

**UNITED NATIONS DEVELOPMENT PROGRAMME
PROGRAMME SUPPORT DOCUMENT**

Atlas ID Number: 0036852

PSD Title: Caribbean Risk Management Initiative (CRMI)

<p>Programme Period: 1 April 2006 – 31 December 2007 Programme Component: Disaster Management Project Title: Caribbean Risk Management Initiative – Phase II Project Duration: 21 months plus 24 months of Phase I Management Arrangement: Direct Execution – Barbados and Cuba Beneficiary countries: Barbados, Cuba, Dominican Republic, Guyana, Haiti, Jamaica, Trinidad & Tobago</p>

Budget	
Phase I –	
CPR Trust Fund	\$300,000
RBLAC	\$300,000
PA Carry over	\$130,000
Radar Early Warning	\$433,760
Other	\$50,000
Sub-total	\$1,213,760
Phase II	
CPR Trust Fund	\$330,000
RBLAC	\$150,000
Sub-total	\$480,000
TOTAL	\$1,693,760

Brief Description: This document represents the second phase of the Caribbean Risk Management Initiative (CRMI) based on the impact of the 2004 hurricane Season and the results of the CRMI Phase I activities. The revision will seek to nurture areas that have enjoyed some positive results and extend and adapt global initiatives to the sub-Region to better understand the vulnerabilities faced by SIDS and address these vulnerabilities effectively. Specifically the project will focus on four main areas:

- Capacity building both at the tertiary and professional levels
- Post-disaster recovery capacity development
- Extending the vulnerability and capacity assessment initiative
- Preparing a Caribbean Reducing Disaster Risk report based on an adaptation of the methodology on the UNDP global Reducing Disaster Risk report.

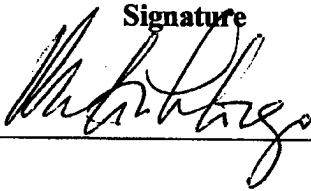
On behalf of:

UNDP – RBLAC

Signature

Date

Name/Title

 5 July 2006 Martin Santiago



Section A: Context

Background: 2004 & 2005 Hurricane Seasons and 2005 & 2006 Flooding

The 2004 hurricane season has proven to be one of the worst hurricane seasons in recent Caribbean history. In terms of the number of countries impacted (12), deaths (over 6000) and damage and destruction to, housing, infrastructure and economic livelihoods, last year's hurricane season was unprecedented. Hurricanes Charley, Francis, Ivan and Jeanne have devastated either entire countries as in the case of Grenada and the Cayman Islands, or large pockets of highly vulnerable populations in this Small Island Developing States region (SIDS). Additionally the May 2004 floods in Haiti caused a tremendous loss of life. The effects of these disasters particularly in the case of SIDS is of increasing concern as these events clearly demonstrate that they can negatively affect the entire populations and economic base of these islands as was seen in Grenada after Hurricane Ivan where the situation was one of total devastation with 90% of the homes and structures damaged or destroyed and economic damage estimates standing at approximately \$889 million USD.

The 2005 Atlantic hurricane season was the most active in recorded history. It was a season of many records: A record twenty-eight tropical and subtropical storms formed, of which a record 15 became hurricanes. Among these Category 5 storms was Hurricane Wilma, the most intense hurricane ever observed in the Atlantic. During that season several countries were impacted including Cuba which was impacted by hurricanes Dennis and Wilma to the level of 20 people dead and over four million affected; Haiti which was impacted by a number of events including flooding causing some 86 deaths and thousands more affected; and Jamaica which was also impacted by Hurricanes Dennis and Wilma causing 6 deaths and almost 10 thousand affected directly. Only 10 months after being struck by Hurricane Ivan in September 2004, on 13-14 July 2005 Grenada was hit again by Hurricane Emily disrupting the recovery efforts from Ivan and causing a further 12% of GDP in damages.

