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FINAL REPORT

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

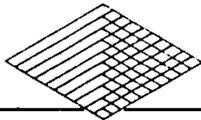
Submitted to:

Office of Foreign Disaster Assistance

Agency for International Development

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

March 29, 1985



March 29, 1985

Mr. Alan Swan
Assistant Director for Latin America
Office of Foreign Disaster Assistance
Agency for International Development
Washington, DC 20523

Dear Mr. Swan:

Decision Information Systems Corporation is pleased to submit eight (8) copies of the Final Report in compliance with a Work Order to conduct a "Program Evaluation of the Pan-Caribbean Disaster Preparedness and Prevention Project." The report fully addresses the scope of work. Accordingly, the main body of the document has chapters devoted to: the Project Design; Management and Coordination; Impacts on Host Country Institutions and Beneficiaries, respectively; Support for Research Hypotheses; and Alternatives and Recommendations. Among other items, the appendices contain seven case country profiles, based on our trips to each country.

In closing, we hope that the report will prove to be a useful tool in formulating future AID/OFDA plans for continuing its pursuit of assisting less developed countries to improve their capabilities in disaster preparedness and prevention. DISC also looks forward to the opportunity to be of further support to the Office of Foreign Disaster Assistance.

Sincerely,

Harvey Dickerson
Project Director

tlr

cc: Paul Krumpe

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EXECUTIVE SUMMARY

BACKGROUND

The Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) is a regional project that is intended to assist twenty-eight governments to better prepare for and to protect their populations against disaster threats. Technical assistance is essentially provided on behalf of the PCDPPP through three executing agencies, The United Nations Disaster Relief Organization (UNDRO); the Pan American Health Organization (PAHO); and the League of Red Cross Societies (LORCS). The CARICOM Secretariat is responsible for overall project supervision and administrative support for the core office located in Antigua. A Management Committee composed of donor agencies and representatives of participant countries is responsible for policy guidance.

Since the project's inception in 1981, there have been approximately one hundred and forty-seven discrete assistance activities have been performed. These activities essentially fall into four categories: technical assistance; training of nationals; surveys and assessments; and preparation of training materials. Of these categories, training and technical assistance are by far the most prevalent of PCDPPP activities. However, because of severe data limitations, it is difficult to estimate the magnitude of services delivered--even in terms of the number of technical assistance days provided, for example. Similarly, available estimates of the number of participant trainees are also limited. A "best guess" is that approximately 1100 trainees have participated in PCDPPP programs over the project life.

PCDPPP has been primarily funded by AID/OFDA, the Canadian International Development Agency (CIDA), and the European Economic Community (EEC). Over the life of the project, approximately (U.S.) \$3,097,600 has been received from all sources. Of

this total, the largest contributor is OFDA at \$1,372,700 (44%), followed by CIDA at \$594,500 (19%) and the EEC at \$451,400 (15%). Other donors contributed the balance of funds.

EVALUATION

Currently, the grantees are requesting further funding to support an additional phase (III). Decision Information Systems Corporation was engaged by AID/OFDA to support the decision making process by performing the first evaluation of the PCDPPP. Major questions that were addressed in the evaluation are the following. What has PCDPPP accomplished and how has AID/OFDA support contributed to these outcomes? How has PCDPPP contributed to national and regional disaster preparedness and prevention, in terms of its impacts on institutions and beneficiaries? And finally, is this multilateral approach preferable to bilateral assistance for future funding?

These questions first were addressed by DISC through the development of a logical/functional model of the project. No such logical framework had been developed and such a paradigm was necessary to address questions regarding the viability of the essential purpose and structure of the PCDPPP. The DISC paradigm relates project inputs, outputs, and goals and objectives. The DISC team then proceeded to conduct field visits to seven representative countries. These trips allowed DISC to evaluate the validity of the paradigm. But moreover, the trips allowed DISC to perform assessments of country preparedness and prevention conditions. These assessments were compared to documentation that detailed conditions before the project, thus facilitating a "pre" and "post" project comparison, necessary to evaluate the actual impacts of PCDPPP.

FINDINGS

Project Design. Several factors have constrained project success to date. Lack of funding continuity has caused severe cash flow problems that have effected management's ability to plan efficiently. There has been a general lack of continuity in the project manager position over the project's life. Most recently, the position has been filled by an individual that also directs PAHO activities. This and other problems have contributed to a lack of integrated plans between executing agencies, lack of fundamental management information and a seemingly fragmented and ad hoc approach to service provision. For the most part there is little coordination between executing agencies. And specifically with regard to PAHO, there has been little coordination at the country level between ongoing PAHO activities and PCDPPP related interests.

Impacts. The greatest impact of the project has been in the preparedness function under the leadership of UNDRO. A significant number of individual countries have been assisted by the project, but few noteworthy accomplishments have been achieved at the regional level with regard to preparedness. One regional level item is the radio network based in Antigua, but this has been plagued with significant operational problems. Although prevention related activities are denoted in the project's scope, this area has only received significant attention in the past year. Finally, no significant reductions in human suffering or loss of life can be directly attributed to PCDPPP because there have been no major disasters in the region during its existence.

SUMMARY AND RECOMMENDATIONS

Despite the operational problems identified in this report the PCDPPP has contributed significantly to progress in the disaster preparedness area, although accomplishments in other technical assistance areas are relatively modest. However, overall project achievements to date seem reasonable in relation

to the resources that have been received and the ambitious goals and objectives that have been set forth for the PCDPPP. A less tangible accomplishment, but nevertheless quite important, is that the project is well received by most countries and has engendered a significant degree of goodwill for AID/OFDA and other donor agencies. For this reason alone, continued funding at whatever level is probably adviseable for AID/OFDA.

AID/OFDA should, however, use this juncture regarding continued funding to promulgate in coordination with all other parties critically needed changes in the internal structure and operations of the project. These changes are described in an option presented in this report which is labeled "fine-tuning" the project. This option was selected over two other available options: phase out the project; and, reconfiguring the project under different institutional auspices.

I. INTRODUCTION

EVALUATION OBJECTIVES

The Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) is a regional project designed to assist governments in the Caribbean islands to better prepare for and to protect their populations against disaster threats. The project was formally initiated in 1981 and is supported by Caribbean governments, by regional and international organizations, and by other interested governments outside the region. The PCDPPP has several major components which are administered by different organizations: project management and liaison activities in member states by CARICOM Secretariat; preparedness and prevention by the United Nations Disaster Relief Organization (UNDRO); health preparedness by the Pan-American Health Organization (PAHO); and preparedness and first-aid training by the League of Red Cross Societies (LORCS).

AID/OFDA has made several grants to UNDRO, PAHO, and LORCS since project inception but accomplishments to date are not well documented. Now, these grantees have submitted requests to AID for continued funding support of project Phase III. In order to assist AID managers in making programmatic decisions regarding continued funding of the grantees, DISC was engaged to generally assess the effectiveness of PCDPPP in furthering host country and regional disaster preparedness and prevention in the Caribbean Basin. More specifically, DISC was requested to: 1) determine the tangible accomplishments of PCDPP to date; 2) review the impact of past AID and other donor agency grant support on the project's accomplishments to date, and; 3) to comparatively assess the potential effectiveness and adviseability of continuing the pursuit of this multilateral approach to Caribbean disaster preparedness and prevention activities as opposed to, or in contrast to, pursuing conventional bilateral approaches to future funding support.

EVALUATION METHODOLOGY

Accomplishment of the evaluation objectives outlined above first required the development of an operational project description and logic/function models of the PCDPPP. This initial work was accomplished by collecting, summarizing, and compiling data in AID/OFDA files in Washington, DC. and the project core office in Antigua. This activity was supplemented by formal and informal interviews of current and former AID/OFDA personnel, project staff, and grant managers in parent organizations.

As a means of addressing both the qualitative and quantitative dimensions of evaluation objectives, and also a set of more specific research hypotheses that are presented subsequently in this report, seven case studies were developed by DISC, based on visits to a corresponding number of participating countries in PCDPPP activities. Case studies were prepared for the following countries: Antigua, Barbados, Dominica, Dominican Republic, Guadeloupe, Jamaica, and St. Lucia. Additionally, the site visits were designed to help DISC in: determining the validity of management's description of the project; and to allow the DISC team to separately conduct assessments of disaster preparedness and prevention conditions at each country. Upon return from the field, the results of each country assessment were compared to country conditions prior to project inception using available documentation, thus providing a means of assessing the impact of PCDPPP on country preparedness and prevention.

BACKGROUND ON PCDPPP

This section briefly traces the historical development of PCDPPP to its present status. The discussion is organized into three segments corresponding to significant Project milestones. These are: the Pre-Project Phase; Project Phase I; and Project Phase II, which includes a description of the current project configuration and staffing.

Pre Project Phase

In the late 1960's, the international disaster assistance community, and in particular AID/OFDA, realized that the time had come to transcend the belief that the functions of disaster preparedness and prevention should be handled internally by each country. This led to the development and continuance of a International Disaster Assistance Seminar for foreign participants. Over 100 foreign disaster officials, including representatives from Caribbean nations have participated in these seminars during past years. These seminars, together with other types of in-country disaster technical assistance gained momentum in the mid-1970's and laid the groundwork for focussing attention on fostering and promoting the concept of disaster preparedness and prevention (DPP) in disaster-prone regions of the world. The concept took hold worldwide in 1976, considered by many as a benchmark for the acceptance of DPP.

In the late 1970's, the Caribbean region, although historically not a region with countries with the greatest incidence of declared disasters, had recently suffered a great deal of economic setbacks and social disruption as a result of disaster agent impacts on the islands. This led international, regional, and national organizations to consider the creation of a mechanism specifically established to deal with disaster preparedness and prevention on a regional basis in the Caribbean. By 1979, movements began to accelerate and six specific events occurred that directly led to the initiation of PCDPPP. These events are summarized in Exhibit I-1.

Phase I

In June 1981, project activities were initiated in the core office of Antigua under the funding auspices of AID/OFDA, CIDA and the EEC. Funding was directed through a series of parallel grants that were intended to establish a multi-sectoral team. By mutual agreement, UNDR0 appointed a team leader to coordinate all

EXHIBIT I-1

EVENTS LEADING TO THE CREATION OF PCDPPP

EVENTS	DATE	SPONSOR	RESULTS
Event 1			
Caribbean Disaster Preparedness Seminar held in St. Lucia where more than 150 representatives from twenty-two Caribbean governments, Caribbean and international organizations in scientific fields participated.	June 10-20, 1979	AID/OFDA	Recommendations for actions which can be taken to strengthen country and regional preparedness.
Event 2			
Conference of Health Ministers of the Caribbean Community (CARICOM).	July 10-12, 1979	CARIĆOM	Call to the Secretary General of CARICOM Secretariat to "seek technical cooperation from UNDRO...in arriving at this conclusion about the future role of the Secretariat in this program area."
Event 3			
U.N. Economic Commission for Latin American (ECLA) Resolution 417 (PLEN. 13) adopted as a result of Hurricanes David and Frederic which devastated Dominica and the Dominican Republic in August and September of 1979.	October 19, 1979		Welcomed the proposal by the Government of the Dominican Republic that the U.N. and more particularly the U.N. Disaster Relief Coordinator, should study ways and means of setting up specific machinery to cope with the natural disasters that periodically occur in the Caribbean basin. This resolution was endorsed on November 9, 1979, by the U.N. General Assembly in Resolution 34/18.

EXHIBIT I-1 (Continued)

EVENTS LEADING TO THE CREATION OF PCDPPP

EVENTS	DATE	SPONSOR	RESULTS
Event 4			
Meeting of Government Nominated Experts to Review the Draft Action Plan for the Wider Caribbean Region.	January, 1980	Caribbean Region	Action plan was accepted, and ratification expected by March, 1980.
Event 5			
Discussions held in Georgetown, Guyana between representatives of UNDRO, CARICOM, Secretariat, and UNDP to resolve issues of implementation of disaster preparedness and prevention in the Caribbean.	February, 1980	CARICOM Secretariat	Agreement on the implementation of a project aiming at developing prevention and preparedness activities, focusing first on the less-developed Eastern Caribbean islands.
Event 6			
Caribbean Disaster Preparedness Projects Conference convened in Santo Domingo, Dominican Republic to advance the recommendations for action formulated in the St. Lucia Seminar.	May 19-23, 1980	The Caribbean Disaster Preparedness Informal Planning Group comprised by CARICOM Secretariat, PAHO, LORCS, UNDRO, OFDA, and representatives from Caribbean Countries.	A compendium of disaster preparedness and prevention projects, both regional and country level, presented by representatives of Caribbean countries.

activities of the project; PAHO detailed a health advisor to assume operational responsibility for technical cooperation in the health sector; LORCS seconded a Red Cross specialist and a first-aid advisor to take on the responsibility for strengthening local Red Cross Societies or branches and also first-aid capabilities, and the British Development Division seconded a meteorologist and communications advisor. The management of PCDPPP was thus arranged so that functional responsibilities were assigned to existing organizations with track records in their functional areas. Policy direction was provided to the projects via a Steering Committee composed of representatives from Caribbean countries and executing agencies.

The compiled list of country and regional projects presented in the May, 1980, conference in Santo Domingo served as a general technical roadmap for the project. However, the project list was never given any prioritization and early project activities undertaken (throughout the duration of Phase I certainly) did not benefit from a country by country needs assessment that would have allowed a rational and focussed direction of activities and resources. The lack of formal needs assessment and associated planning activities was apparently given low priority over pressures to get the project "off-the-ground." These issues notwithstanding, the PCDPPP was chartered at this time to service twenty-eight countries and territories, ranging in size from 7,000 to 9.8 million inhabitants. A profile of the participant countries appears as Exhibit I-2.

Early Problems. Problems soon arose essentially because the project design during this phase of the project represented a collocation of the executing agencies rather than an integrated organization scheme. "Turf" problems emerged to such a precipitous state that work activities suffered significantly. Technical and managerial direction also suffered because of the "newness" of the endeavor on the part of the implementing agencies and staff. None of the staff had experience in working in a comparable multilateral situation. This situation made inter-agency

EXHIBIT I-2

SOCIAL/CULTURAL/POLITICAL CHARACTERISTICS
OF PCDDPP BENEFICIARIES

<u>Country</u>	<u>Estimated Population</u>	<u>Size (Sq. Mi.)</u>	<u>Language</u>	<u>Type of Government</u>
Anguilla	7,000	35	English	Autonomous elected government.
Antigua and Barbuda	80,000	171	English	Independent from Britain since 1981.
The Bahamas	223,000	5,360	English	Independent Commonwealth of Britain.
Barbados	251,000	166	English	Independent Commonwealth of Britain.
Belize	154,000	8,867	English	Independent state.
Bermuda	54,893	21	English	British dependency.
British Virgin Is.			English	British dependency.
Cayman Islands	18,000	102	English	British dependency.
Cuba	9,889,000	44,218	Spanish	Independent state.
Dominica	74,000	290	English	
Dominican Republic	6,248,000	18,704	Spanish	Independent state.
French Guiana	66,800	32,252	French	Overseas Department of France.
Grenada	111,000	133	English	Independent state.
Guadeloupe	314,800	687	French	Overseas Department of France.
Haiti	5,690,000	10,714	French	Independent State.
Jamaica	2,347,000	4,244	English	Constitutional monarchy-British.
Martinique	307,700	425	French	Overseas Department of France.
Montserrat	11,600	32	English	
Netherlands Antilles	253,300	385	Dutch	Equal level with Netherlands within the kingdom.
Puerto Rico	3,196,520	3,435	Spanish	U.S. territory.
St. Lucia	119,000	238	English	Parliamentary democracy, Britain.
St. Kitts-Nevis	44,400	104	English	Associated state controlled by Britain.
St. Vincent and the Grenadines	134,000	150	English	British dependency.
Suriname	363,000	63,037	Spanish/ Dutch	Military-civilian executive.
Trinidad & Tobago	1,149,000	1,970	English	Independent state.
Turks and Caicos	7,000	193	English	British possession.
U.S. Virgin Islands	95,000	193	English	U.S. territory.

cooperation quite imperative, but cooperation apparently was subordinated to early turf battles.

This general situation was worsened by the inability of UNDRO to circumvent bureaucratic obstacles to maintain a steady flow of funds to Antigua, and allow the team leader some flexibility in hiring specialists in the region to perform necessary technical assistance. The resultant delays in disbursement of funds, and the apparent inflexibility exhibited by the central leadership of the project led to frustration of all parties, especially field personnel who were acclimated to quicker turn-around line-type responses. In an effort to avoid fingerpointing, the formulation of steps to be taken to improve the situation were also avoided. As a consequence, all parties became less certain of who was "in charge" and frustrations increased.

Recognizing the critical situation, donors, executing agencies, CARICOM, and members of the PCDPPP Steering Committee, assembled and developed a reorganization plan for the project. The reorganization became effective in April, 1983, to remedy the institutional difficulties inherent in the original arrangement, and redirect PCDPPP operations amid new formulated operational objectives.

