Document of the Inter-American Development Bank

**Barbados**

Contingent Loan for Natural Disaster Emergencies

**(BA-O0004)**

Operating Regulations

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| **Abbreviations** | |
| arl | Automatic Redirection List |
| ccf | Contingent Credit Facility for Natural Disaster Emergencies |
| CNDRMP | Comprehensive Natural Disaster Risk Management Program |
| DEM | Department of Emergency Management |
| deo | District Emergency Organizations |
| drm | Disaster Risk Management |
| drr | Disaster Risk Reduction |
| emac | Emergency Management Advisory Council |
| idb | Inter-American Development Bank |
| MFEI | Ministry of Finance, Economic Affairs, and Investment |
| nems | National Emergency Management System |
| neoc | National Emergency Operations Centre |

1. General Regulatory Framework
2. In addition to the stipulations established in the Loan Agreement, the execution and administration of this operation will be governed by: (i) the provisions set forth in document GN-2999-4, Contingent Credit Facility for Natural Disaster Emergencies (CCF); (ii) the operating guidelines of the CCF contained in document GN-2667-2; and (iii) the rules established in this Operating Regulations.
3. The specific provisions set forth in this Operating Regulations are consistent and in compliance with existing national legislation regarding emergency and disaster risk management and reflect the execution scheme established for the project. The relevant legal, normative and institutional framework of Barbados for the management of disasters and emergencies is mainly governed by the Emergency Management Act, Cap 160A of the Laws of Barbados, and the Emergency Powers Act, Cap. 161.
4. The Operating Regulations include the following three Annexes: I) Terms and Conditions of Coverage; II) Comprehensive Natural Disaster Risk Management Program (CNDRMP), and III) Automatic Redirection List.
5. Project Description
   1. The general objective of the project is to alleviate the impact that a severe or catastrophic natural disaster could have on the country’s public finances. The specific objective is to improve the financial risk management of natural disasters by increasing stable, cost-efficient, and fast-access financing to cover extraordinary public expenditures during emergencies caused by severe or catastrophic natural disasters.
   2. The proposed operation contemplates a single component of US$80 million to structure a stable and efficient ex ante financial coverage to afford, in a timely manner, any extraordinary expenses that could arise in emergencies caused by severe or catastrophic natural disasters. Potential beneficiaries are the entire population of Barbados, in general, and the affected population that receives emergency assistance under the proposed coverage, in particular.
   3. As an additionality, the project seeks to enhance the comprehensive disaster risk management of the country by fostering improvements in five main areas to be monitored through the CNDRMP (Annex II): (i) disaster risk management governance; (ii) risk identification; (iii) risk reduction; (iv) disaster preparedness; and (v) financial protection.
   4. The period during which the resources are available for requesting disbursements is five years, which can be extended for up to five additional years at the borrower’s request and at the Bank’s discretion.
   5. This loan will provide coverage for hurricanes and excess rainfall associated to cyclonic systems, based on the intensity and affected population criteria contractually agreed upon by the country and the Bank and detailed in the Terms and Conditions of Coverage (Annex I). The Terms and Conditions of Coverage include the characteristics of events eligible for coverage, as well as specific matters related to eligibility for disbursements and the methodology for calculating the maximum amount that may be disbursed, based on the intensity and percentage of the country’s population affected by each eligible event.
6. National Emergency Management System of Barbados
7. As the execution scheme established for this project is aligned with the country’s legal, regulatory, and institutional framework for emergency response, this section presents a summary of the most relevant elements of Barbados’ National Emergency Management System.
8. A. Legal and Regulatory Framework
9. The management of national emergencies is articulated in the Constitution of Barbados (Chapter III, section 25), especially concerning the declaration of a state of public emergency by the Governor General as a result of occurrence of natural disasters, infectious disease, or other calamities. The state of emergency could remain in force for a maximum of six months unless it is extended or revoked at any time by a majority of the member of the House of Assembly.
10. In terms of legal instruments, the Emergency Powers Act of 1939 set exceptional provisions for the protection of the population in cases of emergencies. In line the Constitution, the Act empowers the Governor General to declare a state of public emergency by proclamation and authorize the Cabinet to provide response activities, including the supply of basic goods and services.
11. The Emergency Management Act, Cap 160A of the Laws of Barbados is another main legal instrument, as it governs the overall response to emergencies caused by disasters. It provides for the effective organization and management of roles and responsibilities for dealing with such events, and created the two main institutions of the National Emergency Management System (NEMS): the Department of Emergency Management (DEM) and the Emergency Management Advisory Council (EMAC). The Act mandates the establishment of the Emergency Disaster Fund, and a National Emergency Operations Centre (NEOC), maintained and coordinated by the DEM. It also regulates the declaration of disaster, threatened disaster and hazard alert by the Governor General on the advice of the Prime Minister, thus complementing the Emergency Powers Act.
12. There are other instruments that contribute to the management of emergency response to disasters, even though they do not explicitly cover it. For example, the Health Services Act, Cap 44 of the Laws of Barbados of 1999 gives authority for maintaining sanitary conditions and preventing the spread of infectious diseases, whereas the Prevention of Floods Act of 1998 provides authority for the execution of works necessary to control floods and declaration of flood areas. Additionally, the Coastal Zone Management Act of 1998 provides for the effective management of Barbados’ coastal resources and their conservation and enhancement, including matters related to disaster risk reduction and recovery.
13. B. Institutional Framework
14. The NEMS is an overarching, multi-stakeholder mechanism coordinated by the DEM to facilitate emergency management at all levels (see Figure 1). It comprises five main group of stakeholders: (i) the DEM, which is responsible for coordinating all emergency management activities in the country; (ii) the EMAC and its 15 Standing Committees; (iii) the NEOC, a centralized platform to directs the response activities; (iv) 30 District Emergency Organizations (DEO) that organize the resources for response at the community level; and (v) international partners and the private sector. These stakeholders bring together human resource elements and technical expertise to ensure an effective response in time of crisis.
15. The DEM is the department, ascribed to the Ministry of Home Affairs, Information and Public Affairs, responsible for the development and implementation of the government’s general policy relating to emergency management and other disaster risk management priorities in Barbados. During emergencies, the DEM is charged with organizing response activities at all levels. It utilizes an integrated emergency management approach to make detailed planning for the possible impact of any hazard, and to mobilize all appropriate resources in response to an emergency.
16. The Director of DEM is mandated by Emergency Management Act, Cap 160A of the Laws of Barbados to prepare annually, for the approval of the Minister of Home Affairs, an Emergency Management Plan comprising of contingency arrangements under the DEM’s coordination for responding to the threat or aftermath of a disaster in Barbados, whether or not it is such as to prompt a declaration of emergency.
17. The EMAC, chaired by the Minister of Home Affairs, Information and Public Affairs and assisted by the DEM, is an advisory organ whose functions include recommendation of policies, programs and activities to enhance the government’s emergency management policy, and reviewing the work of its Standing Committees. The representatives of EMAC comprises of public sector stakeholders (mainly ministries), as well as private sector and non-governmental organization actors, such as Barbados Red Cross Society. Supporting the EMAC are 16 Standing Committees, responsible for planning for the emergency response both at the national and sector level. Their membership is organized by response functions: shelter management, evacuation, public utilities, damage assessment, road clearance, among others (see Figure 2). These standing committees are chaired by the technical heads of government agencies with responsibility for the execution of national disaster management policy and programs in their respective areas of expertise.
18. The NEOC is the centralized location from which the mobilization and coordination of response and resources is carried out in the event of an emergency or disaster. The NEOC is staffed by the technical heads/representatives of the appropriated agencies and structured to provide a 24-hour round the clock operation in the event of a disaster. Among its functions are: coordinating damage assessment and conducting needs analysis; prioritizing and directing response activities; coordinating initial rehabilitation activities; and communicating to the public the progress of the event, the need for evaluation or other precautions.
19. The DEOs are the volunteer arms of the NEMS, responsible for organizing and coordinating community resources for an effective response to an emergency or disaster. Their membership comes from the communities which they are intended to serve. There are 30 DEOs across the island, strategically within each of the 30 political constituencies. The DEOs work with the community to develop and mobilize disaster prevention and preparedness programs to reduce the impact of identified hazards such as flood, hurricane. The DEOs reach out to various groups within the community, including churches, service clubs, neighborhood watches and NGOs, and individuals. There is also close interaction with government agencies serving the communities, such as police and fire services.

**Figure 1: Barbados’ National Emergency Management System (NEMS)**

Source: Adapted from Country Document Disaster Risk Reduction: Barbados, 2014

**Figure 2: Emergency Management Advisory Council (EMAC) and its Standing Committees**

Emergency Management Advisory Council

(EMAC)

Standing Committees\*

Department of Emergency Management

(DEM)

District Emergency Organizations

(DEO)

Damage and Needs Assessment

Public Information and Education

Food and General Supplies

Health and First Aid Services

Emergency Transport

Public Utilities

Welfare Services

Road Clearance and Tree Trimming

Telecommunications

Shelter Management

Emergency Services

Emergency Housing and Rehabilitation

Committee on Coastal Hazards

Tourism Emergency Management

Hazard mitigation

\*Source: Adapted from Country Document Disaster Risk Reduction: Barbados, 2014. Subsequently the National Oil Spills Committee was added.

