CARIBBEAN DEVELOPMENT BANK

STRATEGY AND OPERATIONAL GUIDELINES

FOR

NATURAL DISASTER MANAGEMENT

April 1998

(Revised September 2004 to include amendments approved at One Hundred and Eighty-Ninth Meeting of the Board of Directors, held on February 10, 2000 and One Hundred and Ninety-Fourth Meeting of the Board of Directors, held on December 7, 2000)
CURRENCY EQUIVALENT

Dollars ($) throughout refer to United States dollars (US$) unless otherwise stated.

ABBREVIATIONS

BDDC - British Development Division in the Caribbean
BMCs - Borrowing Member Countries
CARICOM - Caribbean Community
CARILEC - Caribbean Electric Utility Services Corporation
CBO - Community-Based Organisation
CDB - Caribbean Development Bank
CDERA - Caribbean Disaster Emergency Response Agency
CDMP - Caribbean Disaster Mitigation Project
CDRU - Caribbean Disaster Relief Unit
CIDA - Canadian International Development Agency
CUBIC - Caribbean Uniform Building Code
DHA - United Nations Department of Humanitarian Affairs
DPOs - Disaster Preparedness Offices
ECDG - Eastern Caribbean Donor Group
EIB - European Investment Bank
EU - European Union
GOAB - Government of Antigua and Barbuda
GOCI - Government of the Cayman Islands
IDA - International Development Association
IDB - Inter-American Development Bank
IFI - International Financial Institution
mn - million
NGO - Non-Governmental Organisation
PAHO/WHO - Pan American Health Organisation/World Health Organisation
PCDPP - Pan Caribbean Disaster Preparedness Project
PCDPPP - Pan Caribbean Disaster Preparedness and Prevention Project
UNDP - United Nations Development Programme
UNDRO - United Nations Disaster Relief Organisation (now DHA)
UNICEF - United National Children's Fund
USAID - United States Agency for International Development
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**PREFACE**

Attached is the Strategy and Operational Guidelines of the Caribbean Development Bank (CDB) applicable to assistance from CDB for Natural Disaster Management in its Borrowing Member Countries (BMCs).

The Strategy and Operational Guidelines will deal specifically with the management of natural disasters. However, it is recognised that BMCs are also vulnerable to man-made disasters.

The following CDB documents provide information on CDB's policies and procedures relevant to assistance by CDB for Natural Disaster Management:

- Lending Policies
- Environmental Policy
- Environmental Review Guidelines
- Guidelines for Procurement
- Procedures for the Selection and Engagement of Consultants by recipients of CDB Financing
1. INTRODUCTION

BACKGROUND

1.01 Disasters are extreme events which result in widespread social disruption, trauma, property damage and loss of life. In the Caribbean, a number of natural hazards have resulted in disasters. For the purpose of this paper, natural hazards include tropical storms, hurricanes, rain storms, droughts, earthquakes, and volcanoes. Over the period 1986-1996, the Region has been devastated by a number of disasters which have caused damage amounting to billions of dollars. Even more devastating is the human suffering and dislocation which extend long after the disaster event has occurred. Appendix 1.1 gives further details of natural hazards to which the Caribbean is vulnerable.

1.02 This paper outlines CDB’s strategy and provides operational guidelines for financial assistance to its BMCs for Natural Disaster Management. Specifically, the paper identifies the objectives, and principal focus of such assistance. It sets out the framework within which projects are to be designed for disaster preparedness, mitigation, and rehabilitation of social and economic infrastructure facilities. CDB’s Strategy and Operational Guidelines for Natural Disaster Management is consistent with its mission to contribute to the harmonious economic growth and development of its BMCs. In each of the BMCs, the primary responsibility for Natural Disaster Management rests with the Government. However, CDB recognises and will support the important role that non-Governmental organisations (NGOs) and community-based organisations (CBOs) can play in support of the activities of the Government.

1.03 This paper considers Natural Disaster Management under three components:

(a) institutional preparedness - to ensure the highest level of physical preparedness, as well as the speed and effectiveness of the response when a disaster actually strikes;

(b) mitigation - to increase the protection of buildings and infrastructure facilities against disasters; and

(c) post-disaster response - to rehabilitate social and economic infrastructure and to ensure the earliest reinstatement of economic activity without prejudicing the highest professional standards.

