DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

THE BAHAMAS

CONTINGENT LOAN FOR NATURAL DISASTER EMERGENCIES

(BH-O0003)

OPERATING REGULATIONS

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CONTENTS

I. GENERAL REGULATORY FRAMEWORK

1.1 In addition to the stipulations established in loan agreement BH-O0003, the execution and administration of this operation will be governed by the provisions set forth in documents GN-2502-2 and GN-2502-3, Contingent Credit Facility for Natural Disaster Emergencies (the Facility or the CCF) and its Operating Guidelines, respectively; document GN-2667-2, Proposal to Establish a Set of Contingent Lending Instruments of the IDB, which modified the CCF in part; and the rules established in this Operating Regulations.

II. OPERATIONAL PROVISIONS

A. Supervision and Administration

1. Monitoring of progress of the Comprehensive Natural Disaster Risk Management Program (CDRMP)

2.1 During the coverage period of this loan, the Bank will carry out annual evaluations to determine if the CDRMP (Annex II to this Operating Regulations) is being executed in a manner satisfactory to the Bank, according to the indicators established for that purpose. The first evaluation will be performed 12 months after the "general eligibility to request loan disbursements" has been granted to the borrower.

2.2 Should the Bank find that implementation of the CDRMP is not progressing satisfactorily, the Bank will formally notify the borrower of the specific actions that it must take within a maximum period of 90 days following the date notice is given in order to remain eligible to receive loan disbursements. If, after this period has lapsed, the Bank finds that the recommended corrective actions were not carried out completely and adequately, the Bank will formally notify the borrower of eligibility suspension.

2. Monitoring and periodic updates of the Automatic Redirection List (ARL)

2.3 According to the stipulations established in loan contract BH-O0003, the ARL will be periodically updated by the Bank, in coordination with the Ministry of Finance, to include new investment loan operations to The Bahamas approved by the Bank. The Bank will include in the LRA all the investment loans subscribed with the country as soon as they have been declared eligible for the first disbursement.

B. Disbursements and Use of Resources

1. Eligibility Verification Request for an event

2.4 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, must submit to the Bank a Request for Verification of Eligibility of the event.

2.5 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 Ministry of Finance 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 source of resources (see paragraph 2.6a).

2. Disbursement Request

2.6 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. The disbursement request must include:

a. The amount of the required disbursement, specifying the desired source(s) of resources: (i) new resources of loan BH-O0003 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.

b. The name and number of the special bank account assigned for the disbursement of resources (see paragraph 2.7b).

c. A copy of the Aide Memoire of the last verification mission performed by the Bank to evaluate the progress attained by The Bahamas in the achievement of the objectives agreed upon in the framework of the CDRMP.

3. Disbursement of resources

2.7 Disbursements of resources under loan BH-O0003 will be subject to the following fiduciary and procurement regulations:

a. Once the Bank has approved a disbursement request submitted by the Ministry of Finance, loan proceeds will be disbursed by the Bank in the form of Advance of Funds for up to 100% of the requested amount.

b. The resources of the loan will be placed by the Ministry of Finance in a special segregated account within its liquid asset accounts (cash, banks or liquid investments of immediate availability).

c. The special account may be debited and credited exclusively for the following items:

i. Debited by: (i) cash transfers made by the Bank as disbursements of loan resources; and (ii) interest or other income related to the amounts deposited temporarily, until reimbursements of eligible expenses corresponding to the emergency for which they were provided are made.

ii. Credited by: (i) reimbursements to public-sector institutions responsible for budget execution during emergencies caused by natural disasters for eligible expenses that have been duly documented and validated in accordance with this document and loan contract BH-O0003 (all payment records must have the support documentation mentioned in paragraph 2.10 below); and (ii) reimbursements to the Bank made by the Ministry of Finance for disbursed amounts not executed within the period of time stipulated in the loan contract.

4. Fiduciary and procurement rules for the use of resources

2.8 Contingent loan BH-O0003 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. Besides, to be considered eligible for reimbursement with loan resources, expenses must meet the following criteria:

a. 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.

b. Not be explicitly excluded in the Loan Agreement BH-O0003 ("negative list").

c. Be lawful and valid according to the relevant legislation of The Bahamas.

d. Be directly or indirectly related to the emergency caused by the natural disaster for which the financing was provided.

e. Show evidence of verifiable, documented, and clearly recorded acquisitions and payments.

f. Be adequate in terms of size and price.

2.9 The borrower, through the Ministry of Finance, 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.

2.10 The Ministry of Finance will only reimburse eligible expenses upon receipt of a formal request for reimbursement of expenses from a public-sector institution responsible for budget execution during emergencies caused by natural disasters. Those expenses must have a national budget item assigned and approved, authorization of execution approved and be accompanied by the following paper supporting documentation: (i) order of purchase or requisition of the good or service; (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 liquidation of the supplier's expenses; and (iv) the irrevocable payment order (release) made by the competent authority of the acquiring entity.

2.11 The borrower will justify the use of the loan proceeds via a written Declaration of Adequate Use, which should be submitted to the Bank within 365 calendar days after the onset of the eligible event for which the Bank has disbursed the contingent loan proceeds. To allow for the Bank to determine whether the expenditures financed with loan proceeds were eligible in accordance with the provisions established in the Loan Agreement and in the present Operating Regulations, the aforementioned declaration must detail the characteristics, dates, and amounts of each procurement and the location of the supporting documentation. Any unused resources of the contingent loan BH-O0003 will have to be returned by the borrower to the Bank.

2.12 In order to facilitate the timely completion of any verification or audits of the loan by the Bank, the Ministry of Finance will keep on file, under its custody and at the disposal of the Bank or third parties designated by the Bank, the supporting documentation 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.