1. Operational Provisions
2. Executing Agency
3. The Ministry of Finance, Economic Affairs, and Investment (MFEI) is the Executing Agency, in close coordination with the DEM, which through the EMAC and its various standing committees coordinates with a variety of relevant stakeholders of the NEOC operations group to allocate and execute the contingent loan resources during emergencies. This group is usually comprised of security agencies, such as Barbados Defense Force, and ministries such as Ministry of Transport, Works and Water Resources and Ministry of Agriculture and Food Security (see Table 1), and are responsible for determining and presenting their needs and prioritized expenses to the MFEI for approval.
4. The MFEI will be responsible for: the overall coordination of the project; requesting the eligibility verification of an event; submitting the disbursement requests to the Bank; allocating in coordination with the DEM the loan resources to the relevant sector agencies involved in the emergency response; coordinating the fiduciary, procurement, monitoring and evaluation arrangements to safeguard the timely and adequate execution of resources; substantiating the use of loan resources to the Bank in accordance with the provisions established in the Loan Agreement and this Operating Regulations; and ensuring the compliance with the objectives of the project. Within the MFEI, these responsibilities will be undertaken by the Finance Division.

**Table 1: General representation within the NEOC Operations Group**

|  |  |
| --- | --- |
| **Representative** | **Function** |
| Department of Emergency Management | NEOC Director |
| Royal Barbados Police Force and Barbados Defence Force | Head of NEOC Operations and Security and Complementary Services |
| Barbados Fire Service | Search and rescue, fire |
| Emergency Medical Services | Health and medical response |
| Ministry of Agriculture and Food Security | Food and general supplies |
| Ministry of Education, Technological and Vocational Training | Shelters |
| Ministry of Transport, Works and Water Resources | Transport, road clearance |
| Public Utilities Committee | Coordination of public utilities functions |
| Ministry of Tourism and International Transport | Tourism emergency management |
| Ministry of Finance, Economic Affairs, and Investment | Resource allocation and funding |
| Ministry of Foreign Affairs and Foreign Trade | Foreign relations, liaison |
| Barbados Statistical Service | Damage assessment and needs analysis |
| Government Information Service | Public information |

1. Supervision and Administration
   1. Monitoring of progress of the Comprehensive Natural Disaster Risk Management Program (CNDRMP)
2. The CCF states that all borrowing member countries of the Bank are eligible to receive financing through the facility, provided that they have a CNDRMP in place to the Bank’s satisfaction, with the objective of promoting the effective formulation of a national policy on the comprehensive management of disaster risks, thereby strengthening the general governance framework, improving the identification and reduction of such risks, and enhancing disaster management as well as the financial management of disaster risks.
3. During the preparation of this operation, the project team assessed Barbados’ disaster risk management (DRM) policy and institutional framework. Based on this and discussions with the government, a CNDRMP has been developed and agreed with the government to the Bank’s satisfaction (see Annex II of the Operating Regulations). The CNDRMP includes medium-term goals and first-year milestones on DRM governance, risk identification, risk reduction, disaster preparedness and response, and financial risk protection, and will be monitored throughout the disbursement period of the loan.
4. To maintain the financing through the CCF, the country must maintain the execution of the CNDRMP to the Bank’s satisfaction by making progress towards the medium-term goals therein. To assess the successful execution of the CNDRMP, the Bank will perform annual evaluations to monitor if all the identified yearly milestones and activities are being executed satisfactorily. The first evaluation will be performed 12 months after the “general eligibility to request loan disbursements” has been granted to the borrower. During the evaluation, the Bank and the Government of Barbados will also discuss milestones for the following 12 months. This annual review process will be repeated until the loan drawdown period expires.
5. If as a result of any of these evaluations the Bank finds that the CNDRMP is not progressing satisfactorily, the Borrower will be notified by the Bank of the actions that require implementation within a period of 90 calendar days from the day of the issuance of the notification to maintain eligibility for disbursement of Facility Loan resources. Once this timeframe passes, if the Bank should find that the recommended remedial actions were not completely and properly taken, it may, upon formal notification to the Borrower, suspend the Borrower’s eligibility for disbursements until the shortcomings are properly remediated.
6. Notwithstanding the above, once eligibility for disbursement of a Facility Loan has been granted, it would remain eligible for the duration of the period established in the contract, unless a formal notification of eligibility suspension is delivered by the Bank to the Borrower.
   1. Monitoring and periodic updates of the Automatic Redirection List (ARL)
7. All disbursements made by this contingent loan will be charged to the Bank’s Ordinary Capital resources. The funds may either come from the regular lending program, the Automatic Redirection List (ARL), or a combination of these two options.
8. The ARL is an alternative funding scheme exclusive of the CCF that includes the Bank’s current investment loans with the country that have balances available for disbursements, which could be automatically redirected should an eligible event occur (GN-2999-4, ¶4.12).
9. According to the stipulations established in the Loan Contract, the ARL will be periodically updated by the Bank, in coordination with the Borrower, through the Executing Agency, to include new investment loan operations to Barbados approved by the Bank. The Bank will include in the ARL all the investment loans subscribed with the country as soon as they have been declared eligible for the first disbursement. The current ARL is included as Annex III of this Operating Regulations.
10. Disbursements of Resources
    1. Eligibility Verification Request for an event
11. Upon the occurrence of an event that could be considered eligible for disbursement of loan proceeds, the Borrower, through the Executing Agency, the Ministry of Finance, Economic Affairs and Investment, must submit to the Bank a Request for Verification of Eligibility of the event, accompanied by an Incident Report of the event.
12. The Bank will apply the calculation methodology described in the Terms and Conditions of the Coverage (Annex I to this document) to assess the event in question and will produce an Eligibility Verification Report to be sent to the MFEI as soon as possible. If the assessment indicates that the event is eligible for disbursement of loan resources, the Bank will include in the Eligibility Verification Report the maximum disbursement amount corresponding to said event and will request the borrower to confirm in writing its intention to disburse, specifying the amount and source of resources (see ¶a).
    1. Disbursement Request
13. The Borrower must formally submit to the Bank a disbursement request under the modality of Advance of Funds within a maximum period of 90 calendar days immediately after the onset of the eligible event, taking into consideration the maximum disbursement amount indicated in the Eligibility Verification Report and the availability of loan resources at the time. The disbursement request must include:
    * 1. The amount of the required disbursement, specifying the desired source(s) of resources: (i) new resources from the annual allocation for approvals and disbursements of the country (regular program of loans of the country with the IDB); and/or (ii) undisbursed balances of current IDB loans that are included in the ARL and eligible for disbursement at the date of the request.
      2. The name and number of the special bank account assigned for the disbursement of resources.
14. **Disbursement Methods.** The Borrower may request the disbursement of the resources of the CCF loan by the following methods:
    1. Advances of Funds to finance future eligible expenses up to a limit of 35% of total approved coverage.
    2. Reimbursements of expenses to the Borrower for payments made with its own resources for eligible expenses incurred since the occurrence of the eligible event, up to 100% of the total approved coverage.
    3. Direct Payments made by the Bank to third parties on behalf of and at the request of the Borrower, for amounts agreed between the Borrower and the Bank. This modality will be restricted to transactions that are substantial in nature.

**Table 2: Main characteristics of the disbursement methods**

| **Characteristics** | **Advance of Funds** | **Reimbursement** | **Direct Payment** |
| --- | --- | --- | --- |
| **Limit per Disbursement** | Up to 35% of total approved coverage | Only for substantial amounts, up to 100% of the expenditure | Only for substantial amounts |
| **Pre-Disbursement Requirements** | 1. Designation of an accounting subaccount acceptable to the Bank. 2. Projection of priority expenses. 3. For subsequent disbursements in advance, at least 70% of the total accumulated balances pending justification must be accountable. | 1. Report of incurred expenses. 2. Written declaration of expenses financed exclusively with own resources. | Agreement between Borrower and Bank on the justification, amount, date of direct payment and supporting information required in each request. |
| **Hiring of audit firm** | Hiring of auditing firm no later than 45 days after the 1st disbursement. | Hiring of auditing firm no later than 45 days after the 1st disbursement. | Hiring of auditing firm no later than 45 days after the 1st disbursement. |