1.04 In response to the United Nations proclamation of the International Decade for Natural Disaster Reduction (1990-2000), Caribbean Governments have only recently become involved in Disaster Preparedness and Mitigation activities. CDB’s BMCs have been unprepared for natural disasters which hitherto have resulted in loss of life, extensive property damage and socio-economic disruption. Caribbean Governments have had to cope with these natural disasters amidst efforts to solve chronic economic problems of high unemployment and fiscal and balance of payment deficits which lead to declining standards of living for the majority of the population. When faced with a disaster, Caribbean Governments have been hard pressed to find the financial and other resources needed to rehabilitate social and economic infrastructure and restore full economic activity. Therefore, assistance has been sought from other sources such as the regional and wider international donor community.

It is recognised that disasters can also be caused by man's actions. Such examples include oil and other chemical spills, deforestation and hostilities.
DIRECT ASSISTANCE FROM CDB

1.05 In December 1974, in response to a disaster in Antigua and Barbuda, CDB made its first loan for the rehabilitation of houses damaged by an earthquake. Up to December 31, 1997, CDB had made 14 loans for disaster rehabilitation, amounting to some $50.0 mn, to 8 of its BMCs. The majority of these loans was made for the rehabilitation of damage caused by hurricanes and floods. Of this total, the equivalent of $38.8 mn was loaned for the rehabilitation of damage caused by seven hurricanes and $10.7 mn for the rehabilitation of infrastructure damage by floods. CDB has also provided $0.5 mn to the Government of St. Vincent and the Grenadines for the rehabilitation of the Banana Industry in the island of St. Vincent following the eruption of the La Soufriere Volcano in 1979. In addition, assistance is being provided to Montserrat for emergency settlement as a response to social dislocation due to volcanic activity in that island.

1.06 In respect of disaster preparedness, in January 1982, CDB made a grant to the Caribbean Community (CARICOM) for the preparation of a Caribbean Uniform Building Code (CUBIC). Completed in 1986, CUBIC is a five-part document covering areas of structural design and occupancy, fire safety and public health requirements; services, equipment and systems; and small buildings and prefabricated construction. CUBIC has been formally accepted by the CARICOM Council of Ministers of Health which sponsored the project. To date, only three BMCs have utilised CUBIC to develop their own Building Codes.

ASSISTANCE FROM OTHER AGENCIES

1.07 The Region has accessed financial assistance from both bilateral and multilateral funding agencies, including the United States Agency for International Development (USAID), the British Development Division in the Caribbean (BDDC), the World Bank, the Canadian International Development Agency (CIDA), the European Union (EU), the Inter-American Development Bank (IDB) and various agencies of the United Nations.

REGIONAL NATURAL DISASTER MANAGEMENT INITIATIVE

1.08 The Pan-Caribbean Disaster Preparedness Project (PCDPP) was established in 1981 to improve national and regional Disaster Management in the Caribbean. With headquarters in Antigua, it was launched jointly by the United Nations Disaster Relief Organisation (UNDRO) now the United Nations Department of Humanitarian Affairs (DHA), CARICOM, Pan American Health Organisation/World Health Organisation (PAHO/WHO), and the League of Red Cross Societies (Red Cross). PCDPP was supported by bilateral donors from Canada, the United States, the United Kingdom, and the European Economic Community. Although it was conceived as a short-term, 18-month project, focussed solely on disaster preparedness, the PCDPP operated for almost 10 years. In 1989, when the project extended its work to the prevention of disasters, its acronym was lengthened to the Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) to accommodate the term "prevention". PCDPPP has also led to the creation of disaster preparedness offices in several BMCs, e.g. the Central Emergency Relief Organisation in Barbados, the National Emergency Management Agency in Trinidad and Tobago and the Office of Disaster Preparedness and Emergency Management in Jamaica.

1.09 Recognising the need to institutionalise the work started by the PCDPPP, in 1991 the Heads of Government of CARICOM established a regional agency to coordinate disaster management activities. The Caribbean Disaster Emergency Response Agency (CDERA) was formally established in September 1991 with its headquarters in Barbados. Its main objectives are to:

(a) provide a coordinated emergency relief to any affected participating state;
(b) provide reliable information to governmental organisations and NOGs and donors regarding the effects of a disaster;
(c) mobilise and coordinate the supply and delivery of disaster relief to an affected country;
(d) mitigate or eliminate the immediate consequences of natural disasters; and
(e) promote and establish sustainable disaster response capabilities among countries.