Phase II And Current Status

This phase of the project was formally initiated in April, 1983 and was originally intended to run through December 1984. Phase II represented from a technical viewpoint a continuation of the general goals articulated in phase I, that is to: "contribute to socioeconomic development and environmental protection by developing the individual and collective capacity of the participating countries to mitigate the disastrous effects of natural hazards, and to cope efficiently with disasters when they occur." It is useful to note regarding project goals that no (operational) short term goals have been articulated for the project during phases I or II.

The significant changes implemented in Phase II were essentially managerial and administrative. CARICOM Secretariat was established as the custodian for performing core administrative functions for the project. A role that was assumed from UNDRO. The other significant change was that the Steering Committee was changed to a Management Committee and was given sharper oversight responsibilities (at least on paper) over the project manager, although CARICOM was given direct responsibility for monitoring the progress towards implementation of each six month work plan. In addition to the technical responsibilities associated with promulgating disaster preparedness and prevention activities on a national and regional level, as embodied in six month plans, the project manager was given the following administrative responsibilities:

- To manage the headquarters of the Project Office in Antigua, including the provision of essential support services.
- To select, employ and supervise all secretarial and administrative support ~~staff~~ employed by CARICOM Secretariat.
- To contract short-term consultants as necessary in the areas included in the schedule of the CARICOM Secretariat Component (e.g. public awareness, environmental management, etc.)

The Project Manager (PM) was also given a coordinating role that is wider in scope and more complex. Two coordinating responsibilities appeared to have been emphasized during Phase II:

- Stimulate the establishment of links to other related projects to ensure that disaster preparedness and prevention is a component of the regional development activities.
- Ensure as far as possible, due consultation with all national governments included in the Project on all matters pertinent to the promotion of disaster preparedness and prevention activities.

Current Status. The significant changes outlined above have essentially shaped the structure and function of the project as it stands today and the end of Phase II. Exhibit I-3 presents a functional organization chart that illustrates the relationship between all actors. The numbers in parentheses indicate the number of individuals associated with each project component. The staff levels indicated for project management, UNDR0, PAHO and LORCS include both technical and support personnel.

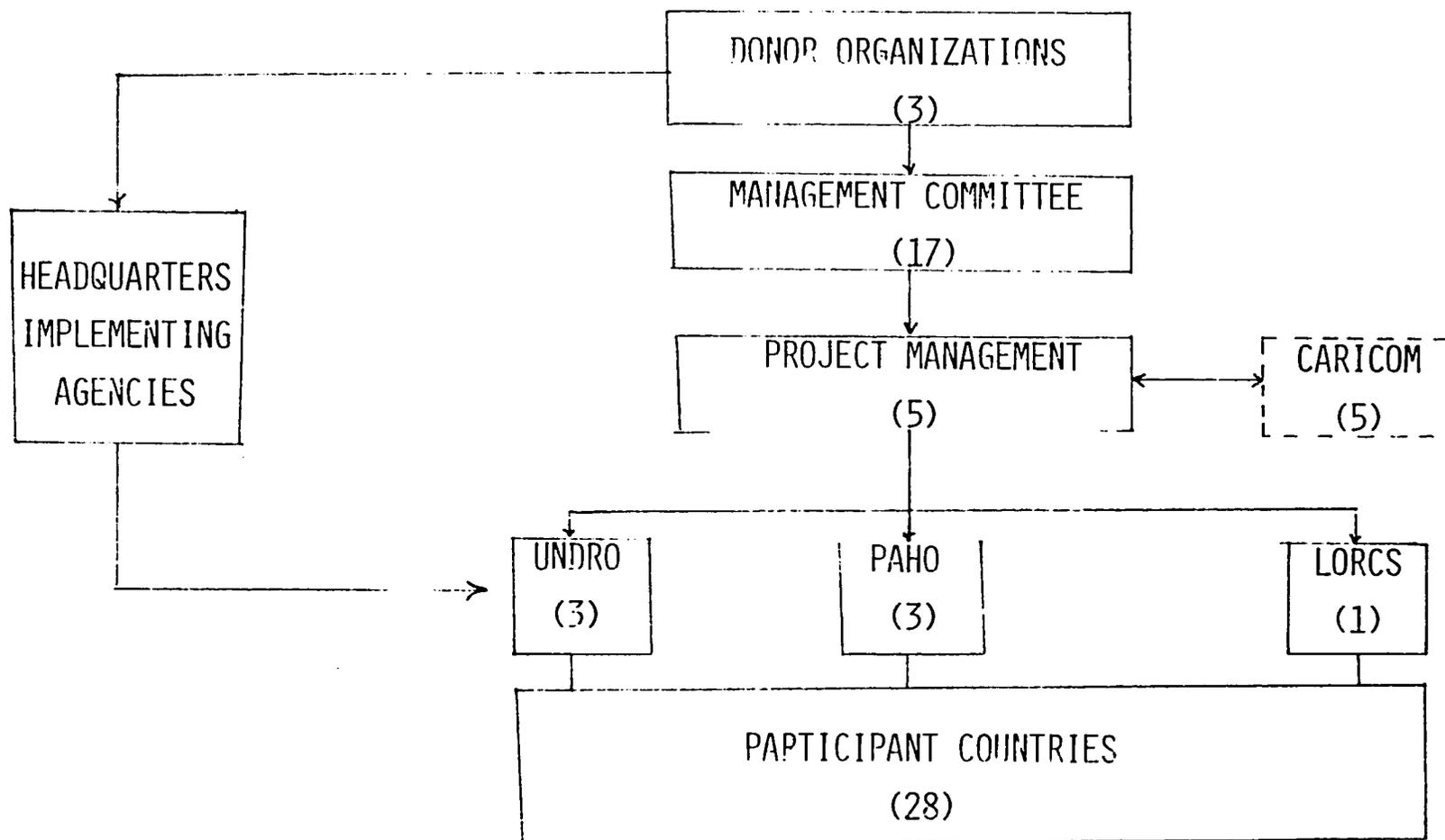
TECHNICAL NOTE ON CONCEPTS OF DISASTER PREPAREDNESS AND PREVENTION IN THE CARIBBEAN

Disaster preparedness and prevention (DPP) is a concept which lends itself to varied interpretation. It can range from the less complex preparation of a national emergency plan and the establishment of procedures to follow in case of disasters, to the more complex activities of geological/structural engineering and environmental management. Discussions of the disaster preparedness and prevention concept, however, contain a central theme that is consistent with the purpose of DPP:

- Preparedness is intended to enhance national readiness to respond to disaster threats in an organized, efficient, and coordinated fashion.
- Prevention, closely associated with the preparedness function, through the collection of a wide array of scientific and technical data, provides for the analysis of main hazards, mapping of most vulnerable areas, evacuation priorities, etc., for mitigating the effects of disaster agents.

In the Caribbean basin, the concept of DPP is readily accepted because of the set of problems created by disaster agents frequently impacting the communities in the islands. But DPP seems much less understood, and this was confirmed during the country visits, at the functional level. There is a significant problem in making a distinction among the various time phases of

PCDPPP FUNCTIONAL ORGANIZATION CHART



disaster, however arbitrarily set, and how each of them: involves different sets of disaster-caused demands; how each of them implies different types of response activity; and how each suggests different roles for national and international organizations. It may be argued, that there is no simple logic or empirical evidence that makes unequivocal distinctions, for example, between disaster preparedness and prevention/mitigation or disaster relief. But in the context of a project specifically designed to address DPP, the justification for a clear or at least operational understanding of demands, activities, and roles is manifest.

In retrospect, making the definition of DPP operational in the Caribbean required the creation of a frame of reference that would clearly describe the fundamental purposes of DPP, the needs for disaster information types and the functions of this disaster relevant information in pre-disaster planning. Ideally, this frame of reference should have been developed based on realistic expectations between donors and recipients, opinion stability about the full spectrum of time phases for disaster planning and response, and value premises that would affect the decision-making for DPP assistance, and these decisions, in turn, establish the framework for determining the types and quantity of scientific and technical assistance to be provided on a national and/or regional basis.

But apparently the interpretation of the DPP concept at the functional level in the Caribbean has generated unrealistic expectations about the potential benefits to be derived from any project of this nature; more so when the project is labeled "Pan Caribbean" in scope and the financial demands are quite uneven among countries.

If disaster preparedness and prevention in the Caribbean was conceived from the idea that nations in this region suffer from a serious lag between their perception of the problems created in the very process of development and their increased vulnerability to disasters; then perhaps their interpretation of DPP is some-

what blurred by the series of changing demands on their fragile national economies, the general low priority given to activities geared to minimize physical impact and social disruption caused by disaster agents, and the misperception or the hope, that DPP activities funded by foreign donors would fill the gap between scarce economic resources and implementation of projects designed to reduce vulnerability.

It is not the intent of the study team to develop an operational definition of disaster preparedness and prevention in the Caribbean for AID/OFDA. However, we believe that some discussion and consensus about the concept of DPP and what it means at the functional level, will provide a more consistent rationale for its interpretation among the Caribbean nations. Thus reducing ambiguity among participant countries regarding the Project's role vis-a-vis such functions as disaster relief and prevention/mitigation.

II. PROJECT DESIGN

This chapter analyzes the design of the PCDPPP. A major objective was to assess the use of resources, activity outcomes, and progress. In the absence of verifiable indicators of such, DISC constructed a basic logic model of the intended project. This logic model, illustrated in Exhibit II-1, defines the events that must occur to achieve the goals of the project. Next, it defines appropriate actions that might be taken which, together with the appropriate assumptions stated in operational terms, would increase the probability of an event occurring.

The study of this logic model led to questions regarding the likelihood that PCDPPP activities in place will lead to the achievement of project objectives. To answer these broad questions and others regarding project design DISC performed an exploratory analysis of five design elements:

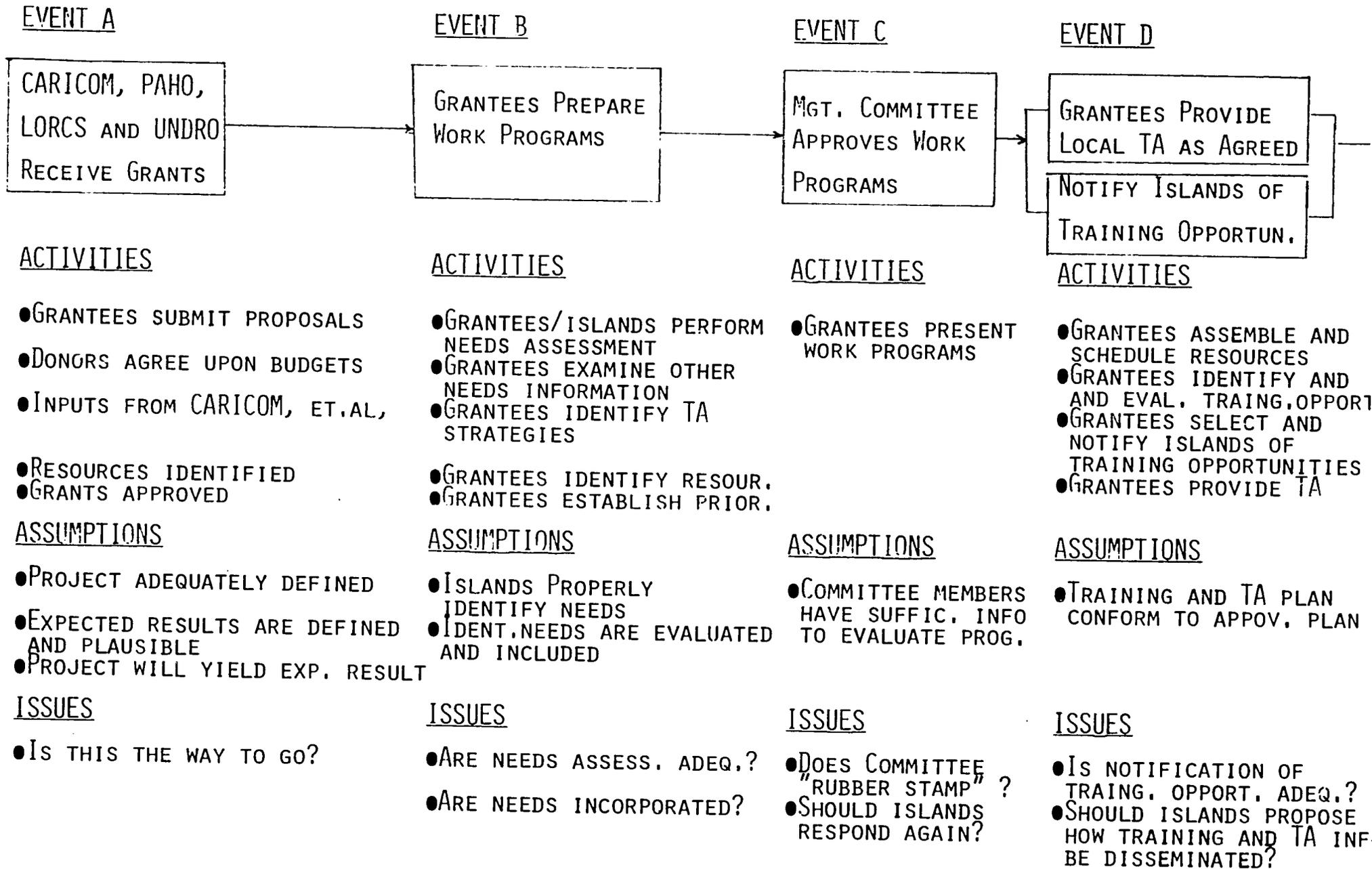
- Objectives
- Activities
- Resources
- Outputs
- Progress

The results of the analysis are presented below.

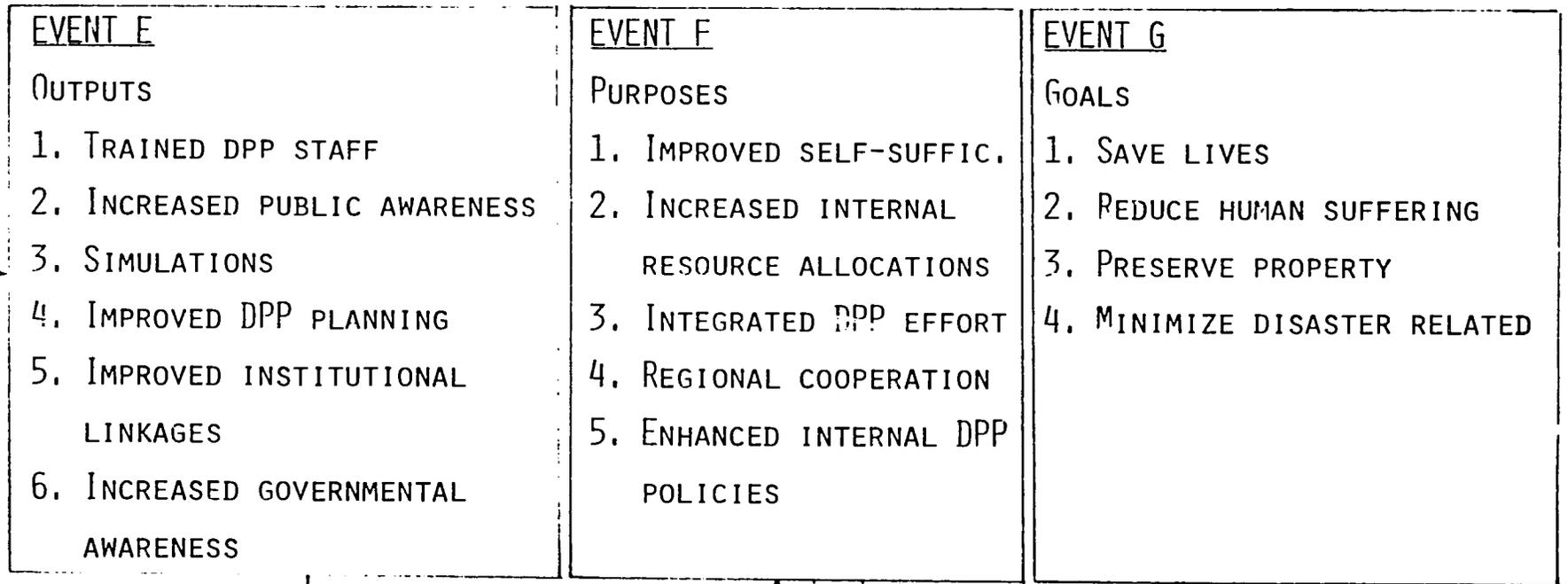
OBJECTIVES

The PCDPPP has defined its objectives as the expected outcome of project activities. The project did not articulate its long-term and immediate objectives until April, 1983, and even then these were not formulated in measurable and verifiable terms (see goal statement in Chapter I). This has led to considerable ambiguity in understanding the central purpose of the project at the host country and implementing agency level.