1. **Advance of Funds.** The Borrower may request up to 35% of the total coverage approved as funds in advance, in each disbursement request. This method will be subject to the following operating rules:
   1. **Account Designation.** To manage the funds in advance, the Bank and the Borrower must agree, prior to the request, on the designation of an accounting subaccount within the Treasury’s Single Account of the Country or an equivalent account that will allow the management and identification of the use of the funds.
   2. **Projection of priority expenses.** Prior to each request, the Borrower shall provide the Bank with a projection of financial needs and eligible priority expenses according to the amount of the funds in advance requested and based on the cash flow model included in this document, as a indicative way of planning the use of resources. The Bank will carry out a preliminary review of the information provided, in accordance with the applicability criteria, and the proportionality criteria in relation to the allocation of the requested resources. If necessary, the Bank will propose modifications to the Borrower.
   3. **Justification.** Once an advance of funds has been made, the Borrower shall justify the use of the funds in accordance with the percentages established by the Financial Management Policy for Projects financed by the IDB (OP-273-12), before it can be receive further advances of funds. As a general rule, at least 70% of the total accumulated balances pending justification must be justified.
2. **Reimbursements.** The Borrower may request up to 100% of the total coverage approved as reimbursements of eligible expenses incurred, registered, and paid within a period of up to 180 calendar days immediately after the onset of the eligible event. Upon formal request from the Borrower, the Bank, at its sole discretion, may extent this period for an additional 90 days, for a total of 270 days. This method will be subject to the following operating rules:
   1. **Expenses Report.** The Borrower shall, prior to the reimbursement request, submit a Report of Eligible Expenses according to the amount requested. The items included in the Expenses Report should be detailed enough to allow the Bank to identify the expenses and, at the same time, facilitate the expense auditing process that will be carried out by an independent firm. Additionally, the Bank will require that each item listed in the Expenses Report have, as a minimum, the required information breakdown. The Bank will carry out a preliminary review of the Expenses Report[[1]](#footnote-2), to confirm it is accordance with the applicability, proportionality, and timing criteria. If necessary, modifications will be proposed to the Borrower. Once the corresponding disbursement has been made, the information presented in the Expenses Report will serve as the basis for the reasonable assurance audit and the Borrower must have the necessary supporting documentation to justify the use of the disbursed resources.
   2. **Declaration of expenses financed with Borrower’s own resources.** Eligible expenses financed with resources from other Bank operations and/or from other financing entities such as international cooperation agencies or multilateral development banks will not be recognized. In this sense, the Borrower must include in the request for reimbursements a letter of declaration signed by the Executing Agency, indicating that the expenses to be reimbursed by the Bank were financed exclusively with its own resources.
3. **Direct Payments.** The Bank can make, on behalf of and at the request of the Borrower, direct payments of eligible expenses to third parties that it deems appropriate. The Borrower, prior to the request for direct payment, must agree the justification, amount, and date of the payment with the Bank, as well as the supporting information required in each case.
4. Use of Resources
   1. Coordination and execution mechanism
5. As the Executing Agency of this contingent loan, the Ministry of Finance, Economic Affairs and Investment is responsible for coordinating the resource allocation process, the execution of payments, the monitoring of the transferred resources executed by the sector agencies involved in the emergency response, and the justification to the Bank of the eligibility of expenditures in accordance with the stipulations and provisions set in the Loan Contract and these Operating Regulations.
6. The MFEI, through the NEMS and in close coordination with the DEM as part of the EMAC, will coordinate with the NEOC operations group to allocate and execute the contingent loan resources during emergencies. The NEMS is an overarching, multi-stakeholder mechanism coordinated by the DEM to facilitate emergency management at all levels. It comprises five main group of stakeholders: (i) the DEM, which is responsible for coordinating all emergency management activities in the country; (ii) the EMAC and its 16 Standing Committees, an advisory organ that gathers relevant public institutions, including the Barbados Meteorological Services, and is responsible for planning for the emergency response both at the national and sector level; (iii) the NEOC, a centralized platform to directs the response activities; (iv) 30 DEO that organize the resources for response at the community level; and (v) international partners and the private sector. These stakeholders bring together human resource elements and technical expertise to ensure an effective response in time of crisis. Regarding the NEOC operations group, it is comprised of security agencies, such as Barbados Defense Force, and ministries such as Ministry of Transport, Works and Water Resources, Ministry of Agriculture and Food Security, Ministry of Housing Lands and Maintenance, Ministry of Education, Technological and Vocational Training, Ministry of Tourism and International Transport, among others and are responsible to determine and present their needs and prioritized expenses to the MFEI for approval.
7. To ensure the timely use of loan resources, the following coordination and execution mechanism must be fully implemented, with assigned personnel of the MFEI, immediately after the occurrence of an eligible event and disbursement of loan resources. This mechanism entails the following process (see Figure 3).
   * 1. *Planning and Expense Identification*. This step is critical to ensure the proper allocation of loan resources among the involved sector agencies. Using the information gathered by the sectoral damage assessment reports, the MFEI, in coordination with the DEM, the EMAC and its Standing Committees, and the NEOC will determine the needs and priorities for response and recovery activities such as removal of debris, provision of shelters and rehabilitation of essential public infrastructure. As a result, a list of prioritized expenses should be prepared by each sector agency in coordination with the DEM, examined by the EMAC, and presented to the MFEI and the Bank.
     2. *Technical Review*. The MFEI with assistance from consulting sector experts will analyzed the lists of prioritized expenses proposed by the sector agencies, making sure that these proposed expenditures potentially meet the technical eligibility requirements set forth in the Loan Contract BA-O0004 and this Operating Regulations. This technical review will entail assessing the scope, appropriateness, cost reasonability, estimated time schedule for procurement and completion set at 180 calendar days from the onset of the eligible event, and eventual adjustments if required.
     3. *Monitoring and Execution*. To safeguard the timely execution of the loan resources once the prioritized expenditures are approved by the MFEI, the sector agencies will proceed with the procurement process and make the corresponding payments according as planned. The Treasury Department of the MFEI will notify the Financial Officer of each sector agency, which in turn will timely register the payments and supporting documentation in SmartStream, the government’s budget and accounting system. The sector agencies will also prepare spending and execution reports with the supporting documentation once a month, detailing the progress made as well as the financial projections related to the use of remaining resources.
     4. *Fiduciary Review*. Lessons learned from past contingent loan operations underline the value of conducting a concurrent and independent verification of the expenditures financed by the loan to minimize the risk that they could not meet the eligibility criteria. Thus, during the execution of response activities financed by the loan resources, an auditing firm , in coordination with the MFEI and support from the Project Team, will carry out a concurrent and independent verification to assess the compliance with the criteria for expenditure eligibility set in the Loan Contract and this Operating Regulations (see ¶0). The auditing firm will provide the MFEI and the Bank a report concluding, with a reasonable level of assurance, which expenditures are potentially eligible (and which are not) to be financed with Fiduciary and procurement rules for the use of resources.
     5. *Eligibility and Reporting*. The MFEI will substantiate the use of disbursed the use of disbursed resources through a Consolidated Report on the Adequate Use of Resources , to be submitted to the Bank within a period of 365 calendar days following the start date of the event for which the Bank has disbursed the resources. Such report must be accompanied by the final report of the auditing firm, in case it was required.

Figure 3: Coordination and execution mechanism for the use of loan resources

* 1. Fiduciary and procurement rules for the use of resources

1. Contingent loan BA-O0004 proceeds will be used solely and exclusively for the reimbursement of eligible expenses, which include but are not limited to: (i) emergency health equipment; (ii) vaccines and medications; (iii) food for the affected population; (iv) facilities and equipment for temporary shelters; and (v) temporary rehabilitation of infrastructure and restoration of basic services. Furthermore, to be considered eligible for reimbursement with Loan resources, expenses must meet all of the following criteria:
   * 1. To have been made within a period of up to 180 calendar days immediately after the onset of the eligible event for which the Bank has disbursed the resources. Upon formal request from the Borrower, the Bank, at its sole discretion, may extend this period for an additional 90 days, for a total of 270 days (GN-2999-4, ¶4.20 (f)).
     2. Not be explicitly excluded in the Loan Agreement BA-O0004 ("negative list"):
     3. Be lawful and valid according to the relevant legislation of Barbados.
     4. Be directly or indirectly related to the emergency caused by the natural disaster for which the financing was provided.
     5. Show evidence of verifiable, documented, and clearly recorded acquisitions and payments.
     6. Be adequate in terms of size and price.
2. The MFEI, as the Executing Agency, will be responsible for setting the procedures and mechanisms for: (i) the reimbursement of loan resources from the special segregated account of the project to sector agencies with budgetary authorization for spending; (ii) accounting and supporting physical documentation required by the Bank to verify eligible expenses; and (iii) prioritization of eligible expenses to be financed with loan resources.
3. The Borrower, through the MFEI, will have 365 calendar days after the onset of the eligible event to make reimbursements using Loan proceeds to the public‑sector institutions responsible for budget execution during emergencies caused by natural disasters for eligible expenses incurred within 180 calendar days immediately after the onset of the eligible event. Upon formal request from the Borrower, the Bank, at its sole discretion, may extend this period for an additional 90 days, for a total of 270 days (GN-2999-4, ¶4.20 (f)).
4. The MFEI shall only be able to reimburse eligible expenses upon receipt of a formal request for reimbursement of expenses from a public-sector institution or agency designated by the MFEI as competent for national public budget items execution during emergencies caused by natural disasters. Those expenses must have a national budget item assigned and approved by the MFEI, authorization of execution approved by competent executing authority and be accompanied by the following paper supporting documentation: (i) order of purchase or requisition of the goods or services in question; (ii) the remittance or other similar proof of delivery or provision of goods or services that shows proof of receipt and acceptance of the provision by the competent authority of the entity acquiring said good or service; (iii) the invoice or detailed bill for the supplier's expenses; and (iv) the irrevocable payment order (release) made by the competent authority of the acquiring entity in favor of the final supplier of the goods and services.
5. After the disbursement of loan resources, the Bank may require a concurrent and independent verification of the expenses financed by the loan, conducted by an auditing firm to assess the compliance with the criteria for expenditure eligibility set in the Loan Contract and this Operating Regulations. The Executing Agency will be responsible for carry out this activity.
   1. Justification of the use of resources
6. The borrower, through the Executing Agency, will justify the use of the loan proceeds via a Consolidated Report on the Adequate Use of Resources. This report must be accompanied by the final report of the reasonable assurance audit firm, in case it was required, or another one required by the Bank, in which a concurrent and independent verification of the expenses financed by the loan resources has been carried out. Such report should allow the Bank to determine whether the expenditures financed with loan proceeds were eligible in accordance with the eligibility criteria set in the Loan Contract and this Operating Regulations.
7. The Executing Agency must present the aforementioned report to the Bank within 365 calendar days after the onset of the eligible event for which the Bank has disbursed the contingent loan proceeds.
8. The borrower will have to return to the Bank any unused disbursed resources of the contingent loan BA-O0004, within 365 calendar days after the onset of the eligible event for which the Bank has disbursed the contingent loan proceeds.
9. In order to facilitate the timely completion of any verification or audits of the loan by the Bank, the MFEI will keep on file, under its custody and at the disposal of the Bank or third parties designated by the Bank, the supporting documentation (original or certified copy) corresponding to all eligible expenses financed with loan proceeds, for a period of up to two years after the disbursement(s) made for each eligible event.
10. Figure 4 presented on the next page summarises the main actions described in this Operating Regulations.