2.13 The graph "Disbursement and use of resources of contingent loans" presented on the next page illustrates the actions described above.

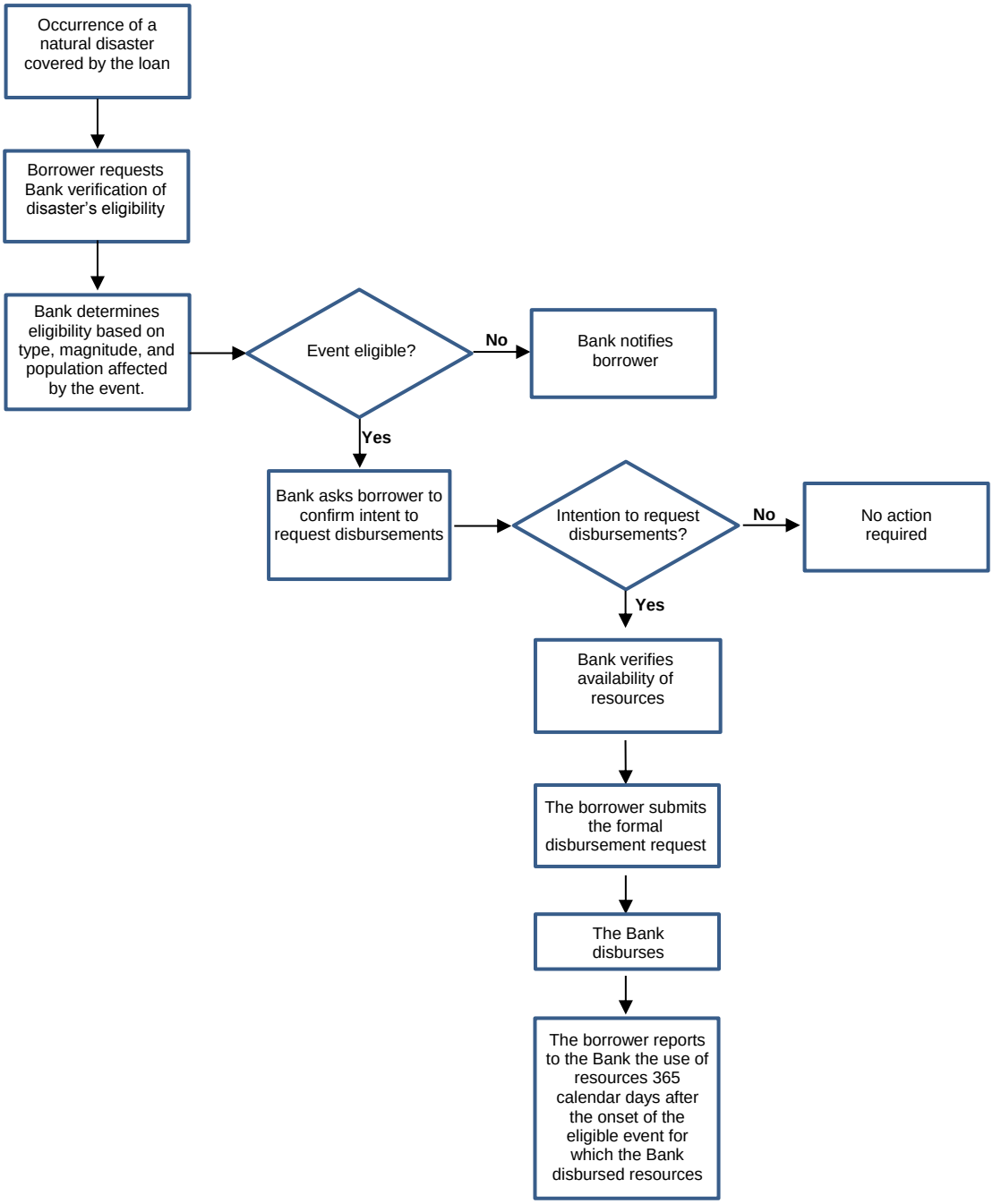
5. Changes in the provisions of the Operating Regulations

2.14 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 BH-O0003.

2.15 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 Ministry of Finance and the Bank. If within a period of 15 calendar days after the date the amended Operating Regulations were formally sent to the Ministry of Finance, the Bank did not receive a formal communication from the borrower expressing its agreement, the amended Operating Regulations will automatically enter into force.

2.16 In case of conflicts between the provisions of these Operating Regulations and the Loan Agreement BH-O0003, the latter will prevail.

Disbursement and use of resources of contingent loans



TERMS AND CONDITIONS OF COVERAGE
ELIGIBLE EVENTS

I. BACKGROUND AND MAIN DEFINITIONS

A. General Framework

1.1 The coverage granted through the Contingent Loan for Natural Disaster Emergencies BH-O0003, and structured under the IDB's Contingent Credit Facility (CCF),[1] is designed to provide the Commonwealth of The Bahamas (The Bahamas) with immediate access to liquid financial resources to cover the extraordinary public expenditures during emergencies caused by severe or catastrophic natural disasters that affect a certain minimum percentage of the total population of the country, which is agreed upon by the Government of The Bahamas and the Bank.

1.2 The present Terms and Conditions of Coverage (TCC) constitute Annex I of the Operating Regulations for Contingent Loan BH-O0003 and are framed within the provisions of the CCF[2] and other specific provisions contractually agreed between the borrower and the Bank for operation BH-O0003.

1.3 The sections below describe the terms and conditions for coverage activation and the calculation of loan disbursements.

B. Basic Definitions of Coverage

1. Period of effectiveness of the coverage

1.4 Loan resources will be available for disbursement for a period of five (5) years, extendable at the request of the country and at the discretion of the Bank for up to five (5) additional years.