In addition to the events identified in the hurricane seasons, Guyana also suffered extreme flooding at the start of 2005 and 2006 causing significant loss and disruption. January 2005 realised the highest rainfall on record since 1888, which combined with malfunctioning drainage systems resulted in between three to five feet of water in some coastal areas. 34 persons died as a result, 275 thousand were affected and an estimated US 500 million in impact realised. The following year, excessive rainfall in December 2005 and January 2006 resulted in a further 165 thousand persons affected and estimate 165 million in impact.

Natural disasters therefore continue to pose a growing threat to the development strategies of Caribbean countries by destroying infrastructure and productive capacity, interrupting economic activity and creating sometimes irreversible changes in the natural resource base. The most recent devastation experienced in Grenada, Haiti, the Dominican Republic, Cuba, Jamaica, the Bahamas, and the Cayman Islands is a continuation of this all too common trend of repeated loss of lives and livelihoods and the erosion of hard earned development gains in this region. The level of losses from major disasters occurring in this region demonstrates the social and

economic importance of reducing disaster risk. Hurricane Gilbert in 1989 incurred losses worth 65% of the GDP, Hurricane Hugo in 1989 caused Montserrat losses worth 200% of the GDP, flooding and landslides from Tropical storm Debbie in 1994 caused St. Lucia 18% of its GDP, Hurricanes Luis and Marilyn in 1995 incurred losses to Antigua and Barbuda worth 65% of its GDP. The economic losses from Hurricane Ivan to Grenada in 2004 was USD 889 million representing 212% of the GDP, to Jamaica USD 595 representing 8% of the GDP and to the Cayman Islands USD 3, 432 million representing \$183% of GDP.

The picture gets grimmer for the future since the current risk situation is being seriously aggravated by climate change which is likely to make matters worse. Even though global climate change is subjected to a great deal of uncertainty, the Intergovernmental Panel on Climate Change (IPCC) concluded that human intervention has a discernable effect on global climate. Global mean surface air temperature has increased between 0.3 and 0.6 degrees since the 19th century and is projected to rise about 2 degrees C more by 2100. Global sea level has risen by between 10 and 25 cm over the past 100 years and is projected to rise about 50 cm more by 2100. What does this mean for the Caribbean?

Small islands and low lying coastal areas are especially vulnerable to sea level rise. Higher rates of coastal erosion, permanent inundation and flooding may occur. This is particularly dangerous in a region where population, economic activity and infrastructure are concentrated on coastal areas. Extreme weather events may occur more frequently (1995,2004 hurricane seasons), sea level rise would magnify the impact of storm surge and waves on coastal areas, while protective ecosystems like coral reefs and mangroves already under threat of destruction from economic development activities, will be further weakened by increased sea surface temperatures and changes in salinity. There is also a close link between environmental degradation and poverty, with low income populations and communities being disproportionately affected by natural hazards. Unsustainable natural hazard resource use associated with poverty especially in countries like Haiti, only serve to exacerbate existing vulnerabilities

The advances made by the Caribbean Development Bank (CDB) in developing a Natural Hazard Impact Assessment tool is a step in the right direction to determine the extent to which potential development projects can configure disaster risk positively or negatively. Other contributions by UNDP in supporting the development of a Comprehensive Disaster Management Strategy for the Region and by USAID through the Caribbean Disaster Mitigation Project have served to raise some level of awareness amongst policy makers of the need for integrating disaster reduction issues in the regional development agenda. However the unprecedented magnitude of loss recently experience in the region only serves to remind us of the need for the international development community to strengthen its support to these highly vulnerable island states in developing appropriate policy, capacity and enabling mechanisms to facilitate this integration.

Haiti, which has suffered severe loss from the recent floods, is one of the poorest and most disaster prone countries of the world. For the past 10 years it has endured almost 20 internationally recognized disasters events which have caused thousands of deaths. Flooding in the month of May 2004 not associated with a named storm was responsible for over 2, 000 deaths in Haiti alone. This does not include the small and medium sized disasters that frequently go unrecognized by the international media. In Haiti, a combination of environmental fragility,

weak institutions, the absence of appropriate warning systems and corresponding community action and a total absence of adequate policies and regulations will continue to have tragic consequences if the situation is not reversed. The continuous degradation of highly sensitive ecosystems upstream have led to the increased occurrence and magnitude of landslides and floods downstream with major physical, economic and social consequences.