**Figure 4: Disbursement and use of resources of contingent loans**

**No**

**Yes**

**No**

**Yes**

Occurrence of a natural disaster covered by the loan

Borrower requests Bank verification of disaster’s eligibility

Bank determines eligibility based on type, magnitude, and population affected by the event.

Event eligible?

Bank notifies

borrower

Bank asks borrower to confirm intent to

request disbursements

Intention to request disbursements?

No action

required

Bank verifies

availability of

resources

The borrower submits the formal disbursement request

The Bank disburses

The borrower reports to the Bank the use of resources 365 calendar days after the onset of the eligible event for which the Bank disbursed resources

* 1. Replenishment of disbursed resources of the Contingent Loan

1. The Borrower may request the Bank to replenish the disbursed resources of the Contingent Loan up to the maximum approved amount, subject to approval by the Bank and in accordance with the respective operational policies. The Borrower may not request a replenishment until a significant amount of the Loan, understood to be not less than 40%, has been disbursed and duly justified in accordance with the provisions set forth in the CCF policy document (GN-2999-4).
2. Changes in the provisions of the Operating Regulations
3. When any of the parties deems it necessary for the proper functioning of the loan, the Borrower and the Bank may agree to changes in the provisions of these Operating Regulations and establish additional specific operating provisions, respecting the provisions of Loan Agreement BA-O0004.
4. Any amendments to the provisions of these Operating Regulations will be incorporated and will enter formally into force through an exchange of communications between the Bank and the MFEI. If within a period of 15 calendar days after the date the amended Operating Regulations were formally sent to the MFEI, the Bank did not receive a formal communication from the borrower expressing its agreement, the amended Operating Regulations will automatically enter into force.
5. In case of conflicts between the provisions of these Operating Regulations and the Loan Agreement BA-O0004, the latter will prevail.

**ANNEX I**

**Terms and Conditions of Coverage**

1. Background and Main Definitions
2. A. General Framework
3. The coverage granted through the Contingent Loan for Natural Disaster Emergencies BA-O0004, structured under the IDB's Contingent Credit Facility (CCF),[[2]](#footnote-3) is designed to provide Barbados immediate access to liquid financial resources to meet the extraordinary public expenditures produced during emergencies caused by severe or catastrophic natural disasters that affect a certain minimum percentage of the total population of the country, as agreed between the Government of Barbados and the Bank.
4. The present Terms and Conditions of Coverage (TCC) constitute Annex I to the Operating Regulations for Contingent Loan BA-O0004 and are framed within the provisions of the CCF[[3]](#footnote-4) and other specific provisions contractually agreed between the borrower and the Bank for this operation.
5. The sections below describe the terms and conditions for coverage activation and the calculation of loan disbursements, when and in the case the Bank determines that an eligible event has occurred.
6. B. Basic Definitions of Coverage
   1. Period of effectiveness of the coverage
7. Loan resources will be available for disbursement for a period of five (5) years. Upon request of the country this period could be extended for up to five (5) additional years, at the discretion of the Bank.
   1. Types of events under coverage
8. The present contingent loan operation covers only hurricanes and excess rainfall associated with cyclonic system events. These events may be considered eligible for disbursements if they occur within the territory of Barbados and exhibit the characteristics described in paragraphs 1.6 to 1.7 below. Disbursement amounts triggered by eligible events will be calculated according to the coverage model detailed in section II of this document.
   1. Eligibility characteristics of the covered events
9. **Excess rainfall associated with cyclonic systems**. The events of this type eligible for coverage are those of torrential intensity occurring within the territory of Barbados during the availability period of the loan, and that present as a minimum the following characteristics: (i) accumulated precipitation of at least 200 mm in 72 hours; and (ii) that applying the methodology developed by the Bank had been found affecting 3% or more of the total country’s population.
10. **Hurricanes.** The events of this type eligible for coverage are those hurricanes that occur within the territory of Barbados and present the following characteristics: (i) a sustained wind speed of 74 miles per hour or higher; (ii) accumulated precipitation of at least 200 mm in 72 hours; and (iii) that applying the methodology developed by the Bank had been found affecting 3% or more of the total country’s population.
    1. Territory, population and value of coverage
11. In order to enable the estimate of the total population affected by any event covered by this operation, both in the case of hurricanes (rain and wind) and excess rainfall the whole territory of Barbados shall be considered as a single area of impact for all the events under coverage. Furthermore: (i) the total population of Barbados has been set at 292,267 [[4]](#footnote-5) people; (ii) the value of coverage per affected person above the corresponding minimums of total Affected Population for each one of the types of event covered will be as follows: excess rainfall US$ 756, and for each one of the two (2) vectors for hurricanes (precipitation and wind) US$ 756. The total contingent loan amount is up to US$ 80 million, but the maximum disbursement amount for each eligible event will never be greater than the available balance of the loan at the time of disbursement.
    1. 25-day period
12. For disbursement purposes, any event or series of events of the same type (hurricanes or excess rainfalls) deemed eligible according to these Terms and Conditions of Coverage will be considered as a single event for the 25 calendar days after the date in which the start of the first eligible event was reported. If more than one event of the same type occurs within a period of 25 days after the occurrence of the first event, the Bank may consider the event of highest intensity to determine the amount to be disbursed from loan resources.
13. Coverage Model

**A. Excess rainfall associated to cyclonic systems**

* 1. **Eligibility Verifications.** As an essential requirement to proceed to calculate the maximum coverage amount for disbursement for a particular event, the Bank must verify that the event in question is eligible according to the definitions set forth in paragraphs 1.6 to 1.9 of this document.
  2. **Excess rainfall Report Agency[[5]](#footnote-6).** The information source for eligibility verification of precipitation events are the reports from the National Aeronautics and Space Administration (NASA). These reports must had been published within a period of up to seven (7) days immediately after the beginning of the event.
  3. **Methodology to determine the number of people exposed (exposed population, EP) to an excess rainfall event.** To determine the EP, the Bank will use: (i) the population density map for Barbados, extracted from the Landscan database; and (ii) the amount of accumulated precipitation during the first 72 hours from the beginning of the event and its distribution, as reported by the Integrated Multi-satellite Retrievals for GPM (IMERG) through the Giovanni software from NASA.
  4. A relationship between the geographical points of latitude and longitude of the Landscan Data Base map and the geographical points of latitude and longitude of the IMERG rain will be defined. When an event occurs, the geographic points of the Landscan map will be associated with their counterparts of the IMERG rain. All geographic points with populations that have been exposed to a minimum accumulation of 200 mm of rainfall in 72 hours will thus be obtained. Table 1 show the intensity scales for precipitation.
  5. **Vulnerability Table.** Table 3 shows the vulnerability coefficients to be applied to the EP which consider precipitation intensity.
  6. **Minimum Total Affected Population-Precipitation (MTA-P)** For an event to be considered eligible for disbursement of resources from Contingent Loan BA‑O0004, the MTA-P will have to be equal to or higher than 8,768 inhabitants.
  7. **Total Affected Population – Precipitation (TAP-P).** The TAP-P will result from the sum of the population affected by precipitations, net of the minimum established above (¶2.6).
  8. **Calculation of Total Affected Population – Precipitation (TAP-P).** To conduct this calculation, the intensity/vulnerability coefficients detailed in Table 3 will be applied to the corresponding number of Exposed Population (EP). The sum of this matrix will yield the TAP-P for the event under observation.
  9. **Calculation of the Maximum Disbursement Amount for an Eligible Excess Rainfall Event.** To determine the maximum disbursement amount for an eligible event, the TAP-P, calculated by applying the above described methodology, will be multiplied by US$756 for each affected person above the minimum. The resulting total will constitute the Maximum Disbursement Amount for the specific event considered (subject to the overall limit explained in paragraph 1.8 above).