2. Types of events under coverage

1.5 Currently, only hurricane events are covered by the contingent loan for The Bahamas. These events may be considered eligible for disbursements if they occur within the territory of The Bahamas and exhibit the characteristics described in paragraphs 1.7 to 1.6 below. Disbursement amounts triggered by eligible events will be calculated according to the coverage model detailed in section II of this document.

3. Eligibility characteristics of hurricanes

1.6 Eligible events for coverage are hurricanes that occur within the territory of The Bahamas and present the following characteristics: (i) a sustained wind speed of 74 miles per hour or higher; (ii) accumulated precipitation of at least 150 mm in 72 hours; and (iii) over 1% of the country's total population affected in the low-

[1] 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 in 2012 through document GN-2667-2.

[2] 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.

density population area (LDP) and/or over 3% of the country's total population affected in the high-density population area (HDP).

4. Territory, population and value of coverage

1.7 For purposes of this operation: (i) the territory of The Bahamas has been divided into two areas: a HDP and a LDP(see ¶2.3 and Table 1); (ii) total population of The Bahamas is 319,031 people, as reported for the country in the Landscan Population Density Map of 2013; and (iii) the value of coverage per affected person above the corresponding minimums for each one of covered hurricane vectors (precipitation and wind) would be US$1,000.

1.8 Total contingent loan amount is US$100 million. The maximum disbursement amount for each eligible event will never be greater than the available balance of the loan at the time of disbursement.

5. 25-day period

1.9 For disbursement purposes, any event or series of events of the same type (hurricanes) 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 is 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.

II. COVERAGE MODEL

A. Hurricane Coverage

2.1 **Eligibility verifications.** As an essential requirement to proceed to the calculation of 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.

2.2 **Hurricane report agency.**[3] The sources of information for eligibility verification of these types of events are: (i) for wind, reports by 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 start of the event.

2.3 **High and low-density population areas (HDP and LDP).** HDP and LDP are identified in Figure 1 below. As well, the geographic coordinates corresponding to each area are listed in Table 1.

[3] 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.

Figure 1. Geographic Localization of HDP and LDP

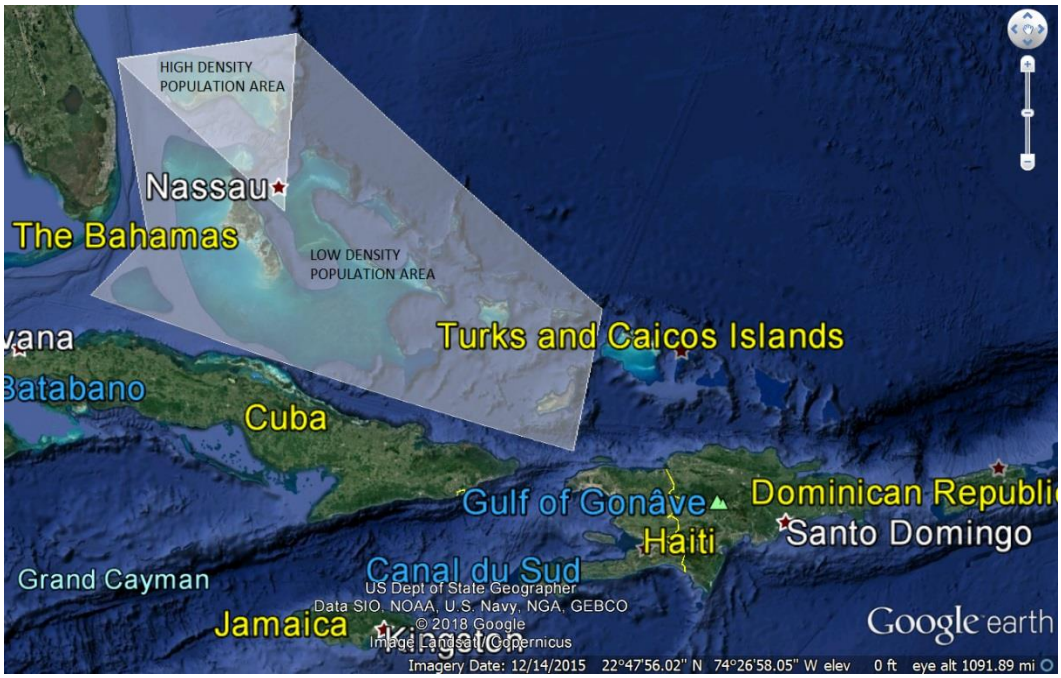


Table 1. Geographic Coordinates for HDP and LDP

HDP	
Longitude	**Latitude**
79°53'34.46"W	27°29'17.05"N
76°37'39.37"W	27°24'57.78"N
77°18'48.00"W	24°41'19.88"N
LDP	
Longitude	**Latitude**
79°53'34.46"W	27°29'17.05"N
76°37'39.37"W	27°24'57.78"N
77°18'48.00"W	24°41'19.88"N
79°43'42.51"W	24°37'31.73"N
80°52'43.89"W	23°50'41.53"N
73°12'52.12"W	20°15'38.89"N
72°18'35.53"W	22°20'10.24"N

2.4 **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 of The Bahamas, extracted from the Landscan database; (ii) the amount of accumulated precipitation during the first 72 hours from the start of the event and its distribution, as reported by the Tropical Rainfall Measuring Mission (TRMM) 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.

2.5 A relationship between the geographical points of latitude and longitude of the Landscan map and the geographical points of latitude and longitude of the TRMM for rain and WS for winds will be defined. When an event occurs, the geographic points of the Landscan map will be associated with their counterparts of the TRMM and the WS. Thus, all geographic points where the populations have been exposed to a minimum accumulation of 150 mm of rainfall in 72 hours and/or sustained winds of 74 miles per hour or more will be obtained. Table 2 and Table 3 below show the intensity scales for precipitation and winds associated with hurricanes, respectively.