EXHIBIT II-1
INTENDED PROJECT LOGIC



INTENDED PROJECT LOGIC (CONT'D.)



EXPECTED OUTPUTS ASSURE PURPOSE ACHIEVEMENT

PURPOSE ACHIEVEMENT ASSURES ACHIEVEMENT OF GOAL

One additional objective has recently surfaced. This is the institutionalization of PCDDPP supported activities within the framework of the host institutions. Institutionalization (as defined by CARICOM) means the continuance of PCDDPP supported activities with funds from CIDA, OFDA, and EEC for the next five years. The process indicator for this objective appears to be a gradual changing of funding base from international donors to Caribbean countries, giving an appearance of a reduction in the dependence on outside support.

The lack of distinct, measurable, and officially articulated objectives acknowledges the low probabilities of achieving the long range objective of the project, which is to contribute to the socio-economic development and environmental protection of the participating countries.

ACTIVITIES

PCDDPP activities occur at two levels: at the central offices of UNDRO, LORCS, and PAHO; and at the project level in the Caribbean.

Central Office Activities

Central office activities encompass those activities necessary for grant administration. These activities include the grant application and award process and post-award activities. Both include actions necessary for grant administration and management including the provision of regulations and guidelines; and procedures for grant application. However, these activities do not explicitly cover the monitoring of the technical aspects of the project and no performance indicators have been developed to determine the adequacy of field activities. Therefore, the usefulness and adequacy of these activities can not easily be determined.

Project Level Activities

The project level activities flow from the grant award event (refer to Exhibit II-1). The logic suggests that grantee representatives in the field are responsible for project objectives and expected outcomes.

Grantees are generally performing activities consistent with component guidance and as presented in their grant applications. These activities are generally structured similarly by UNDRO, PAHO, and LORCS within the semi-annual Management Committee work plan review framework. Project staff note that variations must be attributed to target populations as well as the capabilities of grantee staff. However, as noted previously no formal assessment of DPP needs at the national or regional level is performed nor any mechanisms have been implemented to allow some measure of input from project participants when preparing work plans.

The types of activities performed by the grantees in the field fall into five general categories:

- technical assistance
- training of nationals
- surveys and assessments
- preparation of training materials
- miscellaneous activities

Appendix B, summarizes all the activities performed by UNDRO, PAHO, and LORCS since project inception. The number of activities and technical areas addressed in their performance are shown in Exhibit II-2. The delivery mode for training activities generally fall into four different types: seminars, workshops, simulations/drills and exercises. Technical assistance is mainly provided at the national level on a country-by-country basis. Surveys and assessments are conducted in short country visits and are generally very focused in nature.

EXHIBIT II-2

ACTIVITIES PERFORMED BY PCDPPP COMPONENTS BY TECHNICAL AREAS

<u>UNDRO</u>	<u>PHASE I</u>	<u>PHASE II</u>	<u>TOTAL</u>
● Hazard Analysis	1	6	7
● Mitigation/Prevention	2	8	10
● Preparedness Planning	15	17	32
● Prediction and Warning	2	1	3
● Disaster Response	1	10	11
● Miscellaneous	<u>3</u>	<u>4</u>	<u>7</u>
TOTALS	24	46	70
 <u>PAHO</u>			
● Hospital Disaster Preparedness	5	5	10
● Training of Environmental Health Professionals	3	3	6
● Training in Assessment of Disaster Health Needs	4	4	8
● Development of Educational and Training Materials	<u>6</u>	<u>2</u>	<u>8</u>
TOTALS	18	14	32
 <u>LORCS AND BCRS</u>			
● Emergency First Aid	13	14	27
● Red Cross Disaster Preparedness	<u>8</u>	<u>10</u>	<u>18</u>
TOTALS	21	24	45

RESOURCES

Funding for the PCDPPP have come from at least eight different sources. However, 78% of the total funding for Phases I and II, came from three primary donors: OFDA, CIDA, and EEC. The share of AID/OFDA is \$1.3 million or 44% of the total PCDPPP funding. Exhibit II-3 summarizes the total project funding for Phases I and II, and identifies sources and recipients.

Despite the appearance of adequacy in funding all PCDPPP components, visits to Antigua and discussions with former project staff revealed the following:

- The PCDPPP has had continual cash-flow problems, mainly due to complexity and delays inherent in providing funds from donors through multilateral agencies to the project. (e.g. UNDRO's cumbersome UN system and EDF's delays in disbursement of funds).
- There are some imbalances in budget resources. PAHO is overfunded, especially relative to LORCS which is underfunded. The telecommunications component has been underfunded relative to PCDPPP.

The project has never been audited, therefore, obtaining a clear picture of economy and efficiency has been difficult. However, review of Antigua files and other project documents allowed DISC to determine the total number of expert-years bought. The breakdown is as follows: 4.6 expert-years (UNDRO); 3.5 expert-years (PAHO); and 2.6 expert-years (LORCS). These figures include estimated levels of effort of various project consultants and their costs. LORCS funds were supplemented by UNDRO and BRCS for specific activities during both phases of the project. The average cost per expert-year is \$236,450. These findings suggest that:

- the PCDPPP has been "top-heavy" with senior experts, rather than appropriately "leveraged" with mid-level and junior training and planning technicians/professionals.

PCDPPP FUNDING (000's)

PHASE I:9/1/81-3/31/83

PHASE II:4/1/83-1/31/85

DONORS	PHASE I:9/1/81-3/31/83				PHASE II:4/1/83-1/31/85				TOTALS
	UNDRO	PAHO	LORCS	CARICOM	UNDRO	PAHO	LORCS	CARICOM	
OFDA	\$ 250.0	\$ 175.0	---	---	\$ 563.5	\$ 384.2	---	---	\$ 1,372.7
CIDA*	---	---	---	---	\$ 537.8	\$ 46.7	\$ 10.0	---	\$ 594.5
EEC	\$ 189.9	---	---	\$ 106.0	---	---	---	\$ 146.5	\$ 451.4
UNDRO	\$ 74.0	---	---	---	\$ 113.0	---	---	---	\$ 187.0
PAHO	---	\$ 61.0	---	---	---	\$ 183.0	---	---	\$ 244.0
SIDA	---	\$ 110.0	---	---	---	---	---	---	\$ 110.0
CRC	---	---	\$ 50.0	---	---	---	---	---	\$ 50.0
NETH.	---	---	---	---	---	\$ 88.0	---	---	\$ 88.0
TOTALS	\$ 522.9	\$ 346.0	\$ 50.0	\$ 106.0	\$1,214.3	\$ 701.9	\$ 10.0	\$ 146.5	\$ 3,097.6

* AT THE BEGINNING OF PHASE I, CIDA COMMITTED \$ 5.5 MILLION TO PAHO, ANY AMOUNT OF WHICH COULD BE USED FOR PCDPPP. IN 1983, \$ 85,000 WAS EARMARKED FOR PCDPPP BUT NOT SPENT. IN 1984, \$ 85,000 WAS EARMARKED AND \$ 8,800 SPENT. IN 1985, \$ 179,000 WAS EARMARKED AND \$ 37,900 SPENT TO MID-MARCH.

- there has been no "value for money" audit of the project. CARICOM conducts a limited financial audit of the "support component" only.
- in the absence of such an audit it is not possible to report definitively on the economy and efficiency of the PCDPPP. Our preliminary observation is that overall the use of funds appears to be reasonable, with some indications that significant economies could be attained in some areas, given tighter management control. These areas may include:
 - secretarial travel in support of officers
 - telephone/telex communications
 - management committee meetings (size, frequency, lavishness)
 - procurement of local consultant services

OUTPUTS

Grantees report certain output oriented information to the Management Committee. This information is not entirely consistent between agencies, differences are largely based on the various ways in which the respective grantees monitor their progress. For example:

- UNDRO measures outcomes by number of participating people or countries, in their activities.
- PAHO sporadically uses average number of participants in their activities.
- LORCS works towards the objective of training 6% of each population in the islands but does not do any "head counting" and only records member countries assisted.

In an effort to describe project outputs in a meaningful way DISC extracted data from the Management Committee reports. These data are presented in Exhibit II-4, which presents three types of output measures for each agency during phases I and II.

EXHIBIT II-4

PCDPPP ACTIVITY OUTPUTS: 1981-1984

	PHASE I			PHASE II			TOTALS		
	Country Visits	Trainees	Instructors	Country Visits	Trainees	Instructors	Country Visits	Trainees	Instructors
UNDRO									
o Technical Assistance	32	---	---	46	---	---	78	---	---
o Training	---	54	---	---	304	4	---	358	4
o Miscellaneous*	<u>5</u>	<u>29</u>	---	<u>7</u>	<u>15</u>	---	<u>12</u>	<u>44</u>	---
Total	37	83		53	319	4	90	402	4
PAHO									
o Technical Assistance	14	---	---	45	---	---	59	---	---
o Training		44	70	---	10	---	---	124	70
o Miscellaneous*	<u>15</u>	---	---	---	---	---	<u>15</u>	---	---
Total	29	44	70	45	10	---	74	124	70
LORCS									
o Technical Assistance	23	---	---	21	---	---	44	---	---
o Training	---	85	1	---	32	28	---	117	29
o Miscellaneous*	<u>10</u>	---	---	<u>2</u>	---	---	<u>12</u>	---	---
Total	33	85	1	23	32	28	56	117	29
GRAND TOTALS	99	212	71	121	361	32	220	643	103

* Primarily PCDPPP staff attendance to international conferences, seminars, etc.; also included development of training materials and planning services.

// Summarized from Management Committee Meeting reports and interviews with Project staff.

The Exhibit shows that there were in total approximately 220 technical assistance country visits, 643 trainees, and 103 multiplier instructors trained over the life at PCDPPP. It should be noted that it was not possible to completely corroborate these figures in DISC's country visits, and there were inconsistencies between the data presented in management reports and the data reported by national coordinators--sometimes of a major nature. For example, the Jamaicans reported 700 persons trained by PCDPPP, but these figures did not appear in the Management Committee reports. DISC was able to corroborate to a high degree however, the number of various training sessions that were delivered (as documented in Appendix B). But, numbers of actual trainees is so fragmented that it is of low utility.

With regard to technical assistance country visits, the outputs (products) of these visits were not always documented or discernable. This fact, in conjunction with the variable nature of Technical assistance in general make summary or cross-cutting conclusions regarding this element inappropriate.

PROGRESS

Assessment of PCDPPP progress would have been a relatively straightforward activity if targets and progress indicators would have been built-in the project design, but that is not the case with the PCDPPP. Scant information on the installation of inputs and the lack of credible and verifiable project results did not allow a rigorous assessment of progress beyond the impacts on institutions and the populace reported in Chapters IV and V.

SUMMARY

The findings regarding project design suggest the following:

- three is considerable ambiguity surrounding the central purpose of the project. That is the views of national disaster coordinators versus the views of implementing agencies differ.

- operational objectives have not been clearly articulated, making it difficult to objectively measure progress results.
- no appropriate assumptions have been stated in operational terms or otherwise at any level of the project design.
- no output levels are stated functionally, rather activities are considered sufficient evidence of project results.
- resources usage level indicators in terms of funding, staffing, equipment, and other inputs are not clearly identified other than in general terms in the work program.
- geographic scope of project has proven to be too wide within the existing management strategy for delivering technical assistance and conducting training.
- project lacks integrated ^{approach} approach to address prevention/mitigation needs of Caribbean countries.

III. COORDINATION/MANAGEMENT

Coordination/management between executing agencies is a stated objective of the PCDPPP and is of particular importance to this evaluation. This chapter presents separate sections that address: an assessment of the interaction between UNDRO, PAHO, and LORCS; the role of CARICOM as a support component; the overseeing role of the Management Committee; and the role of project management. The chapter concludes with a summary and conclusions section.

COORDINATION BY EXECUTING AGENCIES

Four elements of coordination among agencies have been assessed during the course of the evaluation these are:

- Need Identification
- Inter-Agency Planning
- Funding, and
- Record-Keeping

Needs Identification

Participant country needs were never formally assessed by the PCDPPP. Rather, the documentation presented in the Santo Domingo conference in 1980 apparently served as a "roadmap" for early activities. Since that time, the needs assessment function has been performed on an ad hoc basis by executing agencies. For example, certain needs have been identified within regional and national workshops, seminars or other PCDPPP activities. PAHO has identified needs through dialogues between its officers and host country public health officers. LORCS in an exception to the preliminary needs assessment finding identified above, at an

early stage visited several countries to determine their needs in Red Cross preparedness and first aid training.

This general situation (no formal needs assessment process) in combination with the absence of operationally defined objectives for the project make it very difficult to review how and why resources were (are) used in certain ways and moreover, to assess the performance and effectiveness of PCDDPPP activities from an evaluative perspective.

Inter-Agency Planning

This element of coordination was assessed by determining the extent to which there is joint planning between UNDRO, PAHO and LORCS. The underlying assumption was that this activity resulted in the allocation of project resources to meet beneficiary needs on the basis of a prearranged set of objectives, rules, procedures, and agreements at the agencies' headquarters or project levels.

Three different points were identified through a review of previous work programs and discussions with project staff:

- Each executing agency plans its own programs independently in consultation with its parent organization. UNDRO and LORCS with Geneva, and PAHO with Washington. Little sharing of information exists.
- PAHO and LORCS engage in joint activity planning to serve a target group or groups with common problems but maintain their individual identity. Little sharing of information with UNDRO occurs.
- UNDRO, PAHO, and LORCS sub-components engage in a activity planning for their respective technical areas.

Thus, a certain amount of what can be broadly described as planning takes place in Antigua, Geneva, and Washington. However at an overall project level, true joint planning occurs only when negotiating space requirements; primarily because Antigua has not fulfilled its commitment to provide adequate office space, and to

a minor extent staffing schedules. Little of the planning that takes place between executing agencies involves joint decisions on program content or mode of technical assistance. In short, UNDRO, PAHO, and LORCS plan their programs independently except when there is specific reason to involve another party in matters pertaining to the physical or logistical aspects of DPP assistance.

Funding

The assumption made here was that this activity would result in the joint provision of resources to the operation of the project. In this context, coordination was assessed by the extent to which there is joint funding among CARICOM, UNDRO, PAHO, and LORCS, through the creation of "pooled" funds.

Funding for the administration of the core office is provided by EEC which disburses funds to CARICOM to cover the overall project management/coordination costs. These funds cover 50% of the Project Manager's salary; the salaries of the Administrative Officer, the Senior Secretary, the Junior Secretary, the Messenger/ Driver, and the cleaner; office equipment and supplies; and communications.

Each of the three executing agencies operates with funding provided by separate grants to their parent organizations. PAHO headquarters in Washington receives grants from OFDA, CIDA, and in Phase I from other sources as well, and disburses money to pay 50% of the Project Managers/Health Officer salary, a secretary, and activity implementation. The sanitary engineer attached to the project is supervised by PAHO but fully funded by the Dutch Government.

Similarly, UNDRO receives grants from OFDA and CIDA. Funds go directly to UNDRO/Geneva to be, in turn, redirected to finance the PCDPPP's UNDRO component made up of the Disaster Preparedness and the Disaster Prevention Advisors, the Telecommunications Consultant, and UNDRO's Senior Secretary.

LORCS also functions through the same grant system, whereby LORCS/Geneva receives grants from OFDA and CIDA, and redirects these funds to finance the LORC's component of the project that currently consists of one First Aid Adviser. Until recently, this function was supplemented by a Red Cross Adviser seconded to PCDPPP by the British Red Cross Society (BRCS) under special arrangements and funded by BRCS to assist nine Caribbean countries and territories: St. Vincent, St. Lucia, Dominica, Antigua and Barbada, Montserrat, British Virgin Islands, Anguilla, and Turks and Caicos. Similar activities are funded in Jamaica; however, these are totally independent from the PCDPPP.

Clearly, joint funding between components is almost non-existent except, and only for CARICOM member islands, for administrative activities. In fact it was the feeling of the staff in Antigua that true joint funding of activities by way of pooling project monies is precluded from the onset by the way grants are made to the executing agencies. Thus, the co-location arrangement of CARICOM, UNDRP, PAHO, and LORCS consists, at best, of a low level of "joint funding" through some sharing of space and administrative personnel.

Record-keeping

The underlying assumption was that executing agencies maintain country records for use in technical assistance. Coordination was assessed by the extent to which these records of "common" host countries are shared among them resulting in a unified record-keeping system and reporting system. Shareable information includes host country needs, problem statements, survey findings or, ideally, disaster country profiles.

As it turned out, the little information available in Antigua is maintained by each agency, and rarely shared or accessible by other agencies. Joint record-keeping in the formal sense, and thereafter uniform reporting procedures, is absent at the project's core office.