**B. Hurricane Coverage**

* 1. **Eligibility verifications.** As an essential requirement to proceed to calculate the maximum coverage amount for disbursement for a particular event, the Bank must verify that the event in question is eligible according to the definitions set forth in paragraphs 1.6 to 1.9 of this document.
  2. **Hurricane report agency.**[[6]](#footnote-7) The information sources for eligibility verification of these types of events are: (i) for wind, reports from the National Hurricane Center (NHC) of the National Oceanic and Atmospheric Administration (NOAA); and (ii) for precipitation, reports from the National Aeronautics and Space Administration (NASA). These reports must have been published within a period of up to seven (7) days immediately after the beginning of the event.
  3. **Methodology to determine the number of people exposed (exposed population, EP) to a hurricane.** To determine the EP, the Bank will utilize: (i) the population density map for Barbados, extracted from the Landscan database; (ii) the amount of accumulated precipitation during the first 72 hours from the beginning of the event and its distribution, as reported by the Integrated Multi-satellite Retrievals for GPM (IMERG) through the Giovanni software from NASA; and (iii) the Wind Swath(WS)provided by the National Hurricane Center (NHC) from NOAA, which shows the speed and path of the hurricane sustained winds.
  4. A relationship between the geographical points of latitude and longitude of the Landscan map and the geographical points of latitude and longitude of the IMERG rain and WS winds will be defined. When an event occurs, the geographic points of the Landscan map will be associated with their counterparts of the IMERG rain and the WS. All geographic points with the populations that have been exposed to a minimum accumulation of 200 mm of rainfall in 72 hours and/or sustained winds of 74 miles per hour or more will thus be obtained. Table 1 and Table 2 below show the intensity scales for precipitation and winds associated with hurricanes, respectively.

|  |  |
| --- | --- |
| **Table 1. Intensity scale for precipitation** | |
| **Intensity scale** | **Milimeters**  **(every 72 hours)** |
| I | >200 |
| II | >250 |
| III | >500 |

**Table 2. Intensity scale for winds associated with hurricanes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Intensity scale** | **Sustained Wind Speed** | | **Atmospheric Pressure**  **(Millibars)** |
| **Saffir-Simpson** | **Miles per hour** | **Knots** |
| I | 74-95 | 64-82 | >980 |
| II | 96-110 | 83-95 | 979-965 |
| III | 111-130 | 96-113 | 964-945 |
| IV | 131-155 | 114-135 | 944-920 |
| V | >156 | >136 | <920 |

* 1. **Vulnerability tables.** Tables 3 and 4 below show the vulnerability coefficients to be applied to the EP for different intensity of precipitation and wind.

**Table 3. Vulnerability Coefficients for Precipation**

|  |  |  |  |
| --- | --- | --- | --- |
| **Areas** | **Intensity**  **200+mm** | **Intensity**  **250+mm** | **Intensity**  **500+mm** |
| General Area | 0.10 | 0.15 | 0.30 |

|  |  |  |
| --- | --- | --- |
| **Table 4. Vulnerability Coefficients for Wind Intensity** | | |
| **Hurricane Intensity** | | **Vulnerability of Exposed Population (EP)** |
| Hurricane 1 | Sustained winds ˃ 74 miles per hour | 0.05 |
| Hurricane 2 | Sustained winds ˃ 96 miles per hour | 0.10 |
| Hurricane 3 | Sustained winds ˃ 111 miles per hour | 0.15 |
| Hurricanes 4 & 5 | Sustained winds ˃ 131 miles per hour | 0.30 |

* 1. **Minimum Total Affected Population - Hurricanes (MTA-H).** For an event to be considered eligible for disbursement of resources from Contingent Loan BA‑O0004, the MTA-H will be equal to or higher than 8,768 inhabitants.
  2. **Total Affected Population – Hurricanes (TAP-H).** The TAP-H will result from the sum of the population affected independently, by precipitations (TAP-P) and winds (TAP-W), net of the minimum established above (¶2.15).

1. **Calculation of Total Affected Population – Precipitation (TAP-P).** The vulnerability coefficients detailed in Table 3 above will be applied to the per intensity Exposed Population. The sum of these calculations will yield the TAP-P for the event under observation.
2. **Calculation of Total Affected Population – Wind (TAP-W).** The vulnerability coefficients detailed in Table 4 above will be applied to the per intensity Exposed Population (EP). The sum of these calculations will yield the TAP-W for the event under observation.
   1. **Calculation of the Maximum Disbursement Amount for an Eligible Hurricane Event.** To determine the maximum disbursement amount for an eligible event, the TAP-P and the TAP-W, calculated by applying the above described methodology, will be multiplied by US$756 for each affected person above the minimum. The sum of both totals thus resulting, will constitute the Maximum Disbursement Amount for the specific hurricane event considered (subject to the overall limit explained in paragraph 1.8).

**ANNEX II**

**Comprehensive Natural Disaster Risk Management Program (CNDRMP)**

1. **Purpose and Scope of the Document**
2. The Bank created a new loan instrument in 2009 titled: Contingent Credit Facility for Natural Disaster Emergencies (CCF). The objective of this Facility is to provide member countries with the requisite liquidity to cover urgent financing needs that arise immediately after a disaster. All borrowing member countries would be eligible for support through this Facility, provided that they have in place a Comprehensive Disaster Risk Management Program (CNDRMP) satisfactory to the Bank (GN-2999-4).
3. The CNDRMP should include the following lines of actions or “components” [[7]](#footnote-8): (i) disaster risk management (DRM) governance (approaches such as policy, planning and institutional strengthening); (ii) risk identification and analysis (approaches such as technical, scientific academic knowledge enhancement); (iii) emergency preparedness and response; (iv) risk reduction (approaches such as territorial or specific civil protection engineering planning and implementation); and (v) financial protection and risk transfer. The CNDRMP must have measurable long-term goals and short-term (or yearly) milestones/indicators to allow regular monitoring by the Bank.
4. This document serves as the CNDRMP for Barbados under its first CCF (BA-O0004) and clarifies: (i) hazard exposure of Barbados; (ii) DRM Policy and institutional framework; (iii) baseline diagnosis of current progress in DRM of the country; (iv) the Bank’s contributions to reducing disaster risk of the country; (v) long-term goals (within 5 years) identified first-year milestones to enhance DRM performance of the country; and finally (vi) the monitoring mechanism to be employed by the Bank.
5. **Country and Bank Actions in the Sector**
6. **Hazard Exposure of Barbados**
7. Barbados is at risk of being affected by most natural hazards including hurricanes, flooding, storm surge, landslides, earthquakes, and tsunamis. Occasionally there are bush fires associated with dry spells and drought conditions which typically occur during El Niño events. Tropical systems and their associated effects which include flash flooding have been known to affect the country more frequently than seismic or tsunamigenic events. As a Small Island Development State (SIDS), with a densely populated low-lying coastal zone and an undiversified tourism-based economy, these hazards typically put a large proportion of productive capital at risk and often affect the entire territory and economy. More than half the population reside within 2km of the coast and more than 95% of the tourism related physical plant is located at or near the coast.
8. According to EMDAT, the International Disaster Database maintained by the Centre for Research on the Epidemiology of Disasters in Belgium, between 1900 to 2020, Barbados has recorded 12 major disaster events, of which: 8 were tropical cyclones, 2 were floods, 1 was drought and 1 a significant earthquake event. Cyclones experienced during this period included Hurricane Janet (1955), Hurricane Allen (1980), Tropical Storm Emily (1987), Tropical Storm Ivan (2004) and Hurricane Tomas in (2010). Hurricane Janet in 1955, was the most impactful cyclone of record. While Janet passed between 24 to 32 km to the south of the island as a category 3 hurricane, it took 38 lives, damaged and/or destroyed 8000 homes and left 28,000 persons homeless[[8]](#footnote-9). The flood of 1970, was considered the worst in the island’s history, with 584mm of rain being experienced in a matter of 10 hours, compared with the annual average of 1524-1651mm.2
9. Analyses from the Barbados National Coastal Risk Information and Planning Platform (NCRIPP) maintained by the Coastal Zone Management Unit suggest probable losses from 100-year return period wind and coastal storm surge events are estimated at US$0.5 billion and US$325 million respectively for the residential housing sector alone. The other IDB study indicates that the country would loss US$1,380M of capitals when a once every 500 years scale of tropical cyclone hits.[[9]](#footnote-10) The country’s Average Annual Loss is, or the country is currently losing on average US$45.25 million[[10]](#footnote-11) of its capitals annually due to Storm Surges, and will be continue losing without any interventions/investments for reducing the disaster risk. Regional projections also suggest that climate change is exacerbating this situation by increasing the frequency and severity of existing coastal hazards as well as generating new types of hazards such as sea level rise[[11]](#footnote-12)
10. **Policy and Institutional Framework for Disaster Risk Management (DRM)**
11. **Regional Framework:** As a member country of the Caribbean Community (CARICOM) and the Caribbean Disaster Emergency Management Agency (CDEMA), since 2001, Barbados has endorsed the regional strategy and framework for Comprehensive Disaster Management (CDM). CDM is an all-hazards approach to DRM which focuses on all phases of the DRM cycle (preparedness, response, risk reduction, recovery, and financial protection). CDM emphasizes taking a holistic, integrated and participatory approach to addressing disaster risk, by the public, private sectors, all segments of civil society and the general population for the purpose of building resilient, safer societies. The objective of the CARICOM CDM Strategy is to strengthen national, sectoral and community level capacity for mitigation, preparedness and coordinated response and recovery to natural and technological hazards and the effects of Climate Change (CC). Additionally, Barbados further recently endorsed CDEMA’s Enhanced CDM Framework 2016-2022 with the same objective of CDM and including four broad lines of actions necessary to accomplish CDM including (i) the implementation of institutional strengthening for DRM both at national and Caribbean regional levels; (ii) the establishment of effective mechanisms and programs for management of DRM knowledge; (iii) the mainstreaming of DRM at national levels and its incorporation into key sectors of national economies (including tourism, health, agriculture and nutrition); as well as (iv) the enhanced community resilience to mitigate and respond to the adverse effects of climate change and disasters.
12. **National Framework:** Emergency Management Act Cap. 160A. Barbados’ governance for disaster preparedness and emergency operations is legislated by the Emergency Management Act (EMA) which was approved in April 2007.The EMA makes provision for : (i) a Director (reporting to the Minister with assigned authority for Disaster Management) with responsibility for administering the Act; (ii) the function of a National Emergency Management System (NEMS) - a broad-based multi-sector, multi-stakeholder mechanism comprising the Emergency Management Advisory Council (EMAC) with sixteen Standing Committees, national emergency services, local volunteers, Non-Governmental Organizations and Community-based Organizations, regional and international partners and the private sector; (iii) an Emergency Management Plan; (iv) National Alert System; (v) a National Emergency Broadcast System; (vi) an Emergency Disaster Fund; (vii) management of a system of Emergency Shelters; (viii) a national Emergency Operations Centre; (ix) development of special area plans; (x) Disaster Hazard Inspectors; and (xi) compulsory annual reporting and emergency policy review by the Director to the Government.
13. The EMAC Standing Committees cover thematic areas including but not restricted to:  
    Public Information; Damage Assessment and Statistics; Health and First Aid Services; Food and General Supplies; Public Utilities; Emergency Transport; Road Clearance and Tree Trimming; Welfare Services; Shelter Management; Telecommunications; Emergency Housing and Rehabilitation; National Mitigation; Tourism Emergency Management; the National Oil Spills Committee; and the Technical Standing Committee on Coastal Hazards.
14. National Emergency Management (Disaster) Plan: The Plan’s main objective is to provide a framework for centralized coordination and direction and to ensure effective planning and response to critical events by providing a structure for the utilization and management of human and material resources at the public, private and community levels. The Plan provides general information on Barbados’ hazard landscape and vulnerabilities, demographics, and typography. Annexed to the National Disaster Plan is the National Emergency Response Plans of several agencies or sectors. The Plan describes the actions that should be taken by the NEMS to prepare and respond to specific hazards and outlines the methods and systems that should be used to warn and protect the population from hazard impacts. The Plan also outlines procedures for obtaining regional or international assistance if necessary, in an emergency or disaster.
15. Department of Emergency Management Disaster Risk Management in Barbados is coordinated by the Department of Emergency Management (DEM), established on April 1, 2007 through the Emergency Management Act Cap. 160A[[12]](#footnote-13).DEM has a mission to develop, promote and maintain a comprehensive National Disaster Management Program to: (i) educate all citizens about the various elements of Disaster Management; (ii) create appropriate mechanisms which will promote and advance Disaster Management activities at all levels of the society; (iii) promote and institutionalize the practice of appropriate preventative and mitigation measure for all possible hazards; (iv) promote the development and maintenance of effective warning, response and recovery plans for all sectors of the society.
16. DEM functions include the overall coordination of preparedness, response to and mitigation of emergencies on a national level through collaboration, cooperation, coordination between government and non-governmental agencies. Upon the incidence or occurrence of a hazard, or impact on any sector of Barbados, the National Emergency Operations Center (NEOC) at DEM’s headquarters is either partially or fully activated. Requisite Emergency Standard Operating Procedures (ESOP’s) are triggered based on the nature of the event scenario. DEM is headed by a public officer holding the post of Director. The Director is assisted by a number of public officers appointed or assigned to DEM and other persons whose services have been engaged by, or who have volunteered their services to the DEM.
17. The DEM currently manages a Cabinet approved results-based, multi-year CDM work program (2019-2023) program to increase resilience by strengthening national systems and processes for emergency and disaster risk management. Five areas of work were agreed upon for the 4-year period: (i) institutional strengthening for CDM; (ii) preparedness response and mitigation capacity; (iii) strengthening community resilience; (iv) research and knowledge management; and (v) recovery.