Table 2. Intensity scale for precipitation associated with hurricanes

Intensity scale	Milimeters (every 72 hours)
I	>150
II	>200
III	>250
V	>500

Table 3. 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

2.6 **Vulnerability tables.** Tables 4 and 5 below show the vulnerability ratios to be applied to the EP by areas (HDP and the LDP) and vectors (precipitation and wind intensity).

Table 4. Vulnerability Ratios for Precipitation Intensity

Areas	Intensity 150+mm	Intensity 200+mm	Intensity 250+mm	Intensity 500+mm
HDP	0.45	0.50	0.60	0.70
LDP	0.40	0.45	0.50	0.60

Table 5. Vulnerability Ratios for Wind Intensity

Hurricane Intensity		Vulnerability of Exposed Population (EP)	
		LDP	HDP
Hurricane 1	Sustained winds > 74 miles per hour	0.30	0.35
Hurricane 2	Sustained winds > 96 miles per hour	0.40	0.45
Hurricane 3	Sustained winds > 111 miles per hour	0.50	0.60
Hurricanes 4 & 5	Sustained winds > 131 miles per hour	0.80	0.80

2.7 **Minimum Total Affected Population - Hurricanes (MTA-H).** For events to be considered eligible for disbursement of resources from Contingent Loan BH-O0003, the MTA-H will be measured separately for the LDP and the HDP areas. For the LDP, the MTA-H should be 3,190 inhabitants and for the HDP, the MTA-H should be 9,571 inhabitants.

2.8 **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), measured separately by areas (LDP and HDP) and is net of the minimums established above (¶2.7).

2.9 **Calculation of Total Affected Population – Precipitation (TAP-P).** To conduct this calculation, the vulnerability ratios detailed in Table 4 above will be applied to the Exposed Population (EP) in the HDP and the LDP, independently. The resulting matrix is shown in Table 6 below.

Table 6. Total Affected Population – Precipitation (TAP-P)

Exposed Population (EP) by Area	Precipitation Intensity I	Precipitation Intensity II	Precipitation Intensity III	Precipitation Intensity IV
Area HDP	EP*0.45	EP*0.50	EP*0.60	EP*0.70
Area LDP	EP*0.40	EP*0.45	EP*0.50	EP*0.70

2.10 The sum of the above matrix will yield the TAP-P for the event under observation.

2.11 **Calculation of Total Affected Population – Wind (TAP-W).** To conduct this calculation, the vulnerability ratios detailed in Table 5 above will be applied to the Exposed Population (EP) in the HDP and the LDP, independently. The resulting matrix is shown in Table 7 below.

Table 7. Total Affected Population – Wind (TAP-W)

Exposed Population (EP) by Area	Wind Intensity H 1	Wind Intensity H 2	Wind Intensity H 3	Wind Intensity H 4 and H 5
Area HDP	EP*0.35	EP*0.45	EP*0.60	EP*0.80
Area LDP	EP*0.30	EP*0.40	EP*0.50	EP*0.80

2.12 The sum of the above matrix will yield the TAP-W for the event under observation.

2.13 **Calculation of the Maximum Disbursement Amount for an Eligible Event.** To determine the disbursement amount for an eligible event, the TAP-H, calculated by applying the methodology described in paragraphs 2.3 to 2.12 above, will be multiplied by US$1,000.

ANNEX II

COMPREHENSIVE NATURAL DISASTER RISK MANAGEMENT PROGRAM (CDRMP)

THE BAHAMAS

I. PURPOSE AND SCOPE OF THE DOCUMENT

1.1 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 are eligible for support through this Facility, provided that they have in place a Comprehensive Natural Disaster Risk Management Program (CDRMP) satisfactory to the Bank (GN-2502-2).

1.2 The CDRMP should include the following key areas:[1] (i) disaster risk management (DRM) governance (such as policy, planning and institutional strengthening); (ii) risk identification and analysis (such as technical, scientific and academic knowledge enhancement); (iii) risk reduction (such as territorial or specific civil protection, and engineering planning and implementation); (iv) emergency preparedness and response; and (v) financial protection and risk transfer. The CDRMP must have measurable long-term goals and short-term (or yearly) milestones/indicators to allow regular monitoring by the Bank.

1.3 This document serves as the CDRMP for The Bahamas under its first CCF Contingent Loan for Natural Disaster Emergencies (BH-O0003) and clarifies: (i) hazard exposure of The Bahamas; (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 five years) and identified first-year milestones to enhance DRM performance of the country; and (vi) the monitoring mechanism to be employed by the Bank.

II. COUNTRY AND BANK ACTIONS IN THE SECTOR

A. Hazard Exposure of The Bahamas

2.1 The Bahamas is highly exposed to natural hazards, including hurricanes. With most of its territory a few meters above mean sea level, The Bahamas is also very vulnerable to the impacts of climate change.[2] These factors place both the socioeconomic activities and the associated public infrastructure, which are concentrated along the coast of New Providence and the Family Islands, at high risk. From 1970 to 2016, the country experienced 18 major disasters including hurricanes, affecting 38,000 citizens.[3] Seven or 40% of these 18 major disasters

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1 GN-2354-5: The Bank Disaster Risk Management Policy, and GN-2354-7: Integrated Management of Disaster Risk and Financial Approach

2 The Government of The Bahamas. "Intended Nationally Determined Contribution (INDC) Under The United Nations Framework Convention on Climate Change (UNFCCC)."