1.10 Recognising the need for coordination of the response efforts in the aftermath of hurricane Hugo in 1989, which caused extensive damage to a number of islands in the Eastern Caribbean, the Eastern Caribbean Donor Group (ECDG) was formed. Donor agencies that are members of the group include BDDC, CIDA, CDB, EU, PAHO, United Nations Children's Fund (UNICEF), United Nations Development Programme (UNDP) and USAID. Two response organisations, CDERA and the Regional Security System (RSS), are members of ECDG while IDB and the Organisation of America States (OAS) are support organisations. UNDP is the lead organisation of ECDG.

INSURANCE

1.11 In the past, insurance coverage against natural disasters was readily available for social and economic infrastructure. However, within recent years, the price of such insurance coverage has become volatile and, at times, so expensive that coverage has been reduced with the result that a substantial portion of the region's social and economic infrastructure is either without coverage or under-insured. The CARICOM Secretariat, World Bank, OAS and CDB, together with representatives of the Caribbean's insurance industry, have formed an ad hoc group to:

(a) develop mechanisms for improving the institutional capacity of agencies responsible for regulating the insurance industry;
(b) explore the feasibility of regional insurance/reinsurance; and
(c) implement measures to mitigate against damage from natural disasters, including building retrofitting, enforcement of codes, and geographic hazard mapping.

While this initiative is being pursued, some organisations, in particular those involved in power generation and distribution, have embarked on self-insurance schemes in order to provide some level of coverage. These organisations have also established lines of credit with commercial banks to provide loans in the event that catastrophic losses are greater than funds available under the self-insurance scheme. The banana industries of the four Windward Islands (Dominica, Grenada, St. Lucia and St. Vincent and the Grenadines) provide their own crop insurance coverage under the Windward Islands Crop Insurance (1988) Limited.
2. NATURAL DISASTER MANAGEMENT

SCOPE OF CDB'S DISASTER PREPAREDNESS AND MITIGATION ACTIVITIES

2.01 The establishment of mechanisms for disaster preparedness and mitigation could reduce the loss of life, physical and economic damage, and shorten the recovery period following a disaster. CDB's participation in disaster preparedness has been limited to funding the preparation of CUBIC, membership in the ECDG for Disaster Management, assistance for, and the attendance of its staff at several relevant workshops and seminars arising from PCDPPP. CDB is also collaborating with USAID and OAS in the implementation of the Caribbean Disaster Mitigation Project (CDMP). To date, CDB has not financed a specific disaster mitigation project.

SCOPE OF CDB'S POST-DISASTER ASSISTANCE ACTIVITIES

2.02 CDB has held the view that immediate relief activities including search and rescue, evacuation, food and water distribution, and emergency health care are best carried out by local groups, the Government concerned, bilateral relief programmes, NGOs and specialised organisations, such as the Red Cross, the DHA and the regional organisations, CDERA and the Caribbean Disaster Relief Unit. In order to assist in the transition between the relief and rehabilitation phases and to get an early perspective on the scope of the required rehabilitation effort, CDB has generally assigned staff to participate in meetings organised by disaster aid coordinating agencies.

2.03 The focus of CDB's post-disaster assistance has been primarily on the rehabilitation of social and economic infrastructure to facilitate early restoration of social and economic activities in the affected country. Consistent with this objective, the scope of the sub-projects financed by CDB included the rehabilitation of:

(a) sections of main, secondary and agricultural feeder roads, bridges and culverts and other drainage structures;
(b) water supply systems including intakes, water treatment plants and transmission and distribution mains;
(c) sections of railway systems;
(d) ports and sea defence structures; and
(e) banana cultivations.

Appendix 2.1 gives a list of disaster rehabilitation projects financed by CDB with a summary of their implementation performance.
LESSONS LEARNT AND PROSPECTS FOR A NEW STRATEGY

2.04 A review of CDB’s current procedures for disaster assistance and the implementation performance of relevant projects financed by CDB indicates the following key issues:

(a) low level of interest in its BMCs for disaster preparedness and mitigation activities, in particular, the enactment and enforcement of appropriate legislation and building codes, and the undertaking of disaster mitigation projects;

(b) absence of tangible assistance from CDB during the emergency relief and initial response phases following a disaster;

(c) long delays between the approval of funds and implementation of rehabilitation activities;

(d) low utilisation of CDB funds because borrowers were able to access financing at more attractive terms than those offered by CDB; and

(e) application of policies and procedures which are not tailored to meet the unique requirements of disaster rehabilitation projects. These include:

(i) a low limit on retroactive financing which is currently set at 20% of the loan funds;

(ii) limited procurement options, notwithstanding the application of specific waivers to CDB’s Guidelines for Procurement in previous projects for disaster rehabilitation; and

(iii) inflexibility in the scope of work approved in loan agreements.

