$BDS20,000 (US \$10,000) for temporary staff. These amounts include salaries, travel and routine supplies. Guidance for the development of the upcoming national budget includes a limit of four percent (4%) on program funding increases and CERO is not exempt from this.

With respect to equipment and facilities, CERO was given a considerable amount of useful radios and telecommunications equipment by OFDA and CIDA. The police department operates the main telecommunications equipment at the emergency operation center. CERO has portable communications equipment for its own use. It also maintains a limited basic inventory of equipment for the use of district operations centers.

CERO stresses the distinction between basic planning and preparedness resources and resources which would be available in time of actual emergency by noting that the total resources of each ministry involved in disaster planning and preparedness could be drawn upon in the latter instance. In addition, it has agreements with local voluntary organizations to provide assistance at such a time.

### 3. CERO RELATIONSHIPS WITH THE PCDPPP

Relationships with the PCDPPP under the current project manager appears to be uneven at best. There were complaints that the present project manager is not available, doesn't return telephone calls and leaves the impression that he talks down to the NDC by dictating what assistance will be provided rather than soliciting information concerning needs and formulating the PCDPPP's technical assistance agenda accordingly. This situation was contrasted to that when Paul Bell was in charge. He was described as making visits to Barbados to identify needs and get PCDPPP to respond to them. Aside from any problems with styles of interaction, it would be fair to say that some of the problems Barbados has with the present PCD project manager could be alleviated if he was more available or, if that is not possible, there be a deputy with authority to serve in his absence. It is also fair to say that because Barbados regards itself as a regional leader in DPP and an early advocate for the establishment of PCDPPP, it is somewhat offended by the current PCDPPP project management situation.

CERO's involvement with the PCDPPP management committee is remote. Through CARICOM, Trinidad presently serves as Barbados' representative at the management committee meetings, but frequently Trinidad doesn't attend. Generally, CERO knows very little about what the management committee does or how it operates. However, it is not completely known whether this is because of the committee's communications practices or a lack of initiative on the part of CERO to find out how the PCDPPP truly operates and use this information to achieve its own ends.

CERO's interaction with the PCDPPP three components, UNDRO, PAHO, and LORCS is also limited. Both PAHO and LORCS have had longstanding relationships with the Ministry of Health and the advent of the PCDPPP has not changed that. Consequently, DPP-related projects in the health area are more often than not designed between PAHO or LORCS and the Ministry of Health without CERO participation and without its knowledge, though CERO said

that sometimes it is copied on project memoranda. It is worth noting that CERO could not persuade the appropriate person in the Ministry of Health to find any time to meet with the DISC investigator during his visit.

A meeting was arranged with Dr. Halmond Dyer, PAHO's Caribbean Regional Coordinator. In many respects, he confirmed the situation described above, giving the clear impression that there was not an attempt to undermine linkages between CERO and the PCDPPP. Rather, such an appearance was simply the result of PAHO's pursuit of a broader health care development agenda, which has been continuing for years. In this context, he regards PAHO's PCDPPP resources as simply another resource to be drawn upon when it seems appropriate to a project under consideration. He noted that in doing so, he formally requests PCDPPP/PAHO funds from the management committee to supplement the funding of the larger PAHO agenda. He emphatically stated that the PCDPPP management committee and/or the PCDPPP project manager controls the PAHO portion of PCDPPP and that if his funding requests were not honored, he would use other PAHO funds assigned to Barbados. In either case, the PCDPPP/PAHO grant is regarded as unimportant to the implementation of the larger PAHO assistance project. As a result, PAHO in Barbados views its major client as the Ministry of Health, does not work through CERO (except to send CERO an occasional "FYI" memo), and views PCDPPP and the main PAHO HQ office as two alternate funding sources.

LORCS has a similar ongoing relationship with the Ministry of Health and the local Red Cross organization. It can be inferred with some confidence that a similar situation prevails, although time did not permit its verification.

No clear understanding could be obtained concerning the process by which CERO solicits or otherwise acquires assistance from PCDPPP outside of the activities of PAHO and LORCS. It was made clear that PCDPPP doesn't really help in clarifying local assistance needs nor provide guidance on what types of assistance

may be funded. It was stated that CERO would generally approach the UNDRO representative directly with requests for training assistance. It was reported as not being known if the PCDPPP project manager is involved in these decisions. If a request for assistance is judged by CERO as one not to be sent to the UNDRO representative, it would be sent to the PCDPPP project manager. Attempts to identify any kind of even semi-systematic process involving CERO and the PCDPPP for requesting and receiving technical assistance were unsuccessful. Generally, they appear to be made on purely an ad hoc basis. However, CERO reports that it "receives and sends lists of needs" which correspond with the meetings of the PCDPPP management committee every six months, but that notification of their acceptance by PCDPPP is sometimes only 2-3 weeks from the date at which they are to be accomplished. (This may describe a process whereby PCDPPP decides on a periodic technical assistance agenda including subjects and country participants, and then ultimately notifies the NDCs involved).

CERO reported that, working with a few other NDCs, a meeting of NDCs was finally funded by PCDPPP and took place in July 1984. This was the first such meeting in the four year life of the PCDPPP. It was also reported that PCDPPP changed the proposed agenda and little was accomplished. Whether this was caused by pre-emptive actions by PCDPPP or a lack of aggressiveness of the NDCs was not determined in this site visit.

#### 4. PCDPPP PROJECTS

Exhibit 3 and 4 summarize some identified PCDPPP-funded and non-PCDPPP activities performed in Barbados. Generally they are conferences/workshops in the area of preparedness planning.

CERO reported that the most important contribution of PCDPPP has been to its public awareness program. In 1983, PCDPPP supplied CERO with video cassette recorders, slide projectors and televisions.

### EXHIBIT 3

#### PCDPPP RELATED PROJECTS

TITLE/DATE LOCATION	SPONSORS	NUMBER OF BARBADIAN PARTICIPANTS		BENEFITS
		CERO	OTHER	
1. Disaster Management Conference, Orlando, Fla., February 1984.	PCDPPP	1	2	Health Officer involved in Queen Elizabeth Hospital prepared- ness learned new techniques.
2. Hazardous Materials Emergency Response School Seminar, Jacksonville, Fla., March 1984.	OFDA/ PCDPPP	--	1	Chief Fire Officer was exposed to techniques applied to fire service.
3. Search and Rescue Workshop, St. Kitts, October 1984.	PCDPPP	--	1	Sub Lt. of Barbados Defense Force became acquainted with SAR exercises.
4. Disaster Control Course, St. Augustine Fla., June 1984.	OFDA/ PCDPPP	--	1	Chief Fire Officer gained from exposure to Emergency Response Management System.
5. Hazard Monitoring and Emergency Work- shop, Havana, Cuba, September 1984.	PCDPPP	--	1	Senior Meteorological Officer "brushed-up" on new techniques.
6. U.S. Coast Guard Pollution Response Simulation Exercise, San Juan, P.R., May 1984.	PCDPPP/Govt. of Puerto Rico	--	1	Sub Lt. of Barbados Coast Guard learned logistics of pollution response action.
7. Workshop on First Aid Training, Antigua, May 1983.	PCDPPP	--	3	Red Cross, St. Johns Ambulance Brigade, and First Aid Coordi- nator were made aware of better first aid care.
8. Mass Casualty Workshop, Antigua, April 1983.	PCDPPP	1	2	CERO's NDC participated as resource person along with health officer and hospital as trainees.
9. Regional Shelter Management and Evacuation, Barbados, October 1983	CERO/ PCDPPP	6	2	4 District Chairmen, 2 shelter wardens, 2 persons from the Police Dept. learned modern techniques.
10. National Disaster Coordinators Meeting, Antigua, July 1984.	PCDPPP	1	--	Acquaint CERO's NDC with other NDCs in the region.
11. Health Educators and Public Infor- mation Officers Workshop, Antigua 1983.	PAHO/ PCDPPP	1	2	CERO's NDC acted as resource person. Other participants gained from exposure to new health information materials.
12. Community Health Emergency Course Ontario, Canada, February 1983.	Antiprior/ PCDPPP	--	2	A Doctor and a Major on the Defense Force got an overview of community health emergency planning.
13. Workshop for Coordinators of District Emergency Organizations, Dominica, March 1983.	PCDPPP	2	--	Both CERO's participants served as resource persons.

EXHIBIT 4

NON-PCDPPP RELATED ACITIVITIES

<u>#</u>	<u>TITLE</u>	<u>SPONSORS</u>
1.	6th National Hurricane Conference, Tampa, Fla., April 1984.	OFDA
2.	Orientation Course for Department Coordinators, Barbados, May 1984.	CERO
3.	Seminar on Disaster Management for District Emergency Organization, Barbados, July 1984.	CERO/ St. Lucy H.S.

CERO has no funds of its own to cover out-of-pocket costs of projects. Hence many projects not receiving outside donor funding are very minimal in scope and rely upon community volunteer resources.

In addition, CERO noted a few known projects funded by PAHO outside of the PCDFPP.

CERO noted that assistance aimed at emergency first aid procedures, evacuation training and the development of a food rationing system was needed. However, perhaps a higher priority would be assistance in surveying the structural and functional integrity of shelters which are usually school buildings and churches.

Finally, a desire was frequently stated that PCDFPP provide funds for convening local voluntary officials to learn of DPP management techniques. It is felt that the benefits of initial investments in training select few could be multiplied if they could be enabled to impart their training experiences to "front line" disaster personnel.

## 5. INSTITUTIONAL DEVELOPMENT

### 5.1 Disaster Planning

Since 1980, the National Disaster Plan (NDP) has been marked by improvements in the following areas:

- Addition of more function-related standing committees to aid in the planning process.
- Improved definitions of ministry duties.
- Increased participation of voluntary groups.
- Improved organization of district emergency organizations.

The improvements have been made to a plan which Barbados felt in 1980 was a model for the region.

The plan is understandably oriented to hurricanes but is expected to have applicability to other types of disasters. Recently, instances of flooding and fires have called attention to the needs to more closely examine the NDP for its adequacy in these situations. The planning process calls for addressing such needs through annual amendments to the existing NDP rather than completely redrafting it.

The plan is periodically tested, largely at the discretion of the ministries involved. These tests may include simulations, practices and message testing. Hurricane practices and telecommunications testing are performed annually.

A comprehensive directory exists containing names, titles and home telephone numbers of all officials having a role in plan implementation in an emergency.

## 5.2 Disaster Preparedness

This investigator concluded that perhaps the biggest threat to adequate disaster preparedness is that of official and public indifference toward either learning about or investing in disaster preparedness actions. The threat posed by hurricanes and other disasters is simply not perceived as a major one. Consequently, there is the important question of how effectively designated resources will be applied and the popular response to an actual disaster situation. However, CERO is basically satisfied with the response to the recent flooding in the north while noting that earlier rainfall warnings would have been helpful and that mistakes of district emergency organizations will serve as lessons for the future.

The adequacy of shelters was reported as a concern. While there has not been a systematic survey of shelters, it is gener-

ally feared that they are in many instances woefully inadequate. However, public funds are unlikely to be forthcoming to correct this situation.

Another major problem that permeates the entire spectrum of disaster responses is the lack of comprehensively trained staff. Aside from such technical personnel as engineers and health practitioners in the ministries (who may still lack training in the specifics of disaster preparedness and relief), most personnel who would be relied upon in planning and implementing disaster operations have received only cursory, if any, training in this area.

### 5.3 Disaster Relief Operations

CERO feels confident that it can mount an effective disaster relief operation. It points to its comprehensive NDP, including a developing network of local voluntary groups who are committed to assist in performing defined functions. Also, this is a central emergency relief fund which can be readily activated as needs arise. CERO also points to initial agreements reached with neighboring islands to provide mutual assistance in the event of disasters.

Ironically, a major foreseen problem is effectively coordinating the contributions of donor nations and groups in the event of disasters. Numerous anecdotes could be developed about how the contributions of well-meaning donors have been misapplied or even wasted. A somewhat related concern is the ability to conduct mass feeding and/or food rationing in a disaster situation.

### 5.4 Disaster Prevention/Mitigation

CERO reports either undertaking or beginning to undertake all activities related to disaster prevention/mitigation with one glaring exception. Barbados does not have a satisfactory building code and as a result a large percentage of the existing

building stock (particularly housing) is vulnerable to a severe hurricane. There is probably no solution for the existing housing stock. However, the results of a present study of regional building code requirements are being awaited.

#### 5.5 Impact on the Populace

This site visit did not permit anything approaching an adequate survey of the populace concerning their knowledge of disaster preparedness. However, such a survey is probably not necessary because officials will readily admit that disaster preparedness is consistently perceived as a low priority. CERO assigns a high priority to public awareness and education activities and has been significantly supported by PCDPPP in these efforts. This may be the best that can be done.

#### 6. **ROLE OF AID/MDRO**

The DISC investigator met with Mr. Blaine Jensen (Assistant Program Officer, formerly the Deputy MDRO) in the absence of Mr. Michael Demetre (the MDRO) who was called away on travel. Mr. Jensen appeared quite knowledgeable about DPP in the region and the PCDPPP although he stressed that whatever knowledge he has was not acquired through official involvement in the PCDPPP.

The MDRO is quite aware of the PCDPPP but, as explained below, has had very little official involvement with it. It was noted that in the planning phase of PCDPPP the issue arose concerning the role of the MDRO vis-a-vis the project. It is speculated by the investigator, but not confirmed, that this issue arose because the implementation of PCDPPP would cause some overlap with the functions of The MDRO. In any case, it was agreed that The MDRO would focus on the disaster relief/reconstruction end of the spectrum and PCDPPP would focus on DPP, which would be inferred as providing at least one rationale for the RDO/C to not become involved with PCDPPP. However, it would appear that lack of involvement by the MDRO in

the PCDDPP would be detrimental to the project, in that information obtained from the site visits to countries participating in the PCDDPP strongly suggests that at least some of the resources of the project should be focused on dealing with disaster relief/reconstruction. At a minimum, the MDRO could enhance the effectiveness of the PCDDPP by simply serving as a technical resource providing information concerning the needs of participating countries in this area and sharing technologies and approaches which address them. Alternatives to this minimal role could be developed if the mission and organization of the PCD were to surface as an issue.

The MDRO has no official monitoring responsibilities concerning the PCDDPP. The stated reason is that PCDDPP is an OFDA-funded project and it is a traditional AID policy that organizations funding a project assume the responsibility for monitoring it. As a result of this situation, The MDRO has not monitored the relationship between UNDRO, PAHO, LORCS and their host country institutions in the context of PCD.

Mr. Blaine stated that he did not have enough information to suggest ways in which the monitoring process could be improved.

For reasons noted above, The MDRO has no official information or evidence concerning the benefits produced by PCDDPP. Informally, it was mentioned that the project had some impact in Antigua following the drought of 1984 by assisting in the development of a DPP organization, and in Dominica because of the prime minister's concern with DPP. With regard to PCDDPP's effects on the development of regional and international linkages, it was informally offered that some minor regional linkages have been development (e.g., Barbados' willingness to make trained personnel available to assist Eastern Caribbean nations in coping with disaster or emergency and its willingness to site emergency food reserves), but nothing really substantial. No linkages have been formed at the international (rest-of-world) level. It was also offered that Mr. Gordon-Somers convenes donor organizations about once a year to conduct

a status assessment of resources available for disaster relief. Mr. Gordon-Somers was perceived as influential concerning the PCDPPP in his capacity as the UN Development Program representatives for the Caribbean region.

Mr. Jensen added further confirmation to the frequency encountered perception that DPP is simply not a high priority with countries participating in the PCDPPP and that if anything substantial is to be developed in the area of DPP it will have to be funded by outside donors (unless perhaps the funding need follows on the heels of a major regional disaster).

### **CONCLUDING OBSERVATIONS**

The effectiveness of PCDPPP in responding to the DPP needs of Barbados is strongly influenced by the quality and quantity of information exchanged between the two parties. On the basis of information provided by only one of these parties, it appears that the quality of this information link is in serious need of improvement. Barbados professes to know little concerning the operations of the PCDPPP and how such information could be used to its benefit. However, the site visit could not reveal whether this problem is the result of poor information transmission or reception. Also, it was noted that CERO mentioned only four PCD-funded projects from the time of project start-up to the summer of 1984 (the other three occurred in the summer of 1984). These early projects were regional conferences not specifically tailored to the needs of Barbados and the most recent ones are quite modest in scope and resource commitments. By analogy with the foregoing conclusion, this modest amount of assistance can be the result of PCDPPP simply choosing not to devote many resources to Barbados or that this country is not pursuing them.

There is some intuitive support for the proposition that Barbados is not aggressively and effectively seeking PCDPPP assistance. Support for this proposition is provided by the finding that Barbados' lacks information concerning the opera-

tions of the PCDPPP. Also, the site visit yielded a sense that Barbados does not have a fervent sense of priorities and a compelling case for a donor to address them. In the absence of these situations, it could be understood why PCDPPP (or another donor) would not display a more impressive record of assistance. On the other hand, the alternate proposition that PCDPPP is not making full use of its resources should also be considered.

## DOMINICA

### 1. STRUCTURE AND ACTIVITIES

Dominica's National Emergency Planning Organization is a four tiered structure that performs planning and preparedness activities and implements response and relief operations during an emergency. The organization (and plan) is primarily geared towards hurricanes but addresses other emergencies as well. Disasters have been categorized into three types: natural; man-made; and extraordinary. While some twenty specific disasters have been identified, this plan only addresses hurricanes in a meaningful way. However, the flexibility designed into the plan to deal with other disaster types is evidenced by the, successful responses to three non-hurricane emergencies since the plan was implemented in 1981. (These three disasters consisted of two light plane crashes, and combined floods and landslides in the Grand Bay area.)