3 Centre for Research on the Epidemiology of Disasters. "Emergency Events Database (EM-DAT)". Retrieved February 9, 2018.

occurred in the last 10 years, showing that impacts from disasters have accelerated in the country. These events are usually accompanied by intense winds, storm surges, severe coastal erosion and flooding, affecting both urban and rural areas. Recent hurricane experiences include: (i) Hurricane Joaquin (September 2015), which passed through the southern islands (comprising only 1.5% of the total population) and destroyed large segments of five islands with total damage estimated at US$114 million;[4] (ii) Hurricane Matthew (October 2016), the first hurricane since 1929 to directly strike both New Providence and Grand Bahama (where the bulk of the country's population and economic activities are concentrated), resulted in an estimated US$519 million of losses and damages; and (iii) Hurricane Irma (September 2017), which devastated several countries in the Caribbean region and also Florida, USA, resulting in an estimated US$31.6 million of losses and US$86.5 million of damages.[5] These events underscore the high and significant socio-economic vulnerability of the Bahamian archipelago to intense hurricanes. Climate Change is likely to add to these impacts and increase the risks and vulnerabilities.[6]

B. Policy and Institutional Framework for DRM

2.2 **Regional Framework:** As a member country of the Caribbean Community (CARICOM) and the Caribbean Disaster Emergency Management Agency (CDEMA) since 2001, The Bahamas has endorsed the regional strategy and framework for Comprehensive Disaster Management (CDM). 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, The Bahamas further recently endorsed CDEMA's Enhanced CDM Framework 2016-2022, which has the same objective of CDM and four broad lines of actions: (i) the implementation of institutional strengthening for DRM 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.

2.3 **National Framework:** Under the auspices of, and guided by, the regional CDM strategy and its Enhanced framework (2016-2022), the Government of The Bahamas (GOBH) recently developed its DRM national framework. This effort includes the development of:

2.4 Disaster Preparedness and Response Act. The Bahamas' governance for disaster preparedness and emergency operation is legislated by the Disaster Preparedness and Response Act approved in 2006, which makes provision for: (i) An Advisory Committee to the Prime Minister; (ii) A National Disaster Committee that is chaired by a director who reports to the Secretary to the Cabinet; (iii) Disaster Consultative Committees of the 22 Family Island Districts headed by

[4] Economic Commission for Latin America and the Caribbean (ECLAC) and IDB. "Assessment of the Effects and Impacts Caused by Hurricane Joaquin: The Bahamas." IDB, 2016.

[5] According to the preliminary report of Economic Commission for Latin America and the Caribbean (ECLAC) and IDB. "Assessment of the Effects and Impacts Caused by Hurricane Irma: The Bahamas." IDB, 2017.

[6] National Climate Change Adaptation Policy.

Island Administrators; and (iv) A National Disaster Preparedness and Response Plan comprising of 13 Emergency Support Function (ESF) Groups made up of government and non-government organizations.

2.5 National Disaster Preparedness and Response Plan 2016-2018. NEMA elaborated this Plan with a vision of foreseeing the involvement of agencies, communities and islands of The Bahamas in the preparedness, mitigation, response and recovery to disasters and emergency situations. The Plan consists of four components: (i) The Basic Plan that guides how GOBH will assist disaster-stricken islands and areas; (ii) ESF Annexes that describe the mission, policies, concept of operations, and responsibilities of the primary and support agencies involved in the implementation of key response functions that supplement Family Island activities[7]; (iii) The Recovery Function Annex that guides the provision of assistance to help disaster victims and affected communities return to normalcy and reduce the risk of future damage; and (iv) Appendices that cover other relevant information, including terms and definitions and the overview of a disaster operation. Additionally, the Plan includes the National Emergency Operations Center (NEOC) Standard Operating Procedures (SOP) as a written manual to provide information on operational activities including personnel requirements, responsibilities, resources, and procedures for presenting a coordinated response to any national disaster.

2.6 National Emergency Management Agency (NEMA). NEMA is the coordinating unit assigned by the GOBH. Its function includes 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 The Bahamas, the NEOC at NEMA's headquarters is either partially or fully activated. Local Emergency Operations Centers (LEOC) on islands that are likely to be impacted are also alerted and activated as necessary. Emergency Operations Centers (SOP) and protocols are activated for Communication (Alert & Updates), Shelter Activation (All Islands), Evacuation (Vulnerable persons in projected path of hurricane/hazard), Transport and all ESF. NEMA is headed by a public officer that holds the post of Director. The Director is assisted by a number of public officers appointed or assigned to NEMA and other persons whose services have been engaged by, or who have volunteered their services to NEMA.

2.7 National Climate Change Adaptation Policy. While the Disaster Preparedness and Response Act and National Disaster Preparedness and Response Plans are mainly focused on emergency preparedness and response operations, The Bahamas National Climate Change Adaptation Policy, which GOBH adopted in 2006, broadly addresses how the country reduces vulnerability to climate risk and CC. The aim of this Policy is to foster and guide coordinated and holistic national plans of action to address the short, medium- and long-term effects of CC. The goals and objectives of this policy include sixteen (16) policy principles that address the five key areas necessary for an effective DRM (see Section I) that

[7] ESF's include: Transportation, Communications, Public Works & Engineering, International Assistance, Planning & Information, Shelter Services, Relief Supplies & Distribution, Health & Medical Services, Urban Search & Rescue, Marine Search & Rescue, Hazardous Materials (Marine & Land), Food, Tourism Industry, Volunteers.

includes: risk identification and analysis (policy principles #9, 10 and 13),[8] risk reduction (policy principles #11),[9] and financial approach (policy principles #14).[10]