2.05 In view of the foregoing, CDB proposes to:

(a) redefine the objectives of its funding; and

(b) update its relevant operational policies and procedures.

OBJECTIVE OF ASSISTANCE

2.06 Having regard to its own expertise, and bearing in mind the capabilities of regional and extra-regional donor and relief agencies, CDB will adopt a strategy to achieve the objectives of:

(a) an improvement of the capacity of BMCs in Natural Disaster Management, in particular, strengthening of their institutional capacity to plan and manage rehabilitation programmes, and institute mitigation measures;

(b) an increase in its funding activities for natural disaster preparedness and mitigation;

(c) an immediate response to the natural disaster events;

(d) an early re-establishment of economic activity in the affected country;
(e) a coordinated approach amongst donor agencies towards the provision of assistance to its BMCs;

(f) collaboration with NGOs and CBOs in the execution of Natural Disaster Management projects, particularly where the NGO or CBO has demonstrated the capacity and competence to undertake the proposed activities; and

(g) incorporation of natural disaster mitigation issues into project design as an extension to environmental impact assessment.

OPERATIONAL GUIDELINES

2.07 The Operational Guidelines for Natural Disaster Management are set out at Annex 1 hereto.
NATURAL HAZARDS IN THE CARIBBEAN

TROPICAL STORMS

1. The Caribbean Region is located in the North Atlantic Ocean, one of the six main tropical areas where storms with low atmospheric pressure at the centre may develop each year. These storms are classified on the basis of the average speed of the wind near the centre of the system as follows:

<table>
<thead>
<tr>
<th>Sustained Wind Speed</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 61 kilometres per hour (km/hr)</td>
<td>Tropical Depression</td>
</tr>
<tr>
<td>[39 miles per hour (mph)]</td>
<td></td>
</tr>
<tr>
<td>62 km/hr (39 mph) to 118 km/hr (73 mph)</td>
<td>Tropical Storm</td>
</tr>
<tr>
<td>Greater than 119 km/hr (73 mph)</td>
<td>Hurricane</td>
</tr>
</tbody>
</table>

2. A mature hurricane may have a diameter ranging from 150 to 1,000 km (93 to 621 miles) of revolving anti-clockwise winds. A unique feature of a hurricane is its eye where there is very little wind, and as it passes over a point, there is a dramatic reversal of the wind direction. The Saffir/Simpson scale is used to categorise hurricanes based on their wind speed and damage potential as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Wind Speed</th>
<th>Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>km/hr</td>
<td>mph</td>
</tr>
<tr>
<td>HC1</td>
<td>119-151</td>
<td>74-95</td>
</tr>
<tr>
<td>HC2</td>
<td>152-176</td>
<td>96-110</td>
</tr>
<tr>
<td>HC3</td>
<td>177-209</td>
<td>111-130</td>
</tr>
<tr>
<td>HC4</td>
<td>210-248</td>
<td>131-155</td>
</tr>
<tr>
<td>HC5</td>
<td>&gt;248</td>
<td>&gt;155</td>
</tr>
</tbody>
</table>

The destructive potential of a storm is due to the high wind speeds and accompanying torrential rains which produce flooding and storm surges along coastlines.

3. The occurrence of storms in the Caribbean has been widely documented over the last five hundred years. Over that period, it is estimated that there has been an average of four hurricanes every year. Relatively few of these hurricanes make landfall.
**FLOODS**

4. In the Caribbean, floods can be the result of either short duration, events of high intensity producing runoff in excess of the capacity of drainage channels, or long duration events of low to moderate intensity, where the soil becomes saturated and most of the rainfall results in runoff. Many of these extreme rainfall events have been associated with the passage of tropical depressions, waves or storms and not, as might be expected, hurricanes.

5. Urban areas in the Caribbean are particularly vulnerable to flooding due to inadequate capacity of drainage structures; changes to ecosystem through the replacement of natural and absorptive soil cover with concrete; and deforestation of hillsides, which has the effect of increasing the quantity and rate of runoff, and through soil erosion and the silting up of drainage channels.

**EARTHQUAKE**

6. An earthquake is a sudden motion of the ground produced by the abrupt displacement of rock masses. Most earthquakes result from the movement of one rock mass past another in response to tectonic forces. The focus is the point where the earthquake's motion starts, and the epicentre is the point on the earth's surface (which could be underwater) that is directly above the focus.