Discussions with project staff and other PCDPPP participants reveal two reasons for the lack of a better record-keeping system: (1) each component has to report its activities to its own parent organization, therefore record-keeping must be geared to satisfy those requirements, and (2) the Management Committee has not pressed the issue, so far, of uniform reporting of activities and finances by grantees.

PROJECT MANAGEMENT

Management of the PCDPPP takes place both at the headquarters of the executing agencies and at the core office in Antigua. At the headquarters level, Geneva and Washington provide overall policy and procedural guidelines to their respective PCDPPP components, and control the disbursement of grant funds.

Currently project management is vested in the Project Manager/Health Officer employed by PAHO. He was selected by the CARICOM Secretariat, with the endorsement of the Management Committee.

Apparently the management role of the Project Manager (PM) with respect to the technical staff attached to UNDRO and LORCS is purposefully limited. The PM has no supervisory authority over other agencies' staff. Each maintains their own technical and support staff working in Antigua. However, staff of each agency have no direct control over their portion of funds, as fiscal control is handled by their parent organizations.

Decidedly, there are problems with the PM's role in the PCDPPP management structure. One of the main obstacles to the effective management of the project is the lack of a single point of accountability for total PCDPPP operations at the core office. This is specially true with the technical staff. They are accountable to their line agency supervisors in the technical and professional aspects of training and technical assistance to the host countries. They view the PM more as an administrator

(landlord) and public relations man than as peer professional involved in training and technical assistance delivery. Thus, the management role of the PM with respect to training and technical assistance performed by UNDRO and LORCS is non-existent, by design. This is an area where some coordinating role of the PM is recognized by the implementors, nonetheless, they fiercely guard their autonomy in their operations.

Thus, a dual management structure arises that obscures responsibility for back-up and corrective action for problems in the performance of project activities. The PCDPPP then becomes vulnerable to failing to meet its constituents multiple needs that require tracking across agency boundaries. Host country progress monitoring and project performance becomes an informal process at best.

Another problem in the management structure is the lack of a clear delineation of PCDPPP and component staff roles. This uncertainty of roles causes confusion among the staff working in Antigua and is frequently translated into lack of efficient operations. Activity duplication as well as administrative oversight sometimes has also resulted from this condition.

Thus, the overall picture is one in which the integration of DPP functions of UNDRO, PAHO, and LORCS does not appear to be operational. The obvious interpretation is that PCDPPP appears to be characterized by the parallel maintenance of three independent sets of training and technical assistance activities. This is counter to the expectation that co-location of executing agencies would result in some degree of functional integration and this, in turn, would result in the better utilization of project resources.

CARICOM ROLE

Phase I was undertaken under the direction of UNDRO. Institutional and bureaucratic inertia made this an unworkable situation that almost lead to the Project's demise. On April 1, 1983,

the CARICOM Secretariat assumed the duties of management of the project. Two noteworthy actions occurred as a result of this change:

- The announcement of U.S. \$106,000 in EEC funds to finance the administrative component of the project.
- The review of the accounting systems and the streamlining of the project administration with that of the CARICOM Secretariat.

The staff of the project at the end of UNDRO management of Phase I, except for the team leader, became the project staff for Phase II, supported by three administrative personnel on monthly and then quarterly contracts.

The temporary Project Manager appointed, a former PAHO Health Officer attached to the project, managed to lead the project until August, 1983, at which time another PAHO Health Officer was appointed to lead the project, initially on a temporary basis, and then permanently. Since then, the Project Manager's salary is paid 50% CARICOM - 50% PAHO. CARICOM assumes all other administrative costs, including personnel services.

CARICOM's more active role in the project has achieved the two basic purposes of their involvement:

- It has freed the Project Manager of some daily administrative chores; and
- It has introduced some degree of fiscal responsibility by highlighting major expense items, e.g., payroll and telecommunications, to heighten the financial awareness of the other components of the project.

The enhanced role of CARICOM at the outset of Phase II has however contributed at least somewhat to the ambiguous lines of authority noted within the project structure. Caricom's not well-defined oversight responsibility over the project manager and the project management function has contributed to problems

in clearly discerning the nodes of responsibility regarding overall project management and coordination.

MANAGEMENT COMMITTEE ROLE

The Management Committee is responsible for the overall supervision of the project. Its composition is as follows:

- Executing agencies: UNDR0, PAHO, LORCS
- Funding agencies: EEC, OFDA, CIDA
- Caribbean institutions: OECS, CARICOM
- Caribbean countries:
 - One each from Cuba, Haiti and the Dominican Republic
 - Four English speaking countries from the CARICOM members pool.

This multilateral body has supervisory authority over many areas of the PCDPPP. The main ones are:

- review financing of future activities
- appointing the project manager
- reviewing and approving six-month work plans
- reviewing the work and reports of the project manager.

Additionally, Project staff interviewed noted that the Management Committee could have a major role to play in preventing the further obsolescence of the project management and administrative systems. They also noted, that strong leadership is even needed to avoid the dissolution of the project. However, they also pointed out that the Management Committee is becoming too politicized. On the one hand, donors are using their financial leverage to coerce Caribbean countries into sharing

more of the financial burden, and on the other, CARICOM is using its privileged position as a regional organization to push the issue of institutionalization. This, they believe is not consistent with the Management Committee's mandate, and is hampering activities in the field.

National Disaster Coordinators believe that the Management Committee should play a greater role in the actual development of the work plans of each individual implementing agency, and not confine themselves to review and approval of the six-month work plan. They also noted that the Management Committee should scrutinize the work and reports of the Project Manager more closely to measure progress, if any, in furthering their disaster management capabilities.

These findings suggest that there is a consensus among PCDPPP staff and participant countries for a more aggressive role by the Committee. However, the question remains as to whether or not greater involvement by the Committee will foster self-reliance in the Caribbean.

SUMMARY AND CONCLUSIONS

The analysis of the coordination/management role has revealed the following:

- The Project Manager does not have authority to manage project resources, specially financial, therefore his management role is inherently limited.
- Lack of a clearly defined role and other problems with the PCDPPP Manager position has impacted the project operations negatively since inception.
- At best, UNDRO and LORCS implicitly recognize a coordinative role by project management, however, they do not relinquish autonomy over plans and actions and this has resulted in spotty coordination of resources.

- Many ongoing PAHO and LORCS activities continue apparently without coordination with the PCDPPP and/or the National Disaster Coordinators involvement.
- Inclusion of implementing agency headquarter's staff in project lines of authority and administrative channels has convoluted the management structure.
- Meaningful coordination between implementing agencies may not be possible unless funding schemes are revised.
- CARICOM has reduced the administrative burden of the implementing agencies but at the same time, it has introduced a new variable in an already convoluted management structure.
- No consistent formats have been developed, within or between project components, for presenting work plans, reporting management information, or reviewing resource expenditures.
- No self-evaluation plans or project monitoring systems have been implemented by the PCDPPP.
- Participant countries have had little or no meaningful input into project planning.

IV. IMPACT ON HOST COUNTRY INSTITUTIONS

One of the major outcomes of the Caribbean Disaster Preparedness Seminar held in St. Lucia in June, 1979, was a recommendation that each country should complete a self-audit to determine the overall status of "country preparedness" on key aspects of disaster preparedness. Among the topic areas to be analyzed were:

- Legislation, at national and local levels
- Funding availability, both pre- and post-disaster
- Public education, including lines of authority and placement of the leadership function.
- Logistics, including movement of people and supplies
- Communications, including use of an emergency operations center
- Integration with private sector and voluntary organizations
- Regional relationships
- Relevance, a consideration of the actual levels of risk for specific threats

These self-assessments were presented in the Caribbean Disaster Preparedness Projects Conference held in Santo Domingo, in May, 1980. The ratings were grouped as follows:

- Disaster Plan
- Disaster Preparedness
- Disaster Relief Operations
- Disaster Prevention/Mitigation

The 1980 self-audits were done by all countries visited by DISC except Guadeloupe. This country and St. Vincent ratings were done retrospectively by the evaluators.

The 1985 ratings reflect DISC's professional judgement, and are mainly based on the 1980 indicators for institutional building elements to produce expected internal changes in disaster management organizations to make them more effective. Optimistic self-ratings and idiosyncratic factors make these ratings crude measures of institutional effectiveness; however, this is the only france of reference available and ultimately the analysis is supplemented by the assessment of project impact on the target groups discussed in the next chapter.

PLANNING AND PREPAREDNESS

The original intention of the PCDPPP regarding preparation of emergency plans was to develop a model country level pre-disaster and post-disaster plan for the Caribbean. This model was to be distributed among all participants and modified to suit conditions in the individual countries.

In connection with disaster preparedness activities it was intended for international, governmental and non-governmental agencies to coordinate their disaster preparedness activities as closely as possible. To this end, it was required that all governments assign specific roles to each agency; inventory all available resources; participate more actively in smaller, localized disasters; and make each responsible international and private voluntary organization already established in a country a member of the National Disaster Committee.

The cross-sectional analysis of the country assessments, as shown in Exhibit IV-1, reveal the following:

- All islands now have disaster plans; most are up-to-date; most are periodically updated; most cover disasters typical to the country.

EXHIBIT IV-1

DISASTER PLAN 1980/1985

Island Name	Up To Date?	PCPPPP Assist? For All Disasters?	PCPPPP Assist? Only For Hurricanes?	PCPPPP Assist? Permanent SOC?	PCPPPP Assist? District Organ.?	PCPPPP Assist? Periodic Updating?	PCPPPP Assist? Periodic Testing?	PCPPPP Assist? Warnings/ Advisories?	PCPPPP Assist? Search and Rescue?	PCPPPP Assist? # of Yes/Possible Vessels (PCPPPP Assist)									
Trinidad	Yes/Yes	No/Yes	Yes/No	Yes/Yes	A bit (commo)	Yes/Yes	Limited	Yes/Yes	No/No	6/a									
Dom. Rep.	No/Yes	Yes/No	No/No	Yes/Yes	A bit (commo)	Yes/Yes	No/No	No/Yes	No/No	1/9									
St. Lucia	Yes/No	No/Yes	No/No	No/Yes	Yes (commo)	Yes/Yes	No/Yes	No/Yes	No/Yes	2/a									
Antigua	Yes/No	No/Yes	Yes/No	Yes/No	Yes (commo)	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	R/a									
Dominica	Yes/Yes	No/Yes	Yes/No	No/No	Yes (commo)	Yes/Yes	No/No	Yes/Yes	No/Yes	6/a									
Turkiles	Yes/Yes	No/Yes	Yes/No	Yes/Yes	No	Yes/Yes	Yes/Yes	No/Yes	Yes/Yes	1/a									
Guadeloupe	Yes/Yes	No/Yes	No/No	Yes/Yes	No	Yes/Yes	Yes/Yes	No/Yes	Yes/Yes	0/a									
St. Kitts/ Nevis	Yes/Yes	Yes/No	Yes/Yes	Yes/Police	Commo Assess.	Yes/Yes	Yes/No	No/No	Yes/Yes	7/9									
St. Vincent	No/Yes	No/Yes	Yes/No	No/No	Yes	No/No	Yes/Some	Yes/Yes	No/Yes	R/9									
# of Yes: OR Average	7/7	5	2/7	4	5/1	5	6/6	7	6/9	7	7/R	4	3/4	3	4/8	1	3/7	3	4.1/9

- PCDDPP assisted 5 of 9 islands with review of disaster plans.
- Most islands now have an Emergency Operations Center, but the quality varies widely. PCDDPP assistance has consisted mainly of providing telecommunications gear, but there are problems with much of it (e.g. the SSB fixed-radio set supplied to Jamaica has a range of only 250 miles. St. Vincent got only parts of radio sets and Barbados 12 antennas and coaxial cables but no transceiver). Communications is a top priority in five islands.
- Only Guadeloupe has a full-blown, written inventory of disaster related resources (food, ambulances, hospital beds, etc.)
- Testing and disaster simulation vary widely. Some islands do not conduct any true simulations (Dominica), and others have full-scale simulations regularly. Airport simulations are the most common. Only 4 of 9 islands surveyed have regular drills in at least some areas. PCDDPP assistance is limited to only a few islands in simulation/drills.
- Formal planning capabilities varies widely and is very hard to measure with any degree of objectiveness given a limited time.
- Local/district organizations now exist on every island surveyed. Their activity varies from virtually none to fully active. PCDDPP has provided training to some district level staff in three islands. Local level apathy has noticeably increased in the last two years due to the absence of disasters.
- Disaster equipment other than communications gear (e.g., vehicles, office equipment, tents, etc.) ranges from virtually none to fairly adequate. PCDDPP has provided no assistance in this area.

Staffing and Resources

- In 3 of 9 islands surveyed, PCDDPP helped found the national disaster organization. In the other 6, PCDDPP helped the organization, to varying degrees, grow and mature.
- Current full-time DPP professional staff range from nine (Dominican Republic) to zero (St. Lucia, St. Kitts, Antigua). Increases in staff are mostly

attributable to heightened awareness as a result of Hurricanes David and Frederick, not to PCDFPP lobbying.

- Annual budgets for CY 1985 range from U.S. \$10,000 to U.S. \$150,000, as follows:

<u>Island</u>	<u>1985 Budget (U.S. \$)</u>
Guadeloupe	\$ 100,000
Jamaica	\$ 150,000 (est.)
Dominican Republic	\$ 67,000
Barbados	\$ 55,000
Antigua & Barbuda	\$15-20,000 (est.-salary only)
St. Lucia	\$10-15,000 (75% of one persons est. salary)
Dominica	\$ 10,000 (est. salary only)

- Most islands' disaster organizations could readily draw on other ministries' resources but some could not (e.g., Dominica). Most islands have established strong links with voluntary organizations, such as the local Red Cross, CARE, local "social leagues," ham radio leagues, religious organizations, etc., and could draw on their resources in emergency situations.

DISASTER RELIEF

In order to get some idea about the disaster response capabilities of the islands visited, again, the crude indicators developed in the country self-audits of 1980 were used. This is illustrated in Exhibit IV-2.

This was done with the full knowledge that creating other indicators to measure quantitatively or qualitatively the level of preparedness, first, and then the capability for response/relief as a function of it was a complex effort. However, the contents of disaster plans, the existence of standby emergency facilities and equipment, the disaster experience of the individual islands, and the non-occurrence of disasters in the countries

EXHIBIT IV-2

Island Name	Organization Existence				Staff trained?			Disaster Preparedness and Relief		Disaster Preparedness Help		Org. Major needs (1985)
	Full-time local staff (prof./tech.)	Part-time local staff (prof./tech.)	Voluntary (prof.)	Staff trained? (Yes/No)	Org. ready for immediate effective response?	Commo. Type	Commo. quality	Did prepared help found the Org.?	Did prepared help org. know?			
Antigua	No	0	0	All	No	No experience	VHF	Adequate	Yes	Drills; commo. equip.; fill vacant slots; activate committees; mitigation		
Bahamas	No	0	0	All	No	Yes	VHF	Fair	No	Commo. equip.; better EOC; search/rescue exercises; hazard analyses		
Barbados	Yes	4	4	40	Yes	Yes?	VHF	Good	No	Shelter upgrading; reverse public indifference; emergency supplies/equipment		
Belize	No	0	0	Many	No	Yes	VHF	Adequate	No	Complete commo. system; locate EOC; current office is inadequate		
Bonaire	Yes	1	0	10%	Not rec.	Yes	VHF	Inoper.	Yes	Commo. gear; simulations; training		
Curacao	No	0	0	All only in emer.	No	No	VHF/VHF	Limited	No	Staff training; reverse public differences; emer. supplies & equip.; building codes; shelter upgrading		
Dominica	Yes	0	3	Civil Serv. only in emer.	Yes	Yes	VHF/VHF	Effective	No	Need help in preparing oil spill plan		
Guatemala	Yes	1	0	0	Yes	Yes	All	Good	No	Expand disaster plans beyond hurricanes; sign Geneva Convention; establish regional working links		
St. Kitts Nevis	Yes	0	0	Civil Serv. needed in emer.	Yes	No (except police)	VHF/VHF	Good	Yes	Integrate police and health plans and operations; need better commo. equip.; need more trained personnel		
St. Vincent	No	0	0	0	No	No	?	?	Yes	- -		
St. Lucia	Yes	0	2	0	Some	Some	VHF	Poor	Yes			
# of Yeses	5	1	55		3	6			3	6		
Mean	.9	2.5	1	N.C.	.3	.5	N.C.	N.C.	.3	.6		

N.C. = Not calculable.

surveyed provided the background for pondering the responses to the self-assessment questions.