UNDP has demonstrated in its very recent global publication on *Reducing Disaster Risk: a Challenge for Development*, that increasing disaster occurrence and loss is indicative of flawed unsustainable development and rapidly accumulating disaster risks. When countries fail to factor hazard and vulnerability considerations into their development policies, strategies and plans, economic growth and social welfare becomes eroded by large-scale disaster loss, while increasing demands are made on national and international humanitarian assistance. Each natural disaster leaves in its wake an overwhelming volume of evidence of how planning and investment decisions contribute to vulnerability. Every school, road, bridge hospital or housing settlement destroyed in Grenada by hurricane Ivan or washed away by the floods in Haiti from hurricane Jeanne, was once a development project. The location of a housing development, how it is constructed and how land use affects the natural environment are all factors that contribute significantly to the damage inflicted during a hazard event. Even though the concepts of economic and financial risk are familiar to those responsible for economic analysis of development projects, risk introduced by the possibility of damage or destruction from a natural disaster is commonly overlooked.

This UNDP global report included a Disaster Risk Index (DRI) that compared the relative vulnerability of different countries (in terms of mortality) with respect to different natural hazards including hurricanes. In the light of the events of the 2004 and 2005 hurricane seasons as well as the other disasters it is worth revisiting the Report. The Relative Vulnerability Indicator for some of the countries recently affected shows: Haiti 12.96, Dominican Republic 2.79, United States of America 2.49, Jamaica 1.45, Cuba 0.16. This shows the relative levels of mortality for each million of population exposed to a hurricane. In other words, assuming the same number of hurricanes affecting the same number of people one could expect more than 80 times more people to die in Haiti than in Cuba and 15 times more people to die in the USA than in Cuba.

The 2004 round of hurricanes in the region has affected different number of exposed population and therefore the number of deaths does not correlate exactly with our Disaster Risk Index (DRI). However, in general terms the DRI speaks for itself. The contrast between the over 1000 deaths in Haiti from Hurricane Jeanne, the 27 deaths in the USA, and the 0 deaths in Cuba is brutal but effectively validates the DRI. If we wanted a clearer and more vivid example of how development (and lack of it) is configuring disaster risk we would not find a better one.

UNDP has provided an exemplary response to the present disasters through the combined efforts of its Country Offices, BCPR and RBLAC. The decided action of the Country Offices, the rapid provision of TRAC 3 emergency grants and the deployment of four Advisors from the BCPR Disaster Reduction Unit to the affected countries (Grenada, Cuba, Jamaica and Haiti) has enabled UNDP to be ahead of the curve in developing recovery programming that will address the countries needs and contribute to the reduction of future risks.

But it does raise the question of how much we are doing on a permanent basis to reduce disaster risk in the Caribbean and whether our efforts and resources are really commensurate with the needs.

While large scale disasters such as Hurricane Ivan prompt a major international response from the UN system most disasters are medium and small scale and responsibility for managing the risks falls squarely with the national governments and local authorities. Within this context it is critical that UNDP advocates for greater attention and resources be given to building national capacities for disaster risk management.

The Caribbean sub-regional cluster meetings of Resident Representatives and Deputy Resident Representatives held in the Dominican Republic in November 2004 and in Barbados in February 2005 reviewed the activities under the CRMI Phase I. The latter meeting in Barbados constituted a Project Steering Committee for the CRMI and supported an expansion in the program, both in terms of the countries involved and the need to build on existing activities as well as develop additional ones. This position was supported by the discussions and outcomes of the regional review meetings of the 2004 hurricane season and other disaster events for 2004/2005 held in Jamaica in March 2005 and Cuba in May 2005. The latter meetings identified a general lack of capacity and need for support to national and regional mechanisms for all phases of the disaster management cycle.