7. Earthquakes result in ground shaking, differential ground settlement, soil liquefaction, landslides or mudslides, permanent ground displacement along fault lines and floods from tsunamis. The effects of an earthquake can be extensive loss of life, damage to buildings, dam failures, fires and pollution from damaged industrial plants. The Richter scale is commonly used to describe an earthquake's magnitude and the Modified Mercalli Intensity Scale, the intensity at a particular place on a scale from I to XII.

**VOLCANOES**

8. A volcano is a breach in the earth's crust through which molten rock or magma flows. Where the breach is in the form of a pipe-like opening on the surface, it is referred to as a conical volcano, of the central-vent type. This is the typical form of volcano. Volcanic eruptions vary from the quiet to the violent types. A central-vent volcano erupts in the form of lava flow, or the ejection of ash and dust formed from the blobs of lava blown apart by expanding volcanic gases as the magma nears the surface. The collective term for this ejected material is pyroclastic rock.

9. The return period (time between each event) for volcanic events could be exceedingly long, at times as long as 10,000 years. Within recent times, La Soufriere in St. Vincent and Langs Soufriere in Montserrat have been the most active.

**DROUGHT**

10. Drought is an extended period of moisture deficiency which is below the normal climatic cycle for a specific area. Drought is a 'slow-onset' disaster. Generally, in the Caribbean, droughts are classified as partial, normal, and severe for return periods of 1 in 5, 1 in 10 and 1 in 50 years, respectively.
11. Droughts have the potential of depleting natural resources, causing widespread brush and forest fires, decimating livestock and devastating crops.
<table>
<thead>
<tr>
<th>Country</th>
<th>Project Title</th>
<th>Borrower</th>
<th>Loan No.</th>
<th>Approval Date</th>
<th>Date of Agreement</th>
<th>Conditions Precedent Satisfied</th>
<th>Actual FDD (US$'000)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG</td>
<td>Hurricane Damage Rehab.</td>
<td>Gov’t</td>
<td>05/SFR-AG</td>
<td>07-Dec-95</td>
<td>05-Mar-96</td>
<td>03-Feb-97</td>
<td>1,269</td>
<td>Under implementation.</td>
</tr>
<tr>
<td>AN</td>
<td>Housing Rehabilitation</td>
<td>Gov’t</td>
<td>01/SFR-OR-AN</td>
<td>29/30-Jun-74</td>
<td>29-Apr-75</td>
<td>-</td>
<td>370</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>BVI</td>
<td>Hurricane Rehabilitation</td>
<td>DBVI</td>
<td>06/SFR-OR-BVI</td>
<td>07-Dec-89</td>
<td>09-Mar-90</td>
<td>14-Aug-90</td>
<td>3,599</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>DO</td>
<td>Hurricane Rehabilitation</td>
<td>Gov’t</td>
<td>25/SFR-DO</td>
<td>18-Dec-80</td>
<td>02-Feb-81</td>
<td>25-Sep-81</td>
<td>990</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>DO</td>
<td>Emergency Banana Rehabilitation</td>
<td>Gov’t</td>
<td>50/SFR-DO</td>
<td>06-Dec-90</td>
<td>08-Mar-91</td>
<td>07-Jun-91</td>
<td>1,590</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>JA</td>
<td>Flood Rehabilitation</td>
<td>Gov’t</td>
<td>1/SFR-OR-J</td>
<td>23-Aug-79</td>
<td>14-Dec-79</td>
<td>02-Jan-81</td>
<td>5,714</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>JA</td>
<td>Hurricane Rehabilitation</td>
<td>Gov’t</td>
<td>03/SFR-OR-J</td>
<td>18-Dec-80</td>
<td>23-Apr-81</td>
<td>11-May-81</td>
<td>4,996</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>JA</td>
<td>Second Hurricane Rehabilitation</td>
<td>Gov’t</td>
<td>05/SFR-J</td>
<td>08-Dec-88</td>
<td>23-Jan-89</td>
<td>11-Aug-89</td>
<td>15,000</td>
<td>Under implementation.</td>
</tr>
<tr>
<td>SKN</td>
<td>Hurricane Rehabilitation</td>
<td>Gov’t</td>
<td>28/SFR-STK</td>
<td>07-Dec-89</td>
<td>10-Jan-90</td>
<td>06-Sep-90</td>
<td>2,203</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>SL</td>
<td>Storm Rehabilitation</td>
<td>Gov’t</td>
<td>45/SFR-STL</td>
<td>08-Dec-94</td>
<td>16-Jan-95</td>
<td>02-Feb-95</td>
<td>5,000</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>SVG</td>
<td>Banana Rehabilitation</td>
<td>Gov’t</td>
<td>44/SFR-ST.V</td>
<td>08-Sept-86</td>
<td>30-Jan-87</td>
<td>30-Mar-87</td>
<td>978</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>SVG</td>
<td>Restoration of Storm and Flood Damage</td>
<td>Gov’t</td>
<td>43/SFR-ST.V</td>
<td>11-Dec-86</td>
<td>28-Jan-87</td>
<td>25-Feb-87</td>
<td>463</td>
<td>Loan fully disbursed.</td>
</tr>
<tr>
<td>SVG</td>
<td>Emergency Banana Rehabilitation</td>
<td>Gov’t</td>
<td>47/SFR-ST.V</td>
<td>14-Dec-87</td>
<td>05-Aug-88</td>
<td>26-Oct-88</td>
<td>1,042</td>
<td>Loan fully disbursed.</td>
</tr>
</tbody>
</table>
OPERATIONAL GUIDELINES FOR
NATURAL DISASTER MANAGEMENT