The following are the results of the cross-analysis of the nine countries surveyed:

- Because only small disasters (local flooding in Barbados, the Antigua drought, and small plane crashes) have occurred since 1980, evaluators could only obtain "socially desirable" answers on relief quality during these disasters.
- In 3 of 9 islands rated, we estimate that the disaster management organization is not ready to provide immediate, effective response and relief. Of the 6 islands that claimed to be ready to respond to disasters effectively, only Guadeloupe appears to have a truly satisfactory capability.
- Even in Jamaica, one of the best assisted islands, recent small oil spills and light plane crashes revealed that response was fast but on-site communication was a major problem.
- In the Antigua drought situation, PCDPPP attempted to serve as the nerve center for relief, but was basically overwhelmed.
- It was implicitly hoped/expected that PCDPPP would have helped create strong, ready, self-sufficient institutions in all 28 member countries. This has not happened in any of the islands surveyed, and probably even less occurred in non-surveyed islands (e.g., Turks and Caicos, Grand Cayman, Haiti, etc.).
- Because of the economic problems of the islands, and the ad hoc method of planning, it is unlikely that this situation will change in the next 2-5 years.
- Key targeted institutions for the project were (1) national disaster management organizations and (2) related governmental and voluntary organizations. PCDPPP did help establish 3 national disaster organizations, and most of them now cooperate with relevant ministries. The project's PAHO and LORCS components relate almost exclusively to the ministry of health and the Red Cross Society on each island. Often the national disaster organization is not involved or informed of any of their activities. Typically other organizations which

have benefitted somewhat from PCDPPP's assistance include: police, fire, armed forces, and building inspectors.

PREVENTION AND MITIGATION

Two of the main priorities in disaster prevention and mitigation at project inception were: land use zoning based on risk analysis, and the development of building codes for legal adoption throughout the Caribbean. This scope was later widened to include vulnerability analysis, restoration of natural resources, and environmental management.

As stated earlier, the 1980 baseline profile of disaster prevention and mitigation was used for comparison with the current status as shown in Exhibit IV-3. The results are as follows:

- The majority of islands have done little or nothing in the areas of risk assessment, land use mapping, zoning, hazard analysis, disaster area mapping, and designation of safe areas. The exceptions are Guadeloupe where mitigation measures have been introduced into the building permit process without assistance from PCDPPP, and St. Lucia which is one of the OAS's pilot projects in the study of disaster mitigation as part of integrated regional development planning.
- PCDPPP has helped support the regional building code project, which is underway in Jamaica, Trinidad and Tobago, Guadeloupe and Martinique. But the primary source of funds was OFDA. PCDPPP did associated workshops and publicity, but was not the prime mover.
- In general, the majority of PCDPPP activity has been on setting up or assisting islanders in attending seminars and workshops in disaster preparedness, not prevention/mitigation. Little effect on host government development plans is identifiable.

EXHIBIT IV-3

Country Name	DISASTER PREVENTION/MITIGATION															1990/1985	
	Risk Assessment?	PCMPPP Asslst?	Land Use Mapping?	PCMPPP Asslst?	Regional/Int'l Projects?	PCMPPP Asslst?	Food Surveillance?	PCMPPP Asslst?	Disaster Area Mapping?	PCMPPP Asslst?	Meteorological Research?	PCMPPP Asslst?	"Safe Areas"?	PCMPPP Asslst?	Yes/Possible Yesses (for PCMPPP Assistance)		
Jamaica	No/Yes	Yes (Bldg. codes)	No/No	No	No/No	No	No/Yes	No	No/Yes	No	No/No	No	No/Yes	No	1/7		
Dominican Republic	No/No	No	Yes/No	No	No/Yes	No	No/Yes	No	No/some	No	Yes/Yes	No	Yes/Yes	No	0/7		
St. Lucia	Yes/Yes	No	No/Yes	No	No/No	No	No/Yes	No	Yes/just started	No	Yes/No	No	No/Yes	No	0/7		
Antigua	No/No	No	Yes/No	No	No/Yes	Yes	outside/No	No	No/No	No	No/No	No	No/No	No			
Dominica	No/No	No	No/No	No	Yes/Yes	Yes	Yes/Yes	No	Yes/No	No	Yes/No	No	No/No	No			
Barbados	OR Forms/No	No	No/No	No	Yes/No	No	Yes/Yes	No	Yes/Yes	No	Yes/No	No	No/Yes	No	0/7		
Guadeloupe	Yes/Yes	No	Yes/Yes	No	?/Yes	Yes	Yes/Yes	No	Yes/Yes	No	Yes/Yes	No	Yes/Yes	No	1/7		
St. Kitts/Nevis	No/No	No	No/No	No	No/Yes	Yes	No/No	No	No/No	No	Yes/No	No	No/?	No	1/7		
St. Vincent	No/Some	Yes	No/Some	Yes	No/Some	Yes	No/No	No	No/Some	Yes	No/No	No	No/Yes	Yes	5/7		
Average: or # of yesses	3/3	2	3/2	1	2/5	5	3/6	0	4/3	1	1/2	0	2/6	1	1.1/7		

REGIONAL LINKAGES

The establishment of inter-governmental linkages was determined by observational measures and gaging of opinions of disaster management staff in the countries visited. The result of the cross-analysis is as follows:

- None of the islands are likely to contribute cash to support a regional organization. Most provide very little cash for their own national organization.
- The establishment of PCDPPP has fostered regional awareness of DPP, and the naming of National Disaster Coordinators (NDCs) in most islands. This has led the NDCs to form a semi-formal group. But PCDPPP has resisted institutionalizing this group, which is somewhat critical of the project.
- Inter-island informal networking and friendships between NDCs and other DPP staff have resulted from PCDPPP activities. So have a few informal actual aid pacts. But no formal agreements exists.
- The regional building code project is the major regional mechanism assisted in any way by PCDPPP.

SUMMARY AND CONCLUSIONS

All levels of PCDPPP participants understand that institutionalization is an underlying objective of the project. There are varied levels of definitional understanding as well as different levels of commitment and capability among all involved. Interviews with project staff revealed that they generally understand the concept of institutionalization as encompassing situations where the PCDPPP activities funded by outside donors are still on-going without these monies. Staff at this level were not sure of the mechanisms to achieve this objective but were aware that institutionalization is an objective and also agreed that is important and beneficial.

National disaster management staff provided varying definitions of institutionalization and concluded there are varying levels. One regional organization (e.g., CARICOM) may be able to

gradually replace current PCDPPP funding with funding from another source, while another (e.g., CDB) may be able to fund PCDPPP activities as part of its development programs, or integrate these activities into the regular curriculum of higher education institutions in the Caribbean. Although grantees are viewing this objective differently, none of them are beginning to report significant in-kind contributions from national governments or regional organizations which include some indicia of institutionalization.

Without a true commitment from the Caribbean islands, institutionalization of PCDPPP is an idea whose time has not yet come.

The major conclusions regarding institutional impacts of PCDPPP are:

- All islands have improved in disaster planning and preparedness since 1980. However, only half of the islands surveyed have been measurably assisted by PCDPPP, despite the concentration of resources in this area.
- A majority of islands have increased their disaster management staff and resources since 1980, but this is not primarily attributable to PCDPPP.
- Because no major disasters have occurred since 1980, measurement of disaster response capability has been difficult. However, small disasters indicate significant problems still exist.
- Very little has been done by the islands or PCDPPP in disaster prevention and mitigation. The most advanced islands have done hazardous area mapping and building code improvements and assessments, but have not begun to have an impact on the building/development process.
- No locally-funded regional disaster prevention and mitigation organization is likely to be established in the next 2-5 years. Preparedness and prevention are simply not a high enough local priority.
- PCDPPP has fostered the creation of informal networking, not formal linkages, between islands.

V. IMPACT ON BENEFICIARIES

The Caribbean countries covered in the evaluation include Antigua and Barbuda, Barbados, Dominica, Dominican Republic, Guadeloupe, Jamaica, and St. Lucia. They occupy a land area of approximately 24,500 square miles. The population of these 7 countries is approximately 9,433,800. The sizes of the populations range from 74,000 in Dominica to 6,248,000 in the Dominican Republic. These countries fall in three of four cultural linguistic areas of the Caribbean: English, French and Spanish.

PCDPPP BENEFICIARIES

The intended beneficiaries of the PCDPPP include 28 countries in the Caribbean with an approximate total population of 31,108,000 including Cuba. These countries occupy a land area of approximately 196,396 square miles and speak 4 different languages: English, Spanish, French and Dutch (refer to Exhibit I-1). Except for Belize (Central America), Guayana and French Guiana (South America) all these countries are islands in the Caribbean Basin.

DISASTER THREATS

Many of the islands among the 28 beneficiaries of the PCDPPP are among the most ecologically vulnerable in the world. These Caribbean islands have been periodically subjected to hurricanes, floods, drought, tornados, earthquakes, volcanos, and other natural and man-made disaster agents. Even though not every country has been subjected to hurricanes, floods, volcanic eruptions, earthquakes, etc., all Caribbean islands have, to a greater or lesser extent, been subject to disasters. Since most of them are dependent on the ocean, their most important

resource, they are also vulnerable to pollutants such as oil spills and other natural poisons that affect marine life.

Historical records dating back to the 16th century attest to the vulnerability of the islands. For example, since 1526 the Dominican Republic has suffered 8 earthquakes, and in the last century it has been subjected to 139 major hurricanes and tropical storms, 4 in the last 20 years. Haiti has been struck by 5 hurricanes and suffered 5 droughts during the last 20 years. The total number of deaths in the Caribbean caused by disasters during this same period ascends to 4,365 and the approximate number of affected people was 4,785,000 or about 15% of the total population of 32 million in the Caribbean. Exhibit V-1 illustrates the historical hazard analysis of the PCDDPPP participant countries; and Exhibit V-2 shows total U.S. disaster relief assistance provided to the affected countries, during the 20 year period between 1964-1983.

PCDDPPP IMPACTS

Although the benefits from the PCDDPPP were expected to accrue in the institutional building of disaster management organizations first, these institutions were not intended to be built for their intrinsic merits, rather they were ultimately intended to benefit the populations of the islands. From this standpoint, disaster preparedness and prevention is a form of investment in human resources, technology and capital equipment with the view to saving lives, reduce property damage and minimize wastage caused by costly errors during disaster relief operations.

There were many difficulties in attempting to measure PCDDPPP impacts on the populace for two reasons: (1) there is no clear indication of end-of-project-status and what this means in terms of impacts, and (2) budgetary and time constraints did not allow a sample survey of target groups. However, the interviews and discussions with individuals in the countries visited resulted in the following findings:

EXHIBIT V-1

HISTORICAL HAZARD ANALYSIS OF PCDPPP PARTICIPANTS
1964-1983

Specific Disaster Hazard	Number of Disasters					Frequency (years)			
	1	2	3	4	5	0-5	5-10	10-15	15-20
WEATHER									
Earthquake									
Tornado, Cyclone	I								I
Flood	B,C,D, G,H,P,Q	I						I	B,C,D, G,H,P,Q
Typhoon									
Tidal Wave									
Tsuanami									
Hurricane	A,E,F, I,N,O	C,M		D	H	H	D	C,M	A,E,F, I,N,O
Drought	D,I				H				
Avalanche, Mud or Rock Slide									
(Other)	F		O				O		F

LEGEND:

A--Bahamas	E--Dominica	I--Jamaica	P--Surinam
B--Barbados	F--Guadelope	M--Martinique	Q--Trinidad
C--Belize	G--Guyana	N--St. Lucia	
D--Dominican Republic	H--Haiti	O--St. Vincent	

NOTE: Other PCDPPP participants (14) had no "declared disasters."

EXHIBIT V-1 (Continued)

Specific Disaster Hazard	Number of Disasters					Frequency (years)			
	1	2	3	4	5	0-5	5-10	10-15	15-20
ACCIDENTS									
Trans. Accidents									
Utility Failure	G	H						H	G
Structure Collapse (Bridge, Dam, Building)									
Oil Spill	D								D
Fires	C,H								C,H
Explosions									
(Other)	A								A
MEDICAL									
Epidemic									
Water Pollution									
Mass Poisoning									
Extreme Smog									
(Other)									
HUMAN ACTION									
Civil Disturbance	D,G	I						I	D,G
Subv. Destruction									

EXHIBIT V-2

U.S. DISASTER RELIEF ASSISTANCE TO THE CARIBBEAN: 1964-1983

	<u>IDA Funds</u>	<u>Other USG Assistance</u>	<u>Total USG Assistance</u>	<u>U.S. Volags</u>	<u>Total U.S. Assistance</u>
A. Bahamas	\$ 6,600	1,500	8,100	11,000	19,100
B. Barbados	5,000	---	5,000	300	5,300
C. Belize	82,500	2,297,400	2,379,900	18,000	2,398,000
D. Dominican Republic	3,156,600	26,603,500	29,760,100	2,589,900	32,350,000
E. Dominica	671,500	3,368,000	4,039,500	798,800	4,838,300
F. Guadelope	186,600	---	186,600	35,800	222,400
G. Guyana	273,900	123,700	397,600	6,000	403,600
H. Haiti	3,836,400	13,471,300	17,307,700	2,385,200	19,692,900
I. Jamaica	536,500	208,600	745,100	2,515,700	3,260,800
M. Martinique	31,300	---	31,300	17,800	49,100
N. St. Lucia	500,700	849,700	1,350,400	653,300	2,003,700
O. St. Vincent	92,300	1,398,900	1,491,200	178,100	1,669,300
p. Surinam	---	46,000	46,000	---	46,000
Q. Trinidad	<u>4,800</u>	<u>---</u>	<u>4,800</u>	<u>---</u>	<u>4,800</u>
TOTALS	\$9,380,700	\$48,368,600	\$57,775,300	\$9,210,000	\$66,963,300

- The immediate intended beneficiaries of the project are national-level preparedness staff, district-level staff and volunteers, and the general populace.
- PCDPPP has provided training/assistance to most national-level staff; to some (several hundred) district-level staff/volunteers; but too few projects that will have widespread impact.
- If PCDPPP continues to pursue its current strategies (e.g., lots of seminars for national-level staff) then little change from the current situation can be expected in 2-5 years.
- In one of the most-benefitted islands (Jamaica), 700 locals were trained in DPP, all medical trainees are being given DPP training, and all major hospitals have had disaster plans installed. All this will benefit thousands, but probably not tens of thousands, of islanders.
- In the least-benefitted islands (Dominican Republic, Guadeloupe) no major benefits to the island population were discernable.
- In the medium-benefitted islands (Barbados, Dominica, St. Lucia), training of national and some district-level DPP staff was done, with some simulations and workshops.
- None of the islands surveyed has a modern disaster preparedness law creating the national disaster organization, outlining its functions, and enjoining various ministries to cooperate. Most islands operate under a vague old "riot act" (e.g., Jamaica), or an old Civil Defense law and Presidential decree (e.g., Dominican Republic), or general emergency powers.
- PCDPP has not attempted to lobby islands to enact such laws, and probably will not in the next 2-5 years, barring a dramatic change in philosophy. The current philosophy is to be very diplomatic and reticent in "political" matters.
- There have been no identifiable unforeseen or indirect benefits of the project; and none are expected. (The only possible exception is the informal establishment of a network of NDCs.)
- The project is criticized for (1) not conducting periodic comprehensive needs assessments; (2) not relating training and assistance plans to needs

assessments; (3) providing too many high cost out-of-country seminars and meetings for national-level disaster staff; (4) not lobbying for effective/modern disaster legislation; (5) not "pushing" host governments at all; (6) having an ad hoc, unexplained grant application process; (7) acting like a reactive "foundation" instead of a pro-active "community".

SUMMARY AND CONCLUSION

The assessment of PCDPP benefits accrued to the population of the countries surveyed is summarized in Exhibit V-3.

Three major conclusions can be derived from these findings:

- Most PCDPPP assistance has been in the form of seminars/training for upper-level staff in the national disaster management organizations.
- Institutional and population awareness has been raised or maintained by the PCDPPP in many countries surveyed through the public awareness activities of the project.
- Projects with widespread impact, such as mitigation measures integrated in the national and/or regional development of the Caribbean are rare.

There has not been saving of lives or reduction of suffering directly attributable to PCDPPP because fortunately, there have been no major disasters since 1981. And finally, no strong conclusions can be drawn regarding the merits of bilateral versus multilateral support because of constraints in the evaluation scope and the essential non-evaluability of PCDPPP. However, the DISC analysis suggests that the two approaches should be viewed as complementary rather than competing in nature for future support in the Caribbean basin.