2005 was the second year of the CRMI Phase I, and during this period, responsible country offices (COs) were challenged by changing personnel and a record breaking hurricane season of 14 tropical storms and 15 hurricanes. Specific activities realized during this period included:

- CRMI Project Steering Committee meeting in February
- Regional Meetings facilitating the sharing of experiences and lessons learned
- Capacity building activities with a focus on increasing the local and regional capability in post disaster recovery
- Creation of a new website for CRMI and launching of the Network Facility
- Conclusion of a Best Practice Case Study and three country reviews on Comprehensive Disaster Management
- Initiation of Vulnerability and Capacity Assessment (VCA) methodology to incorporate climate change and climate variability in partnership with the mainstreaming Adaptation to Climate Change (MACC) project
- Conclusion of application of Adaptation Policy Framework and study of climate forecasting and drought risk in agriculture in Cuba and Dominican Republic
- Support to Cuba risk management strategies and plans at national and local level

A regional capacity development exercise aimed at the UN system and UNDP more specifically and facilitated by the Bureau for Crisis Prevention and Recovery (BCPR) and the Disaster Management Training Program (DMTP) in Jamaica in June 2005 highlighted areas for further attention, including:

- Surge capacity on post disaster recovery through a multi-lingual pool of professionals should be present in affected countries in post disaster recovery when necessary (national UNVs and project personnel trained by DMTP/BCPR at least once a year).
- Incentives should be given for institutions, universities and media to increase their commitment to risk management
- Responding to the needs identified from recent hurricane activity, the CRMI would be incorporated into new capacity building activities proposed by COs.
- There is a need to expand the role of the RCs in meeting the needs of countries in the response, recovery and transition phases of a disaster as well as implementing disaster risk reduction in the countries.
- The Global Report on Disaster Risk reduction should be adapted to reflect the issues faced at the regional level.

Rationale for CRMI Phase II

The CRMI Phase I has been funded through the UNDP's Bureau for Crisis Prevention and recovery (BCPR) and Regional Bureau for Latin America and the Caribbean. This funding assisted in establishing the CRMI and laying the foundation for a consolidated and consistent approach to Disaster Risk Reduction in the Caribbean. A critical component of the CRMI approach has been to build partnerships with other agencies and donors as well as in making the linkages with existing initiatives. The Government of Japan through the Japanese International Cooperation Agency, has invested in regional disaster management initiatives through the Caribbean Disaster Emergency Response Agency (CDERA), most notably the Caribbean Disaster Management Project (CADM). This proposal seeks to build on the investment made by the respective institutions and find synergies between the respective investments in further elaborating a sustainable approach to DRR in the Caribbean.

In addition to building on lessons learned, the proposal will promote the lessons and experiences across the three main linguistic communities of the Caribbean. Finally, the proposal also seeks to access the extensive expertise and experience existing in the Caribbean and among the various linguistic communities.

Section B: Strategy for use of UNDP Resources

The proposed project extension will also build on the CRMI activities currently under implementation since March 2004. These activities illustrate the necessity and timeliness of this proposal. Support has been provided to the University of the West Indies (UWI) campus in Barbados for a Masters of Environment program. This support will continue in the second phase.

Following the 2004 hurricane season and the impacts realized in several of the Caribbean islands as well as the flooding seen in Guyana in 2005, it has become clear that there was a need to build capacity in post disaster recovery within the region. The BCPR and DMTP coordinated an event in Barbados in August/September 2005. This activity was successful as representatives from

Caribbean country Offices, UNVs and regional professionals participated. Phase II seeks to replicate this training in both English and Spanish each year of the initiative.

Under the CRMI, the UNDP is collaborating with the Mainstreaming for Adaptation to Climate Change (MACC) project in the implementation of a vulnerability and capacity assessment (VCA) initiative in St Lucia and probably at least one other country. The VCA will incorporate physical, social, environmental and economic vulnerabilities across differing scales (community and national) and a changing climate. This activity has also sought collaboration with a number of key stakeholders at both the national and regional levels. The second phase of the CRMI will support building on the outcomes of this activity in cooperation with other partners where possible. This collaboration is expected to take the form of community based initiatives that emanate from the VCAs. This initiative along with the support to the UWI program will see a continued investment climate change adaptation and linkages to disaster risk reduction initiatives.