C. Baseline - Diagnosis of Current Progress in DRM of The Bahamas

2.8 **Governance.** Governance in this CDRMP refers to a framework of laws, norms, policies and institutional power to manage and reduce disaster risk. NEMA can be considered as the primary responsible within GOBH in coordination with the Advisory Committee to the Prime Minister, the Cabinet and other institutions including the Ministry of Finance, Ministry of Public Works (MoPW), the Department of Meteorology (Met office) and Bahamas National Geographic Information Systems (BNGIS), for DRM. Progress: See Section II. B. Challenges: GOBH considers that some additional planning instruments are required for effective sectoral and territorial-based DRM. These include: sectoral disaster risk mitigation plans with climate change considerations, sectoral business continuity plans and Islands evacuation strategies. CDEMA's regional CDM strategy requires that all member countries have National Disaster Management Policies.[11] The strategy also calls for the mainstreaming of gender issues into national policies and plans. GOBH has not yet developed a National Disaster Management Policy.

2.9 Risk Identification. In this CDRMP 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). The Department of Meteorology is the primary institution mandated to conduct these activities. Progress: The Met office monitors climate phenomenon and hurricanes 24 hours per day on a daily basis and 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 Met office, via TV and radio media sources. Hurricane information is shared with neighboring countries such as, the Turks and Caicos Islands (TCI). TCI relays information from The Bahamas Meteorological Department to the general public.[12] In the 1990's The Bahamas Met office conducted some flood hazard assessment studies. Challenges: Additional modern equipment is needed (e.g., doppler climate radar) for further improving the scale, coverage and accuracy of weather forecasting and hurricane information services. Optimizing institutional coordination and better

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8 #9: Promote and support research and information gathering at the national and regional levels on aspects of Climate Change and its impacts as they pertain to The Bahamas; #10: Ensure that society, at all levels and in all sectors, is adequately informed on Climate Change issues and their implications for the nation through a programme of Public Education and Outreach; #13: Create an enabling environment for the adoption of appropriate technologies and practices that will assist in meeting national and international commitments with respect to the causes and effects of Climate Change.

9 #11: Ensure that adequate physical and socio-economic planning is undertaken on a continuing basis to address the impacts of Climate Change: such planning will be undertaken in the wider context of sustainable development.

10 #14: Procure and allocate adequate financial and other resources to ensure that Climate Change issues are effectively addressed.

11 National Disaster Preparedness and Response Plan 2016-2018.

12 According to the CDEMA Regional Progress on the implementation of the Hyogo Framework for Action (2009-2011).

networking for broader real time integrated hazard monitoring, including wave heights, energy, and storm surge in relation to community vulnerability is also 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 needed. The development of risk analysis studies, including probabilistic hurricane/flood risk assessments, are essential as inputs for national development planning, disaster risk mitigation planning and to inform the country's financial protection and decision-making strategy to address maximum probable losses under a range of multi-hazard scenarios, including climate change.

2.10 **Emergency Preparedness and response.** In this CDRMP Emergency preparedness and response refers to the emergency preparedness and response actions planned, coordinated, organized and performed by NEMA, Island Administrators and communities. 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). NEMA 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.). Challenges: There are some lessons learned from the recent experiences of hurricane Joaquin in 2015 including:[13] the need to enhance existing Relief Supplies Distribution/Logistic Operations Plans; and for strengthening Local Island Disaster Committees. The Bahamas' performance self-evaluation under the Hyogo Framework for Action as prepared by NEMA indicates additional challenges of including and supporting vulnerable and at-risk communities including the disabled, elderly, single parents with children, women and migrant population as well as training and enhancing the knowledge and skills of island-communities with regard to community preparedness & response as well as building their resilience.

2.11 **Risk Reduction.** In this CDRMP 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) new, Building Code compliant resilient built development and infrastructure. The Ministry of Works and Transportation (MOWT) is the primary institution with responsibility to conduct these risk reduction activities. Progress: The GOBH approved The Bahamas Building Code Third Edition in 2003 using as reference the Florida Building Code. The 2003 Code incorporates hurricane wind design for the construction and operation of housings, buildings and other public structures. The 2003 Code also incorporates flood events to restrict lowest floor that should be above any known flood level. The MOWT is also responsible for the construction, management and maintenance of storm drainage infrastructure. Challenges: Lessons from the experiences of recent hurricane Joaquin in 2015 include:[14] construction of dwelling homes must be in accordance with the national building code; and construction buildings, dwelling homes and installation of certain infrastructure facilities should

[13] According to the National Disaster Preparedness and Response Plan 2016-2018.
[14] According to the National Disaster Preparedness and Response Plan 2016-2018.

be in accordance with the Land Use Planning and Zoning Laws. GOBH needs to strengthen its capacity related to Integrated Coastal Zone Management (ICZM) to manage disaster and climate change risk especially in the coastal area. This ICZM related challenges include: (i)managing and permitting existing and new built development to incorporate ICZM and building code concerns; (ii) institutional capacity strengthening for the MOWT and (iii) knowledge enhancement especially with respect to the utilization of nature-based infrastructure approaches. The new loan program with the Bank: Climate Resilient Coastal Management and Infrastructure Program (BH-L1043, US$35M, 2018-2024)[15] is expected to address these challenges.