The four tiered structure (illustrated in Exhibit 1) is as follows. At the top of the pyramidal structure is the prime minister who is responsible for general direction and control. Next, and recently added to structure is the Executive Committee which is composed of the key related officials, including the permanent secretaries of police and communications and transport, and three other senior government officials. Next in the structure is the Emergency Coordinating Advisory Council which is composed of some twenty-two members and representatives of virtually every affected public and quasi-public organization. The Executive Committee was added to the structure in 1984 because the Council body proved to be too unwieldly for decision making purposes. The fourth and most important component from a relief perspective is the District committees and their subordinating insert

EXHIBIT I

THE NATIONAL EMERGENCY PLANNING ORGANIZATION

Prime Minister

Executive Committee:

- Coordinator for Disaster Preparedness
- Commissioner of Police
- Permanent Secretary/Communications and works
- Local Government Commissioner
- Agricultural Development Advisor
- Chief Welfare Officer
- Physical Planner

Advisory Council:

- All members of Executive Committee
- Eighteen other representatives
- Eight standing committees: public utilities; public relations; food and general supplies; welfare; health services; telecommunications; transportation; shelter.

District Emergency Organization:

- Ten districts

local committees. The District chairmen are empowered to initiate "most urgent relief measures as they see fit."

As mentioned, the plan addresses most disaster types. These have been organized into a typology of: natural; man-made; and extraordinary. The National Emergency Relief Planning Organization has the role of activating the community on an island-wide basis to deal with any type of disaster. Towards this end, five functions are outlined in the planning document: informing; warning; coordinating; providing; and evaluating.

## **2. FUNCTIONS OF THE NATIONAL DISASTER COORDINATOR (NDC)**

The NDC officially serves as chairman of the Executive Committee. His position is a full-time one although he does perform vector control activities, which are considered an emergency planning/management function. In addition to general planning and preparedness activities performed on an ongoing basis, the NDC is responsible for serving as a key liaison in the emergency operations center when a disaster occurs.

## **3. RELATIONSHIPS BETWEEN NDC AND OTHERS**

The NDC serves as primary liaison with PCDDPP management. He attends most project activities and coordinates with other national representatives as to their roles, responsibilities and activities.

### **3.1 Interaction between NDC and UNDRO, PAHO, LORCS**

The NDC serves as primary liaison with UNDRO and spends the most time attending to UNDRO related activities. With UNDRO he plays a more prominent managerial role with respect to coordinating their in-country and overseas activities.

With PAHO, the NDC plays only an "informational" role. Most PAHO activities are coordinated directly through the Ministry of Health.

With LORCS, the NDC plays a similar role as that with PAHO. Activities are again coordinated through the Ministry of Health and the NDC plays only an informational role.

### 3.2 PCDPPP Management Committee

The NDC serves as primary liaison to this body and serves as country representative when required. In this regard, he is responsible for coordinating country responses to informational requests and solicitations for proposals. Only two formal proposals have been requested to date: telecommunications equipment; and funding to support a district committee training program.

### 3.3 Relations with Other Countries

The NDC performs as the country contact for liaison between other countries. Most liaison occurs between Antigua, Barbados and Guadeloupe/Martinique. Formal liaisons between donor countries and international organizations (public and private) are first routed through the Minister for External Affairs.

## 4. RESOURCES

There is no formal budget allocation for civil defense. The only ongoing resource allocation to this function is the salary for the NDC, who is part of the Office of the Prime Minister. The NDC has no staff or dedicated equipment or other non-personnel resources that he could identify. There is some evidence that key resources have little access to the key resources of the Police and Ministry of Communications and Works in an emergency. These organizations have their own sectoral plans and seem little disposed to submit to NDC direction or coordination.

The NDC has a small cubicle/office but no secretary, no vehicle, no EOC, etc.

## 5. PCDPPP SPONSORED ACTIVITIES

Dominica has participated in approximately fifteen activities since project inception, as shown in Exhibit 2. Thirteen of these activities have been in the area of planning and prevention. The two exceptions are: attendance at the (U.S.) National Hurricane Conference in 1982 and 1984, and participation in in-country workshops in support of the uniform building codes project. Most of the activities involved relatively small numbers of National representatives (frequently one or two). These representatives are usually senior government officials. Exceptions to this general situation include the aforementioned building codes workshop where many staff people in the Planning Division participated and training courses involving shelter management and district committee persons. Notably, no activities have transpired in the areas of hazard analysis and vulnerability analysis.

## 6. INSTITUTIONAL DEVELOPMENT

### 6.1 National Disaster Plan

Dominica's plan was originated in 1981 and has been updated twice since that time: in 1983 and 1984. An annual updating process has been incorporated into the plan.

## EXHIBIT II

## DOMINICA

## ACTIVITIES SPONSORED OR SUPPORTED BY PCOPPP

Date	Type	Functional Area	Topic	Agency	Trainees	Benefits
2/85	a	Preparedness Planning	Maintenance of school buildings as emergency shelters	In Country	2	Familiarized building superintendents with scope of responsibilities with regard to primary shelters
11/84	d	Prevention/mitigation	Construction industry workshop for small buildings to withstand hurricanes	UNDRO	14	Progress towards creating a sub-regional manual as part of the uniform building codes projects
10/84	i	Preparedness Planning	Search and Reserve operations	UNDRO	2	?
9/84	i	Preparedness Planning	Mass Casualty Workshop	UNDRO	3	?
2/84	b	Preparedness Planning	U.S. Disaster Management Workshop	PAHO	1	?
10/83	i	Preparedness Planning	Shelter Management Workshop	UNDRO	1	Education officer familiarized with his management role
9/83	c	Preparedness Planning	Communications and control	UNDRO	1	NC familiarized with how to set up an emergency center
8/83	d	Preparedness Planning	Mass Media Workshop	UNDRO	1	Unable to verify benefits

EXHIBIT 11 (Continued)

Date	Type	Functional Area	Topic	Agency	Trainees	Benefits
7/83	d	Preparedness Planning	Rule of Security Forces in planning	UNDRO	1	Unable to verify benefits
4/83	f	Preparedness Planning	Mass Casualty Workshop	UNDRO PAHO	2	Dominica presented a paper summarizing experiences with the hurricane. How to conduct simulations was discussed.
3/83	d	Preparedness Planning	Disaster Planning Procedures for District coordinators	UNDRO	80	Roles and responsibilities were reviewed.
11/82	d	Preparedness Planning	Trainee/Trainer session on first aid	LORCS	2	Institutional capacity to deliver training was developed.
4/82	b	Prediction and Warning	National Hurricane Conference	USAID	1	Reviewed U.S. plans for hurricane response. Viewed as inapplicable to local situation.
2/82	b	Preparedness Planning	Public Awareness Workshop	UNDRO	1	Reviewed available materials and identified gaps in materials. Additional materials were prepared to achieve a comprehensive set of media materials.
1/82	c	Preparedness Planning	Comprehensive Emergency Management	UNDRO	1	Oriented the NC to the concept of emergency management (as opposed to relief).

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The most recent annual updates to the plan indicate significant institutional development. Most noteworthy in this regard is the establishment of the Executive Committee between the level of the Prime Minister and the Advisory Council. This change was prompted by the finding that the full body of the Council proved to be too unwieldy a decisionmaking body. Therefore, the Executive Committee was established to streamline the process.

A second measure indicating institutional development (in 1984) was the assignment of responsibility on an ongoing basis for the identification of shelters, wardens, and assistant wardens. Previously, no specific responsibility was assigned. However, evidence that the responsibility was being fulfilled was not available during the country visit, in that no list of the shelters or wardens was available.

In summary, there apparently is a process in place to maintain and improve the disaster plan and the emergency organizational structure. This process was not in place before PCDPPP, but it is difficult to isolate and separately assess the contributions that the project has made, from those developments that would and did occur because of the hurricanes of 1979 and the three most recent smaller disasters. Although it was not stated by those persons interviewed, it is probable that the project personnel played at least a minor role in recommending the establishment of the Executive Committee. Col. Mignon was in fact present at the annual meeting of the Advisory Council in which that item was the most significant on the agenda.

Training is a major need for Dominicans who would serve as disaster relief staff in an emergency. However, with the aid of PCDPPP, adequate training materials have been developed. What is necessary now is an in-country training effort, backed by top management from the PM on down (many relief staffers are very political). It appears that PCDPPP has now done all it can in this area; local will is now the key.

## 6.2 Disaster Preparedness

The contributions of the PCDPPP project in this area fall into three categories: training; technical assistance; and hardware. Country personnel have participated in twelve specific preparedness training related activities sponsored by PCDPPP. With the exception of custom-taioered training delivered to District committee and local level officials, all training has been targeted at senior officials of the government and the disaster coordinator. Two salient points can be identified with regard to the utility and effectiveness of the training. First, as pointed out by the national coordinator, he did not feel that the training received has significantly raised the level of expertise of the recipients, but rather that the major benefits of the training have been to raise the level of awareness among the trainees regarding disaster preparedness and prevention. Second, there was little evidence that the training had filtered down to lower levels within the governmental structure, or that training content had been "multiplied" through additional country-sponsored training efforts. In one case where the PCDPPP training was clearly formatted to achieve this end (first aid training), the trained trainer was never given the authorization to proceed with further training from top level officials within the government.

The second area of contribution by PCDPPP was in technical assistance. Col. Mignon has worked closely with the country to improve the plan and the condition of preparedness, although tangible products could not be identified. The project also provided logistical support and modest resources to help the coordinator launch a District committee training program. A third item in the technical assistance area provided by the project was support in preparing a hospital plan. This plan was to be tested in late 1984 as part of a large simulation exercise.

However the exercise was postponed indefinitely by the Office of the Prime Minister.

The absence of any operational tests has made it difficult for country representatives to assess the effectiveness of the current plan, outside the three "real" disasters that recently occurred. According to the coordinator and other persons interviewed, operations proceeded relatively smoothly during these emergencies. Operations were coordinated as outlined in the plan, from the emergency center that was temporarily established in the cabinet room. Communications were established through portable equipment, at least some of which was contributed by the PCDPDP.

Based on interviewer observation, it is questionable whether the in-place preparedness apparatus is capable of handling a major emergency situation.

A final area of contribution from PCDPDP with regard to the preparedness function is equipment. The PCDPDP has donated three items: police radio equipment (high frequency) and walkie-talkies, an undetermined number of back-up generators; and a small number of small hand-saws to aid in the clearing of timber from road and stream areas. The latter were used in the most recent incident of flooding in the Grand Bay area in late 1984.

### 6.3 Disaster Relief Operations

Dominica does have some capability to implement emergency relief operations but the adequacy of a timely response is questionable. The NDC noted that the Red Cross, the Local Social League, and PCDPDP would aid in relief operations. The coordinator identified interdepartment coordination as a major factor inhibiting the mounting of effective relief operations. He acknowledged that "they (department heads) tended to work at cross purposes at the expense of getting things done." Other

deterrents to mounting an effective operation identified by the interviewer included two major items.

First, the radio equipment donated through PCDDPP is in poor condition and marginally operable. For example, the component of the radio needed for inter-island communication (with Antigua especially) is not operating. The police intra-island radio link is not functioning between the headquarters and many of the sub offices located on the far side of the island. Also, since 1979, the telephone link between Rouseau (the capital), Grand Bay (the second largest town--population 5,000), and the north coast, has been broken. Hence, there is now no way for any government agency, including the police, to contact these areas except by messenger or private ham radio, even during non-emergency periods.

Second, there is a lack of adequate heavy equipment needed for earth moving and road clearing activities that result from the frequent flooding. This inadequacy, and the generally poor condition of the road network, make it unlikely whether the country could quickly move in needed supplies and equipment. Further, the island does not currently have a helicopter for moving in equipment and/or supplies by air. As a result, the country is reliant on other countries (most recently the French) to handle many essential relief operation.

The Dominican police have a limited capability to conduct on-shore search and rescue operations.

#### 6.4 Disaster Prevention/Mitigation

Only one tangible activity could be pinpointed with regard to this area as a result of PCDDPP. A workshop was held for planning officials regarding the construction of small buildings to withstand hurricanes. This workshop was viewed as helpful with regard to progress towards developing Dominica's input to the uniform building codes project.

## **7. IMPACT ON THE POPULACE**

Dominica has benefitted from attendance at a mass media workshop conducted in 1983 in Antigua by the PCDPDP. Other forms of assistance included the sharing by the project of scripts for radio jingles that are aired during each hurricane season. These jingles run three to four times per day from June to November. Additionally, in 1984 a "Disaster Preparedness Week" was conducted but details regarding its major activities and PCDPDP involvement were unavailable.

The public awareness function was viewed by the Press Secretary as being somewhat lacking. He advanced the following inhibiting factors to a more concerted public awareness program: a lack of funds; a low literacy rate in rural areas (50%); the radio station does not reach all areas of the island; there are no funds to mount a TV campaign, and in any event, the production facilities are quite limited. Items that the secretary thought were needed to upgrade the public awareness program included the development and printing of leaflets and brochures which could be done with modest amounts of outside funds. He identified the need for a comprehensive list of shelters as a priority need in this area.

## **8. FUTURE OF PCDPDP AND DOMINICAN SELF-SUFFICIENCY**

The national coordinator did not feel that Dominica would be self-sufficient in preparedness in the next two years. The major reason cited was insufficient top level awareness and support within the government, as evidenced by the lack of significant budgetary support of efforts in this area. He also feels that the country will have an on-going need for training, especially since the training received to date has not been

institutionalized. He also feels that they will be an ongoing need in the short term for technical assistance (see Exhibit 3 for specifics). In summary, he believes that Dominica would benefit from the institutionalization of PCDPPP, primarily because permanency would provide an ongoing source of visibility, training, information dissemination.

The coordinator cited only one shortcoming of the PCDPPP project. That was the current lack of a full-time project manager. The coordinator felt that if that problem was resolved the project could proceed more effectively.

EXHIBIT 3

FUTURE ACTIVITIES DESIRED BY THE DOMINICAN  
NATIONAL COORDINATOR

- Workshops on how to integrate disaster planning and economic planning
- Further training on shelter management
- Top level training in disaster organization and management
- Workshops on damage assessment
- Assistance in conducting simulation exercises at all levels
- Training in handling of telecommunications equipment
- Further "train the trainer" support in first aid.

PERSONS CONTACTED OR INTERVIEWED  
IN DOMINICA

<u>Person</u>	<u>Title</u>
Hon. Euginia Charles	Prime Minister
Mr. Cary Harris	Development Coordinator, Economic Development Unit
Ms. Judith Garraway	Permanent Secretary, External Affairs
Hon. Alleyne Carbon	Permanent Secretary, Ministry of Communications and Works
Mr. Lorden Doctrove	Chief Technical Officer, Ministry of Communications and Transport
Dr. W.E.V. Green	Medical Officer of Health
Mr. H. Steinberg	Chief Information Officer
Mr. H.L. Doctrove	Commissioner of Police
Mr. Jerome Lloyd	National Disaster Coordinator

## DOMINICAN REPUBLIC

### 1. OVERVIEW

Throughout history, the Dominican Republic (DR) has been affected by hurricanes seismic movements and floods. The DR is located between latitudes  $17.50^{\circ}\text{N}$  and  $20.0^{\circ}\text{N}$  and longitudes  $68.0^{\circ}\text{W}$  and  $72.0^{\circ}\text{W}$ . This region of the tropical North Atlantic has been frequently struck with tropical hurricanes. In the recorded period from 1939 to 1979, the DR has been hit by 23 hurricanes that caused minor and catastrophic damage.

The hurricane season begins in June, but July marks the initiation of cyclonic activity in the Eastern Atlantic and in August this activity spreads through all of the Western Atlantic until the end of the season in November.

According to the records kept by the DR Servicio Meteorologico Nacional, the total number of hurricanes and tropical storms that have struck the DR during the last century is 139; and throughout this period the south of the island has been the most affected. Latest examples of this are the damage caused in this region by Hurricane David on August 31, 1979, followed by Hurricane Frederick on September 6, 1979.

The DR has also been subjected to strong readjustments of the earth's crust and these have left visibly arched zones and well developed fault systems. These seismic movements in the island constitute the major seismic activity in the Greater Antilles, where it is not unusual to find seismisms that vary between 1 km and 240 kms in depth. The total number of major earthquakes suffered by the DR from 1562 to 1946 was eight; many earthquake included repeated tremors, of up to 140 in 40 days.

The DR is affected annually by floods of different magnitudes. The zones where major damage occurs are located in the north, east, and western parts of the island, where severe damage to agriculture, roads and housing in poverty-stricken neighborhoods has occurred. These floods are caused mainly by:

- Strong and prolonged rains, sometimes at a great distance from the affected zones.
- Tidal waves that cause invasive floods.
- Overflow or quick drainage of dams, generally caused by strong tropical storms.

The Armed Forces and Civil Defense state that the severity of damage caused by the worst natural disasters through 1979 were compounded by four factors:

- Inadequate preparedness.
- Lack of coordination during disaster relief
- Lack of public awareness about impending disasters.
- Lack of emergency shelters.

Recognition of the necessity to remedy this situation prompted the DR in late 1980 to establish the necessary mechanisms to minimize the destructive effects of natural disasters. This was done by coordinating existing qualified personnel, organizational structures and logistical resources in the public sector to respond to emergency situations in a coherent and organized manner.

## 2. PROFILE OF THE NATIONAL DISASTER MANAGEMENT ORGANIZATION

The Dominican Republic through its National Emergency Plan has established the functions and responsibilities of the various government institutions in case of emergency.

The specific organizational structure and assignment of responsibilities of this loosely knit organization are described below and illustrated in Exhibit 1.