EXHIBIT V-3

Summary of Benefits Provided to
Islands by PCDDPP, 1980-1985

Relative ranking
of
PCDDPP effectiveness

Islands	Major Benefits	Relative ranking of PCDDPP effectiveness
Jamaica	23 ODP staffers and 687 other Jamaicans trained in disaster preparedness; all current/future health professionals trained in preparedness (ultimately benefitting thousands of Jamaicans); shelter management upgraded; ODP developed capacity to put on drills; health disaster plans formulated/upgraded; S.U.S. 32,000 in-kind contribution by GOJ.	High
Dominican Republic	Some commo. gear provided; brought DR disaster staff together with other islands staff; helped somewhat with public awareness; 5 national-level staff trained.	Low
St. Lucia	Some public awareness increase; training of top level staff; training of 500 Red Cross volunteers in First Aid*; training of building contractors in sound building techniques simulations of hospital and airport plans.	Medium
Antigua	Public awareness via TV, radio, print; drills at airport (annual); drills at hospital, fire service, police, Red Cross, 2 U.S. bases, St. John's Brigade; upgrade hospital and national plan; all sector needs assess; workshop for contractors; drought assistance; helped establish NDC and subcommittees.	High/ Medium
Dominica	Increased awareness among top-level management; workshop for 14 construction contractors in proper techniques; workshop for school shelter superintendents; preparedness planning for 80 district personnel.	Medium
Barbados	Training of 22 national and 190 local staffers in preparedness and shelter management; increased some public awareness; CERO head views PCDDPP as having made significant contributions.	Medium
Guadeloupe	No major benefits (in fact, GOG has provided TA to PCDDPP).	Low
St. Kitts/Nevis	Assisted with completion of national plan; assisted with search and rescue workshop (only independent since 1983).	Low/ Medium
St. Vincent	Training of top staffers; commo equip.; assist with national plan	Low/Medium

*It is not certain that this large Red Cross project was funded/sponsored by PCDDPP

VI. ANALYSIS OF RESEARCH HYPOTHESES

This chapter discusses four research hypotheses addressed by the evaluation. The conclusions drawn are largely based on the analyses and findings presented in the three preceding chapters within which the viability and effectiveness of the PCDPPP project design, and the impacts of PCDPPP on host country institutions and beneficiaries were all reviewed. The four hypotheses discussed below are:

- Has disaster preparedness been significantly improved as a direct result of PCDPPP?
- Has disaster prevention been significantly improved as a direct result of PCDPPP?
- Has PCDPPP resulted in the saving of lives and reduction of human suffering?
- Is the PCDPPP multilateral approach a preferable strategy to bilateral U.S. technical assistance?

The reader should bear in mind that DISC findings and related statistics that are presented below especially regarding the impact on host country institutions and beneficiaries are based on a baseline of nine countries for which a 1980 condition could be established and compared with a 1985 status. Thus, comparison of the differential status of these nine countries between 1980 and 1985 provided a basis for assessing the impact of PCDPPP along the four hypotheses. The 1985 condition was either determined through our six country case studies; or for the three additional case countries, extrapolated by DISC based on available documentary evidence. For all nine countries, 1980 conditions were determined through documentation presented at the 1980 Santo Domingo Conference (see previous Exhibit I-2 for discussion on this event).

Has disaster preparedness been improved? The disaster preparedness function has been addressed at two levels: the national level (i.e. individual participant country); and the regional level. Here, despite the fact that the planning and preparedness area has been a major area of emphasis by PCDPPP only five of the nine islands surveyed by the DISC team have been measurably assisted by the Project. There are four general avenues in which PCDPPP has made significant accomplishments at these and other islands in the preparedness area. First, PCDPPP has assisted many countries in preparing and/or upgrading their disaster plans. Now, all islands have up-to-date plans. Second, the Project has provided communications equipment to several islands. Here however, there are many operational problems with the equipment and upgrading communications equipment remains a top priority in half the islands assessed. Third, the PCDPPP has assisted countries in preparing and or conducting simulations. Simulations are critical component to realistically assessing preparedness, short of actual emergency conditions. Progress here is quite meaningful. And fourth, the PCDPPP has assisted in assembling and in training district level organizations, which are an important component to preparedness. In sum, PCDPPP has made some significant progress in this area, which is probably the strongest single area of performance through Phase II of the project.

Significant regional progress in preparedness has been less evident however. There have been some informal bilateral agreements established between participant countries but these are probably only secondarily attributable to PCDPPP. One tangible regional level accomplishment is the intra-island radio network based in Antigua. This however, is plagued with some operational problems.

In sum, accomplishments at the regional level besides those identified have been for the most part of less tangible accomplishments. One less tangible accomplishment although somewhat dubious, is the national coordinators group established in

1984. This group may become a significant resource in future activities. Formulation of this group, however, was not strongly encouraged or facilitated by PCDPPP.

Has Prevention Been Improved? Little progress has been made in this area, in part because it has been given low priority by PCDPPP. Only recently was a technical expert engaged to specifically address this area. As a result little or nothing tangible has been done at a national or regional level in the areas of risk assessment, hazard analysis, disaster area mapping, etc. One tangible activity furthered by PCDPPP is the uniform building code project, but the primary source of funding for this endeavor has been OFDA bilateral assistance.

In general, no significant or tangible progress has been made in the prevention function that is directly attributable to PCDPPP. Islands that are high "achievers" in this area have received little or no PCDPPP assistance (e.g., Guadeloupe, Trinidad and Tobago).

Has human suffering or loss of life been reduced? Little data exist to meaningfully address this hypothesis because there have not been any major disasters during PCDPPP's existence. There have been some minor meteorologically related events such as flooding, and some minor airport incidents. And also, the Antigua drought situation occurred, which was such an anomalous event that little relevant conclusions can be drawn on that experience. In all these incidences however, little or no link, positive or negative can be effectively drawn regarding PCDPPP's impact. What can be said on this topic is that in virtually all cases, the national coordinators in the islands experiencing these minor disasters expressed the opinion in interviews that response/relief operations proceeded somewhat smoothly (or better) than before PCDPPP was existence, however these are hardly objective or unbiased opinions. So in sum, little meaningful conclusions can be drawn, favorable or unfavorable regarding PCDPPP's impact.

Is multilateral better than bilateral support? This is a difficult question to address within the context of this study for threefold reasons. First, because a specific bilateral assistance situation was not reviewed. Second, because comparable multilateral cases were not assessed in a meaningful way. And third, because PCDPPP is not, as presently represented, an evaluable project within the strict sense of the term.

DISC's analysis does suggest two relevant points regarding this topic, however. One, the multilateral approach, if properly configured, does potentially represent a viable means of technical assistance. It is important to note that all islands interviewed were favorably disposed to the project and expressed desire to see it continued with from their view, mostly minor changes. And, PCDPPP does represent an available mechanism to provide further assistance. If the multilateral approach was rejected, considerable "up front" costs and time would have be expended by AID and other donors to achieve comparable future results through bilateral assistance in a short time horizon. A second point and related to point one is that multilateral and bilateral support should probably not be viewed as competing strategies in the Caribbean basin. Rather, the most effective strategy would likely use each in a complementary way. What is not clear based on the present evaluation is whether PCDPPP could ever address all of the twenty-eight countries in a meaningful way. Assuming that it could not, a role for bilateral assistance is clearly manifest. Bilateral assistance could be used to more specifically address the problems of, for example, the least or most developed countries; or perhaps the non-english speaking countries such as the Dominican Republic and Haiti. Similarly, it may be advisable to direct bilateral assistance on a geographic basis. For example, targeting the western Caribbean including Jamaica, Dominican Republic, and Haiti for bilateral assistance and relying on the multilateral approach (through PCDPPP) to target attention to the eastern Caribbean. In the latter example PCDPPP would gain from a smaller geographic area to serve and the three western islands, which have been

underserved to date by PCDPPP, would value from more focussed attention that could be made available on a bilateral basis.

In sum, while this hypothesis could not be tested in a rigorous analytic way here, the analysis has produced meaningful points that should be considered in the decision making process. Further consideration to this general topic is provided in the following chapter.

SUMMARY

The specific functional area of disaster preparedness at the national and regional levels has been significantly improved in four ways by PCDPPP in a significant number of islands. This area has been the highest priority of PCDPPP to date. On the other hand, little or no progress has been made in the area of prevention at the national or regional level as a direct result of PCDPPP. Further, the accomplishments in prevention may have occurred without PCDPPP or through bilateral assistance only.

VII. ALTERNATIVES AND RECOMMENDATIONS

INTRODUCTION

This chapter describes three alternatives concerning future OFDA financial participation in the PCDPPP. These are: (1) phase out, (2) reconfigure, and (3) fine-tune present project. The last of the three alternatives is the one recommended. Each alternative is presented first with its description. This is followed by a discussion of the assumptions that may govern its selection and concludes with a discussion of the pros and cons of choosing the alternative. Lack of adequate information and time constraints caused the analysis of the pros and cons of each alternative to be more qualitative in nature. Despite these limitations, the analysis and information presented should provide an adequate basis for an informed decision concerning future OFDA participation in the PCDPPP.

ALTERNATIVE 1: WITHDRAW OFDA FINANCIAL PARTICIPATION IN THE PCDPPP

DESCRIPTION

Choosing this alternative means that OFDA would withdraw in an orderly fashion from financial participation in the PCDPPP. Depending upon the needs of any orderly withdrawal which would minimize disruption and confusion, this could occur by the close of FY85 or FY86. However, if this alternative is chosen, it may be best to move quickly and terminate funding by the close of FY85 if it becomes known that OFDA does not plan a continuing commitment to the project.

ASSUMPTIONS

The validity of the following assumptions appear important to the selection of this alternative.

1. The political consequences of terminating the project are acceptable. This addresses the negative impact on Pan-Caribbean-U.S. relations which would result from terminating the project. The symbolic value of the project as a manifestation of a U.S. commitment to regional assistance and cooperation may outweigh its modest dollar cost. Excluded are any bureaucratic consequences.

2. All other project donors also withdraw support. A unilateral U.S. withdrawal in the face of continuing commitments to the project by other donors may be perceived as a unnecessarily mean and petty act that distracts from a spirit of multi-lateral cooperation in the region.

3. OFDA and other project donors maintain current bilateral assistance levels. If other forms of related assistance are curtailed, the marginal negative effects of withdrawing from the project may be significantly increased to the point where they outweigh the costs of continued participation.

PROS AND CONS

The pros of withdrawing from participation in the project are:

1. this would save OFDA resources and permit their assignment to other objectives;
2. this would provide OFDA staff time to pursue other priorities; and
3. this would tend to stimulate self-reliance among the islands.

The cons of withdrawing from participation in the project are:

1. this would potentially cause a decline or a reduced rate of growth in the islands' DPP capabilities;
2. as a result of (1) occurring, this implies an increase requirement for U.S. relief assistance in the event of a future disaster. In technical terms, the expected value of the increase in future disaster relief costs resulting from a decline in current DPP activities may exceed the cost of continuing the project; and
3. this would diminish U.S. prestige and ability to negotiate quid-pro-quo agreements and lessen regional ties to the U.S.

ALTERNATIVE 2: RECONFIGURE THE PROJECT

DESCRIPTION

Choosing this option means that the present project would be completely dismantled, returning only a continuing commitment by donors to provide DPP assistance to currently eligible islands by approximately the same methods. The project's present name could be retained. All current provider arrangements, both organizational and individual, would be terminated at an administratively convenient time, e.g., the end of the fiscal year.

Immediately following a decision to select this option, donors should meet to decide whether the project should be reconfigured under the auspices of an existing mutual assistance organization (OAS and CARICOM are two proposed options) or re-established as an unaffiliated free-standing entity. Independently of this decision, donors should define a mission and operations statement for the new project organization which clearly defines its purpose and goals (in evaluable terms), scope and limitations of assistance to be provided, requirements for program planning, management and financial systems, general organizational structure and governance body. The statement

should be specific enough to ensure that the project is reconfigured in a manner consistent with donor expectations but not be overly prescriptive to the point of suppressing creative approaches to its implementation.

The agreed upon mission and operations statement could be offered for implementation (preferably by contract) to an established mutual assistance organization or could be put out for bids by private or voluntary organizations. The newly appointed project management would be free to negotiate technical assistance provision agreements with previous providers or select others based on terms and conditions most favorable to the project. The governance body should approve all such agreements.

ASSUMPTIONS

The validity of the following assumptions appear important to the selection of this alternative.

1. The political consequences of terminating current provider arrangements are acceptable. This addresses the donors willingness and ability to deal with any adverse reactions by current assistance providers (i.e., UNDRO, PAHO, LORCS) to the termination of their current funding for project activities.
2. All donors agree to the termination of current provider arrangements and the reconfiguration of the project.
3. New funding will be at least equal to current levels.
4. At least one form of auspices will be acceptable to the islands.
5. Candidate auspices would be willing and able to accept project responsibilities.

PROS AND CONS

The pros of reconfiguring the project are:

1. this would reduce the proportion of funding devoted to overhead type activities and increase the number of man-years directly devoted to technical assistance;
2. this would provide a "clean slate" for better defining donor expectations, project objectives and management practices;
3. this would permit the unencumbered introduction of more effective management systems;
4. if the auspices of an established mutual assistance organizations were chosen, this alternative would provide closer links to networks of regional political decision makers;
5. this alternative would provide the intangible benefits accruing from the sense of commitment and enthusiasm accompanying the formation of a new organization entity; and
6. this would be a strong statement and renewed donor support for DPP assistance objectives.

The cons of reconfiguring the project are:

1. the described reconfiguration of the project is likely to result in a loss of output for a 1-2 year period while the project becomes re-established;
2. there will be a possible need to relocate the project headquarters; and
3. the strong statement of renewed donor support for DPP objectives made by selecting this alternative implies a commitment to long term funding of the project.

For the stand-alone organizational option, there are additional cons:

1. This may lack political legitimacy.
2. This may lack the access to political figures which could result from common ties to the project.

3. This creates a need to establish a complete organizational infrastructure from "scratch" (e.g., basic operating procedures and environment equipment, facilities, identity, etc.

ALTERNATIVE 3: "FINE TUNE"/MODIFY THE CURRENT PCDFP

This is the recommended alternative.

DESCRIPTION

Choosing this alternative is analogous to renovating an old building. The external facade and identity of the structure remains, but its interior is gutted and rebuilt with new, more efficient and effective systems and structures. The key features of this alternative are the definition of evaluable project goals and objectives; the establishment of a strong project manager; a severe reduction in the autonomy of technical assistance providers; the installation of well defined and responsive technical and financial management systems and procedures; and the strengthening of donor governance and oversight.

Like the preceding alternative, the choice of this one should be immediately followed by donors defining and agreeing upon a renewed mission and operations statement which defines in evaluable terms the projects' goals and objectives, scope and limitations, and the previously mentioned organizational structure and systems. Again, this statement should be specific enough to explicitly address all donor operations yet not only prescriptive to the point of stifling creative means of implementation.

This statement should provide for a strong project manager role with the incumbent being held accountable for overall project performance and given the necessary authority and control mechanism needed to fulfill these responsibilities. Of particular importance in this regard is that the project manager have

control over the selection and application of technical assistance resources. This means that current providers most either agree to submit to greater control or be faced with competing with other identified supplies and the possibility of being excluded from funding by the project. Complementing this strong project management function would be the development and implementation of technical assistance planning and management systems which would provide for enhanced needs assessments and island input to the definition and scheduling of assistance activities. These activities would be expanded to include an information clearinghouse function among islands and activities for increasing the dissemination of information within islands.

To address the current problems caused by severely inadequate recordkeeping and financial disclosure systems, an important element of the project's modification would be a well-defined requirement for the development of such necessary systems and the performance of activities to ensure its satisfaction.

Finally, the realization of these foregoing project modification's and improvements requires a sharpening of current donor oversight responsibilities. This does not necessarily mean a greatly increased workload for AID staff, but simply a sharpened definition of what information they should require concerning project plans and performance, by what means it could be obtained, and how it should be used to provide overall direction.

ASSUMPTIONS

They valdity of the following assumptions appear important to the selection of this alternative.

1. donor funding levels remain constant
2. islands do not disagree with changes
3. current grantees will agree to mechanisms for greater control of plans and activities (the importance of this assumption varies directly with their political influences)

3. the project remains in Antigua
4. donors will assume greater oversight responsibilities.

PROS AND CONS

The pros of "fine tuning"/modifying the project include all of those identified with the immediately preceding alternative of reconfiguring the project except:

1. the continuation of the current PCDPPP forecloses the option of gaining the closer links to network of regional political decisionmakers that the option of placing the project under the auspices of an established mutual assistance organization offers.
2. modifying the present project may not provide the benefits derived from the enthusiasm associated with the establishment of a new organizational entity.

However, this alternative adds the following pros to those of alternative 2:

1. it would continue the goodwill associated with the present project.
2. it would maintain existing relationships with the islands.

The cons of modifying the project are:

1. this could potentially leave remnants of the current convoluted project structure including inadequate grantee cooperation.
2. this could potentially cause the maintenance of some excessive overhead structure.

IMPLEMENTATION CONSIDERATIONS

The choice of any alternative involving more than simply terminating the project or continuing it without change will require performing at least the following tasks:

1. preparing a project design and implementation plan
2. reaching agreements with donors
3. consulting with the islands
4. recruiting personnel
5. defining donor implementation and oversight responsibilities
6. managing project implementation

PREPARING A PROJECT DESIGN

If OFDA is the donor which is most aggressively considering changes in the project, then it will probably be expected to assume lead responsibility for designing and overseeing the implementation of these changes. The first activity needed to be performed is the detailed design of the modified or reconfigured project and its associated plan for implementation. Depending upon the specific choices made, this design will likely include the following components: goals and objectives, organization, roles and responsibilities, operating requirements, management and financial systems, and governance policies and procedures.