A major activity scheduled is the development of a Regional Reducing Disaster Risk report. This activity will require the adaptation of the methodology used in the preparation of the Global Report; identifying and agreeing on key indicators; and building consensus and collaboration on the preparation of the report. The report should address the wider Caribbean and therefore will require the broadest participation. This activity is also expected to gain support from partners and to involve all Country offices as well as the BCPR.

The Horizontal Cooperation will allow the consolidation of activities under Phase I including documenting, sharing and adapting of lessons from within the region particularly at the level of local government or community organizations as an attempt to find concrete measures that reduce the vulnerability of populations at risk. The promoting of greater collaboration and coordination between the countries in the region by using local capabilities and expertise in the Caribbean countries will also be supported. The CRMI Network Facility will support the dissemination of these experiences.

The CRMI will continue to work towards to develop a framework for collaboration and even joint programming with other developmental partners in the region.

Section C: Immediate objectives, outputs, indicators and activities

Objective 1: Increased capacity for climate risk management

Output 1.1: Cadre of climate risk management personnel developed

Tertiary level capacity building: The second phase of the project will maintain support for ongoing activities and also facilitate greater coordination of regional tertiary institutions through the Small Islands Developing States (SIDS) University forum in the area of disaster risk reduction. The support to the UWI will extend the arrangements commenced under the CRMI to facilitate the Climate Change module of the Masters in Environmental Studies through student scholarships, enabling the use of visiting lecturers and curriculum revision to include disaster

risk reduction. All DRR related activities will be coordinated with the UWI Centre for Disaster Management based in Jamaica, including support to other UWI campuses.

Recovery Training: This element will support the development of a cadre of post-disaster recovery specialists in the Caribbean through the implementation of training activities and building on the 2005 activity developed by the BCPR and DMTP and also utilizing materials and to limited extent trainers from the BCPR. This recovery training course will include a Surge Capacity element and will be linked to the International Recovery Platform initiative. The focus of the training will be UNDP CO specialists, project consultants, local and international UNVs and local consultants. Four workshops, two in Spanish and two in English are scheduled over the period of the extension, most likely two in 2006 and two in 2007.

Output 1.2: Increased resources allocated for climate risk reduction projects

Horizontal cooperation in the framework of the CRMI: The horizontal cooperation between national governments in the Caribbean must be promoted through the UNDP offices through a systematic and comprehensive effort to pool and utilize the capacities, experiences and resources of developing countries. It has been recognized in many occasions that many countries in the Caribbean have achieved excellent results and experiences that can be shared and replicated with other countries. The project activity will extract lessons learned and adapt them to other countries at the level of local government or community organizations as an attempt to find concrete measures that reduce the vulnerability of populations at risk. The project will help in bridging knowledge and information gap in the region as well as promoting greater collaboration and coordination between the countries in the region by using local capabilities and expertise in the Caribbean countries. The activities carried out in the framework of the CRMI will commence in 2005 and will be systematized and disseminated through the CRMI Network Facility.

Objective 2: *Risk reduction and climate change adaptation integrated into development*

Output 2.1: Vulnerability characterization and disaster risk reduction advocacy tool developed for Caribbean

Caribbean Report on Reducing Disaster Risk: The Global Report on Reducing Disaster Risk: A Challenge for Development is an important document and a milestone in addressing DRR as an issue of sustainable development. One of the challenges faced in the global report however is finding suitable data and developing appropriate indices to serve small island states such as those in the Caribbean. In the Global Report, the principle index for disaster impact is mortality. However, in SIDS and the Caribbean context generally, the vulnerability of the entire country and economy to a single event demonstrates a level of vulnerability not seen in other contexts and therefore other socio-economic indices will have to be utilized.

Under this project extension a regional report for the Caribbean will be developed in association with key partners in the region including research, technical assistance and donor institutions. This activity will be vital in rigorously and empirically defining the vulnerability faced by the countries of the region and in building the necessary consensus at the community, national,

regional and international levels to prioritise DRR in the development process and related initiatives.