### 2.1 Executive Junta of the Civil Defense

This body is constituted of all the state secretariats, representatives from autonomous state institutions and private institutions. It is convened at the request of the Executive Director of the Civil Defense to coordinate actions and advise the President during emergency situations.

### 2.2 Office of the Civil Defense (OCD)

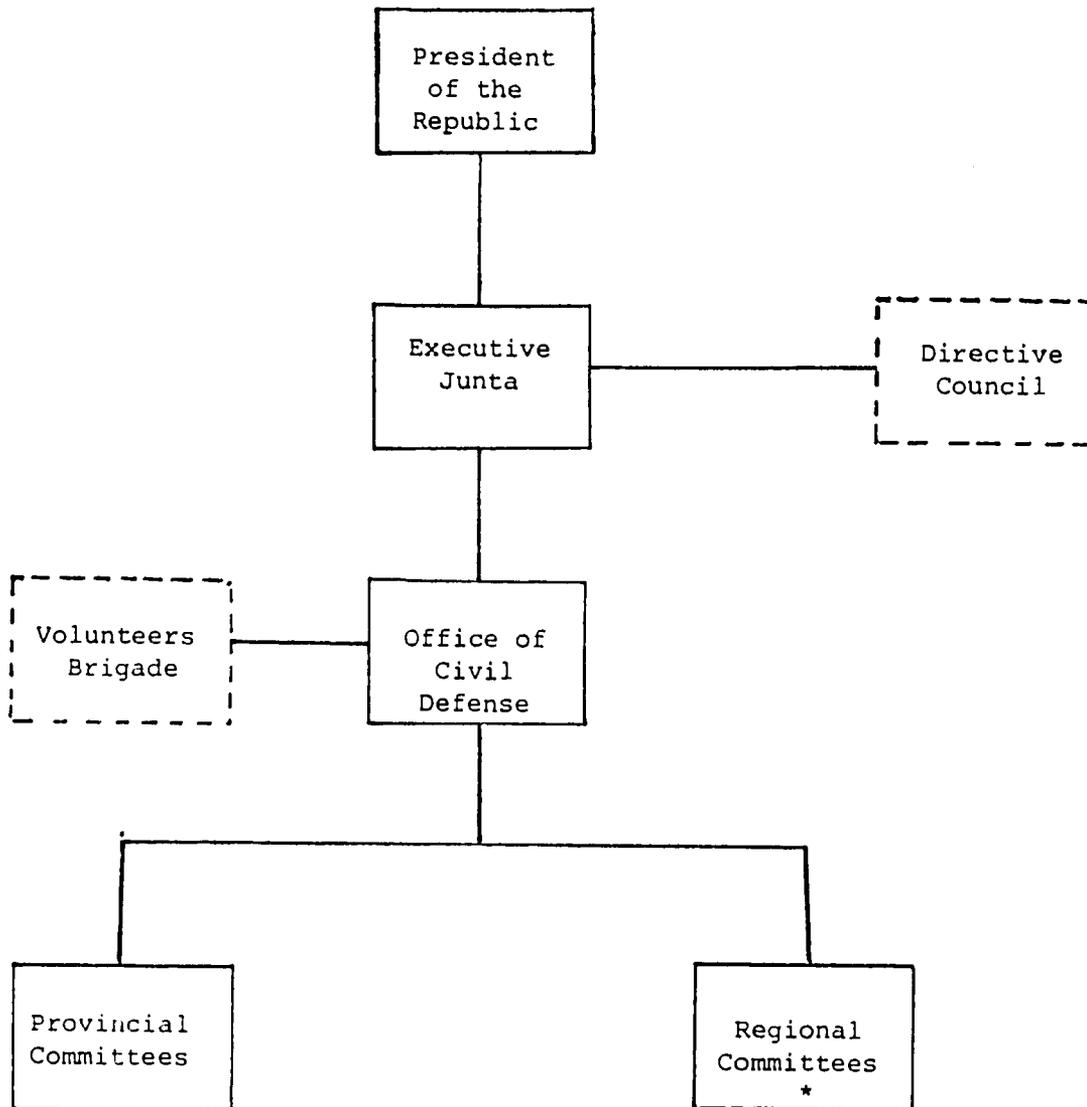
The primary function of this office is to coordinate operations during national emergencies. This office is also responsible for the coordination of all activities in connection with disaster preparedness and prevention in the DR. The organizational structure of this office is shown in Exhibit 2.

The headquarters of the OCD is located in a suburban neighborhood a short distance from the Presidential Palace and the American Embassy.

The OCD HQ would serve as an EOC during an emergency, but, would be somewhat inadequate for that role. The HQ is a two story detached, colonial-style brick house in its own compound, with a moderate amount of parking, located on a slope well above any likely floods. The house has about 2000 square feet and is remodelled into offices, but there is no true kitchen, sleeping facility or library. There is emergency power, Xerox facilities,

EXHIBIT 1

DISASTER MANAGEMENT ORGANIZATION IN THE DOMINICAN REPUBLIC

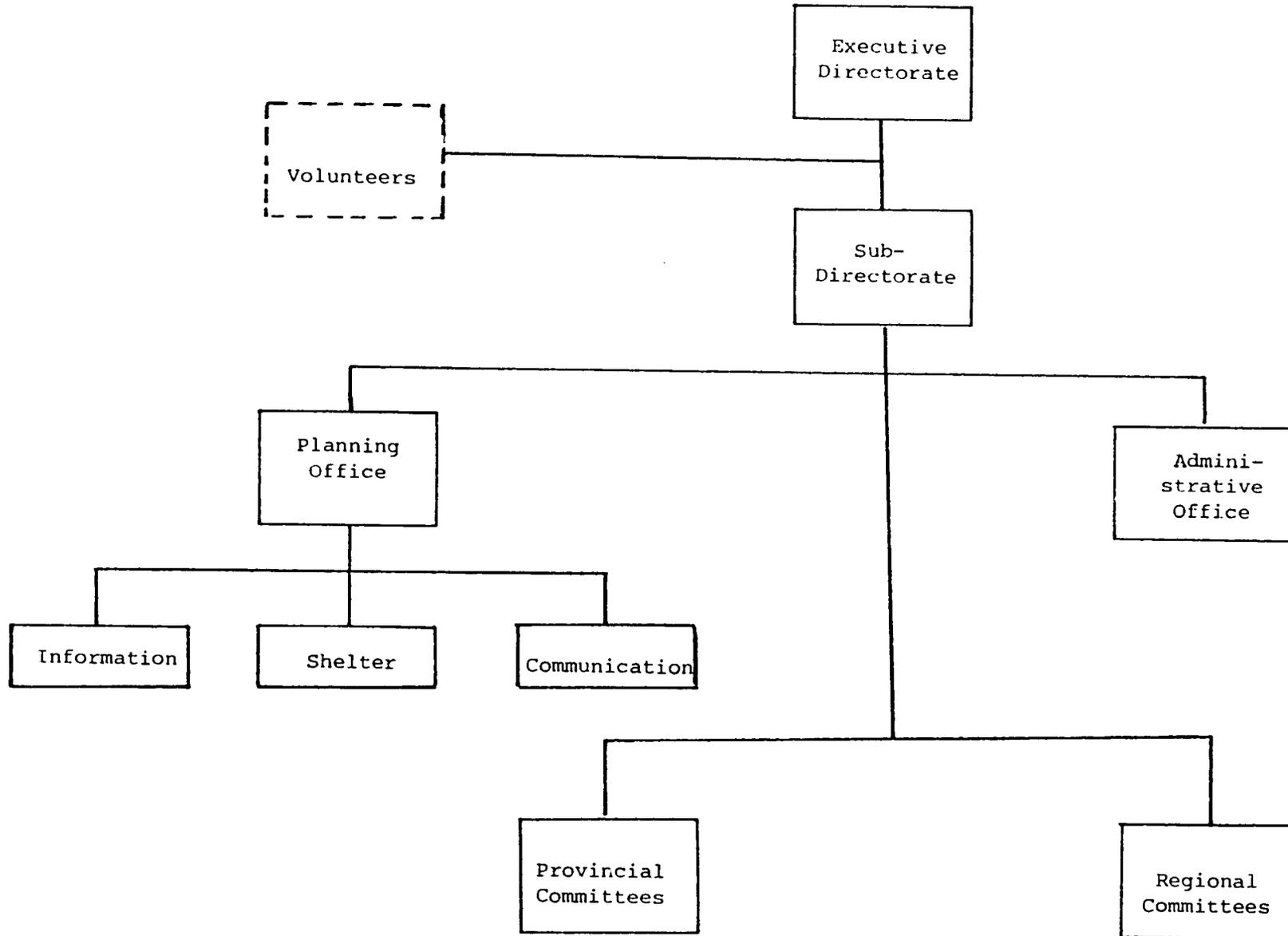


--- Structure not formalized.

\* Not a functional body yet.

1/1

OFFICE OF CIVIL DEFENSE IN THE DOMINICAN REPUBLIC



and a conference room, but no true situation room was observed

The OCD has 5 vehicles, 2 with four-wheel-drive and 4 with mobile radios.

OCD from a small detached radio "shack" has strong, daily, radio links with at least 10 provincial capitals which have VHF base units. (There are 26 capitals in total.) Plans are afoot to install VHF base units in 9 other capitals.

It is clear from an analysis of shipping records that OCD received 1 VHF transceiver and 10 walkie-talkies (8 of which are working) from PCDPPP. But OCD staff credit the PCDPPP only for the walkie-talkies, saying that CIDA, UNDRO or other sources provided the VHF transceiver.

OCD also has another (non-PCDPPP) VHF base unit, 3 SSB transceivers, 2 AID-donated radios operating on the 11 meter band for international communications, and the mobile units and provincial capital base stations mentioned above.

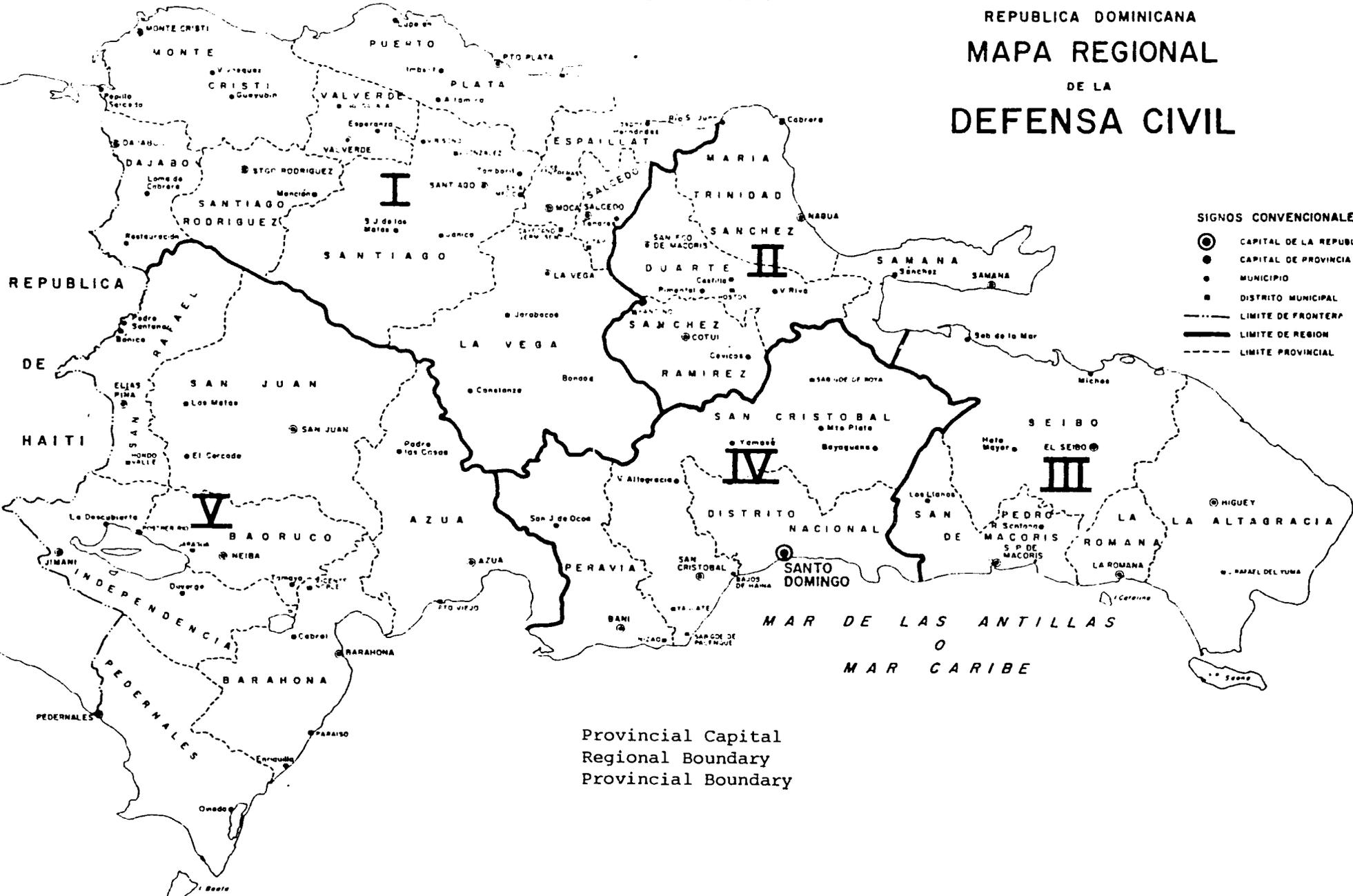
Using their radio equipment, OCD can occasionally link up with the twice-weekly PCDPPP radio net.

The staff of the OCD consists of 20 permanent employees of which 9 are technical and 11 administrative. In addition, the OCD relies on 40 volunteers whose skills and training range from radio communications to first-aid. Confidence in their skills and motivation is high and they describe their organization as "lean and mean."

Nationally, the Civil Defense is divided into five regions. Each region comprises many provinces; for example, in Region I, eight provinces are included. Although regional committees exist, key organizations are the provincial committees located in the provincial capitals, as shown in Exhibit 3. Each committee is headed by a President, followed by a Vice-President, a planner, a communications specialist, and a varying number of

OCEANO ATLANTICO

REPUBLICA DOMINICANA  
**MAPA REGIONAL**  
 DE LA  
**DEFENSA CIVIL**



- SIGNOS CONVENCIONALES**
- ⊙ CAPITAL DE LA REPUBLICA
  - CAPITAL DE PROVINCIA
  - MUNICIPIO
  - DISTRITO MUNICIPAL
  - LIMITE DE FRONTERA
  - LIMITE DE REGION
  - - - LIMITE PROVINCIAL

Provincial Capital  
 Regional Boundary  
 Provincial Boundary

support volunteers. A major goal of the national Civil Defense is to acquire its own HQ in each provincial capital. Provincial disaster committee activity varies. Provinces in the disaster-prone south are much more active, and hold regular committee meetings. There are EOCs designated in each province (usually fire or police stations), but there are no provincial-level Disaster Plans.

### 2.3 Functions of the National Disaster Coordinator

The Executive Director of the Civil Defense in the DR is the counterpart of the National Disaster Coordinator in other Caribbean countries.

In this capacity, he assumes total responsibility for coordination of the program for emergency procedures at a national level. Together with the Executive Junta of the Civil Defense and the President of the Dominican Red Cross, he advises the President of the Republic during emergencies and decision-making during crisis situations.

Before an imminent disaster, the Executive Director is responsible for marshalling all state resources necessary for emergency mobilization; and during emergencies he manages and controls the Emergency Operations Center where the seat of the Government temporarily resides during crises. Other specific functions of the Executive Director are to:

- Coordinate all the operations in the different phases of emergency situations;
- Coordinate emergency communication;
- Coordinate safety and public order activities;
- Warn the citizenry;
- Provide information and public education to the citizenry;

- Coordinate emergency resources;
- Activate, when necessary, the Emergency Operations Center;
- Shelter the affected population and manage emergency shelters;
- Coordinate evacuation of population from high risk areas;
- Coordinate all phases of search and rescue operations.

The strong identification of the Executive Director of the OCD with the organization and the direct line of authority from the President of the Republic make the Executive Director a very powerful figure with a broad mandate during emergency situations.

#### 2.4 Internal Coordination of the OCD

The OCD relies on the Executive Director for overall direction and Coordination. With the assistance of a Deputy Director, The Executive Director oversees the Office of Planning (information, shelters, and communication) with a technical staff of 9 and the Office of Administration with 11 support personnel. Also, directly under the authority of the Executive Director are 40 volunteers, a police lieutenant, and the provincial and regional committees.

Although Mr. Alfonso Julia Mera, the current Executive Director of the OCD, has direct access to the DR President and other top political figures in the country, his role and that of his organization during non-emergency periods is reduced to coordination of activities with the different ministries, public agencies and voluntary organizations. However, it is evident that the lack of a sense of urgency in government agencies makes the coordination of resources and comprehensive disaster planning

more difficult to perform.

One major preoccupation of the OCD staff is the lack of continuity at key positions in the organization. This, they claim, makes major progress in terms of disaster preparedness and prevention very elusive. They candidly mentioned two factors for lack of continuity:

- New political administrations make wholesale changes in key positions in all public agencies
- New political administrations emphasize or deemphasize disaster preparedness and prevention to varying degrees.

This, of course, could not be corroborated by the investigator, but his familiarity with the political scene in this part of the world made him consider these two factors seriously.