REACHING AGREEMENTS WITH DONORS

Assuming that at least CIDA wishes to continue as a donor, agreements will need to be reached with it concerning proposed changes in the project.

CONSULTING WITH THE ISLANDS

If alternative 3 is chosen, there would not appear to be a strong need to consult with the islands concerning proposed changes in the project. Generally, these changes are administrative in nature and simply advising the islands of their nature and benefits should be sufficient. However, if alternative 2 is chosen there will be a greater need for consultation with island constituents.

RECRUITING PERSONNEL

The project's recent experience suggests that recruitment of technical personnel will require more than a passing effort. If alternative 2 is chosen with the option of having the project under the auspices of an established mutual assistance organization, most of the staffing responsibilities could be shifted to this new grantee. However, if alternative 3 is chosen (or alternative 2 with the free-standing option) there is no in-place resource for screening and choosing project management personnel with the possible exception of the present project staff. (This is not recommended.) It would appear that OFDA and/or CIDA will have to assume responsibility for this task.

DEFINING DONOR RESPONSIBILITIES

Based on decisions concerning changes in the project design, donors should decide and agree upon their roles and responsibilities for project governance. Such governance mechanisms will be a strong aid in ensuring that the project's activities correspond with expectations and will also be a major determinant of its effectiveness.

MANAGING PROJECT IMPLEMENTATION

Implementation responsibilities will range from ensuring that initial project design activities are completed and related decisions reached to following through on their execution and establishing a revamped operating project. This implies a need for an implementation manager who can assume this full range of responsibility. The manager should be accorded recognition and sufficient authority to carry out the full range of implementation activities and be required to report in a structured fashion to donors.

The importance attached to the implementation of project changes is equal to that of the changes themselves.

APPENDIX A
STATEMENT OF WORK

ARTICLE I - TITLE

Program Evaluation of Pan-Caribbean Disaster Preparedness and Prevention Project (PCDPPP)

ARTICLE II - OBJECTIVE

To evaluate A.I.D./OFDA Grants to the United Nations Disaster Relief Organization (UNDRO), the Pan-American Health Organization (PAHO) and the League of Red Cross Societies (LORCS) in support of the PCDPPP. To specifically determine what has happened, how and why these grants have (or have not) impacted Caribbean Basin host country disaster preparedness and prevention methodologies, strategies and institutions.

ARTICLE III - STATEMENT OF WORK

BACKGROUND

- A. Description - The Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) team concept derives from a major workshop held in the Caribbean in 1979. This meeting was attended by interested government representatives and potential donors. The Pan-Caribbean Disaster Preparedness Project was initiated in 1980 and was an outgrowth of the workshop recommendations. OFDA has also supported other aspects of the workshop recommendations that support the PCDPPP team concept. The total U.S. dollar support to the PCDPPP team concept since 1979 has not been compiled. The UNDRO part of the team concept was designed to provide long and short term technical services in disaster preparedness and prevention to Caribbean governments. The Pan-Caribbean Disaster Preparedness and Prevention Project with UNDRO as coordinator is a regional project designed to assist governments to better prepare for and to protect their populations against disaster and disaster threats. The Project was initiated by Caribbean governments and is supported by regional and international organizations, and other interested governments outside the region. The PCDPPP has several major components which are administered by different organizations: project management and activities in Member States by CARICOM Secretariat; preparedness and prevention by UNDRO; health preparedness by PAHO; Red Cross Society preparedness and first aid by LORCS. Several of these organizations receive A.I.D. funding support and are therefore included in this evaluation.

- B. Current Status - The current status of the PCDPPP is contained in the PCDPPP Management Committee's last periodic Meeting Report. This meeting was held in April 1984. Participants at the meeting agreed that UNDRO and other participating organizations would submit detailed requests to donors, including AID, for contributions to the third phase of the Project. It was agreed that proposals for the first year of Phase III (FY-1985) would be submitted by October 1984. UNDRO has submitted its FY 1985-1986 request for AID continued support. Status of other participating institutions, donors or implementors remains to be determined. UNDRO (and other players on the PCDPPP team) accomplishments to date (since project inception) remain to be documented.

SCOPE OF WORK

The following outlines AID's Office of U.S. Foreign Disaster Assistance requirement to specifically determine what has happened, how and why the Pan-Caribbean Disaster Preparedness and Prevention Project (PCDPPP) team has either succeeded (or not) in advancing tangible results and host country capabilities in disaster preparedness and prevention methodologies, strategies and institutions in the Caribbean Basin since its beginning in 1979. This evaluation will be used principally to assist AID/W managers in programmatic decisions involving continued funding of the Grantees, the United Nations Disaster Relief Organization (UNDRO), PAHO and LORCS. This evaluation shall assess (1) definitive progress to date, (2) problems and setbacks possibly hindering progress, (3) project design and effectiveness, (4) relative cost-effectiveness, (5) project impact on beneficiaries, (6) management and effectiveness of multilateral donor support, and (7) impact of project on host country disaster related institutional development and self-sufficiency. Additionally, this evaluation will be used by AID to gain a better understanding of the problems in promoting and implementing regional and national disaster preparedness and prevention activities in developing countries of the Caribbean and elsewhere. OFDA will use this evaluation also to improve the formulation of viable strategies to achieve the ultimate goal of saving lives and reducing human suffering in the LDCs.

1. Evaluation Principal Issues - The following issues need resolution as the Project's objectives, goals, inputs, outputs, and accomplishments are sorted out and defined. UNDRO, LORCS and PAHO are the focal points and major recipients of U.S. dollar support, therefore AID needs the following determined as a basis for funding decision-making:

- (a) Effectiveness of PCDPPP project management and implementation by UNDR0, LORCS, and PAHO now in the field.
- (b) Fiscal accounting of Project funds to date by appropriate functional category. Use of funds for that which was intended or programmed. If not, why not?
- (c) Delineation of specific results, achievements or accomplishments by year and category vs. Grant Scopes of Work.
- (d) Effectiveness of AID project monitoring (AID/W, AID/OFDA and USAIDs) corresponding to host country participants.
- (e) Documentation of actual host country counterpart commitments both in-kind and dollar resources by FY.
- (f) Documentation of the host country participant institutionalization of the PCDPPP through UNDR0 coordination or by other means. If not, why not?

2. Evaluation Hypotheses to be Tested--

- (a) Disaster preparedness and prevention (each to be addressed separately) at the host country and regional levels (each to be addressed separately) has been significantly improved from 1981 to the present time as a direct result of the creation of the PCDPPP multilateral.
- (b) The PCDPPP multilateral approach and multinational focus is a preferable strategy to bilateral U.S. technical assistance and institutional support given the current political and economic (including strategic) importance of the Caribbean Basin and current policies.
- (c) The saving of lives and the reduction of human suffering in the Caribbean Basin from 1981 to the present time is attributable to implementation of the PCDPPP and results achieved to date under components of the project.

3. Evaluation Purpose--

- (a) Project Design/Redesign - To determine the adequacy of the PCDPPP design and scope of work in order to achieve desired results/outputs.

- i. Define original end-of-project status. If revised, when? how?
 - ii. Delineate project progress to date by FY and expected results.
 - iii. Determine requirements for project redesign if necessary.
- (b) Examine Implementation Process - To review project inputs and outputs and schedules for project completion. If continued work were approved is there a reasonable expectation that the work would remain on schedule and achieve timely end-of-project status?
 - (c) Redefine Assumptions - To redefine assumptions upon which the PCDPMP was based if they have changed significantly over the life of project.
 - (d) Obtain User Feedback - To obtain user feedback from governments, institutions, individuals, the populace, USAIDs, etc., in order to document Lessons Learned and improve OFDA programs.
 - (e) Establish Priorities - To assist AID/OFDA in establishing its priorities in Caribbean Basin disaster preparedness and prevention activities, especially possible follow-on activities through UNDRO and the PCDPMP.
 - (f) Measure and Document Results - To determine what has been accomplished by UNDRO, LORCS, and PAHO through the PCDPMP using AID support (and other donor contributions) vs. original scope of work or donor expectations.

4. Evaluation Methodology--

- (a) Collection, Summarization and Compilation of Materials/Documents produced under UNDRO, LORCS, and PAHO Grants. These include, but are not limited to: country disaster plans, operations manuals, technical manuals, project papers, contracts, public news articles, published technical papers, photos of facilities and personnel, documentation of equipment, training progress reports, final reports, interim reports and/or annual reports and meeting reports.
- (b) Interviews and Discussions - Summarization of formal and informal interviews with project participants, host

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country nationals, managers, USAID personnel, other knowledgeable individuals and consultants, former AID personnel, etc.

- (c) Milestones - Preparation of PCDPPP chronology showing specific timeline of events, accomplishment milestones, meetings, installations, deliveries, travel of specialized personnel and experts, training completed, invitational TDYs, etc.
- (d) Site Visits - Contractor is expected to visit not less than four host country sites to document results of project to date with first hand experience, photos, etc.
- (e) Statistical/Numerical Data Summaries - Compilation of summary data to include, but is not limited to, number of host country individuals trained, disaster preparedness plans prepared by country, area and populace protected by prevention actions, number of host country spin-off activities, dollars committed in national budgets, etc. Compile data in tabular form.

5. Evaluation of Project Design--

(a) Inputs -

- i. Have the inputs to the PCDPPP been provided on schedule (see SOW) and is there reasonable expectation that schedules can or will be maintained?
- ii. If the inputs were provided on schedule, is it reasonable to expect outputs given the original assumptions? Now or in the future? If not, what changes will be necessary? If uncertain, the following factors should be examined: a) does the type, quantity or timing of inputs need to be revised?; b) are the project output expectations realistic?; c) are the assumptions realistic?

(b) Progress -

- i. Based on the progress achieved to date (provide documentation of specific results vs. scopes of work since inception) will PCDPPP purpose be attained? Soon? Within two years, or more?
- ii. On the basis of experience and familiarization with local conditions in the Caribbean, are the original

PCDPPP assumptions valid and/or relevant? If not, what will have to be done to assure cost-effective success?

- iii. Taking into consideration the extent of any identified problems, setbacks or lack of results to date in the PCDPPP and given the magnitude of past, current and planned inputs (FY 85 & 86) can UNDRO and others satisfy the achievement of the project purposes(s) and objectives(s)? If not, what are the alternatives to better ensure success?

(c) Outputs -

- i. Are the planned output levels likely to lead to a definite set of conditions (specific status) which can be expected at the end of the project? If so, what are they? Delineate completion schedule.
- ii. If the outputs to date are inadequate or lack definition, what new actions are now required to achieve specific results and end products?
- iii. How will expected outputs lead to savings of lives and reduction of human suffering both on a national and regional level?

6. Evaluation of Project Impact on Beneficiaries--

(a) Define Beneficiaries and Impacts -

- i. Who are the intended principal beneficiaries and to what degree should AID expect the project to affect or impact them in the target host countries as a result of the PCDPPP?
At the current time? At the end of the Project?
- ii. What impact has the PCDPPP had on disaster-related institutional development in the Caribbean Basin to date?
- iii. How has the PCDPPP UNDRO, LORCS CARICOM and PAHO components assisted host countries in policy implementation, enactment of laws to protect people and prevent disasters?
- iv. What have been the unforeseen and indirect benefits of the PCDPPP on beneficiaries and others involved? To date? Future expectations if project continued?

- v. What are the factors and/or outputs which best describe and document project performance in relation to the above impacts analyses (items i-iv)? Provide details suited to assist AID in program management decisions.

(b) Define Changing Priorities (if any)

- i. Can any PCDPPP design changes be identified to enhance the positive impact(s) on beneficiaries? What steps should be taken by whom?
- ii. Document the relative costs/benefits of various steps/alternatives in redesign of project, if necessary.
- iii. How have regional or national priorities changed since the beginning of the project which may have affected the course of PCDPPP implementation.

7. Evaluation of PCDPPP Project Impact on Host Country Institutions--

(a) Institutional Change -

- i. What type of institutional change has been anticipated since project inception? When? What changes can be expected should project funding continue for two more years?
- ii. What has been the relationship between/among target institutions since project inception? Compare this with current dynamics.
- iii. What are the target institutions by functional sector and host country? How have they related to disaster preparedness and/or prevention programs/activities and institutional development?

(b) Institutional Effectiveness -

- i. How has UNDRO, LORCS and PAHO proven effective in developing strong host country disaster related institutions that are capable of self-sustaining, self-sufficiency now and in years to come?
- ii. What is the likelihood for future success if the PCDPPP is continued, unchanged, as currently designed? With project design modifications? Elaborate as to how institutions can be strengthened with project design changes.

- iii. What measure of host government reliance should be placed on AID and/or other donor support/funding to ensure that the PCDPPP is institutionalized at the national level and at the regional level. Will UNDRO, LORCS and PAHO continued participation be required to ensure the project goals are achieved?
- iv. Have strong inter-governmental institutional linkages been established to date? How? By whom? When?
- v. Has the PCDPPP significantly furthered host government's development plans on a national planning basis through participating institutions? If so, how? If not, why not?

8. Evaluation of UNDRO, LORCS, CARICOM and PAHO Roles--

(a) Coordination/Management -

- i. How has the PCDPPP team managed its inputs from donor organizations and host country contributions? Has the field support from organizational headquarters (UNDRO, LORCS, PAHO and CARICOM), USAIDs, AID/W and host governments been adequate? Provide evidence to support conclusions.
- ii. What evidence exists that host governments have or will utilize ideas/recommendations generated by the PCDPPP?
- iii. Are UNDRO, LORCS, CARICOM or PAHO ready to replicate an institutional arrangement such as the PCDPPP on a larger scale, perhaps in Central America? Would such action be advisable?
- iv. Define the role of the PCDPPP Project Management Committee. Has the committee performed its role well and/or how could it have been strengthened?
- v. To what extent have USAIDs monitored the relationship between UNDRO, LORCS, CARICOM and PAHO and host country target institutions and the governmental entities?
- vi. What are the differences between the current PCDPPP approach to disaster preparedness and prevention in the Caribbean Basin and that developed by other institutions in other regions (i.e., the E-W Center in the Pacific Basin)?

- vii. What modifications are required in the types of short-term consultants actually needed to achieve definitive results and the need for continuing longer-term consultants past the current phase of the PCDPPP (i.e., to extend these until the end of the project)?
- viii. What should be done today to define expected project outputs subject to future evaluation (i.e., within one year, two years) such that specific outputs and/or products can be evaluated? What steps should be taken by OFDA to ensure that a meaningful evaluation of the PCDPPP results can be made at the end of FY85 and FY86?

ARTICLE IV - REPORTS

The contractor shall:

1. Prepare and submit to AID 12 copies of the Final Report bearing the title of this evaluation (Article I). The Report format must include (but is not limited to) the following:
 - (a) Face Sheet (show Grant No., title, etc.)
 - (b) Executive Summary (two pages, single-spaced including statement of purpose of evaluation)
 - (c) Major Findings - Provide statement of major findings (short and succinct with topics identified by subheadings).
 - (d) Recommendations - Should correspond to major findings and specify who takes what recommended actions and why.
 - (e) Report Body - Provides the information, summaries, compilations, data, etc. on which the major findings and recommendations are based. Includes a description of how the project affected or should affect disaster preparedness and disaster prevention in the Caribbean Basin within what time-frame.
 - (f) Appendicies - Include the evaluation Scope of Work, statement of methodologies used, materials compiled, bibliographies, chronology of events and milestones, etc.
2. The Final Report document must adhere to the Scope of Work (Article III), specifically addressing the evaluation of:
 - (a) principal issues, (b) hypotheses to be tested, (c) purpose, (d) methodologies used, (e) PCDPPP Project Design

(inputs, progress and outputs), (f) project impacts on beneficiaries, (g) impact on host country institutions and (h) roles of UNDR0, LORCS, CARICOM and PAHO in PCDFPP management and coordination. The Final Report contents should closely follow the Scope of Work so as to ensure that all issues, questions and information are answered, compiled and well-documented in a concise, easily readable document (single-spaced, typewritten, printed on both sides of pages).

Submission of Final Report shall be within 15 calendar days of completion of evaluation.

ARTICLE V - RELATIONSHIPS AND RESPONSIBILITIES

The contractor shall perform the proposed services under the technical coordination of AID/OFDA, the requiring office. Overseas travel is required and will necessitate coordination with USAID missions and AID/OFDA/LAC. The contractor is responsible for all its staff air travel arrangements, passports, clearances, etc. All travel must be approved by AID/OFDA/LAC and USAIDs in advance.

ARTICLE VI - TERM OF PERFORMANCE

The effective date of this work order is January 10, 1985 and the estimated completion date is March 13, 1985.