**Risk Resilient Integrated Coastal Zone Management (ICZM) Policy (2020‑ 2030)**

1. The pre-existing ICZM Policy has been updated to enhance the delivery model for ICZM in Barbados by: (i) being more risk informed; (ii) promoting the practical mainstreaming and the identification of specific operational ways to treat to risk identification, preparedness and response, recovery, risk reduction/adaptation, and financial protection and risk transfer; as well as, (iii) advocating for measures such as the implementation of digital risk information platforms, to enhance interagency coordination and decision-making for CZM.
2. **Baseline – Diagnosis of Current Progress in DRM in Barbados**
3. **Governance.** Governance in this CNDRMP refers to a framework of laws, norms, policies, and institutional power to manage and reduce disaster risk. DEM can be considered as having the primary responsibility within the Government of Barbados in coordination with the EMAC Advisory Committee, the Minister with responsibility for Disaster Management, the Prime Minister, the Governor General, the Cabinet and other institutions including the Ministries of Home Affairs, Finance, Public Works, Health, Agriculture, Tourism, Education, Environment, Public Utilities, Social transformation and the Barbados Meteorological Services; for DRM. Progress: In late 2019, the Cabinet of the Government of Barbados approved the Barbados CDM Country Work Program (CWP) 2019‑2023 which was developed by the DEM and NEMS partners. The development of this multi-year, cross-sectoral work program recognizes the need for and enables an operational transition to a broader more comprehensive, strategic multi-annual/long-term approach to disaster risk management; in which the DEM in partnership with NEMS partners, facilitates, advocates and actively exercises increased leadership for more coordinated multi-sector engagement and cooperation and mainstreaming of risk reduction and climate adaptation approaches, This approach is better aligned to, harmonized with, and monitorable in the context of regional (CARICOM) and internationally articulated (Sendai Framework for DRR 2015-2030) DRM outcome targets and their respective progress tracking indicators Challenges: While the Emergency Management Act (EMA) of Barbados and the CDM Country Work Program 2019‑2023 are quite comprehensive covering aspects related to risk identification, risk reduction, response and recovery there is room for improvement in the operational level coordination and coherence across the agencies that comprise the NEMS. The EMA does not also establish a responsibility framework for all government levels (central, decentralized and/or local).
4. **Risk Identification**. In this CNDRMP Risk Identification refers to the requisite technical, scientific studies and research required to identify vulnerable areas and sectors. Actions include: (i) hazard monitoring (e.g. deployment of hazard monitoring equipment, daily monitoring and record keeping); (ii) dynamic and static analysis of hazard risk, and vulnerability (e.g. hazard, vulnerability and risk mapping); and (iii) communication and dissemination of information (e.g. timely provision of hurricane hazard and early warning information to citizens and government institutions).
5. The Barbados Meteorological Services (BMS) is the primary institution mandated to conduct these activities for the purposes of contributing to safety of life and property, reduction of social and economic impacts of natural disasters, community health and the preservation and enhancement of environmental quality. Progress: The BMS undertakes monitoring and prediction of hydrological and climate phenomenon, data processing, and advisory weather services to the public and other specific user groups such as aviation, shipping, recreation, and tourism. Flood, severe weather, and other special weather warnings are provided as a public goods exercise and weather forecasts with outlooks of up to four days are issued and updated up the three times per day. The BMS also issues warnings/alerts, proactively when hurricanes are approaching the country. These alerts are issued in three categories: Hurricane Watch, Warning, and Alert. Citizens and tourists receive warnings/alerts issued by the BMS, via TV and radio media sources. Hurricane alert and forecast information is shared with neighboring Organization of Eastern Caribbean States (OECS) countries e.g. St. Vincent and the Grenadines and Dominica.
6. Additionally, under the BA-L1014 Coastal Risk Assessment and Management Program Loan, the Government of Barbados via the efforts of its Coastal Zone Management Unit (CZMU) has increased its capacity to undertake risk analysis studies, including probabilistic hurricane/flood risk assessments. In this regard, a National Coastal Risk Information and Planning Platform (NCRIPP) has been developed. NCRIPP is a web-based, multi-user digital platform with advanced mapping and visualization capabilities which allows users to view, interact with, and model hazard risk at individual property parcel or community scales. NCRIPP evaluates risk in a quantitative manner, with a capability of estimating the cost of repair or replacement of an asset of a group of assets if affected by a hazard of a given severity. Expected hazard impacts are a result of probabilistic assessments of various hazards guided by historical data and numerical modeling including the consideration of climate change factors. Damage estimates in turn are based on the severity of the hazard combined with the vulnerability (exposure and susceptibility) of the asset to the particular hazard.
7. Challenges: Weather forecasting and hurricane information services need to be further improved to provide more accurate information to citizens and tourists in real time, across the country. Additional modern equipment, technology and training is needed by the Barbados Meteorological Services and optimizing institutional coordination and better networking for broader real time integrated hazard monitoring, including wave heights, energy, and storm surge in relation to community vulnerability remains necessary. New media including smartphones’ applications for hurricane warning/watch/alert information services for improved user convenience, including tourists, and access for decision-making is also needed. NCRIPP outputs are as good as its underlying data, and as such will need continuous improvement to ensure the currency, relevance and applicability of the information being generated. Considerable work to further build out the applied national utility value of NCRIPP is required through increasing its demand utilization to provide relevant scale specific risk analyses for key sectors for use in their planning and operational decision-making. Additional efforts would be necessary to develop a probabilistic economic loss estimation due to beach erosions of storms, daily wave events, and sea level rise, which should be a key input for sustainable coastal zone development plans especially for the tourism economic sector.