NATURAL DISASTER PREPAREDNESS

Preparation of Physical Standards

1. Recognising the need for each country susceptible to disasters to have appropriate construction standards, CDB will continue to support and be willing to finance the adaptation of CUBIC to the conditions peculiar to each of its BMCs. CDB will also promote the enactment and obligatory application of such standards as codes of practice. All Natural Disaster Management projects will consider and address, as appropriate, issues related to the development, maintenance and application of construction standards and codes.

Institutional Capacity Building

2. BMCs must have the institutional capacity for inspection and for the enforcement of construction standards and codes. Therefore, CDB will finance the costs of training and other aspects of institutional capacity building in this regard. CDB will continue to support the establishment of disaster preparedness offices (DPOs) in its BMCs. In its policy dialogue with its BMCs, CDB will promote:

(a) the development of the institutional capacity of DPOs;

(b) the preparation of physical development plans which incorporate hazard maps; and

(c) the development of contingency plans that include the best mitigation practice for the rehabilitation of social and economic infrastructure facilities.

3. With respect to the insurance industry in its BMCs, CDB will cooperate with other International Financial Institutions (IFIs) and support other initiatives aimed at augmenting the level of catastrophic coverage, including the establishment of a regional catastrophic emergency fund, a reinsurance pool, self-insurance or other options. CDB will also support the strengthening of the institutional capacity of the Region's insurance supervisory authorities.

Natural Disaster Preparedness Activities at CDB

4. CDB will create a register of consultants for damage assessment, remedial design, and prioritisation, and supervision of disaster rehabilitation projects. CDB will also prepare standard Terms of Reference and model contracts for these tasks. Details of the purposes for which such consultants may be used are set out at sub-paragraph 14 (c) (ii) and paragraphs 22 and 23. CDB will also create and maintain a register of contractors for various rehabilitation services and suppliers for various categories of goods and services. Details of the purposes for which such contractors and suppliers may be used are set out at sub-paragraph 14 (b) and 22 (b). Consultants and Contractors will be registered on the basis of established criteria set for capability and experience.
NATURAL DISASTER MITIGATION

Retrofitting

5. CDB will finance projects for the retrofitting of public buildings and major economic infrastructural facilities. Such works will only be eligible for consideration as retrofitting if the physical condition of the facility renders it incapable of withstanding a natural hazard. The cost of assistance in the preparation of plans for such retrofitting will be an eligible component for CDB lending.

6. Project preparation will examine the current state of social and economic infrastructure such as schools, hospitals, port and airport installations, utilities, warehouses, hurricane shelters and Government buildings. The review will also include those facilities which may have been repaired after previous disasters, but which still need to be upgraded to acceptable standards. There will be provision for training for specific types of retrofitting and inspection, and for the development of a preventive maintenance programme. Standards and Codes referred to at paragraph 1 will cover new works as well as retrofitting.

Board Documentation

7. A disaster mitigation project document presented to CDB’s Board of Directors will be in the format of a Staff Report, and not a standard Appraisal Report. This Report will contain all relevant information for the full comprehension and assessment of the proposed project. Details of the format of the Staff Report are presented at Attachment 1 to this Annex.

Terms of Funding

8. The attainment of preparedness targets, including those for mitigation, will be an element in determining the terms under which rehabilitation loans will be accessed. Thus, the best terms, in respect of interest rate, repayment period and percentage counterpart contribution, will depend on the attainment of targets to be certified on an annual basis by CDB.