OCD believes that regional coordination of certain functions of disaster preparedness and prevention in the Caribbean is possible. However, they reiterate that a project addressing regional concerns in these areas must orient itself towards the whole region and not only a sub-group of countries in the Caribbean. A major barrier, they claim, is the non-acceptance of the DR by CARICOM, except as an observer with no vote or voice in the decision-making process. This situation has forced the DR, Haiti, and Cuba to form a "non-English speaking block" during, for example, Management Committee meetings of the PCDPPP. This has been done, they claim, more out of frustration than political alignment, since they have a good and long-lasting relationship with US AID/OFDA on a bilateral basis.

## 2.5 Resources and Expenditures

The provision for national emergency powers can be found in DR Public Law 257 of June 17, 1966, which established the Civil

Defense. These include the investment of powers by the President of the Republic on the Executive Director of the OCD to effect international agreements of mutual cooperation, and procure equipment, services, and necessary supplies.

The operating budget of the OCD has been steadily increasing since the RD \$120,000 (U.S. \$48,000) allocated in 1981 and 1982. The 1984 budget shows an allocation of RD \$174,000 (U.S. \$61,000). These amounts include salaries for full- and part-time staff, some per diem for volunteers and attached personnel, such as the police lieutenant and the Red Cross representative, travel and routine supplies. In conjunction with a study for the reorganization of the OCD performed by the National Office for Administration and Personnel, a 1985 budget request for RD \$190,000 (U.S. \$66,667) has been submitted to the Office of the President. OCD is confident that this new budget will be approved and this will allow the re-structuring of the organization and the conduct of performance appraisals of personnel.

As mentioned earlier, the facilities occupied by OCD, although relatively adequate to house the OCD staff, are grossly inadequate to serve as a Emergency Operations Center. OCD believes that this is a high priority that must be addressed in the short-term if the DR hopes to effectively respond to emergency situations.

### **3. THE OCD AND PCDFPP MANAGEMENT**

The OCD has been somewhat distant from PCDFPP management. Contacts with the project manager have only occurred in Management Committee Meetings or in very few cases by radio or telex.

The OCD expected PCDFPP to provide translation services for its delegate in the last two Management Committee meetings (MCMs) but that only occurred once and the translation was poor. In any case, the DR delegate believes that proceedings in MCMs are not

really very important. He feels that almost all important decisions are made prior to committee meetings, by Dr. Heinemann, Col. Mignon, and other PCDDPP project staff. He thinks the key decisions regarding the formulation of workplans, are drawn up with little consultation with national disaster coordinators, before they are presented to the MCM.

Several times the OCD has offered to host MCMs, seminars, and other PCDDPP related activities but their suggestions have been ignored. The apparent lack of attention to the DR is partially blamed on being out of the project focus, which currently is on the Eastern Caribbean islands, and on insufficient communication with the staff in Antigua. The nature of OCD's staff interaction with PCDDPP management reflects a lack of integration of the DR with other elements of the project. However, the Executive Director indicated a general interest in increasing the involvement of his staff in as many activities as possible.

In the absence of more substantive participation in PCDDPP, the OCD is initiating contacts with organizations such as Partners of the Americas, which at the present time is setting up a Chapter in the Dominican Republic. This will allow them to seek up to \$5,000 for small projects through Michigan State University, the designated partner of the DR in the U.S.

The OCD reports that it does not have a formalized long-term or short-term planning process. OCD staff believe that a planning process has not been developed because of their action-oriented disposition. The Director views his most important function as "getting out and getting the job done." In short, they are program implementors, not planners, since the staff perceives itself as having to be response-oriented. Nevertheless, they claim informal planning is done routinely by the Planning Officer, and in fact OCD had submitted 4 project plans to PCDDPP in July 1984. OCD received a promise from the PCDDPP Project

Manager to send an advisor to assist in drafting project proposals but he never came. OCD is not aware of the mechanism used by the other participant countries for submittal of project proposals, and the criteria for prioritizing and selecting projects to be included in the PCDPPP work programs.

In summary, the OCD staff feels cheated out of more meaningful participation in the PCDPPP due to the lack of communication with Antigua, and the little or no attention paid to non-CARICOM countries by the PCDPPP project management.

#### **4. OCD INTERACTIONS WITH UNDRO, PAHO AND LORCS**

Project development activities within the OCD typically result from an internal need or a government or voluntary agency solicitation of OCD sponsorship of a project. If the idea is approved as being appropriate for OCD involvement, the staff works with the sponsor to refine the concept, signs a letter of agreement, stipulates the responsibilities of each party and gives the OCD sole authority for coordination to ensure that it is consistent with civil defense activities. A major consideration for the OCD is that the project not involve the use of OCD's scarce resources and the identification with the co-sponsor be unobtrusive. UNDRO, PAHO, and LORCS in this context are considered co-sponsors of projects dealing with the functions of disaster preparedness and mitigation in the DR.

OCD staff interaction with these PCDPPP components has been at best minimal and at worst non-existent. The lack of frequency and intensity of interaction appears to be directly correlated to the lack of attention paid to the DR by PCDPPP management.

The only significant contact with UNDRO, they claim, was the visit of Al Wason (UNDRO's prevention specialist) to the DR on February 9, 1985. Mr. Wason was accompanied by J. Spitzer and D.

Puffenberg. Their visit was subject of a newspaper article the next morning. While in the DR, Mr. Wason pledged \$1,500 of PCDPPP funds to develop a plan for a study to determine sources of oil spills and other ocean contaminations in the country. Other contacts with UNDRO are reduced to interaction with the disaster preparedness and disaster advisors at Management Committee Meetings.

PAHO does not coordinate or inform the OCD of their in-country activities, PCDPPP sponsored or otherwise. Engineer R. Lopez at the Ministry of Public Health confirms this assertion and could not recall any activities in the emergency health field that could be directly attributed to the PCDPPP.

The Director of Relief of the DR Red Cross, Atahualpa Read Davis, has been in that post for several years. He claimed that the only real assistance from LORCS came in a seminar dealing with "Relief in Emergency Situations" held in Santo Domingo in June, 1984. Rene Carrillo from LORCS was present and he encouraged more exercises of this type in Region III of LORCS, which also comprises Haiti and Cuba. Mr. Read Davis does not want to put all the blame on PCDPPP for the lack of interest in the Dominican Red Cross (DRC). On the contrary, he believes, the blame must be shared between the two organizations--PCDPPP for neglecting the DR, and the DRC for not seizing the opportunity to participate more meaningfully with LORCS through PCDPPP. Requests to LORCS for assistance have always been done through the LORCS Regional Coordinator, Ricardo Bermudez, based in Costa Rica, since the only knowledge they have of the PCDPPP comes from the newsletters published by PAHO.

## 5. ROLE OF AID/MDRO

Mr. John E. Roberts, U.S. AID Programming Division Chief, is also the designated MDRO for the mission. He has little awareness of the PCDPPP mainly because he has received no information about the project. In any event, he foresees his involvement with the PCDPPP only as a facilitator rather than in a monitoring capacity. He is well aware of the disaster situation in the DR and believes that forthcoming cuts in the national budget may impact the Civil Defense at a very critical time.

## 6. PCDPPP ACTIVITIES AND OTHERS BENEFITTING THE DOMINICAN REPUBLIC

Mr. Julia Mera was appointed the Executive Director of the OCD on January 16, 1985. In order to determine the number of PCDPPP sponsored activities, the evaluator interviewed Walker Gonzalez, former Sub-Director of the OCD and delegate to the project, and Milagros Nanita, now living in Kensington, MD.

Exhibit 4 shows the PCDPPP and non-PCDPPP activities in which the DR has participated. The total number of DR personnel trained by PCDPPP is approximately 5. Out of the 5 trained, two are out of the disaster management circle and three remain involved in disaster management. In-kind contributions were negligible, in part due to the small number of activities in which the DR participated, and in part because participants were provided air fare and per diem to attend these activities. Except for rekindling the interest of the OCD in disaster preparedness and prevention, training of DR nationals by the PCDPPP has not had any "multiplier effect."

EXHIBIT 4

PCDPPP AND NON-PCDPPP ACTIVITIES

	<u>ACTIVITY</u>	<u>DATE</u>	<u>LOCATIONS</u>	<u>PARTICIPANTS</u>	<u>SPONSOR</u>
	1. U.S. Hurricane Conf.	3/26/82	Orlando, FL	1	AID/OFDA
	2. Oil Pollution Simulation Exercise	5/21/84	San Juan, PR	1	U.S. Coast Guard/ PCDPPP
'	3. National Coordinators Meeting	7/11/84	Antigua, WI	1	PCDPPP
'	4. Hazard Monitoring and Emergency Management Seminar	7/24/84	Cuba	1	PCDPPP
	5. Search and Rescue Workshop	10/22/84	St. Kitts-Nevis	1	PCDPPP

Note: To the activities listed in this Exhibit, the attendance of the DR to all Management Committee Meetings of the PCDPPP must be added.

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## 7. INSTITUTIONAL DEVELOPMENT

### 7.1 Disaster Planning

The OCD staff recognizes that the mere existence of a National Emergency Plan does not necessarily mean that the operational capabilities to carry out the plan also exist. However, the fact that it was put together attests to the commitment of various public and voluntary organizations and the benefits derived from the creation of inter-institutional linkages in the DR. The Plan addresses, in a generalized fashion, all types of disasters that historically have struck the DR, except environmental pollution and specifically oil spills which are of great concern to the DR. Due to the relatively newness of the Plan (it was made official on November 16, 1984) and the absence of disasters, the OCD does not have any experience with its implementation, therefore they could not tell what the flaws are, and what type of remedial action would be needed. The only activity that bears any relation to the Plan is the conduct of a study entitled "Study for the Reorganization of the Civil Defense," performed by the Technical Secretariat, National Office of Administration and Personnel, Department of Organization and Methods in October, 1984.

### 7.2 Disaster Prevention Mitigation

OCD is beginning to focus on the importance of hazard analysis and disaster mitigation. According to the OCD Director, the following activities are top priorities in the DR:

- Comprehensive hazard analysis to determine hazards that threaten the DR, and zones/microzones that would be affected by a disaster.

- Detailed vulnerability analysis of the risk sectors such as housing, agriculture, business, and general infrastructure.
- Development of a plan for the prevention of natural disasters, with details about structural and non-structural forms for the management of hazards in different zones of the country.
- Development of plan emphasizing structural methods to reduce vulnerability.
- Development of a computerized database with hazard and vulnerability analysis results, for use in disaster management.
- Institutionalization of mitigation measures as part of the national development program.

This program at a glance appears to be quite ambitious, but the OCD staff believes this is the only approach to disaster management which would have lasting effects in the DR. They also believe that by working with other institutions such as the University of Santo Domingo and the Ministry of Public Works in implementing this program, they can reap the benefits of inter- and intra-institutional linkages while coordinating the work. Note that all these activities are plans for the future. No real progress has yet been made.

### 7.3 Disaster Preparedness/Relief Operations

The OCD admits that their disaster response capability is severely limited by the lack of stand-by emergency facilities and equipment such as an adequate Emergency Operations Center and communications equipment. Nevertheless, they are quick to add that their disaster experience, which they believe is unique in the Caribbean, has immeasurably contributed to their awareness and emergency readiness capabilities. However, the time elapsed since Hurricanes David and Frederick struck the DR in 1979, has

had a diminishing effect on the level of disaster preparedness in the DR. They point to the fact that a flurry of activities followed the disasters of 1979, culminating with the preparation of the National Emergency Plan. Since then, however, preparedness activities have noticeably weakened except for a modest increase in the budget for the Civil Defense, and the public education campaigns conducted by various public and voluntary agencies to raise and maintain the level of disaster awareness of the populace.

## **8. CONCLUDING OBSERVATIONS**

Although OCD firmly believes that regional cooperation in disaster preparedness and prevention is possible in the Caribbean, no significant benefits could be attributed to PCDDPP (except receipt of radios, and OCD staff deny this assistance.) OCD feels that as long as CARICOM is overseeing the project, the probabilities of being fully accepted by PCDDPP management are minimal. By contrast, they point to their relative success in obtaining funds and technical assistance on a bilateral basis from US AID/OFDA.

If the present PCDDPP organization structure remains, they believe, the focus of the project will remain on the Eastern Caribbean islands first, and then the CARICOM member countries. However, they are also quick to admit that the resolution of these problems is out of their hands since being on the receiving end of the project does not allow them to get involved in the decision making process, except marginally in the Management Committee Meetings.

One recommendation made repeatedly during the discussions and interviews in the DR, was to increase the level of communication between the DR National Disaster Coordinator and the

PCDPPP management and staff in Antigua. One step in the right direction, they noted, was the release of the PCDPPP newsletter in October 1984.

The DISC analysis of relative disaster threats and occurrences shows that the DR is one of the most threatened Caribbean islands. It seems ironic that it has received so little aid from PCDPPP. If PCDPPP was eliminated, it is clear that OCD and the preparedness of the DR would be affected very little.

## **GUADELOUPE**

### **1. OVERVIEW**

The government of Guadeloupe represents an atypical regional situation with regard to disaster preparedness and prevention (DPP) activities because it is formally part of the French government structure. As a result, there is a degree of available resources and technical expertise that is not available in other regional governments. This condition is manifested in a quite mature and sophisticated DPP structure. Nonetheless, the Guadeloupe case is quite illustrative and useful in that it is virtually an ideal situation of DPP by which other country situations can be compared and contrasted.

### **2. PROFILE OF THE DISASTER MANAGEMENT ORGANIZATION**

The government of Guadeloupe's disaster preparedness and planning structure and operations are significantly different than those of the other case study countries, because this country is a department of France. As such there is no freestanding DPP structure. Rather, these functions are embodied in a civil defense unit organizationally located within the Office of the Prefect. The manager of the civil defense unit functions as the equivalent to the national disaster coordinator.

This situation facilitates the treatment of disaster management as an integral function of governmental operations, especially since the Prefect serves as chief administrative head of national governmental activities. Thus, through administrative directive the Prefect can delineate activities and responsibilities of all of the various ministries involved and to a significant extent, other key actors. These are:

- o Mayors of each political jurisdiction
- o Military services
- o State security police
- o Various communications functionaries.

Generally speaking, the disaster management structure consists of two tiers. The national government, directed by the Prefect represents the first tier. All planning activities are directed by the civil defense unit and implemented by the various ministries and other governmental units. Most notably, these include.

- o Director of Radio F.R.3 Guadeloupe
- o Head of the Department of Public Works and Utilities
- o Head of the Departmental Health Service
- o Officers in Charge of Military Establishments
- o Academic Officer in Residence

This first tier is overlaid on the local government level, especially with respect to the governmental ministries, which often have local administrative units situated in and serving the major local jurisdictions.

The second tier of local governmental jurisdictions is directed by mayors and town officials. These individuals are responsible for drawing up and maintaining internal DPP plans through communal safety committees. Mayor's responsibilities include:

- o Identifying shelters
- o Various public awareness activities
- o Through coordination with the Departmental Health Service--organizing first aid teams

- o Earmarking funds for the purchase of relief tools and equipment (e.g., saws, hammers, rope, etc.)

## 2.1 National Disaster Coordinator (NDC)

The head of the civil defense unit performs the following functions:

- 1) Prepares national plans
- 2) Annually updates the plans
- 3) Liaises with PCDPPP and other international organizations
- 4) Serves as key functionary during disaster operations
- 5) Directs disaster training activities such as annual simulations
- 6) Maintains an inventory of disaster-related resources--personnel and nonpersonnel.

## 3. **RELATIONSHIPS OF NDC WITH PCDPPP**

The NDC serves as liaison with the PCDPPP. In this regard, interaction has been fairly limited to date. Mostly however, the interaction has been responding to informational and technical assistance requests by PCDPPP, such as assistance in responding to the Antigua drought situation. Other examples were responding to a technical assistance request by Dr. Patterson regarding an undefined public health issue, and visiting Haiti in 1982 to assist that country in developing an emergency plan. There are but three formal activities sponsored by PCDPPP in which Guadeloupe has participated in:

- o Seismic Risk Conference (1982)
- o Communication and Control Seminar (1983)
- o Airport Safety Conference (1984)

The above activities delineate all interactions, according to the NDC, with PCDPPP management, the Management Committee, implementing agencies and other participant countries.

#### 4. RESOURCES

The NDC was somewhat reluctant to quantify the available resources partly because the funding structure is somewhat complex. However, in addition to the head of the civil defense unit there is an assistant dedicated to this activity; a secretary; two cars; and telecommunications equipment that is used in the emergency operations center that is temporarily established in the Prefect's office during emergencies.

#### 5. PCDPPP ACTIVITIES

Of the three activities identified in the preceding section, one activity was in support of Hazard Analysis (seismology); one activity was in prevention and mitigation (airport safety); and the final was a preparedness activity (command and control).

#### 6. INSTITUTIONAL DEVELOPMENT

Guadeloupe is quite mature in this area, however, PCDPPP has played no significant role in this condition. The following briefly summarizes the situation:

## 6.1 National Disaster Plan

There are currently four separate plans:

- o Air disaster (originated in 1979, updated in 1981 and 1984)
- o Volcano (originated in 1976)
- o Hurricane (originated in the sixties, updated in 1981 and 1984, amended annually)
- o General (originated in 1979, updated in 1984).

Additionally, a fifth plan is under development to address oil spills.

## 6.2 Disaster Preparedness

The country is quite mature in this area also. Supporting each of the four plans identified above is an "Inventory of Means". This catalogues all available resources such as: radio equipment (with technical specifications) first aid providers (at local level); hospital capacities and available medical personnel; ambulances (private and public); heavy equipment (private and public); aviation equipment (i.e., helicopters); and so forth.