2.12 **Financial protection and Risk Transfer.** In this CDRMP Financial Protection and Risk Transfer refers to the actions related to ensuring financial resilience to shocks including but not limited to preparation and financial disbursement for risk mitigation, immediate response, rehabilitation and reconstruction in the event of disasters of varying magnitude, scales of impact and probable loss. The Ministry of Finance retains the primary responsibility of this. Progress: GOBH is currently a member of and policy subscriber to the Caribbean Catastrophe Risk Insurance Facility (CCRIF), a parametric facility designed to limit the financial impact of catastrophic hurricanes, excess rainfall and seismic events by quickly providing short term liquidity when a policy is triggered. Challenges: CCRIF provides limited coverage to low-frequency and high-intensity catastrophic events, and the GOBH needs to broaden and deepen its financial coverage to attend emergencies and recover from medium-frequent (and medium-intensive) disaster events. Also, GOBH will need financial resources for proactive disaster risk mitigation measures. Specific needs include: identifying its baseline financial exposure to probable hazard events with future climate change scenarios; developing a comprehensive financial strategy for mitigation, retention and risk transfer, and additional financial instruments required to cover medium-frequent disaster events.

D. Bank Contributions in the Sector

2.13 Over the last few years, the IDB has been supporting the GOBH to strengthen the country's DRM framework and performance, including:

2.14 Climate-resilient Coastal Management and Infrastructure Program (Amount - loan: $35 million). The Objective of this program is to build resilience to coastal risks (including those associated with climate change) through sustainable coastal protection infrastructure, including nature-based infrastructure and integrated management of the coast. Specifically, the program will finance science-based shoreline stabilization and coastal flooding control measures in East Grand Bahama, Central Long Island and Nassau/Junkanoo Beach in New Providence, natural infrastructure for hazard resilience through restoration of coastal natural habitats (mangroves, reefs) in Andros and institutional strengthening for coastal risk management. This operation is expected to result in a reduction of economic losses due to natural disasters and an increase in local economic activity through coastal resilience. Executing Agency of this Program is the Ministry of Works. Expected results are: (i) climate-resilient erosion and flood control solutions, including nature-based and hybrid coastal protection measures in Grand Bahama, Long Island, Nassau Harbor; (ii) an innovative demonstration program of nature-based solutions for coastal erosion and flood control in Andros with

[15] http://www.iadb.org/en/projects/project-description-title,1303.html?id=BH-L1043.

community participation; (iii) enhanced governance for coastal resilience. Status as of February 2018: The Board of the Bank approved the Program in November 2017 and as of March 2018, the Bank is awaiting GOBH approval, signature and achievement of conditions precedent to initiate implementation.

2.15 Country Disaster Risk Profile for The Bahamas (Amount - grant: US$300,000). This study develops The Bahamas' Disaster Risk Profile to assess economic losses and human impacts due to eventual hurricanes, coastal floods and coastal erosion over different return periods. Activities include (i) digitalizing fifty years of paper-based meteorological observations collected by the Department of Meteorology including Long Island, Andros, Eastern Grand Bahama, Exuma and Inagua; (ii) Assessing national policy, institutional and budgetary conditions for an effective implementation of public policies in DRM (using The Bank's original methodology titled: Index of Governance and Public Policy in Disaster Risk Management - iGOPP); (iii) estimate probable maximum losses (PML) and average annual losses (AAL) due to eventual hurricanes, coastal floods and erosion; and (iv) capacity development for national institutions. The National Counterpart for this study is The Bahamas Department of Meteorology. Expected results are: (i) Country Disaster Risk Profile for The Bahamas; (ii) Three technical workshops for technology and capacity transfer to national institutions. Status as of February 2018: in execution to be completed by the end of 2018.

2.16 Feasibility Studies for a Climate-resilient Integrated Coastal Zone Management Program (Amount - grant: US$795,000). This grant resource program was designed to strengthen the foundational capacity of GOBH to implement ICZM as a strategy for sustainable development and addressing climate change. The project also prepared and validated with stakeholders' the designs and feasibility analyses for a potential investment program. The program was completed in fall 2016. Results were: Draft National ICZM Policy, ICZM capacity assessment, ICZM technical briefs, conceptual designs for shoreline stabilization structures. This work led directly to a request from GOBH in the summer 2016 for a public investment program. All technical studies served as key inputs in program appraisal and design. The Executing Agency was the Ministry of Environment and Housing.

2.17 Ecosystem-based Development Plan for Andros (Amount - grant: US$900,000). The objective of this project is to develop the Andros Master Plan (AMP) which represented an innovative approach to mainstream natural capital in multi-sectoral development planning. The work combined the modelling of trade-offs in ecosystem services (e.g. role of mangroves and reefs for coastal protection, fisheries production, tourism value) for different development scenarios with a highly participatory process of creating these visions of the future, building consensus around them, and formulating an ecosystem-based master plan. The project was completed in 2017 with the following results: (i) Innovative ecosystem services assessment and analysis of trade-offs for future development scenarios (Final report of Stanford University's Natural Capital Project); (ii) Andros Sustainable Development Master Plan; (iii) on-line hazard modelling platform; (iv) interactive workshop to introduce concepts and methodologies to build capacity at the national level to facilitate mainstreaming of ecosystem services in integrated planning approaches. The Executing Agency was the Office of the Prime Minister (OPM).

2.18 Community-based Conch Management for the Family Islands (Amount - grant: US$500,000). The objectives of this technical cooperation are: (i) creating

alternative livelihoods in fishing communities; (ii) implementing community-based conch monitoring; (iii) developing a community-based conch fishery reserves/no take zones; and (iv) implementing the conch 'traceability' program connecting fishers to local restaurants (certification program). The project just started in February 2018 with the following results expected: (i) diversification of fishers' income; (ii) enhanced sustainability of conch harvest; (iii) medium-term recovery of conch stock; and (iv) improved links of fishers to local markets. The Executing Agency is the Bahamas National Trust (BNT).