Subject to the written approval of the Project Manager (see block 5 on the Cover Page), the estimated completion date of this work order may be extended provided that such extension does not cause the elapsed time for completion of the work, including furnishing of all deliverables, to extend beyond 30 calendar days from the original estimated completion date. The contractor shall attach a copy of the Project Manager's approval for any extension of the term of this order to the final voucher submitted for payment.

It is the contractor's responsibility to ensure that the Project Manager-approved adjustments to the original estimated completion date do not result in costs to the Government which exceed the total amount obligated for the performance of the work. Under no circumstances shall such adjustments authorize the contractor to be paid any sum in excess of the total amount obligated in this order for the performance of the work.

Adjustments which will cause the elapsed time for completion of the work to exceed the original estimated completion date by more than 30 days must be approved in advance by the Contracting Officer.

APPENDIX B
PCDPPP ACTIVITIES

EXHIBIT B-1

UNDRO ACTIVITIES: PHASE I

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants PCDPPP/Host Countries</u>	<u>Source of Funds</u>
1. Review National Emergency Plan	1/82	Haiti	2C/1CO	USAID/PCDPPP
2. Comprehensive Emergency Management Training	1/82	Puerto Rico	4T	PCDPPP
3. Review Airport Emergency Plan	3/82	Haiti	1C/1CO	PCDPPP
4. Review Weather Forecasting	3/82-4/82	Haiti	1BD/1CO	PCDPPP
5. Fourth Annual Hurricane Conference	4/82	Orlando, FL	10T	PCDPPP
6. Training of Local Emergency Radio Operators	4/82-6/82	Eastern Carib.	1BD/24T	PCDPPP
7. Congress on Emergency Planning	6/82	Mexico	1U, 1L	PCDPPP
8. Preparation of Materials for Schools	6/82-8/82	Barbados & Dominica	1C/2CO	PCDPPP
9. Awareness Workshop - Follow-up	6/82	Eastern Carib.	1C/7CO	PCDPPP
10. Regional Hurricane Preparedness Week	6/82	Montserrat	All, 1C/1CO	PCDPPP
11. National Hurricane Preparedness Week	6/82	Eastern Carib.	1C/5CO	PCDPPP

Legend: U--UNDRO; C--Consultant; BD--British Development Division; All--All PCDPPP Team Members; T--Trainees; CO--Country(s)

EXHIBIT B-1 (Continued)

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants</u> <u>PCDPPP/Host Countries</u>	<u>Source of Funds</u>
12. Earthquake Disaster Prevention Survey & Analysis	6/82	Antigua	1C/1CO	PCDPPP
13. UWI Attachment Program	7/82	UWI	9T	PCDPPP
14. Post Disaster Coordination	8/82	Eastern Carib.	1U/3CO	PCDPPP
15. Review of National Emergency Plan	8/82	St. Vincent	1U, 1P/1CO	PCDPPP
16. Training Workshop for Community Coordinators	8/82-9/82	Dominica	1U, 2C/10T	PCDPPP
17. Review of National Emergency Plan	8/82	British Virgin Islands	1U/1CO	PCDPPP
18. Review of National Emergency Plan	9/82	Dominican Rep.	1U, 1P, 2C/1CO	PCDPPP
19. Review of National Emergency Plan	9/82-10/82	Belize	1U/1CO	PCDPPP
20. Review of National Emergency Plan	10/82	St. Kitts-Nevis	1U/1CO	PCDPPP
21. Review of National Emergency Plan - Follow-up	10/82	British Virgin Islands	1U/1CO	PCDPPP
22. Telecommunications & Meteorology	11/82-2/83	St. Kitts, Anguila, Dominica, St. Lucia	2C/4CO	PCDPPP
23. Regional Workshop in Emergency Planning	11/82	Puerto Rico	6T	PCDPPP/PR
24. Emergency Communications	12/82-3/83	Haiti, Jamaica, Belize	1C/5CO	PCDPPP

EXHIBIT B-2

UNDRO ACTIVITIES: PHASE II

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants</u> <u>PCDPPP/Host Countries</u>	<u>Source of Funds</u>
1. Seismic Monitoring	5/83	Haiti	1C/1CO	PCDPPP
2. Preparation of Public Information Documents	6/83	Antigua	1C/AllCO	PCDPPP
3. Disaster Management Course	6/83	Jacksonville, Florida	1U/3CO	PCDPPP
4. Public Information Documents Preparation	6/83-9/83	Antigua	1C/AllCO	PCDPPP
5. Public Awareness Document Preparation	6/83-9/83	Haiti	1C/1CO	PCDPPP
6. Construction Industry Workshop	7/83	Antigua	3C/20T	PCDPPP
7. Mass Media Workshop	8/83	Antigua	1U, 1C/20T	PCDPPP
8. Role of Security Forces in a Disaster	8/83	Antigua	1U/25T	PCDPPP
9. Communications and Control in Disaster Management	9/83	St. Lucia	1U/26T	PCDPPP
10. Hurricane Shelter Survey	9/83-2/84	Antigua, Dominica, St. Kitts-Nevis, St. Vincent	1U, 1C/4I	PCDPPP
11. Organization of Management Shelter	10/83	Barbados	1U, 3C/13T	PCDPPP
12. Organization of Management	12/83	Jamaica	1U, 3C/10T	PCDPPP

Legend: U--UNDRO; C--Consultant; All CO--All Countries; T--Trainees; I--Instructors

EXHIBIT B-2 (Continued)

	<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants</u>		<u>Source of Funds</u>
				<u>PCDPPP</u>	<u>/Host Countries</u>	
13.	Development of National & District Emergency Plans	5/83-10/83	Six Countries	1U,1C/6CO		PCDPPP
14.	Hurricane Vulnerability Study	3/84	St. Lucia	1C/1CO		PCDPPP
15.	U.S. Hurricane Conference	4/84	Tampa, Fla.	1BD,2C		OFDA/PCDPPP
16.	IMO Search & Rescue Seminar	4/84-5/84	Caracas	1U,1C		PCDPPP
17.	Marine Pollution Planning Meeting	5/84	St. Lucia	1U, IMO, UNEP, OAS		PCDPPP
18.	St. Vincent Team Visit	5/84	St. Vincent	1P,1U,2C		PCDPPP
19.	WMO Meeting - Region 4	5/84	Barbados	1U		PCDPPP
20.	Disaster Relief Command Post Exercise	5/84	Miami, Fla.	1U		PCDPPP
21.	Oil Pollution Simulation Exercise (U.S. Coast Guard)	5/84	Puerto Rico	2U/20T		OFDA/PCDPPP
22.	PCDPPP Team Visit to Dominica	6/84	Dominica	1P,1U,2C		PCDPPP
23.	District Emergency Leaders Training Seminar	6/84	Montserrat	1U,1C/40T		PCDPPP
24.	National Coordinators Meeting	7/84	Antigua	All Natl Coordinators		PCDPPP
25.	Review National Plan	7/84	Belize	1U/1CO		PCDPPP
26.	Hazardous Chemical Spills Workshop	7/84	Mexico	1U/2CO		PCDPPP

EXHIBIT B-2 (Continued)

	<u>Activity</u>	<u>Date</u>	<u>Location</u>	Participants	<u>Source of Funds</u>
				<u>PCDPPP/Host Countries</u>	
27.	ICAO Air Safety Discussion Meeting	7/84	Montreal	1U,2C	PCDPPP
28.	Simulation Exercise to Test Airport & Hospital Plans	8/84	Antigua & Barbuda	1U/40T	PCDPPP
29.	In-Country Emergency Plan and Training in Disaster Preparedness	9/84	St. Vincent	1U,1C/40T	PCDPPP
30.	Hazard Monitoring & Emergency Management Workshop (Regional)	9/84	Cuba	1C/40T	PCDPPP
31.	Search & Rescue Workshop (Regional)	10/84	Barbados	1U,2C/20T	PCDPPP
32.	Post-Earthquake/Hurricane Rescue & Relief Workshop (National)	11/84	Jamaica	1U/30T	PCDPPP
33.	Implementation Building Code	11/84-1/85	Jamaica	1U/1C	PCDPPP
34.	In-Country/Logistics Plan	12/84	Dominica	1U,1C/1CO	PCDPPP
35.	Hurricane Vulnerability & Construction Industry Workshop (Reg)	12/84	Jamaica	1U,2C/10CO	PCDPPP
36.	Hurricane/Flood Risk Mapping	12/84	Belize	1C/1CO	PCDPPP
37.	Volcanic Hazards Assessment	12/84	Dominica	1C/1CO	PCDPPP
38.	Country Visits for Prevention Activities	7/84-12/84	All Countries	1C/20CO	PCDPPP

EXHIBIT B-3

PAHO ACTIVITIES: PHASE I

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants PCDPPP/Host Countries</u>	<u>Source of Funds</u>
1. Antigua Holbarton Hospital Workshop	1/82	Antigua	1C/6T	PCDPPP
2. Mass Casualty Planning Workshop	4/82	Grand Cayman	1P,1L,1C/15T	PCDPPP
3. British Virgin Islands Hosp. Emergency Plan	4/82	British Virgin Islands	2P/10T	PCDPPP
4. Mass Casualty Planning Workshop	4/82	St. Lucia	1P,1L/13T	PCDPPP
5. DP Training for Environ. Health Officers	5/82	Antigua, Grenada, St. Vincent	1P/60I	PCDPPP
6. Essential Drugs for Disaster Management Training	5/82	Barbados	1P/10I	PCDPPP
7. Preparation of Field Manual "Front Line Health Team"	6/82	Antigua/ Washington	1P	PCDPPP
8. Public Awareness Survey	2/82-4/82	Regional	1C/6CO	PCDPPP
9. Development of Hospital Disaster Plan	7/82-8/82	Barbados	1P/1CO	PCDPPP
10. Follow-up Research Post Hurricane David	9/82-3/83	Dominica	1C/1CO	PCDPPP

Legend: P--PAHO; L--LORCS; C--Consultant; T--Trainees; I--Instructors; CO--Country(s)

EXHIBIT B-3 (Continued)

PAHO ACTIVITIES: PHASE I

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants PCDPPP/Host Countries</u>	<u>Source of Funds</u>
11. Preparation of Health Disaster Plan (Advise & Assist)	7/82-2/83	Grenada	1P/1CO	PCDPPP
12. Course on Disaster Preparedness for Health Personnel (Assistance)	8/82-3/83	Haiti	1P,1C/1CO	PCDPPP
13. Assist in Preparation of Health Disaster Plans	8/82-11/82	St. Vincent	1P,1C/1CO	PCDPPP
14. Assist in Preparation of DP for National Health Personnel	12/82-2/83	Turks & Caicos	1P/1CO	PCDPPP
15. Assist in Re-writing Holbarton Hospital Plan	7/82-8/82	Antigua	1P/1CO	PCDPPP
16. Familiarization Virit	9/82	Dom. Republic	2P,1U/1CO	PCDPPP
17. Development of Procedural Manual for Health	8/82-12/82	Regional	5P/All Caricom	PCDPPP
18. Planning for Seminars for Technical Health Coordinators	10/82	Regional	2P/Regional	PCDPPP

EXHIBIT B-4

PAHO ACTIVITIES: PHASE II

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants PCDPPP/Host Countries</u>	<u>Source of Funds</u>
1. Familiarization Trips	4/83-9/83	8 Countries	1P/8CO	PCDPPP
2. Planning and Programming PAHO Headquarters	5/83	Washington	1P	PCDPPP
3. Country Visit-Disaster Manage- ment in Health Sector	6/83	St. Vincent	1P/1CO	PCDPPP
4. Critique of Airport Simulation Exercises	6/83	Cayman Islands	1P/1CO	PCDPPP
5. Critique of Airport Simulation Exercises	7/83	Jamaica	1P/1CO	PCDPPP
6. Follow-up to Survey of Health Institutions	8/83	Jamaica	1P/1CO	PCDPPP
7. Familiarization Trips	9/83-12/83	10 Countries	1P/9CO	PCDPPP
8. Health Needs and Disaster Preparedness Activities	11/83-5/84	6 Countries	1P/6CO	PCDPPP
9. Environmental Health Activities	9/83-7/84	8 Countries	1P/8CO	PCDPPP
10. Environmental Health Workshop	4/84	Antigua	1P/10T	PCDPPP

Legend: P--PAHO; C--Consultant; CO--Countries

CP

EXHIBIT B-4 (Continued)

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants PCDPPP/Host Countries</u>	<u>Source of Funds</u>
11. Translation of PCDPPP Documents	6/83-1984	Washington	1P/2CO	PCDPPP
12. Development of Front-line Team Manual	3/84	Antigua, Barbados	1C/2CO	PCDPPP
13. Copies of "Lady Called Camille" Film & Development of Disaster Reports	8/84	Antigua	1C	PCDPPP
14. Environmental Health and Hospital Disaster Plans Surveys	7/84-12/84	7 Countries	1P,1C/7CO	PCDPPP

- B.9 -

Legend: P--PAHO; C--Consultant; CO--Countries

91'

EXHIBIT B-5

LORCS ACTIVITIES: PHASE I

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants</u> <u>PCDPPP/Host Countries</u>	<u>Source of Funds</u>
1. Meeting with Red Cross DP Committee	1/82	Barbados	1L/1CO	PCDPPP
2. Discussions with Red Cross	2/82	Trinidad & Tobago	1L/1CO	PCDPPP
3. Familiarization Visit with Red Cross and DP Committee	3/82	Dom. Republic	1L/1CO	PCDPPP
4. Disaster Relief Preparedness & Organization of Youth Seminars	4/82	Bahamas	2L/35T	LORCS/OFDA/CYP
5. Regional Workshop on First Aid Training	5/82	Antigua	2L/25T	PCDPPP
6. Review Red Cross Society Disaster Plan	5/82	Jamaica	2L/1CO	PCDPPP
7. Introductory Visit	6/82	Suriname	1L/1CO	PCDPPP
8. Drafting First Aid Manuals	6/82	Antigua	1L,1B/Regional	PCDPPP
9. Seminar on Red Cross Disaster Preparedness	6/82	Trinidad & Tobago	1L/13T	PCDPPP
10. Visit to Discuss Disaster Plan & Red Cross Program	9/82	Guayana	1L,1B/1CO	PCDPPP
11. Visit to Discuss Disaster Plan & Red Cross Program	9/82	Suriname	1L/1CO	PCDPPP

Legend: L--LORCS; B--BRCS; T--Trainees; I--Instructors; CO--Country(s)

EXHIBIT B-5 (Continued)

LORCS ACTIVITIES: PHASE I

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants</u> <u>PCDPPP/Host Countries</u>	<u>Source of Funds</u>
12. Visit to Discuss Disaster Plan & Red Cross Program	9/82	Barbados	1L,1B/1CO	PCDPPP
13. Discuss Red Cross Society's General Status	10/82	Haiti	1L,1P/1CO	PCDPPP
14. Red Cross Disaster Preparedness Workshop	10/82	Jamaica	1L,1B/25T	PCDPPP
15. Train DP Coordinator	10/82	Bahamas	1L/1I	PCDPPP
16. Review RCS Disaster Plan and Other Programs	11/82	Dom. Republic	1L/1CO	PCDPPP
17. Information Mission	11/82	Barbados	2L/1CO	PCDPPP
18. Information Mission	12/82	Guayana	2L/1CO	PCDPPP
19. Information Mission	12/82	Jamaica	2L/1CO	PCDPPP
20. Visit to Red Cross Society	12/82	Cuba	2L/1CO	PCDPPP
21. Develop Affiliate Societies of BRCS	1982	Anguila, Antigua, British V. Islands, Dominica, Grenada, Mantserrat, St. Kitts/Nevis, St. Lucia, St. Vincent, & the Grenadiness	1B/9CO	PCDPPP

Legend: L--LORCS; B--BRCS; T--Trainees; I--Instructors; CO--Country(s)

- B.11 -

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EXHIBIT B-6

LORCS ACTIVITIES: PHASE II

<u>Activity</u>	<u>Date</u>	<u>Location</u>	<u>Participants PCDPPP/Host Countries</u>	<u>Source of Funds</u>
1. Instructor Trainers Course Emergency First Aid	1983	Jamaica	2L/13I	PCDPPP
2. Instructor Trainer Course Emergency First Aid	1983	Antigua	2L/15I	PCDPPP
3. CYP Youth Programme on Disaster Preparedness	1983	Bahamas	2L/32T	PCDPPP
4. Develop Affiliate Societies of BRCS	1983	Anguila, Antigua, Brit. Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts/Nevis, St. Lucia, St. Vincent and the Grenadines	1L/9CO	PCDPPP
5. Emergency First Aid	1984	12 Countries	1L/12CO	PCDPPP

- B.12 -

Legend: L--LORCS; I--Instructor(s); T-- Trainees; CO--Country(s)

CP