Additionally, there is the capability to establish two operation centers: one is Basse-Terre, the capital; and another in Point-au-Pitre, the major population center. As well, there are annual simulations conducted for air crashes and an annual meeting for hurricane preparedness. (The NDC feels that simulations are not necessary for hurricanes as "everyone knows what to do"). Air crash simulations were reported to cost above \$400 to \$500 (direct costs), last about 4 hours, and involve 300 participants.

### 6.3 Disaster Relief

Again, the NDC claims that the country is well prepared to conduct relief operations. The inventory identified above catalogues an array of relief resources including food staples, potable water, blankets, tents, etc. The country also has the support of the local Red Cross Unit, which can mobilize first aid teams but has no equipment or supplies.

### 6.4 Prevention/Mitigation

The country has undertaken significant steps in this area as well. A comprehensive set of building codes has been adopted and a permit is necessary for erection of any building. A zoning plan has been implemented to control significant development in the area of an active volcano.

## 7. **IMPACTS ON POPULACE**

A rigorous analysis of the impacts of DPP activities was not practical within the resources devoted to this case study. What can be said is that there is every indication that the government is well tuned to enhance public awareness and readiness, especially with regard to hurricanes.

The hurricane plan delineates explicit messages (warnings) to be broadcast within specific time intervals by radio and television broadcasters. As well, there are activities devoted to increasing public awareness during the hurricane season over the radio and television and at movie houses.

#### 8. COMMENTS ON PCDPPP

The NDC does not feel that Guadeloupe is an official member of PCDPPP but that the government fully supports the project and is well positioned to help in many ways. Here, he implicitly suggests that PCDPPP management has not taken full advantage of this offer however. He also feels that PCDPPP has a "difficult job" because many of the proposals and advice promulgated do not get sufficient attention/support by the national governments.

He thought that the project was a "good idea" and felt that there has been insufficient time to realize significant tangible results. He stated that it took five years (he's been in the job 15 years) of hard work to get his program to a satisfactory level.

#### INTERVIEWS

Mr. Max Vincent, Director, Civil Defense  
Mr. Rizo, Assistant to the Civil Defense Director  
Col. Celeste, Chairman, Guadeloupe Red Cross

## JAMAICA

This chapter has four major sections:

1. Profile of the national disaster preparedness and prevention organization
2. PCDPPP and non-PCDPPP activities benefitting Jamaican preparedness
3. Sources of information for the evaluation
4. Recommendations.

These sections follow below.

### 1. PROFILE OF THE NATIONAL DISASTER PREPAREDNESS AND PREVENTION ORGANIZATION

#### 1.1 Structure, Activities, and Institutional Development

In Jamaica, the organization charged with disaster preparedness and prevention is the Office of Disaster Preparedness and Emergency Relief Coordination (usually known as ODP), headed by Mr. Franklin McDonald. ODP has been located in four different ministries and offices since its founding in 1980. It is now set up as an autonomous unit in the Ministry of Construction (Works). This is considered a desirable location since the current Minister of Works is close to the Prime Minister, and would probably raise no objection if the Director of ODP reported directly to the P.M. during an emergency, and the Minister was simply advised of developments. The Ministry of Construction is also quite powerful, having a large fleet of vehicles and 67 offices and yards around the country.

In its role as the national disaster coordinating office, ODP has a table of organization separate from its nominal reporting relationship within the Ministry of Construction. This table of organization is described in the National Disaster Plan:

Jamaica, and is presented in Exhibit 1. As can be seen in this Exhibit, ultimate authority rests with the National Disaster Committee, which is headed by the P.M., and includes 14 ministries, several heads of major voluntary organizations, the Commissioner of Police, the Chief of Staff of the Jamaica Defense Force (JDF) and others. A working group of this large body, headed by the P.M., makes up the National Defense Executive.

Unfortunately, neither of these august bodies (or the planning subcommittees of the National Disaster Committee) have met since about December of 1983, due to waning interest in disaster preparedness. This waning interest is due to the fact that no major disasters have occurred since 1979-80, when the floods of 1979 and Hurricane Allen of 1980 sparked the founding of ODP. ODP is now trying to reactivate the Committee and the Executive.

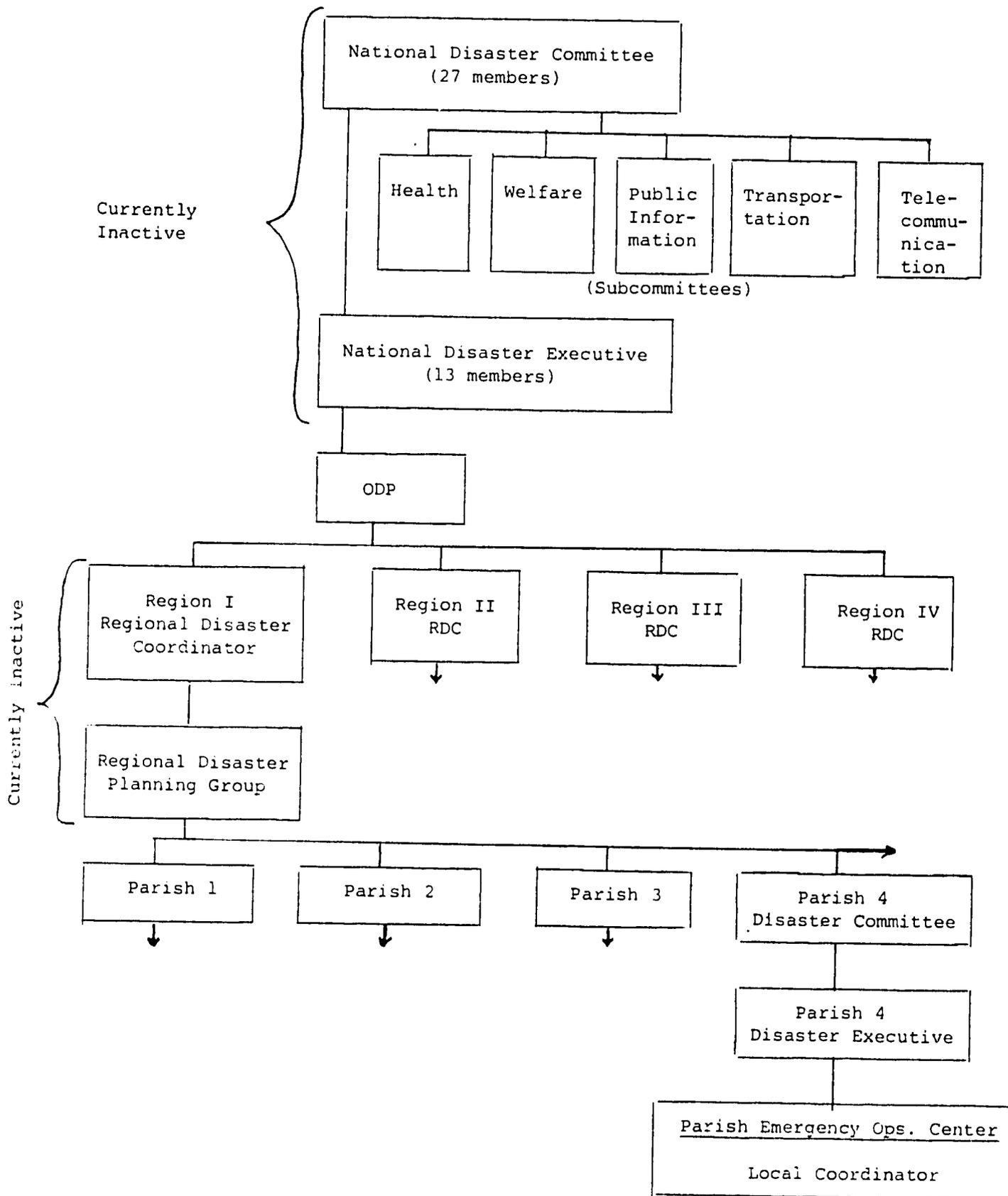
The structure of ODP itself is discussed in the next section.

Below ODP in the national plan are four regional disaster bodies, but these have never been activated. ODP hopes to organize them in the future.

Below the regional bodies are Parish Disaster Committees. (There are 13 parishes in Jamaica, which serve basically the same function as a combined city and county government--such as Jacksonville-Duval--does in the U.S.). These committees are chaired by the parish Mayor and have members including the Senior Police Officer, Senior Fire Brigade Officer, the Medical Officer of Health, the Roads Superintendent, heads of relevant voluntary organizations, etc.

EXHIBIT 1

DISASTER PREPAREDNESS ORGANIZATION IN JAMAICA



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Below the parish committee is the parish executive, a working body of key local department heads. The Local Disaster Coordinator is usually an employee of the parish, often an Assistant Secretary of the Parish Council, who is given part-time disaster duties.

The level of activity and preparedness at the parish level varies considerably. At the "active" extreme is a parish whose committee meets 2-3 times per year, has a written tailored disaster plan, has a designated Emergency Operations Center, has had 4-5 disaster preparedness seminars in the last year, has designated and inspected 20 shelters, and has an active interested local coordinator. At the "inactive" extreme is a parish which has had virtually no preparedness activity in over a year, except publication of a health sector disaster plan paid for by a foreign government (but not followed through on).

Even in the strong parishes substantial weaknesses exist. For example, in the parish mentioned above as being at the "active" extreme, the following deficiencies were noted in a superficial inspection:

- No drills or simulations had occurred in over a year.
- Local disaster communications gear was located in the vulnerable Fire Station, not in the well-situated Constabulary H.Q., which was designated as the Emergency Operations Center.
- Local disaster communications equipment (CB radios) would reach only a portion of the parish.
- Parish fire equipment consisted only of one 1,000-gallon truck broken since December of 1984, and one operational 300-gallon truck. (No water mains exist; trucks must carry and pump their own water.) This one truck serves a parish of 15 by 30 miles. The fire chief acknowledged that he rarely puts out fires, he only "cools down the ashes." He also complained of having no fire boots, helmets, or communications gear except for some CB radios with limited range.

- There are no blankets, tents, tools or other disaster supplies stockpiled.
- There is no secure storage area for stockpiled materials.
- There is no emergency fund for disaster expenditures. (Until recently each parish had a \$200\* revolving disaster fund, but this was eliminated by the central government as an economy move.) There is a \$100,000 fund used by the local Member of Parliament for many purposes, but this fund is usually exhausted by the time the May-June flooding season starts, and may be committed to other projects much earlier.
- There are no parish government funds allocated to any type of disaster preparedness function or expenditure.

The difficulties of this parish are a reflection of the extremely bad economic situation in Jamaica (as indicated by the national rate of 28 percent unemployment). This situation is likely to get worse before it gets better, due to declines in the key bauxite and tourist industries.

#### 1.2 Functions and Accomplishments of the Office of Disaster Preparedness

ODP is charged with coordinating all Government of Jamaica (GOJ) disaster preparedness, planning, mitigation, and relief. In a disaster situation, the ODP director has key contacts in each relevant ministry; these contacts would be under his direction and control. (An outside observer noted that the important Jamaica Defense Force would also be responsive to ODP's needs.) Through these contacts ODP would have access to a large amount of supplies, vehicles, manpower, and other resources.

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\* All figures are in U.S. dollars.

ODP itself has modest resources, but they are much more substantial than many Caribbean islands. The ODP internal table of organization (Exhibit 2) provides for 32 full-time slots, an impressive number. However, only 12 are professional , technical slots. Of these, only 6 were filled by Jamaicans in February of 1985. Two more slots were filled by Peace Corps Volunteers (PCVs) at no cost to GOJ. (One of these persons was due to leave in March, 1985. Two or three new PCVs may arrive shortly.) The entire, key Operations Division had no filled professional slots. Due to the low pay given to Jamaican civil servants, some difficulty in filling the vacancies was anticipated.

ODP's accomplishments include:

- Establishing itself, securing local funding, and continuing to survive despite severe budget problems experienced by the GOJ.
- Publishing a National Disaster Plan. This is kept on an NCR word processor for easy updating. The plan was last updated in November, 1984. It addresses hurricanes, oil spills, aircraft accidents, earthquakes and floods. It includes a basic administrative plan, a model parish plan, and special plans for disasters such as oil spills.
- Establishing what is probably the best library on disaster preparedness in the Caribbean. This was done primarily by soliciting free materials from U.S. agencies and other foreign sources. Only about \$200 per year is actually spent on purchases. The library occupies about 90 board feet on one wall of the ODP HQ.
- Securing a substantial HQ and co-located Emergency Operations Center. This facility is located next to the P.M.'s compound, is in two adjacent hurricane and earthquake-resistant buildings, has adequate parking, good security, two conference rooms, a library, a kitchen, sleeping facilities, Xerox and stencil-duplicating machines, is located near a helicopter landing area, and has air-conditioning for the professional staff.) (The facility is not luxurious, however. In fact is is rather bleak, and lacks many amenities such as enough filing cabinets, shelves, etc.)

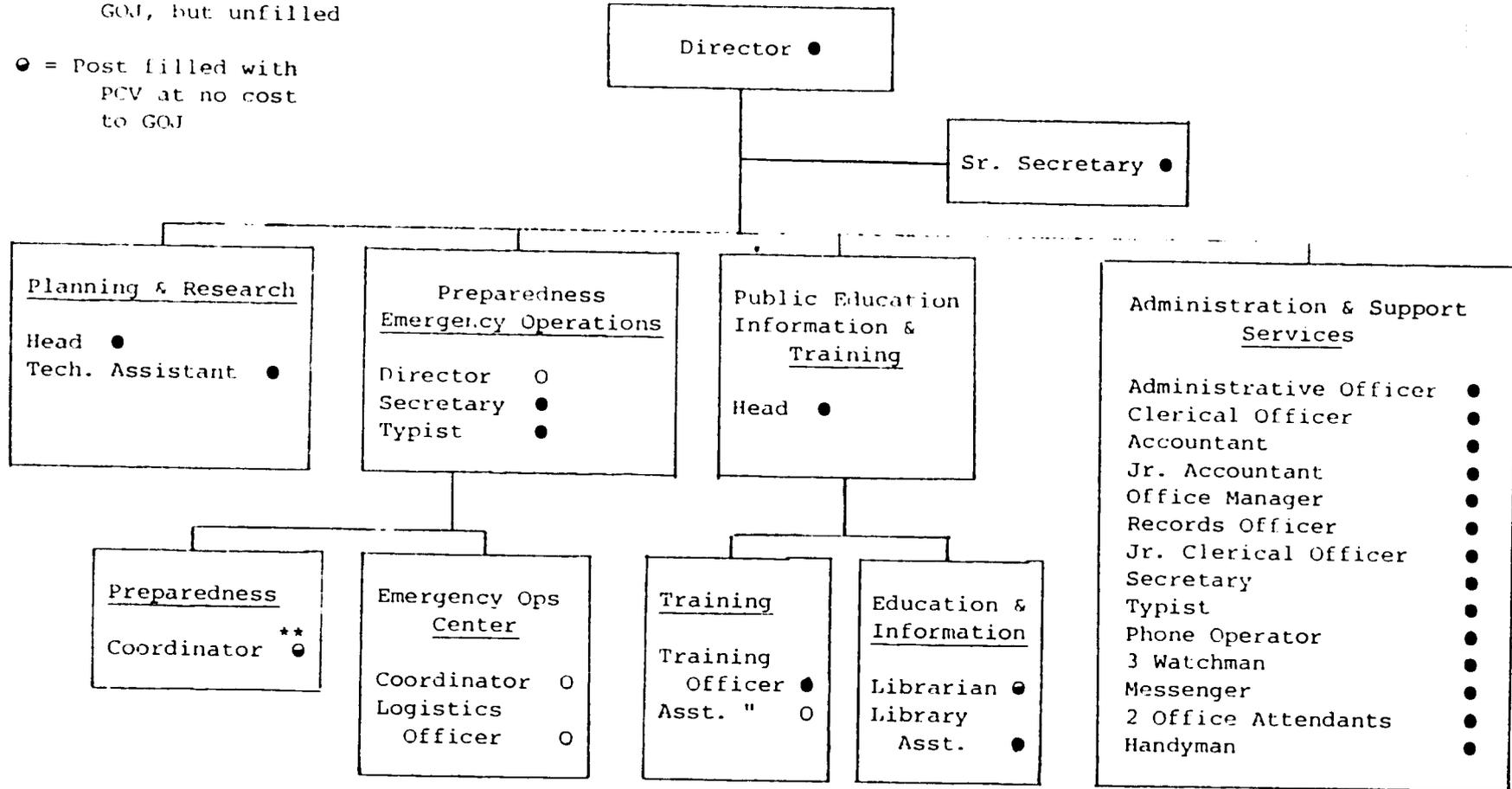
EXHIBIT 2

ODP Table of Organization\*

● = Post filled,  
funded by GOJ

○ = Post funded by  
GOJ, but unfilled

◉ = Post filled with  
PCV at no cost  
to GOJ



- 7 -

\* 16 other slots were proposed but have never been authorized.

\*\* This slot is filled with a PCV whose term expires 3/15/85.

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- Securing communications gear, including: 10 VHF sets in excellent condition using the works, fire and police civilian emergency channels; 10 VHF sets in fair condition using the police regular channel; and many CB sets. These latter are being distributed to fire stations to link up with local CB radio clubs.
- Establishing links with voluntary agencies, including The Jamaican Red Cross, Council of Voluntary Social Services (an umbrella organization) and the Council of Churches, and getting them to agree to provide all shelter for the first 72 hours of a disaster.
- Changing the public attitude from apathy to an awareness that preventive measures are possible and useful. This has been done by airing public service announcements, putting inserts in the major newspapers, showing films, and distributing pamphlets. (Informal "man-on-the-street" interviews with various Jamaican citizens showed that they recalled these public service messages and were aware of what to do in a hurricane emergency.)
- Assisting in getting all future Jamaican medical personnel trained in disaster preparedness, first aid and CPR, via inclusion of these courses in their curricula.
- Analysis and identification of hazardous locations for building on the island.
- Designation and inspection of shelters.
- Participating in 14 PCDPPP-funded seminars and 2 short-term consultancies.
- Participating in 12 other seminars funded by GOJ, CIDA, OFDA, the Japanese government, Virginia Polytechnic Institute, and others.