2.19 Post-disaster Emergency Grant (Amount - grant, US$200,000 per operation). This is a non-reimbursable technical cooperation for emergency humanitarian aid following a declaration of natural disaster, either nationally or regionally, and a written request by the Government. Eligible Expenses are: Food aid and water distribution, Emergency Medical Assistance, Temporary housing (shelter), and logistics necessary for emergency operations. Recent Emergency Grant Technical Cooperation projects approved for the Bahamas include: Emergency Assistance due to Hurricane Irma (BH-T1059), Matthew (BH-T1053) and Joaquin (BH-T1049) respectively.

2.20 Post-disaster Impact Assessment Grant: This is a non-reimbursable technical cooperation resource to fund in-depth economic impact assessment, including damages, losses, and foregone income due to a disaster. The Bahamas has requested and received this support after Hurricanes Joaquin in 2015 and Matthew in 2016. Each of these studies cost approximately US$100,000. These studies are typically conducted in partnership with the United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC), which pioneered the development of the damage and loss assessment (DALA) methodology are recognized experts in this type of assessment and analysis. Typical execution time for the conduct of a DALA is around 1-3 months. Recent assessments in the country: Post disaster needs assessments using the DALA methodology were undertaken by ECLAC in The Bahamas after Hurricane Joaquin (Nov -Dec 2015); Hurricane Matthew (Oct – Nov 2016); and Irma (Oct- Nov 2017) respectively.

III. CDRMP OF THE BAHAMAS

A. Objective and Description

3.1 The objective of the CDRMP is to support the country's efforts for reducing disaster risk including all five key areas (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.

3.2 The Bahamas' DRM policy/institutional framework addresses all five key areas required for a CDRMP (see Section II. B.). Under The Bahamas' DRM framework, and based on the current progress and challenges (See Section II.C.), as well as considering the current Bank contributions in the Sector, the GOBH identified long-term goals over 2018-2022 for each of the five key areas and first-year milestones as progress indicators to be monitored are presented in – Table 1.

Table 1. Long-term goals of CDRMP and short-term milestone/indicators of the first year

Key Areas	Long-term goals (within five years, 2018-2022)	Milestone/indicators 2018-2019
Disaster Risk Management (DRM) Governance	Develop and articulate islands evacuation strategy/plan	Policy and directives for emergency island evacuation **Responsibility: NEMA**
	Develop sectoral disaster risk mitigation plans	15 Sector plans **Responsibility: NEMA**
	Develop sectoral continuity of operations plans	15 Sector continuity of operations plans **Responsibility: NEMA**
	Strengthen island administration and leadership for DRM	3 seminars and 3 sectoral workshops (North, Central and South) on comprehensive disaster preparedness and mitigation **Responsibility: NEMA**
Risk Identification	Strengthen Hurricane and Storm Surge Monitoring System	4 Radar/Doppler Systems in operation (all geographic sectors) **Responsibility: Met Office**
		Development of Mobile Application for severe weather bulletins **Responsibility: Met Office**
		Probabilistic Risk Assessment for The Bahamas, including climate change considerations **Responsibility: Met Office**
		Institutional decision making for data collection and data needs based on Comp. 3 of ICZM loan (BH-L1043) **Responsibility: MOWT in coordination with the Met Office**
		Storm surge hazard mapping (to be developed in the second or the third year), including climate change **Responsibility: Met Office**

Key Areas	Long-term goals (within five years, 2018-2022)	Milestone/indicators 2018-2019
Risk Reduction	Strengthen national capacity for ICZM	Formation of Integrated Coastal Zone Management Unit (within MOPW) under the framework of the IDB Coastal Investment Loan (BH-L1043) **Responsibility: MOWT**
		Updated building code (to be addressed in the second or the third year) **Responsibility: MOWT**
Preparation for Emergency and Response	Improve public awareness among women, men and youth about personal preparedness & self-care	4-6 public service announcements developed 6-9 gender-inclusive public awareness campaigns conducted **Responsibility: NEMA**
	Strengthen emergency communication systems	30 radio base stations & 35 satellite phones & 105 handheld radios provided to Family Islands and quarterly tested **Responsibility: NEMA**
	Improve North, Central and South island community knowledge and skills for community preparedness & response	3 community emergency preparedness & response simulations conducted (NAD, Port Dept., NEMA) **Responsibility: NEMA**
	Strengthen relief supply & distribution logistics	3 training seminars in relief supply and distribution delivered in North, Central and South sectors (LSS system) **Responsibility: NEMA**
Financial Protection and Risk Transfer	Deepen the ex ante financial protection and risk transfer for disasters	Baseline of financial exposures calculated with a Probabilistic Risk Assessment that is under preparation by the Met Office. **Responsibility: Ministry of Finance, in coordination with the Met Office**
		Concept note on a financial strategy for risk protection and reduction **Responsibility: Ministry of Finance**

Key Areas	Long-term goals (within five years, 2018-2022)	Milestone/indicators 2018-2019
		Review and analysis of the current allocation of public expenditures on relief and reconstruction from natural disasters (Technical Note) **Responsibility: Ministry of Finance**
		Strengthen the ex ante financing of extraordinary fiscal expenditures caused by severe or catastrophic natural disaster through the CCF loan **Responsibility: Ministry of Finance**

B. Eligibility and validity of the CDRMP

3.3 The Bank confirmed that The Bahamas 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 CDRMP and as conditional to meeting the eligibility requirements for the Contingent Loan for Emergencies due to Natural Disasters for The Bahamas (BH-O0003). The Bahamas 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.

C. Monitoring

3.4 After the first period of validity of the CDRMP (see paragraph 2.1 of the Operating Regulations), the Bank will perform an annual evaluation of the CDRMP to monitor if all the identified yearly-milestones are being executed satisfactory. During the annual evaluation, the Bank and the GOBH 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 GOBH.

3.5 In the event that the result of the annual evaluation is unfavorable, the Bank will follow the procedures set forth in paragraph 2.2 of the Operating Regulations.