Procurement (Mitigation and Preparedness)

9. Procurement of works, goods and services for disaster preparedness and mitigation projects, unless otherwise approved by CDB’s Board of Directors, will follow CDB’s Guidelines for Procurement of Goods and Services and CDB’s Procedures for the Selection and Engagement of Consultants. Where CDB proposes to use resources from lines of credit provided by other IFIs, e.g. World Bank, IDB, and European Investment Bank (EIB), special procurement arrangements will be negotiated with those IFIs.

POST-NATURAL DISASTER RESPONSE

10. Where CDB is satisfied that a disaster exists, based on its assessment of the extent of economic and social dislocation in an affected country, CDB proposes to offer financial and other assistance for each of the ensuing phases of emergency relief, immediate response and rehabilitation.
Emergency Relief

11. Immediately after a disaster, CDB will assign its staff to participate in meetings organised by disaster relief and coordinating agencies. The President will have the authority to approve a grant to CDERA to assist that organisation’s efforts in undertaking rapid initial assessment, and in providing emergency relief to the affected BMC [with the exception of the Cayman Islands (CI) which is not a member of CDERA]. In the case of CI, the grant will be made to the Government of the Cayman Islands (GOCI). The grant will be in an amount not exceeding $100,000 per disaster event.

Procurement

12. Goods and services are eligible for procurement from the proceeds of the grant. CDB’s Guidelines for Procurement shall not apply in the procurement of such goods and services. Temporary remediation shall be identified as such, its appropriateness justified, and its timely upgrading provided for in the subsequent rehabilitation phase. Where CDB proposes to use resources from lines of credit provided by other IFIs, special procurement arrangements will be negotiated with those IFIs.

Immediate Response

13. CDB will endeavour to make the earliest contact with the Government of the affected country through an initial letter indicating:

   (a) that a grant would be made to CDERA or GOCI;

   (b) CDB’s willingness to consider further financial assistance for the recovery effort; and

   (c) that the Government should submit an application for such financial assistance.

14. On receipt of an application for financial assistance, the President will be authorised to approve an emergency loan of an amount not exceeding $500,000, at a concessionary rate, to the Government to meet its expenses for the clearing and cleaning of affected areas and for emergency restoration of services. The following special procedures will govern this facility.

   (a) Board Documentation

       CDB staff will prepare a brief paper recommending approval of the emergency loan by the President. Preparation of this paper will, in most instances, be a desk exercise and will cover only the nature of the disaster event and the most reliable estimates of damage caused to the various sectors of the economy.

   (b) Procurement

       for works not undertaken by direct labour, contractors and suppliers may be chosen from the register of contractors and suppliers mentioned at paragraph 4. Special procurement arrangements will be negotiated with IFIs, where CDB proposes to use resources from lines of credit provided by those IFIs.
(c) Loan Disbursement

CDB will make disbursements to the Government on the basis of a certificate from a consultant, engaged by CDB after consultation with the Government, showing that the goods and/or services were utilised for the approved operations.

15. For disaster events of long duration, for example, prolonged volcanic activity or drought, the proceeds of an emergency loan could be used for an operation such as the relocation of the affected population.\[1\]

Rehabilitation

Damage Assessment, Recovery Strategy and Rehabilitation Programme

16. In the transition between the initial response and rehabilitation phases, CDB staff will participate in a detailed assessment of the social and economic impact and sectoral damage caused by the disaster. An effective recovery strategy and a programme of rehabilitation works will also be developed. Factors which would be considered in the formulation of the recovery strategy include:

(a) the quickest possible alleviation of human suffering;
(b) the severity of the impact of the disaster on the economic performance of the country, which may require the Government to modify its priorities and investment programmes, and the need for early re-establishment of economic activity;
(c) the achievement of the best match between resources required for rehabilitation and available resources, in particular, financial and manpower resources;
(d) the mitigation or removal of post-disaster threats to the affected population and early restoration of economic activity; and
(e) the commitment on the part of Government to restore normalcy to administrative, regulatory and cost recovery mechanisms at an early date.