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- Participating in four drills and simulations funded by AID, GOJ and others.
- Undertaking studies of housing vulnerability, hazard management, and building regulations enforcement.

Current needs in the organization and its activities include the following:

- Need to fill key substantive slots.
- Need to conduct more drills and simulations. These are quite expensive, hence the lack of activity. The airport special plan is actually simulated once a year; the hospital special plan is drilled once a year in a desk-top discussion; other plans are apparently not simulated.
- Need to reactivate the national and some parish disaster committees, and need to address some of the local-level deficiencies noted earlier.
- Need to obtain better and more communications gear. Actual emergencies (e.g., small oil spills and crashes of light planes in isolated areas) have shown that initial response times are fast. But once on the scene different actors often cannot communicate with each other due to incompatible frequencies and other equipment problems. This is listed by the ODP Director as his #1 problem.
- Need to reverse the gradual increase in apathy in the population.
- Need to gain some influence over the development process, which is continuing to construct homes, buildings, and resorts in hazardous areas.
- Need to secure appropriate disaster legislation. ODP operates now under the Emergency Powers Act, a vague, all-purpose law which is directly equivalent to the ancient British Riot Act.

### 1.3 ODP Resources and Expenditures

The manpower resources of ODP were described earlier.

ODP's annual budget, paid for out of the GOJ general fund, is about \$110,000 (U.S.).

ODP owns its HQ/EOC, described above. It owns no other facilities, but in an emergency would have access to hundreds of training camps, equipment yards, storage depots and other facilities owned by other ministries and offices.

ODP has 3 vehicles of its own. In an emergency it would have access to hundreds of GOJ light vehicles, JDF heavy trucks, JDF aircraft and Jamaican Coast Guard vessels.

ODP has some blankets and tents stockpiled. However, ODP's philosophy is not to stockpile supplies and food, but to monitor the government's inventories and know how to access them. Since tents are expensive and are disliked by the populace, ODP prefers to issue locally-manufactured "zinc sheets" (corrugated iron sheets) or plastic sheeting in an emergency. Large stocks of both of these items are readily purchasable locally. This allows the population to fix up their own roofs, and speeds post-disaster normalization. (Recall that many Jamaican houses are made entirely of rough boards and zinc sheets.)

### 1.4 Relations between ODP, PCDPP, and other Organizations

This section is broken down into the following parts:

- Relations between ODP and PCDPPP
- Relations between PAHO, UNDRO and LORCS (in Jamaica), PCDPP and ODP
- Relations between ODP and other participant PCDPPP countries.

Relations between ODP and PCDPPP. As indicated above, ODP has moved from non-existence to relative maturity in just over four years. Prior to 1980, disaster preparedness in Jamaica was left to an inactive Central Emergency Relief Committee. Now a

functioning, viable organization exists. It was during this same frame that PCDPPP was founded. The obvious question that arises is, "Did PCDPPP help found ODP, did it help it grow, and can it take some of the credit for ODP's successes?" The apparent answer to this important question is "No."

The founding of ODP and of PCDPPP was triggered by the same events--the floods, hurricanes, and volcanic eruptions of 1979-80. But since founding ODP only required the unilateral action of the GOJ, while founding PCDPPP required multi-lateral action, ODP really got underway before PCDPPP. ODP's primary genesis was the floods of April and June of 1979. By late 1979, a government task force had recommended the establishment of a permanent office; by March 1980 an early attempt to implement the recommendation had failed; and by mid-1980, the office was successfully established. The present director was seconded to his post in ODP in mid-1980, from his former job as head of the geological survey.

By contrast PCDPPP was still in its "start-up phase" as late as September, 1981, according to Dr. Wynette Patterson. At this point, little substantive work had been done, with most PCDPPP effort devoted to securing quarters and getting established. Thus PCDPPP had little to do with the genesis of ODP.

In terms of ODP's growth and successes, PCDPPP can also claim little credit. While PCDPPP has provided training for ODP staff and other Jamaican nationals, most of the training was provided in 1984. Three seminars and one short-term consultant were provided in 1983; only two seminars training 3 Jamaicans were provided in 1982; and no training or assistance was apparently provided in the formative years of 1980 and 1981.

Furthermore, ODP staff feel that PCDPPP has:

- Not taken a leadership role in convincing top Jamaican leaders of the need to regulate building development, pass disaster-related legislation, and in general implement a comprehensive program. ODP feels that PCDPPP should have staff who are

comfortable dealing with Prime Ministers, large industrialists, major bankers, etc., and who are unafraid to push these decisionmakers for disaster mitigation and preparedness. The current PCDPPP approach is so diplomatic as to be ineffectual. For example, PCDPPP has declined to advise governments on where to organizationally locate their disaster offices, even though this is crucial to effectiveness. And PCDPPP staff once wanted to edit out critical language in a consultant's report on Jamaican building inspectors, when the report was accurate and the inspection system was in very bad shape.

- Not hired staff with the technical qualifications that will be useful to OPD on a "nuts and bolts" level. Also, some PCDPPP staff seem to have an exaggerated view of what GOJ can afford in disaster relief, and consistently recommend too expensive relief items when cheaper items will do. (For example, in training seminars PCDPPP staff have adamantly advocated using expensive tents and chemical toilets for victims, when clear GOJ policy is to use cheap zinc sheets and slit trenches.)
- Not assisted ODP in comprehensively analyzing its situation and its major needs. Director McDonald reports he has not had a "sit down planning session" with PCDPPP staff in over two years. He has never visited Antigua. Since 1980, when the baseline assessment of GOJ's disaster preparedness was done, PCDPPP has apparently not used the assessment in planning its programs, nor has it done a follow-up assessment. Rather, PCDPPP activities seem to be rather random and ad hoc, at least when viewed by GOJ. Once in a while ODP will get a call from a PCDPPP staffer saying, "I'm putting together a work plan in a few days for the next          months. What do you want me to put in it for Jamaica?" ODP wants a much more comprehensive approach for Jamaica (and other islands). This approach would say, "What is the status of preparedness here? What are the major weaknesses? What can PCDPPP do to address these weaknesses?"
- Not tapped into existing resources sufficiently. ODP feels that many Caribbean institutes and projects have information and research that PCDPPP could broker and disseminate, at low cost, but it has not. Barbados is far advanced in preparedness and many Jamaican ideas come from Barbados. But they come unilaterally from an informal network between ODP and Barbados, not brokered through PCDPPP. PCDPPP has not linked up with the 30-year-

old Caribbean seismic institute, has largely ignored the Trinidad and Jamaican regional building code project, has ignored the potential influence of the insurance industry in preventing building in hazardous sites, and has not tried to prevent AID and other publicly-funded buildings from building in hazardous areas.

- Not informed ODP sufficiently of PCDPPP activities. ODP feels that a key PCDPPP role should be to inform all member countries of all disaster-related training opportunities, especially those funded by PCDPPP. Instead, ODP most almost always find out about seminars "through the grapevine." Also, PCDPPP often sends consultants, experts, and staff to Jamaica to work with PAHO, UNDP, and other agencies. ODP feels that it should be notified of such visits for two reasons: to reinforce the role of ODP as the central GOJ disaster coordinator, and to allow ODP to possibly set up brief meetings to pick up some substantive ideas from each expert. PCDPPP has vigorously resisted all such efforts.
- Not followed up on its own initiatives. For example, a shelter management workshop put on by PCDPPP clearly needed some followup, but PCDPPP was apparently not interested in doing so. ODP then put on its own follow-up.
- Not operated in a manner befitting an advisor to LDC agencies. ODP feels that with a very meager budget it has come a very long way. But with a much more lavish style of expenditure PCDPPP has produced much less. The "bang" to "buck" ratio should be increased.
- Not delegated authority in a reasonable way within PCDPPP itself. It is apparently common knowledge that because of lack of trust, staff problems, and management style, the director of PCDPPP refuses to allow any cable or telex to be sent by his staff (even senior staff) unless he approves it first. Often this involves cables being held unsent in Antigua until they are read to him over the phone in Geneva or elsewhere.
- Not acted in a "pro-active" manner. ODP feels that the original goal for PCDPPP was to pro-actively lead the Caribbean countries to better preparedness. Instead, PCDPPP seems to have evolved into a reactive mode of operation. It waits, like a foundation, for funding requests. It considers the requests it receives through a

puzzling process unexplained to outsiders.\* It ignores funding requests it should have received, funds some of the requests it did receive, and waits for the next cycle.

As a result of its frustrations with PCDPPP, ODP has approached OFDA and other agencies unilaterally on many occasions, and has found them quite responsive. Of 26 seminars and conferences benefitting ODP preparedness since 1981, 14 were put on in conjunction with PCDPPP, but 12 had no PCDPPP involvement. ODP benefitted a great deal from this assistance, and is extremely grateful for it. But if PCDPPP were abolished, ODP feels that ODP would certainly survive, and that Jamaican preparedness would only be affected marginally.

ODP staff served on the early informal formative PCDPPP planning group, have been very active on the PCDPPP management committee, and have expressed many of these concerns. Director McDonald attended 4 committee meetings as a member and 1 as an observer. He missed 3 meetings.

ODP reviewed an early draft of the paper on "establishing a regional mechanism for preparedness." ODP strongly feels that a regional mechanism of some kind is necessary, but that it must first, exercise the leadership qualities alluded to earlier, and second, focus on building up the in-country capabilities to deal with disasters. In the wake of a disaster, external assistance will always be a belated supplement to internal actions.

#### Relations between PAHO, UNDRO and LORCS (in Jamaica, PCDPPP and ODP

LORCS in Jamaica and UNDP (the UNDRO representative in Jamaica) have not received any funding or aid from PCDPPP and have little contact with PCDPPP/Antigua.

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\* ODP reports that lately it appears that the PCDPPP rule of thumb is one item per island per year.

PAHO has cooperated with PCDPPP and ODP on several projects, mainly dealing with hospital disaster plans and incorporating disaster management into health professionals' educational curricula. PAHO staff know the PCDPPP staff and submit funding requests to them.

Some PAHO staff feel that PCDPPP needs to undertake a comprehensive needs assessment of preparedness, set attainable goals, and move quickly toward goal achievement. There is some urgency in this, since in Jamaica at least preparedness in the health sector is only "at its beginning," and much more needs to be done before the next disaster strikes.

ODP maintains a close liaison with the UNDP Kingston Office, the PAHO Kingston Office, and the Jamaican Red Cross (JRC). ODP has contact points and phone numbers with all three organizations and has 24-hour phone contacts for the JRC.

#### Relations Between ODP and Other Participant PCDPPP Countries

ODP looks to Barbados in an informal way for many of its disaster preparedness ideas. It also looks to Trinidad and Tobago for informal advice on building codes.

ODP receives a great deal of training assistance bilaterally from OFDA/AID/USA. (See the discussion below.)

Director McDonald is the head of the Caribbean national disaster coordinators group, and as such attends the PCDPPP management committee meetings, and knows the needs and problems of the disaster coordinators.

ODP is in contact with the USAID MDRO in Jamaica, and the current MDRO has attended two PCDPPP/ODP preparedness seminars. However, he only spends 4-5 percent of his time on disaster-related activities. The vast majority of his time is devoted to AID economic development efforts. The previous MDRO (who is now the deputy MDRO) spent more time in contact with ODP, especially in procuring communications gear. However, neither of the MDROs have really monitored ODP and its status, and they certainly have not monitored PCDPPP and its efforts.

## 2. PCDPPP and NON-PCDPPP ACTIVITIES BENEFITTING JAMAICA PREPAREDNESS

The vast majority of PCDPPP training and other assistance has been provided to ODP/GOJ in the area of "preparedness planning." No assistance was provided in the areas of "prediction and warning" and "vulnerability analysis while limited assistance was provided in the areas of "hazard analysis" and "prevention and mitigation."

Exhibit 3 presents a summary of the assistance provided by PCDPPP, in chronological order. This exhibit shows that about half of the 20 PCDPPP-related items involved sending small numbers of Jamaicans to workshops, simulations or conferences (mostly in preparedness planning) elsewhere. About one-third involved setting up large workshops, mostly on preparedness planning, in Jamaica.

The total number of Jamaicans trained was roughly 700, and the Jamaican government contributed in-kind services and cash totalling more than J \$160,000 (about U.S. \$30,000).

GOJ has not contributed cash to PCDPPP or any other regional organizations. ODP has good informal links with other Caribbean islands, and supports the idea of a permanent regional disaster preparedness mechanism of some kind. But it has not contributed cash or in-kind support toward creating a regional mechanism.

The "multiplier" and "long-term" effects of most of these PCDPPP activities on the general population are fairly limited, with the exception of the courses in disaster preparedness being provided to virtually all new Jamaican health professionals (item number 2.0). This promises to have a widespread, long term impact on preparedness.

Exhibit 4 presents a list of overseas training, Jamaican workshops, simulations, and short term consultancies not sponsored by PCDPPP. While most of these items are in the area of "preparedness planning," many of the short term consultancies (some of which have actually gone on for months) are concentrated

in the area of hazard analysis. Little was done in the area of prediction and warning.

EXHIBIT B

PCDPPP-RELATED

FELLOWSHIPS, OVERSEAS TRAINING, CONFERENCES, FAMILIARIZATION AND STUDY TOURS/CONSULTANCIES

ITEM NUMBER	TECHNICAL AREA	TITLE/ITEM/ DATE/LOCATION	SPONSORS	NUMBER OF JAMAICAN PARTICIPANTS		COST TO GOVERNMENT OF JAMAICA (US \$)*	BENEFITS
				ODP	OTHER		
1.	Preparedness Planning (PP)	Comprehensive Emergency Management for Local Officials, San Juan, Puerto Rico (Feb. 1982)	PCDPPP/Govt. of Puerto Rico	--	1	\$200.00	Participant was able to assist Disaster Committee (Prelawny) formulate plans for Emergency operations.
2.	PP	EFMA/Florida Workshop on Development of Simulation Exercises and Observation of Tampa Bay, Florida Drill April 1982)	OFDA/PCDPPP	1	1	\$800.00	ODP developed capacity for creating training simulations/drills.
3.	PP	Mass Casualty Workshop/Simulation (Jan. 1983) (Kingston)	PCDPPP/PAHO	3	42	\$11,250.00	Ministry of Health Officers concerned with Mass Casualty Management were able to formulate guidelines for such operations. The simulation tested has since been used in Antigua and in Latin America.
4.	PP	1983 Disaster Management Conference Orlando, Florida (Feb. 1983)	PCDPPP	1	3	\$1,500.00	Fire Department, Health Services, Red Cross, ODP officials gained experience on state-of-the-art Disaster Management.
5.	PP	1983 Disaster Control Course St. Augustine, Florida (May 1983)	PCDPPP/OFDA	1	--	\$500.00	ODP Officer gained from exposure to Emergency Response Management Systems.

\* Roughly, divide these figures by 5 to get the U.S. dollar equivalent.

EXHIBIT 3 (continued)

ITEM NUMBER	TECHNICAL AREA	TITLE/ITEM/ DATE/LOCATION	SPONSORS	NUMBER OF JAMAICAN PARTICIPANTS		COST TO GOVERNMENT OF JAMAICA (in \$ J)	BENEFITS
				ODF	OTHER		
6.	PP	Shelter Management and Evacuation Procedures (Feb. 1984) (in Jamaica)	PCDPPP/ODP	5	32	\$25,000.00	Parish Officials responsible for Shelter Programs reviewed experiences in the Region and formulated guidelines for local Shelter Management.
7.	PP	1984 Disaster Management Conference Orlando, Florida (Feb. 1984)	PCDPPP	--	1	\$500.00	Health Officer involved in Hospital Emergency Planning learnt of techniques in use.
8.	Hazard Evaluation	Management of Geological Hazards, USGS, Denver, Colorado (March 1984)	OFDA/PCDPPP	--	2	\$8,000.00	Officers of the Geological Survey and Town Planning Department were able to absorb and apply techniques for identification of and controlling land use in areas subject to geological hazards.
9.	PP	1984 Hazardous Materials Management Course St. Augustine, Florida (March 1984)	PCDPPP	--	1	\$500.00	Fire Department training officer exposed to techniques, which applied in Fire Service.
10.	PP	Role of Jamaican Media in Disaster Management (May 1984) (Kingston)	PCDPPP/ODP/CAPIMAC/PRESS ASSN OF JA	3	20	\$4,000.00	Sensitization of Media Personnel, development of guidelines for Media behavior and Action Plan for Media/ODP collaboration.
11.	PP	Oil Spill Regional Plan Development Seminar, St. Lucia (May 1984)	IMO/PCDPPP	1	--	\$2,000.00	ODP and Coast Guard officers participated in development of Regional Plan to be used in event of major incident.