This activity will establish linkages with the Global Risk Identification Programme (GRIP) to gain from the technical expertise involved in developing the global report. It is also expected that the partnerships

Output 2.2: Risk reduction and climate change adaptation tools developed and applied

Integrated Vulnerability Assessment Methodologies applied: The UNDP is jointly implementing a vulnerability and capacity pilot assessment exercise in St Lucia and at least one other country in the OECS. Under this phase, the opportunity to develop one or more demonstration projects based on the recommendations of the VCAs will also be explored. This will be undertaken in partnership with other stakeholders and will focus on community based adaptation activities.

Objective 3: *Resource Mobilization to Support Disaster Risk reduction in the Caribbean*

Output 3.1: Expanded programs in partnership with international and regional stakeholders

Partnership building and resource mobilization will continue to be a focus of the extended CRMI and will be integral to all elements. The development of the Regional Reducing Disaster Risk is an example of this strategy. The specified budget will permit the initiation and development of the process, but partnerships at the international and regional level with a range of institutions will be critical to the effective and sustained development of this process.

Opportunities with international and regional funding agencies and partners will be explored including with the support of the Regional Bureau for Latin America and the Caribbean and the Bureau for Crisis Prevention and Reduction.

Section F: Management

Given the regional nature of the project, the project implementation modality will be Direct Execution and management of different components will be diffused throughout the region. The lead COs are Cuba and Barbados, however, other COs will have responsibility for implementing specific activities. The BCPR (DRU) will follow up project implementation and will provide technical oversight. The Barbados and Cuba Country Offices will have responsibility for overall coordination of project activities and will liaise with each Country Office responsible for the implementation of project activities. The CRMI Project Steering Committee (PSC) will consist of the Resident Representatives of UNDP COs of Barbados, Cuba, the Dominican Republic, Guyana, Jamaica and Trinidad and Tobago, as well as BCPR (DRU) and RBLAC. The PSC will meet bi-annually throughout the project cycle. Overall responsibility for the project, including financial responsibility, will lie with the UNDP Country Offices responsible for the implementation of project activities.

Project Results and Resources Framework

Outputs	Activities	Time frame (number of quarter – Q1 starts April 2006)							Inputs	Budget USD
		Q1	Q2	Q3	Q4	Q5	Q6	Q7		
1.0 Tertiary level capacity building	1.1 Four scholarships		20K			20K				40,000
	1.2 Visiting professors			10K		5K				15,000
	1.3 Support university prog on DRR					15K				15,000
									Sub-total	70,000
2.0 Recovery Training	3.1.4 training activities (English & Spanish)	30K			30K					60,000
	3.2 Materials	5K			5K					10,000
									Sub-total	70,000
3.0 Post Vulnerability and Capacity Assessments community projects (4 countries)	4.1 Review of results of the pilot VCAs				3K					3,000
	4.2 Development of proposals				5K					5,000
	4.3 Project implementation						50K		Partner SGP	50,000
									Sub-total	58,000
4.0 Caribbean Report on Reducing Disaster Risk	5.1 Develop TOR and select team	2K								2,000
	5.2 Development of indices		10K	15K						25,000
	5.3 Data collection & analysis			10K	20K	15K				45,000
	5.4 Stakeholder review					2K				2,000
	5.5 Report preparation					10K				20,000
	5.6 Finalization of report						10K		Wider Review	10,000
	5.7 Travel – for consultations, etc.		5K	2K		8K	3K			18,000
	5.7 Communication and public information	1K	2K	2K	2K	1K	1K			10,000
	5.6 Report Publication						18K			18,000
									Sub-total	150,000
5.0 Horizontal Cooperation	6.1 Systemization and translation of horizontal cooperation									50,000
6.0 Project Management									Sub-total	50,000
	7.1 Project Staffing	5K		15K	15K	15K	15K	15K		80,000
	7.2 Administration	2K		2K	2K	2K	2K	2K		12,000
									Sub-total	92,-000
									TOTAL	480,000