17. The rehabilitation programme will be geared towards achieving the objectives of the recovery strategy. Since the rehabilitation programme is intended to address a situation of severe crisis, the focus will be on the rehabilitation of social and economic infrastructure and the restoration of key economic sectors to their pre-disaster operating levels. Rehabilitation methods should normally satisfy the best mitigation practice, unless a temporary solution is required for economic or humanitarian reasons.

\[1\] Relocation will be carried out under the general principle that those relocated will be no worse off after the relocation.
Project Design

18. The Government of the affected country and CDB will agree on those components of the rehabilitation programme which will comprise a rehabilitation project to be financed by CDB from the proceeds of a loan (the rehabilitation loan). Factors to be considered, *inter alia*, are:

   (a) CDB’s previous experience in dealing with the Government/Executing Agency, the expected level of effectiveness of project management and its likely impact on project implementation; and

   (b) CDB’s preference for priority attention to be given to sectors in which CDB is already involved, and has available expertise.

19. CDB will avoid the inclusion of conditions precedent to first disbursement of the loan which are burdensome and will incorporate loan conditions linked directly to rehabilitation rather than to long-term macro and socio-economic policies. CDB will also provide a retroactive financing facility for rehabilitation works undertaken or goods supplied during the transition period between the immediate response and rehabilitation phases. The amount of retroactive financing for eligible disaster rehabilitation expenditures will not normally exceed 30% of the rehabilitation loan.

20. A major rehabilitation project could utilise all uncommitted resources allocated to a country in CDB’s lending programme. In addition, CDB, in consultation with the relevant country, may decide to:

   (a) reallocate available balances under loans already approved to the country, provided that such reallocation is compatible with the requirements of the funding source;

   (b) restructure the lending programme for the country and, where feasible, allocate additional resources from other sources; and

   (c) examine its total lending programme in order to identify funds which could be reallocated from other countries.

As far as possible, CDB will use its Special Funds Resources to finance disaster rehabilitation projects. Where CDB proposes to use resources from lines of credit provided by other IFIs, special arrangements for the terms of the loan will be negotiated with those IFIs in accordance with this paper.
21. To allow for speedy processing, the document presented to the CDB’s Board of Directors will be a Staff Report, and not a standard Appraisal Report. The Staff Report will extensively cover:

(a) the impact of the disaster on the country’s population and economy and its recovery prospects;

(b) the occurrence of the disaster;

(c) an assessment of the borrower in the execution of the initial response phase and the use of the related CDB line of credit; and

(d) the rehabilitation programme.

The calculation of financial and economic Rates of Return as applicable for normal lending, will be omitted. Details of the format of the Staff Report are presented at Attachment 1 to this Annex.

22. Where requested, CDB will finance the engagement of consultants obtained from its register mentioned above at paragraph 4 to assist in the assessment and development of the recovery strategy and rehabilitation programme. CDB proposes to utilise more flexible procurement procedures for the undertaking of disaster rehabilitation projects. Accordingly, the following waiver of CDB’s Guidelines for Procurement shall apply:

(a) unless otherwise determined by CDB’s Board of Directors, works or goods estimated to cost less than the equivalent of US$3,000,000 may be procured by competitive shopping without being restricted to eligible countries; and

(b) all works to be financed under the retroactive financing facility mentioned at paragraph 19 may be executed by direct labour and petty contracts, or by registered contractors mentioned at paragraph 4. Also, goods may be supplied by registered suppliers mentioned at paragraph 4.

Where CDB proposes to use resources from lines of credit provided by other IFIs special procurement arrangements will be negotiated with those IFIs.

23. Consultants selected from the register of consultants mentioned at paragraph 4 may be used for the preparation of emergency designs and bid documents, the supervision of construction and supply contracts, and the certification of contractors'/suppliers' claims.
PRINCIPAL APPRAISAL CRITERION

The principal assessment criterion for disaster mitigation and rehabilitation projects will be a Least Cost Analysis approach to evaluate the options that would lead to the most equitable and cost-effective resource allocation.

REQUIRED DATA ELEMENTS

1. **Introduction**
   - Project Background and History
   - Macro-Economic Factors/Considerations
   - Sector Analysis
   - CDB's Contribution/Previous Lending (Sector)

2. **The Project**
   - Objectives/Rationale
   - Location and Site
   - Design/Alternatives/Technology/Least Cost Analysis
   - Project Description/Scope
   - Capital Cost and Project Financing/Commitments
   - Implementation Plan
   - Procurement
   - Disbursement
   - Operation/Production/Process Description
   - Project Management
   - Project Risk
   - Environment and Social Impact Analysis
   - Monitoring Indicators

3. **The Borrower and Guarantor/Executing Agency**
   - Legal Status/Capacity/General
   - Powers and Duties
   - Fiscal Performance

4. **Justification and Benefits**

5. **Terms and Conditions**
   - Loan Amount - CDB Financing
   - Repayment Terms
   - Conditions
   - Reports and Records