**Emergency Preparedness and Response**

1. In this CNDRMP Emergency preparedness and response refers to the emergency preparedness and response actions planned, coordinated, organized and performed by DEM. Actions include: (i) planning (organization and coordination of emergency operations, emergency response planning, relief supply and distribution logistics, shelter management, damage assessment and needs analysis (DANA), etc.) and (ii) preparedness exercises (simulation, community training etc). DEM has the principal coordination and oversight responsibility for these actions. Progress: A national mechanism for disaster preparedness and emergency operations is well established and organized (See Section II. B.). There has also been minimal progress on recovery planning. Challenges: As identified in the CDM work-program (2019-2023) some review and update of sector emergency response plans in agriculture, tourism, communications, housing and security are required. The development of gender sensitive criteria to identify “vulnerable persons” is identified for action, as well as the updating of social protection policies and standard operating procedures for managing vulnerable persons in emergencies are identified as priorities. Additionally, the development of an Early Warning Policy along with training and strengthening of NEMS stakeholders in exercises and communication are needs to be more optimally addressed. Consistent with both the findings of the current draft iGOPP assessment and the findings of the 2018 CDEMA audit, Barbados’ capacity in recovery planning needs strengthening. The 2018 CDM Audit[[13]](#footnote-14) found notable weaknesses in the area of recovery, including: (i) recovery planning (ii) business continuity planning, particularly among micro, small and medium enterprises; and (iii) mechanisms to support the psychological recovery of the population post‑disaster. Presently, there is no clear ex-ante strategic plan and/or governance approach on how continuity of government and resilient post-disaster economic recovery and reconstruction might be optimally coordinated and facilitated.  Development of a coordination plan, institutional approaches, roles and configurations and financing for the national continuity of Government in advance of national scale impacts prior to loss events is critical to enabling future resilient recovery. Recognizing this deficit, the Government of Barbados is embarking on the development and approval of an enhanced national recovery framework in 2020 as part of its multi-year CDM country work program (2019-2023).  Under this work program, it is also envisaged that more structured protocols around the role, engagement, and involvement of the private sector in the provision of services during emergencies will be defined and developed.  At present, private sector involvement in emergency response is largely affected on an ad hoc, as needed, responsive basis.
2. **Risk Reduction.** In this CNDRMP Risk Reduction refers to the actions related to disaster risk mitigation, civil protection, resilient infrastructure, and nature-based risk mitigation measures that public entities plan, implement and maintain.Actions include structural and non-structural interventions such as: (i) spatial and land use planning for risk mitigation; (ii) retrofitting and reinforcement of constructions to remove/reduce physical vulnerability, etc.; (iii) Building Code compliant resilient built development and infrastructure. Progress: Government of Barbados first developed a Building Code in 1993 and updated it 2013. The formation of a Building Standards Authority is being contemplated by the Government of Barbados. Planning, design, construction of public coastal infrastructure is informed by risk modelling inclusive of climate change considerations. The Ministry of Ministry of Housing Lands and Maintenance is currently implementing a retrofitting program for increasing resilience of the building stock occupied by vulnerable low-income households. Challenges: Compliance remains voluntary as there is still no law in Barbados that makes adherence to the Building Code mandatory nor are there regulations mandating the adoption of disaster risk reduction measures during the construction of public and private infrastructure projects. Residential low -income housing stock is considered vulnerable to storms and earthquakes as a majority of such dwellings are built of wood. Comparative technical and economic appraisal of nature based and/or hybrid nature-based and conventional measures as investment options for reducing climate risk in the coastal zone is insufficiently discussed and considered in the climate risk/ICZM policy agenda of the country.

1. **Financial Protection and Risk Transfer.** In this CNDRMP financial protection and risk transfer refers to processes that seeks to determine the optimal combination of financial mechanisms or instruments for the retention and transfer of risk in order to have timely ex-post access to economic resources, which improves disaster response capacity and protects the fiscal balance of the state.Progress: Given the risk posed by natural hazards and climate change, the Government of Barbados has been advancing measures to strengthen its financial resilience. The country has purchased insurance protection through the Caribbean Catastrophe Risk Insurance Facility (CCRIF) against hurricanes, excess rainfall, and earthquakes. Since 2010, the CCRIF has made six (6) payments for recovery efforts, totaling US$19.3 million. Another significant measure is the inclusion of natural disaster clauses into new government bonds that will allow deferral of scheduled amortization falling due for two (2) years. The risk retention capacity provided with a contingent loan would be another important step in improving the country’s natural disaster risk financial management and would complement the CCRIF, which was highlighted by the IMF in its latest Article IV Report for Barbados. Challenges: Through the National Coastal Risk Information and Planning Platform (NCRIPP), probable losses from 100-year return period wind and coastal storm surge events are estimated at US$0.5 billion and US$325 million respectively for the residential housing sector alone. Fiscal shocks from losses and contingent liabilities associated with natural hazards and climate change could undermine reforms the Government are presently implementing under the International Monetary Fund (IMF) Extended Fund Facility (EFF) arrangements. The MFEI oversees the sourcing and allocation of funds used to address natural disasters. The MFEI has not yet developed a national financial protection and risk transfer strategy/policy, based on probabilistic modeling of natural hazards, exposure, and the estimation of sectoral and national average annual and/or maximum probable losses. Greater knowledge development and sensitization about risk layering and financial DRM is required as are additional financial instruments required to cover medium-frequent disaster events.

**D. Bank Contributions in the Sector**

1. Over the last few years, the IDB has been supporting the Government of Barbados to strengthen the country’s DRM framework and performance, including:

Sustainable Development Policy Program (BA-L048) (Amount – loan: $80M)

1. The objective of the programmatic policy-based loan series is to improve the country’s governance for sustainability through the strengthening and modernization of the regulatory framework. The specific objective of the first policy-based programmatic loan (PBP) is to advance the ongoing regulatory reform efforts to improve: (i) the efficiency and sustainability of spatial planning, development control, and water resource management; (ii) natural asset management; and (iii) disaster risk management and resilience. The reforms are an integral part of the Government’s development philosophy and are fully aligned to the Government’s commitment to the Sustainable Development Goals (SDGs). The reforms are expected to be further deepened and implemented in anticipated PBP’s II and III, respectively. Investment decision-making and screening is expected to be more efficient/faster, with more sustainable and resilient designs. Expected beneficiaries are the entire population of Barbados (approximately 285,000 persons). Status as of August 2020: The Board of the Bank approved the Program on March 11, 2020. While Government of Barbados have already secured nine of ten expected reforms, in light of the COVID-19 Pandemic, a request to waive the timeline for meeting the tenth reform, in order to expedite disbursement of financing has been requested and is being processed.

Coastal Risk Assessment and Management Program (BA-L1014) (Amount – loan: $30M)

1. The objective of this investment loan is to build resilience to coastal hazards through improved conservation and management of the coastal zone. The loan compromised three components on: (i) coastal risk assessment, monitoring and management; (ii) coastal infrastructure; and (iii) institutional sustainability for CZM. The component on risk assessment was focused on the provision of updated qualitative and quantitative data on risk in the coastal zone and state of the art tools for the routine assessment, monitoring and management of risk (including climate change) in the coastal zone as well as the design and implementation of a national integrated coastal risk information and planning platform. The component on infrastructure was focused on: the construction of coastal defense, shoreline enhancement structures and offshore breakwaters; ecosystem restoration and ecosystem based adaptation demonstration projects; as well as, design and feasibility analysis of new infrastructure projects aimed at providing long-term shoreline protection and enhancing the recreational value of beach areas. The component on institutional sustainability was focused on: (i) updating and approval of the ICZM Plan incorporating disaster risk reduction (DRR) and climate change adaptation (CCA); preparation of regulations under the ICZM Plan; development of two strategies and action plans for coastal CCA and DRR; including the development of a cost recovery mechanism for coastal infrastructure. Status as of August 2020: The operation is in the process of closeout and evaluation.

Index of Governance and Public Policy in Disaster Risk Management (iGOPP) Application in Six (6) Borrowing Member Countries of the Caribbean Region (RG‑ T2787) (Amount – Non-Reimbursable Regional Technical Cooperation: $500,000)

1. The objective of this regional technical cooperation (TC) is to improve knowledge about the level of governability for DRM in Latin American Countries through the application of the iGOPP. Barbados will benefit from an iGOPP assessment under this regional TC. iGOPP was designed to contribute to a better understanding of disaster risk and DRM policy in the IDB’s Borrowing Member Country. iGOPP indexes the formal (provable) normative, legal, institutional, and budgetary frameworks for DRM in BMCs and offers a means of sharing good practices amongst Latin American and Caribbean countries. The index identifies strengths and gaps and will be used by the IDB in developing future capacity building and assistance strategies for its BMC’s. Status as of April 2020: Field interviews and assessments were conducted in 2017, and an iGOPP assessment report was prepared with information compiled until January 2018. A draft of the final assessment report was shared with the Government of Barbados in March 2020.