## EXHIBIT 3 (continued)

ITEM NUMBER	TECHNICAL AREA	TITLE/ITEM/ DATE/LOCATION	SPONSORS	NUMBER OF JAMAICAN PARTICIPANTS		COST TO GOVERNMENT OF JAMAICA (in \$ J)	BENEFITS
				ODP	OTHER		
12.	FF	WMO Regional Meeting (National Coordinators Meeting) Barbados (May 1984)	WMO/PCDPPP	1	--	\$500.00	Review of National/Regional Hurricane Plans and identification of priorities for Coordinators Meeting.
13.	FF	Oil Spill Simulation, Puerto Rico (June 1984)	PCDPPP/US Coast Guard/OPDA	--	1	\$500.00	Coast Guard officer learnt (by observing simulation) techniques for containment of spills at sea.
14.	FF	Simulated Emergency Test of Amateur Radio Capacity (June 1984); including 4 days short-term consultant; in Jamaica	ODP/JARA/PCDPPP	4	40	\$500.00	Simulated test of Amateur Communication System allowed a realistic evaluation to be made of the capability of HAMS Radios in crisis conditions.
15.	Prevention & Mitigation	Building Inspection Procedures for Reducing Disaster Losses (July 1984); also 4 days short-term consultant (Jamaica)	PCDPPP	3	42	\$2,500.00	Improvements in Building Inspection Procedures islandwide.
16.	PP	Providing telecommunications equipment (SW, HF, SSB) (May 1984)	PCDPPP	--	--	\$1,500.00	SSB range of 250 miles, can contact other islands (but not yet Antigua)

EXHIBIT 3 (continued)

ITL4 NUMBER	TECHNICAL AREA	TITLE/ITEM/ DATE/LOCATION	SPONSORS	NUMBER OF JAMAICAN PARTICIPANTS		COST TO GOVERN- MENT OF JAMAICA (in \$ '000)	BENEFITS
				ODF	OTHER		
17.	PP	Provide MCF word processor, with mailing list and TB management software 64K, 16 bit machine (Kingston)	PCDPPP/UNDEFD	--	--	\$100-500 (training of staff, surge protectors)	More office efficiency in ODF, put National Plan on word processor.
18.	PP	Technical assistance in upgrading hospital and GOJ Min. Health disaster plans (Nov. 1993 - Dec. 1994) (Jamaica)	PAHO/GOJ Min. Health/PCDFPP	--	70	\$100,000	Hospital and Min. Health professionals established solid disaster preparedness plans in 70 Min. and 3 large hospitals; increased awareness; better disaster health care for hundreds (thousands) of Jamaicans.
19.	PP	Workshop in training the trainers in triage, patient transport, other medical disaster skills (April 1984) (Kingston)	PAHO/ODF/PCDPPP/GOJ Min. Health	--	30	?	Greater awareness among Jamaican medical trainees; better disaster medical care for hundreds of Jamaicans.
20.	PP	Courses in disaster preparedness and relief for health professionals (1984-on) (Kingston)	PAHO/U. of the West Indies/PCDPPP/OPD	--	400/yr.	?	Medical trainees of all kinds (MDs, nurses, PHNs, dental techs., med. techs., etc.) being given at least 1 course in disaster preparedness. Should provide better medical disaster mgmt. for thousands of Jamaicans. Also, 1st aid and CPR are prerequisites of these courses.
			TOTAL	23	687	SJ 160,650 + SUS 32,130 +	

Exhibit 4

NON-PCDPPP-RELATED ITEMS

OVERSEAS TRAINING, CONFERENCES, FAMILIARIZATION  
AND STUDY TOURS

<u>#</u>	<u>TITLE</u>	<u>SPONSORS</u>
1.	Training of Fire Officers (Nov 1983 & May 1984)	OFDA/NFPA
2.	Conference On Air Traffic Safety (March 1984)	OFDA/FAA
3.	1984 National Hurricane Conference, Tampa, Florida and visit to Beach Protection Works Tampa/St. Petersburg Area (April 1984)	OFDA
4.	Earthquake/Disaster Management Workshop for Media California (March 1984)	OFDA
5.	Planning Meeting for International Conference on the Implementation of Hazard Mitigation Programmes/Formation of American Panel for Risk Reduction in High Risk Areas, Washington DC (June 1984)	VPI/OFDA
6.	Fellowship on Technology in Disaster Prevention Japan (Sept - Dec 1984)	Govt of Japan/Govt of Ja
7.	Fellowship in Technology for Fire Prevention and Hazardous Materials Management, Japan (Aug - Nov 1984)	Govt of Japan/Govt of Jamaica
8.	Workshop in Disaster Prevention, Oxford Polytechnic (May - June 1984)	OFDA/OXFORD
9.	Annual VOLAGS/OFDA Conference on Disaster Relief & Management Washington DC (October 1983)	OFDA

**Exhibit 4 (continued)**

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|-----|--|--|
| 10. | Planning Meeting on Int. Conf. on Implementation of Hazard Mitigation Programmes Washington DC (December 1983) | Virginia Polytechnic /OFDA               |
| 11. | Planning Meeting Annual Hurricane Conference, Miami (October 1983)   | OFDA                                     |
| 12. | Emergency Management for Community Leaders; Arnprior, Canada (February 1981)                                   | CIDA/<br>EMERGENCY<br>PLANNING<br>CANADA |
| 13. | Natural Hazards Workshop 1983, University of Colorado Boulder, Colorado (July 1983)                            | OFDA                                     |
| 14. | First Conference on Seismicity of Caribbean, Dominican Republic (May 1983)                                     | OFDA/GOJ                                 |

WORKSHOPS IN JAMAICA

<u>#</u>	<u>TITLE</u>	<u>SPONSORS</u>
1.	Community Leaders and Disaster Management (June - July 1984)	JAYCEES of JAMAICA/ODP
2.	Data Management for Severe Weather Forecasting and Drought Impact Assessment (May 1984)	IBM/ODP/ OFDA
3.	National Workshop for Parish Disaster Coordinators (June 1984)	ODP
4.	Role of Educators in Disaster Management (Formulation of Curriculum Adjustments)(May 1984)	ODP
5.	Jamaica's Emergency Relief and Welfare System (March 1984)	ODP
6.	Fellow-Up to PCDPPP Shelter Management Workshop (March 1984)	ODP
7.	Management of Hazardous Materials (November 1983)	ODP

Exhibit 4 (continued)

8.	Development in High Risk Areas (August 1983)	ODP
9.	Vulnerability of Vernacular Housing (August 1983)	ODP/OFDA
10.	Seventy-Five Years After: Earthquake Risk in Jamaica (January 1982)	Insurance College of Jamaica/ ODP
11.	Hurricane Awareness for Teachers (August 1983)	ODP/OFDA
12.	Storm Surge Problems in Caribbean (Group of Experts Meeting) (December 1981)	WMO
13.	Mass Casualty Management Workshop: Twenty-Five Years After Kendal Train Crash, Mandeville, Jamaica (September 1982)	ODP
14.	Documentation of Extreme Events in Jamaica (October 1981)	ODP/Jamaica Geograph ical Society

SIMULATIONS, DRILLS, EXERCISES

<u>#</u>	<u>TITLE</u>	<u>SPONSORS</u>
1.	Oil Spill Simulation Test (April 1984)	JDF/COAST GUARD/ODP
2.	Kingston Airport Mass Casualty	Airport Authority of Jamaica/ ODP
3.	Airport Fire Simulation Guantanamo Base (March 1984)	USAID
4.	Montego Bay Airport Crash Simulation (Jamaica, 1984)	ODP

Exhibit 4 (continued)

CONTRACTS, SHORT CONSULTANCIES/ADVISORY VISITS

<u>#</u>	<u>TITLE</u>	<u>SPONSORS</u>
1.	Hazard Management Programme (Ralph Field Associates) Twenty-one Months (May 1982 - Feb 1984)	OFDA
2.	Management of Selected High Risk Areas Ralph Field Associates Eight Months (Feb - Oct 1984)	OFDA
3.	Vernacular Housing Vulnerability Survey (INTERTECT) Three Months (May - August 1982)	OFDA/USAID HOUSING
4.	Development of Six (6) Training Booklets for Vernacular Housing Improvement (INTERTECT) Two Months (May - August 1983)	OFDA/USAID HOUSING
5.	Emergency Operations Management (State of Virginia Office of Emergency and Energy Management) Two Months (April 1982, May 1983)	OFDA/STATE VIRGINIA
6.	Schools Hurricane Programmes (Terry Nixon) Two Weeks (August 1983)	OFDA
7.	Development of Schools Emergency Education Programme (Paula Cruz) One Week (October 1983)	OFDA

### 3. SOURCES OF INFORMATION FOR THE EVALUATION

No major problems were encountered in conducting this evaluation. Interviewees were quite available and helpful.

Time did not permit more than a superficial analysis of preparedness at the parish level. However, the analysis that was done deemed sufficient for purposes of this evaluation.

The following sources of information were tapped in this evaluation.

#### Interviews

- Dr. N. Andrews, Country Representative, PAHO Kingston Office
- Mrs. Claudine Correia, Junior Professional Officer, United Nations Development Program (UNDP representative in Kingston)
- Hon. Noel Flemmings, Mayor, St. Thomas Parish
- Mr. T. Lewison, Training Officer, Goodyear Rubber Factory, Morant Bay
- Mr. W. Malcomb, Mental Health Officer and Psychiatric Nurse, Portland Parish Primary Health Care Clinic
- Mr. Charles Matthews, Mission Disaster Relief Officer, U.S. A.I.D., Kingston
- Mr. Franklin McDonald, Director, Office of Disaster Preparedness, Government of Jamaica
- Dr. Wynette Patterson, Director, Caribbean Food and Nutrition Institute, University of the West Indies (former Director, PCDPPP)
- Ms. Barbara Quarry, Assistant Secretary, St. Thomas Parish Council; also Disaster Coordinator, St. Thomas Parish

- Dr. Una V. Reid, Area Advisor, Health System Manpower Development, PAHO Kingston Office
- Ms. Hilary Sherlock, Project Manager, Primary Health Care Upgrading Project, Portland Parish
- Mr. David Taylor, Hospital Disaster Planner, PAHO Kingston Office
- Mr. Don Washington, Health Planner, PAHO Kingston Office
- Mr. William Wilcox, Emergency Relief Coordinator, Office of Disaster Preparedness, and Peace Corps Volunteer (also former Associate Director, U.S. F.E.M.A.)

### Report and Files

- Ralph M. Field Associates, Hazard Mitigation Analysis in Jamaica (Conn: RMFA, 1982).
- Ralph M. Field Associates, Hazard Mitigation Program (Conn: RMFA, 1984).
- Ralph M. Field Associates, Proposal to Undertake an Emergency Management Program in Response to Natural Disasters (Conn: RMFA, 1984).
- F. McDonald, and K. Ford, "Jamaica's National Hazard Management Programme: A Review of Work in Progress," (paper presented at Conference on Disaster Mitigation Programs, Ocho Rios, Jamaica, 1984).
- Miscellaneous pamphlets and brochures.
- ODP, National Disaster Plan: Jamaica (Kingston: ODP, mimeo, 1984).
- ODP, "Review of Proposals for Structuring the Organization," (Kingston: ODP, mimeo, 1983).
- OFDA AID, Jamaica: A Country Profile (Washington: AID, 1983).
- OFDA, three "Disaster Case Reports" for Jamaica.
- Una V. Reid, Disaster Preparedness and Management: A Course Designed for Health Professionals in Jamaica (Kingston: ODP, 1984).

- "Some Local Government Services Going to Central Government," The Daily Gleaner (Kingston), February 14, 1985.
- Carl Stone, "Savaging Local Government," The Daily Gleaner (Kingston), February 13, 1985.
- William H. Wilcox, "Proposed Improvements for The Post-Disaster Human Welfare Assistance System in Jamaica," (Kingston: ODP, mimeo, 1984).

#### 4. RECOMMENDATIONS

The findings and recommendations of this case study can be broken into two parts - those which involve Jamaica and ODP exclusively, and those which involve ODP and PCDP.

##### Recommendations involving GOJ and ODP

ODP has accomplished a great deal in a fairly short time. Its remaining needs are clear to ODP staff, and they include the following major items:

- The need to fill budgeted professional slots in the organization.
- The need to revitalize the national and some parish committees.
- The need to obtain adequate, coordinated communications gear.
- The need to reverse the gradual increase in apathy toward preparedness within the GOJ bureaucracy and the public.
- The need to obtain some influence over the development process.
- The need to secure national disaster preparedness legislation.

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## Recommendations Involving ODP and PCDPPP

PCDPPP, if continued at its present or an expanded level, can best aid ODP and GOJ by:

- Conducting a comprehensive, systematic analysis of GOJ's preparedness, identifying weaknesses, and carefully targeting programs to aid in addressing those weaknesses.
- Helping ODP push for national disaster legislation.
- Helping ODP gain some influence over the development process.
- Coordinating and brokering existing Caribbean resources in a way to benefit GOJ (and other islands)
- Notifying ODP (and other islands) of training opportunities in the region.

## ST. LUCIA

### 1. OVERVIEW

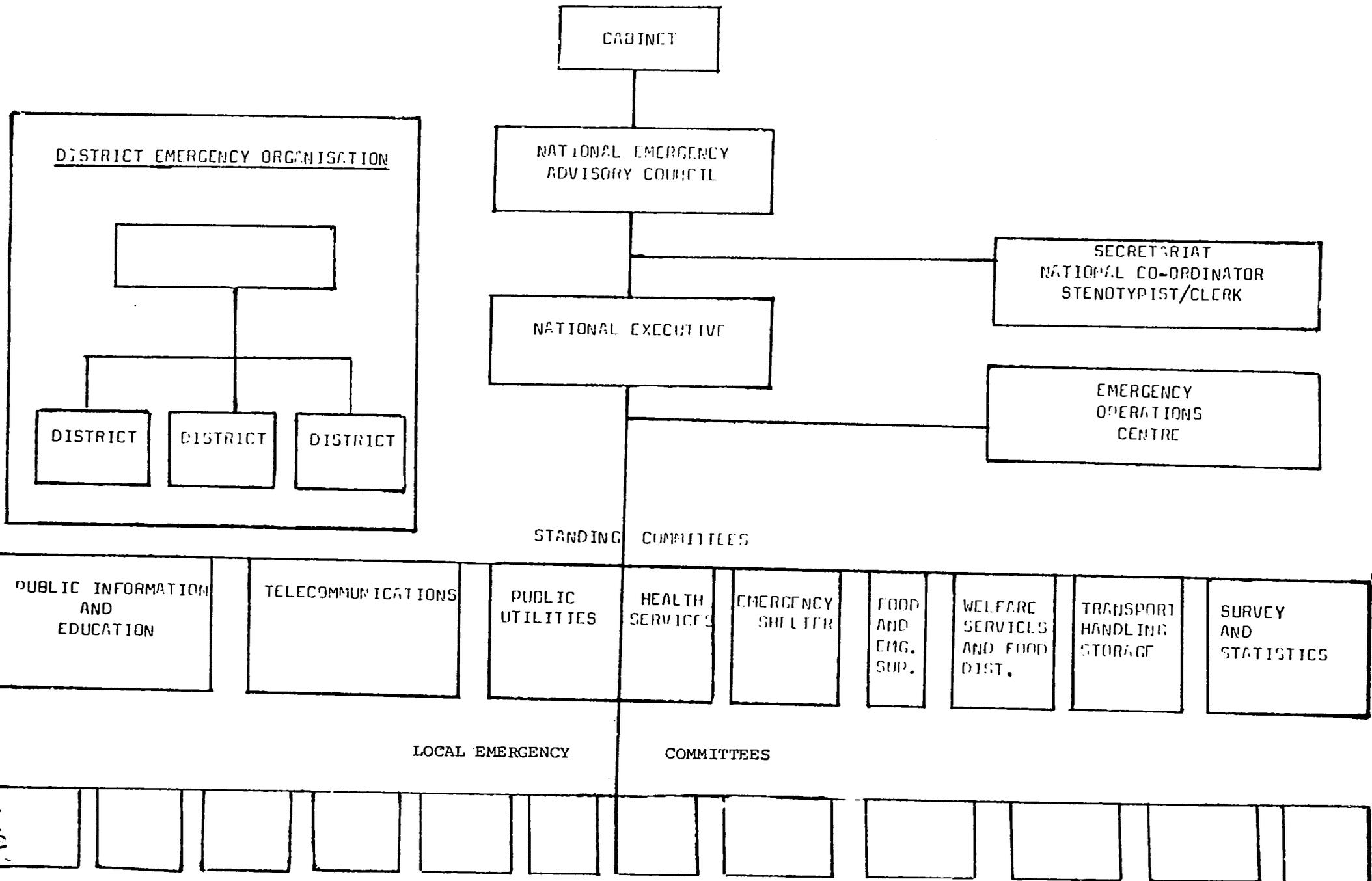
Until Hurricane Allen devastated the island in 1980, St. Lucia had not experienced major hurricane damage for nearly 100 years. As a result of this, DPP activities are accorded a low priority both officially and by the populace. A NDP was officially published in 1983 following a three-year development period beginning with the establishment of the PCDPPP. Although St. Lucia has appointed an official NDC, no visible governmental resources are assigned to DPP. St. Lucia welcomes the assistance received from the PCDPPP but has little knowledge of the project's operations and does not aggressively seek its resources.

### 2. PROFILE OF THE NATIONAL DISASTER PREPAREDNESS AND PREVENTION ORGANIZATION

#### 2.1 Structure and Activities

Exhibit 1 summarizes the organization of DPP in the St. Lucian government and indicates that considerable responsibility for implementing preparedness and prevention plans lies at the local (district) level under the supervision of the NDC or persons authorized by the National Emergency Organization (NEO) located in the Prime Minister's office. Overall responsibility for coordinating the planning of DPP at national and district levels involving the public, voluntary, and private sectors resides with the Emergency Executive Committee of the National Advisory Council. The Secretary to the Cabinet is chairman of both, and the NDC is a member of the Executive Committee.