Study on Disaster Risk Management – A Macro Perspective Cost-Benefit Analysis for Reducing Vulnerability (RG-T3369) (Amount – Non-Reimbursable Regional Technical Cooperation: $800,000)

1. The objective of this regional technical cooperation is to optimize, among several options, the effectiveness of public investment measures for reducing vulnerability to natural hazards focused on the Bank’s member countries. Barbados will benefit as a specific study country under the regional technical cooperation. Status as of April 2020: The Bank has contracted consultants and the study is underway.
2. **CNDRMP OF BARBADOS**

**A. Objective and Description**

1. The objective of the CNDRMP is to support the country’s efforts for reducing disaster risk including all five components (See Section I): (i) DRM governance; (ii) risk identification and analysis; (iii) risk reduction; (iv) preparation for emergency and response; and (v) financial protection and risk transfer.

**Table 1. Long-term goals of CNDRMP and short-term milestone/indicators**

**of the first year**.

| **Component** | **Long-term goals (within five years, 2020-2025)** | **Milestone/Indicators 2020-2021** |
| --- | --- | --- |
| **DRM GOVERNANCE** | Enabling environment for Comprehensive Disaster Management strengthened to reflect multi-institutional coordination and implementation.  CDM mainstreamed into key sectors. | Comprehensive Disaster Management (CDM) Policy statement developed.  **Means of verification**: Endorsement of the CDM policy statement by Emergency Management Advisory Council (EMAC)  **Responsibility: DEM** |
| 1.3MegaWatt grid tied resilient solar Photo-voltaic systems installed at (7) Government buildings.  **Means of verification**: Reporting from the Ministry of Energy, Small Business and Entrepreneurship (MESBE)  **Responsibility: MESBE** |
| **RISK IDENTIFICATION** | Improved quality of impact weather forecasting and hurricane information. | Impact based forecasting for Barbados has been introduced effective June 1st, 2020.  **Means of verification**:  Monthly validation reports for the verification of Barbados Meteorological Services(BMS) high resolution numerical forecast simulations against actual forecaster predictions and observations.  **Responsibility:** **BMS** |
| Improved NCRIPP sustainability in use and applicability. | Probabilistic beach loss estimation model introduced.  **Means of verification**: Communication/memo from Director, CZMU that model is being used/applied.  **Responsibility: CZMU** |
| **RESPONSE & PREPAREDNESS** | Improved social protection policies and standard operating procedures for managing vulnerable persons. | Inventory of social protection programmes with in-depth analysis of selected social protection measures completed.  **Means of verification**: National Social Protection Assessment Report approved by Ministry of People Empowerment and Elder Affairs (MPEA).  **Responsibility**: **MPEA** |
| Early Warning Policy developed and implemented.  Update and approve Sectoral Multi-Hazard Disaster Management Plan and related procedures. | Multi-institutional technical consultation to inform/prepare development of first draft Early Warning Policy developed.  **Means of verification**: Report of Early Warning Consultation developed by DEM.  **Responsibility: NEMS**  At least one (1) key sector disaster management plan reviewed and updated to ensure that it is multi-hazard in nature.  **Means of verification:** Evidence of submission of updated plans to EMAC.  **Responsibility**: **DEM & Sector Lead Agency** |
| **RISK REDUCTION** | Public sector project management cycle improved for incorporating disaster risk reduction measures in public development projects. | Definition and Listing of National Critical Infrastructure updated and mapped using NCRIPP.  **Means of verification**: Minutes of Emergency Services Committee inclusive of map rendition.  **Responsibility: CZMU**  Risk informed detailed designs and cost estimates for public coastal infrastructure completed.  **Means of verification**: Infrastructure design reports  **Responsibility: CZMU** |
| Vulnerability of existing low-income residential housing infrastructure reduced | Gender-sensitive criteria to identify vulnerable persons developed.  **Means of verification**: A report that includes a Geographic Information System (GIS) mapping of vulnerable persons, which will have gender disaggregated data.  **Responsibility**: **MPEA** |
| Physical vulnerability reduction program for low-income residential housing implemented.  **Means of verification**: Reports submitted to the Roof to Reefs Program Unit from Urban Development Commission and Rural Development Commission.  **Responsibility**: Ministry of Housing Lands and Maintenance) |
| **FINANCIAL PROTECTION (risk retention & transfer)** | Deepen the ex-ante financial protection and risk transfer for disasters | Contingent Credit Facility (CCF) Signed.  **Means of verification**: Mutually signed IDB/Government of Barbados CCF Agreement  **Responsibility: Ministry of Finance, Economic Affairs & Investment, IDB** |

**B. Eligibility and validity of the CNDRMP**

1. The Bank confirmed that Barbados policy/institutional framework on DRM, as well as the long-term goals/short term milestones identified (in Table 1) are satisfactory and meet the requirements of a CNDRMP and as conditional to meeting the eligibility requirements for the Contingent Loan for Emergencies due to Natural Disasters for Barbados (BA-O0004). Barbados is therefore eligible to access the Bank's financial resources through the CCF for the next 12 months starting from the date that loan contract enters into effect. Additionally, it is confirmed that the long-term goals/short term milestones of this CNDRMP (in Table 1) are consisted with the Sendai Framework of Action 2015-2030 (including four priorities)[[14]](#footnote-15) and the frameworks of CDM Country Work Program (CWP) 2019‑2023 (including five pillars. See II. B: National Framework).

**C. Monitoring**

1. After the period of validity of the CNDRMP (after 12 months starting from the date that loan contract enters into effect), the Bank will perform an annual evaluation of the CNDRMP to monitor if all the identified yearly-milestones are being executed satisfactory. The successful execution of the milestones will allow extending the eligibility of the CCF for a further 12 months. During the annual evaluation, the Bank and the Government of Barbados will discuss milestones for the next 12 months and will record as signed-official minutes. This annual review process will be repeated until the CCF drawdown period expires. The CCF expires within five years from the date that loan contract enters into effect and can be renewed for another five years upon the Bank’s receipt of an official request by the Government of Barbados.
2. In the event that the result of the annual evaluation is unfavorable, the Bank would request the Government of Barbados, undertake the requisite actions necessary to meet and archive all required milestones of the CNDRMP framework within a period of 90 calendar days, in order to maintain eligibility to access the CCF resources.

1. This preliminary review should not be interpreted in any way as a pronouncement by the Bank regarding the eligibility of the expenses presented. The justification for the use of resources will proceed according to what is indicated in paragraphs 4.25 and 4.26. [↑](#footnote-ref-2)
2. The Contingent Credit Facility for Natural Disaster Emergencies (CCF) was approved by the Bank in February 2009 through document GN-2502-2 and modified in part through documents GN-2667-2 (2012), GN-2667-4 (2019) and GN-2999-4 (2002). [↑](#footnote-ref-3)
3. The provisions governing the operations of the CCF are compiled in the corresponding Operating Guidelines, which were approved by the Bank in September 2014 through document GN-2502-3. [↑](#footnote-ref-4)
4. As per Landscan Data Base of digital population distribution 2017. [↑](#footnote-ref-5)
5. In the event that the aforementioned information sources are not available in a timely manner, the Bank will determine the substitute data source(s) and the mechanism to determine the magnitude of the events that define their eligibility and, where appropriate, the amount for disbursement. [↑](#footnote-ref-6)
6. In the event that the aforementioned information sources are not available in a timely manner, the Bank will determine the substitute data source(s) and the mechanism to determine the magnitude of the events that define their eligibility and, where appropriate, the amount for disbursement. [↑](#footnote-ref-7)
7. GN-2354-5: the Bank Disaster Risk Management Policy, and GN-2354-7: Integrated Management of Disaster Risk and Financial Approach [↑](#footnote-ref-8)
8. Department of Emergency Management (2014): Country Document for Disaster Risk Reduction. [↑](#footnote-ref-9)
9. Indicators of disaster risk and risk management to Barbados. Coastal Risk Assessment and Management Program (2463/OC-BA; BA-L1014). Prepared for Coastal Zone Management Unit. July 2015. [↑](#footnote-ref-10)
10. Global Risk Assessment 2015 <https://www.preventionweb.net/english/hyogo/gar/2015/en/home/data.php?iso=BRB>. [↑](#footnote-ref-11)
11. Under a high carbon emissions scenario, the median 21st-century sea-level-rise projection ranges from 0.74-0.83 m across 12 tide gauges in the Caribbean Basin according to Strauss B. and Kulp S. 2018. Sea-Level Rise Threats in the Caribbean. Data, tools, and analysis for a more resilient future. Climate Central, Princeton, NJ. [↑](#footnote-ref-12)
12. 4 Draft Index of Governance of Public Policy in Disaster Risk Management (2020): National Report for Barbados. [↑](#footnote-ref-13)
13. The CDM Audit comprises a set of internationally accepted standards (or criteria) for each phase of the disaster cycle- mitigation, preparedness, response and recovery. [↑](#footnote-ref-14)
14. <https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf>. [↑](#footnote-ref-15)