NATIONAL EMERGENCY ORGANIZATION  
ORGANIZATIONAL STRUCTURE



At the national level, disaster planning and implementation activities are assigned to the various ministries whose functions include activities relevant to disaster preparedness and prevention. Also included in this process are various utilities, public authorities and voluntary organizations. Planning activities are coordinated by a series of standing committees who report annually to the NEO. At the district level, the Ministry of Community Development and Social Affairs facilitates the development and maintenance of local emergency committees and guidelines for their plan of operations are provided by the NEO. Copies of local plans are requested to be sent annually to the NDC. The NDC is responsible for the day-to-day functioning of the NEO under the overall direction of the Secretary to the Cabinet.

The NDC readily acknowledges that St. Lucia's DPP organization was heavily influenced by Barbados. A comparison of the organizational structures reveals very little in the way of substantive differences. A noticeable exception is that the development of local organizations in St. Lucia is assigned to the Ministry of Community Development and Social Affairs while in Barbados it is assigned to the Central Emergency Relief Organization, the equivalent of St. Lucia's NEO.

## 2.2 Functions of the NEO

The main function of the National Emergency Organization is to ensure that the island is in a state of preparedness at all times to meet any natural or man-made disaster which may occur.

Specific functions of the National Emergency Organization include:

- Review and revise annually in April the National Disaster Plan.

- Store and control emergency equipment and other relief supplies.
- Coordinate the activities of governmental and non-governmental agencies in the event of a disaster.
- Decide on what precautionary measures should be taken when a major disaster threatens.
- Organize simulated exercises.
- Advise the Government on what measures should be taken after a serious disaster occurs.
- Organize and coordinate emergency relief services, post-disaster surveys and reports.
- Prepare and maintain inventory of resources (financial, human, material).
- Collaborate with inter-regional and extra-regional emergency relief organization.
- Take charge of any relief stores, equipment and funds which may be raised or received by the Government for relief purposes and to distribute such stores and funds in the most beneficial manner to the stricken areas.
- Organize coordination between National Emergency Relief Organization and District Emergency Committees.
- Arrange for relief aircraft and ships, including customs clearance or relief supplies and visas for personnel.
- Entry control of non-essential visitors.
- Public information and press briefings.
- Warning systems, warning dissemination, responsibility for and control of broadcasting.
- Evacuation plans, shelter and refugee areas, including promulgation of these plans.
- Direction of labor.

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- Organize post-disaster reconnaissance and reports.
- Post-disaster demolition and repair.

### 2.3. Functions of the NDC

The National Disaster Coordinator is directly responsible to the Secretary of the Cabinet who is the Chairman of the National Emergency Advisory Council. He performs the following duties:

1. Review and revise the National Disaster Plan and the supplementary booklets.
2. Confer with the Chairman of all the Standing Sub-Committees, heads of government and non-governmental agencies. Attend their meetings where and when necessary and ensure that they prepare and submit reports on their assignments set out in the National Disaster Plan.
3. Confer with the relevant Permanent Secretaries to ensure that all government departments and public utility companies prepare contingency plans and submit a copy to the National Emergency Advisory Council.
4. Coordinate the disaster preparedness work of all governmental and non-governmental agencies.
5. Provide coordination between the National Emergency Advisory Council and the District Emergency Committees.
6. Confer with the appropriate governmental and non-governmental agencies to arrange for training and workshops in disaster preparedness, prevention and mitigation at all levels particularly at the community level.
7. Liaise with the Pan-Caribbean Disaster Preparedness and Prevention Project and other disaster agencies.
8. In collaboration with the Government Information Service, organize and supervise the program for Disaster Preparedness Week and provide bulletins and audio-visual material for public awareness and information.

9. Confer with the relevant officials to ensure that emergency simulation exercises are carried out by the relevant agencies at least once a year in mass casualty management, telecommunications and emergency shelter management.
10. In collaboration with the Chief Education Officer and Chief Engineer, Ministry of Communications and Works revise and publish annually in the month of June the list of Emergency Shelters.
11. Arrange for meetings of the National Emergency Advisory Council to be held at least twice a year and the Coordinating Advisory Council once a quarter.
12. Attend to all correspondence to and from the National Emergency Advisory Council.
13. In collaboration with the Sub-committees for Telecommunications and Public Information, ensure that the Emergency Operations Center is functional at all times and for its immediate activation in an emergency.
14. Advise and assist District Emergency Committees in the development and execution of their disaster preparedness, prevention and relief work, and ensure that they have the support and assistance of the relevant governmental and non-governmental agencies.
15. Assist with the procurement of equipment and supplies for training and emergency relief.
16. Compile and maintain a comprehensive list of human and material resources available for emergency operations.
17. Keep an inventory of all disaster equipment and material received and issued.
18. In collaboration with the Ministry of Foreign Affairs, advise and assist in the coordination of matters relating to external disaster agencies.
19. Keep the Coordinating Advisory Council informed of the state of disaster preparedness and of any problems likely to affect the satisfactory execution of the National Disaster Plan.

20. Perform the duties of Secretary to the Coordinating Advisory Committee and supervise the secretariat of the National Emergency Organization.
21. Prepare an annual report of the National Emergency Organization.
22. Perform such other relevant duties as may be assigned by the Chairman of the National Emergency Advisory Council.

#### 2.4 Internal Coordination

As the NDC does not have unilateral authority to develop and execute plans and allocate resources, much of his efforts are devoted to coordinating the work of ministries and other organizations in making their contributions to the NDP. This involves working with organizational contributors to the plans to eliminate duplicative actions and fill gaps in needed activities.

The NDC noted that planning coordination could be improved among the ministries and voluntary organizations. Evidence of this need surfaced during Hurricane Allen when there was duplication in food distribution and politicians were reported to have behaved as if there was no plan, by making on-the-spot decisions and personnel assignments. The NDC stated that a seminar for top government officials is planned for this year to reinforce the existence of the NDP. Also noted was a consolidation of the local emergency committees from 32 to 8.

The NDC believes that both national and regional coordination of DPP is possible. In the first instance, he predicated this belief on the participation of the various ministries and other organizations in the NDP planning process (while recalling the Hurricane Allen experience). In the second instance, he identified a potential role for OECS as an overall planning, coordinating, and funding mechanism.

The NDC does not perceive any problems in coordinating external assistance for DPP. However, he later mentioned some significant problems in coordinating external disaster relief assistance following Hurricane Allen.

## 2.5 Resources and Expenditures

The present NDC has held this position since its inception in 1979. Prior to assuming this position, he served for 20 years as permanent secretary to various ministries. The position of NDC is not full-time, although the incumbent reports spending 75 percent of his time performing its functions. In the budget, his position is described as coordinator of nongovernmental voluntary organizations for the Peace Corps. There is no budget line item for DPP activities, including the salary and expenses of the NDC.

Through PCDPPP, CIDA provided NEO in 1984 with a telecommunications and radio system which now links all key points in the island with the Emergency Operations Center located in NEO office space.

## 3. NEO RELATIONSHIPS WITH THE PCDPPP

The NDC reports very little contact with the PCDPPP project manager and no interaction with the Management Committee, yet also reports that he cannot think of anything they've asked for but haven't received. With this overview, the NDC reports considerable difficulty in trying to reach the project manager who is perceived as spending too much time out of the office and not having a deputy. The NDC also reports having no contact with PCDPPP's voluntary components. As in Barbados, PAHO and LORCS deal directly with the Ministry of Health on disaster-related matters.

St. Lucia appears very passive in the process of acquiring assistance from PCDPPP. The NDC reports receiving annual training program schedules from PCDPPP along with invitations to nominate participants whose expenses would be covered by the project. Also, the NDC receives management committee reports of consultants engaged and projects to be undertaken. There were instances where these consultants sought visits to St. Lucia to identify needs and provide information. One project that was frequently mentioned was a recent workshop held on St. Lucia for small building contractors and building inspectors on sound (non-engineered) housing construction. It was reported that most communications were initiated by PCDPPP.

The NDC gave the clear impression that he knows little about how PCDPPP functions or how its decisions are made. However, he suggests that the project manager and others formulate assistance programs for submission and approval by the Management Committee and then announce their availability to the participating countries. He complained that he has never been invited to visit PCDPPP headquarters in Antigua.

The NDC made a number of observations concerning support provided by and needed from PCDPPP. In terms of the project's most valuable contributions, he noted PCDPPP's role in obtaining their telecommunications and radio system from CIDA. He also thought that assistance provided by advisors was useful. However, he was critical of the fact that personnel sent off for training do not share their newly obtained knowledge and that this is frequently due to the fact that donor (PCDPPP) funds are not provided to finance information sharing activities. This point was made a number of times.

The NDC also indentified a number of DPP activities in which more assistance was needed and the type desired. This information is summarized in Exhibit 2.

**EXHIBIT 2**  
**ASSISANCE NEEDS**

TECHNICAL AREA	ASSISTANCE TYPES
1. Disaster Planning and Preparedness	Workshops, Equipment
2. Warnings and Lifesaving	Equipment
3. Coordination and Direction	National and Regional Conferences, Workshops
4. Organization and Management	Conferences, Workshops
5. Surveys and Estimates of Damage	Workshops
6. Mobilization and Material Resources	Workshops
7. Stockpiling	Literature
8. Materials Availability	Literature
9. Mobilization of Personnel	Literature
10. Personnel Training	Workshops and Conferences to orient Officials
11. Simulation Exercises	Comprehensive Model

On balance, NEO is satisfied with the assistance provided by PCDPPP. A number of favorable references were made to the project in its 1984 annual report. A closing statement in the report reads: "The NEO greatly appreciates the technical and material support received from the PCDPPP and welcomes and supports the activities of the organization to set-up permanent and regional emergency organizations to respond effectively in times of disasters".

#### **4. DISASTER PREPAREDNESS PROJECTS**

Exhibit 3 summarizes 14 DPP projects conducted over the last four years. Most of these projects were supported with PCDPPP funds. Although two of the projects were funded by local sources, it was stressed that the NEO has virtually no resources to conduct DPP activities.

Almost two-thirds of the projects were regional in scope and funded mostly by PCDPPP. This lends support to the observation that St. Lucia is somewhat passive in pursuing their own priorities and simply takes advantage of whatever opportunities arise to obtain training and information.

#### **5. INSTITUTIONAL DEVELOPMENT**

St. Lucia has made considerable progress in developing its DPP capability but still claims to be highly dependent upon donor funds to maintain and enhance its present level of preparedness. Among the areas where additional and for continuing assistance is needed include: training of local volunteers, basic equipment and emergency supplies, and public information and awareness. The primary source of this dependency is the unwillingness of the government to allocate funds for DPP activities. (Recall that

## EXHIBIT J

## DISASTER PREVENTION AND PREPAREDNESS PROJECTS

Technical Area	Activity	Topic	Scope	Date	Est. Cost	Participants	Benefits	Comments
Preparedness Planning -- First Aid	short course	emergency first aid training	local	late 1983	unknown	500 in repeated courses	ability to provide first aid	Funded by LORCS PCDPPP
Preparedness Planning -- Emergency procedures	workshop	training for emergency shelter managers	local	annually	\$851200	80/year	more effective shelter mgt	Funded by St. Lucia
Preparedness Planning -- Emergency procedures	workshop	search and rescue	regional	1984(?)	unknown	2 members of Coast Guard	more effective search & rescue techniques	Funded by PCDPPP
Preparedness Planning -- Emergency procedures	workshop	hazard monitoring & emergency mgt.	regional	1984(?)	unknown	1 govt. official	improved knowledge	Funded by PCDPPP
Preparedness Planning -- Emergency procedures	conference	Meeting of NDCs	regional	1984	unknown	NDCs of participating countries	-	Funded by PCDPPP
Preparedness Planning -- Emergency procedures	conference	Descriptions of DPP programs	regional	1984	unknown	NDC & town planner	-	Organized by VPI
Preparedness Planning -- Communication Planning	workshop	role of CB clubs in preparedness & emergency telecommunications	local	1984	unknown	local CB club members, voluntary organizations	more effective communications resources	Funded by local sources
Preparedness Planning -- Communication Planning	workshop	training in emergency procedures	regional	1983	unknown	radio operators emergency operation centers	more effective communication resources	Funded by PCDPPP
Preparedness Planning -- Communication Planning	workshop	training in emergency procedures	local	1984	unknown	local CB club members	ditto	Funded by PCDPPP
Prevention & Mitigation	workshop	hazardous materials	regional	1984	unknown	chief fire officer	improved knowledge	Funded by PCDPPP
Prevention & Mitigation	simulation	airports & hospital plan testing	regional	1984	unknown	medical & airport officials	improved knowledge of plan testing	Funded by PCDPPP
Prevention & Mitigation	workshop	pollution control	regional	1984	unknown	ministry officials	improved pollution control knowledge	Funded by PCDPPP
Prevention & Mitigation	workshop	emergency management of environmental health & water supply	regional	1984	unknown	ministry officials	improved knowledge of mitigation mgt.	Funded by PCDPPP
Prevention & Mitigation -- Building standards	workshop	sound building practices	local	1984	unknown	building contractors & architects	improved building standards	Funded by PCDPPP

there is no direct reference in the budget to even the salary of the NDC.)

In the unlikely event that these funds are made available (short of the occurrence of a disaster), St. Lucia would need help with the development and implementation of building structure and location codes. A regional disaster preparedness mechanism could aid in meeting these needs by pooling and sharing resources. If the PCDPPP were to serve as such a mechanism, they could meet certain needs by continuing their present activities but they are not empowered to pool and/or allocate resources among the islands.

### 5.1 Disaster Planning

St. Lucia has had a hurricane preparedness plan for the last twenty years. At the 1979 St. Lucia meeting concerned with the establishment of the FCD, St. Lucia began to develop the first version of its current NDP. This was first published in 1983 and a draft update was completed in 1984. The final acceptance of this update has awaited for the past six months a promised review and comment by PCDPPP. Once this is obtained, the final version will become the 1985 NDP.

The present NDP differs from the old hurricane plan, in that it:

- Contains more subcommittees involved in the planning process.
- Refined emergency operations center procedures.
- Refined post disaster procedures.
- Improved emergency management procedures.
- Established local emergency committees.
- Enhanced the telecommunications system.
- Established an NDC.

While the NDP primarily addresses hurricanes and other tropical storms, it is believed that it is applicable to other types of disasters. The plan was said to be updated annually, but the first update of the version prepared around 1981 is still in draft form. It is organized primarily by government ministry, utilities and national voluntary organizations. However, much of the "front-line" implementation responsibilities are delegated to local emergency committees.

The plan is tested annually, primarily through the activation of the emergency operations center and the telecommunications system. Some ministries are said to test by simulation, including the airport search and rescue operations.

It was noted that PCDPPP-sponsored workshops were an important aid in developing the plan, but it needs improvement in the areas of post disaster management, collection of disaster statistics, coping with a lack of emergency relief shelter resources, mass feeding, and mass casualties.

## 5.2 Disaster Preparedness

The NEO is the designated disaster preparedness organization. Its permanent staff is limited to the part-time NDC, but disaster plans call for the mobilization of all necessary government and voluntary resources in the event of an emergency. Staff training is limited to conferences and workshops, most of which are funded by PCDPPP. The stated immediate needs in this area were limited to the satisfaction of outstanding requests to PCDPPP for reports on conferences and workshops not attended by St. Lucians.

### 5.3 Disaster Relief Operations

The NDC stated that St. Lucia could take immediate actions in disaster relief operations. However, outside assistance would likely be needed to finish the job, especially if the disaster was of any significant scale. St. Lucia has a good quality telecommunications system for organizing a response involving government agencies and an impressive network of national and local voluntary organizations.

The areas of disaster relief operations reported to be in need of the most improvement include the following significant areas:

- Coordination of donor assistance
- Post-disaster status reporting including the need to train local emergency committees in making post-disaster assessments
- Improvement of shelter integrity.

### 5.4 Disaster Prevention/Mitigation

The NDC reports the following status of disaster prevention/mitigation activities:

<u>Activity</u>	<u>Status</u>
1. Risk assessment	Just started with OAS help
2. Land use mapping	Performed
3. Regional/international projects	None
4. Food surveillance	Performed during hurricane season
5. Public health	Performed
6. Disaster area mapping	Just started

7. Meteorological research      Use regional information
8. Designation of safe areas    Performed
9. Resource inventory            performed

#### 5.5 Impact on the Populace

The NEO devotes a significant amount of effort toward increasing the awareness and preparedness of the populace of potential disasters. In 1984, a Disaster Preparedness Week was held from May 27 to June 2 at the start of the hurricane season. There were talks, panel discussions and announcements over local radio stations. Posters were displayed and films were shown. However, the NEO has noted that because St. Lucia has not been affected or even threatened by a hurricane since 1980, complacency is a serious problem. It is becoming increasingly difficult to motivate even persons with assigned disaster preparedness responsibilities to maintain adequate levels of preparation.

#### 6. CONCLUDING OBSERVATIONS

DPP in St. Lucia is not a high public priority by either of two measures. First, there is no explicit commitment of public funds to this activity (even the salary and expenses of the NDC are subsumed in the budget under a different descriptor). Second, St. Lucia does not aggressively seek the outside assistance that potentially is available. Rather, St. Lucia appears content to receive whatever assistance is offered whether or not it is particularly germane to its needs.

The fact that a formal NDP exists which includes all the appropriate governmental, quasi-governmental and voluntary organizations and appears to have been developed through a structured process supports the belief that some DPP planning and organizing infrastructure is in place. However, time did not permit an

investigation of commitments to and awareness of the plan by participants in its implementation and whether its development was simply a "paper exercise". The NDC more than once indicated that the PCDPPP could make a valuable contribution to the status of DPP in St. Lucia by funding activities designed to increase top level and local awareness and commitment to the NDP. Included in this was the need for funds to provide for local dissemination of the information and knowledge acquired by government personnel who receive PCDPPP-funded training.