

Index of Governance and Public Policy in Disaster Risk Management (iGOPP): National Report Barbados

Sergio Lacambra

Yuri Chakalall

Tsuneki Hori

Ivonne Jaimes

Rolando Durán

Ana María Torres

Tamara Lovell

Ernesto Visconti

Environment, Rural
Development and Risk
Management Division

TECHNICAL NOTE N°
IDB-TN-1919

October 2020

Index of Governance and Public Policy in Disaster Risk Management (iGOPP): National Report Barbados

Sergio Lacambra

Yuri Chakalall

Tsuneki Hori

Ivonne Jaimes

Rolando Durán

Ana María Torres

Tamara Lovell

Ernesto Visconti

**Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library**

Index of Governance and Public Policy in Disaster Risk Management (iGOPP):
national report Barbados / Sergio Lacambra, Yuri Chakalall, Tsuneki Hori, Ivonne Jaimes,
Rolando Durán, Ana María Torres, Tamara Lovell, Ernesto Visconti.

p. cm. — (IDB Technical Note ; 1919)

1. Natural disasters-Government policy-Barbados. 2. Emergency management-Government policy-Barbados. 3. Environmental risk assessment-Government policy-Barbados. I. Lacambra, Sergio. II. Chakalall, Yuri. III. Tsuneki, Hori. IV. Jaimes, Ivonne. V. Durán, Rolando. VI. Torres, Ana María. VII. Lovell, Tamara. VIII. Visconti, Ernesto. IX. Inter-American Development Bank. Environment, Rural Development and Risk Management Division. X. Series.
IDB-TN-1919

JEL Code: Q54

Keywords: iGOPP, Public Policy Governance Index, GRD, Disaster Risk Management, Climate, Climate Change, Floods.

<http://www.iadb.org>

Copyright © 2020 Inter-American Development Bank. This work is licensed under a Creative Commons IGO 3.0 Attribution-NonCommercial-NoDerivatives (CC-IGO BY-NC-ND 3.0 IGO) license (<http://creativecommons.org/licenses/by-nc-nd/3.0/igo/legalcode>) and may be reproduced with attribution to the IDB and for any non-commercial purpose. No derivative work is allowed. Any dispute related to the use of the works of the IDB that cannot be settled amicably shall be submitted to arbitration pursuant to the UNCITRAL rules. The use of the IDB's name for any purpose other than for attribution, and the use of IDB's logo shall be subject to a separate written license agreement between the IDB and the user and is not authorized as part of this CC-IGO license.

Any dispute related to the use of the works of the IDB that cannot be settled amicably shall be submitted to arbitration pursuant to the UNCITRAL rules. The use of the IDB's name for any purpose other than for attribution, and the use of IDB's logo shall be subject to a separate written license agreement between the IDB and the user and is not authorized as part of this CC-IGO license.

Note that link provided above includes additional terms and conditions of the license.

The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.



Contact information: Sergio Lacambra (slacambra@iadb.org)

This document was prepared by:

The IDB specialists in Disaster Risk Management: Sergio Lacambra, Yuri Chakalall, Tsuneki Hori and Ivonne Jaimes. The external consultants in Risk Management and Adaptation to Climate Change: Luis Rolando Durán, Ana María Torres, Tamara Lovell and Ernesto Visconti.

The valuable collaboration of the Government of Barbados was also counted.

Prepared with information compiled until January 2018

The development and publication of this document was financed through the Regional Technical Cooperation RG-T2787, financed by the Multi-Donor Fund for Disaster Prevention with contributions from Canada, Spain, Japan and Korea.

Index of contents

EXECUTIVE SUMMARY	1
RECOMMENDATIONS FOR POLICY REFORM.....	4
1. INTRODUCTION	7
2. INSTITUTIONAL FRAMEWORK.....	12
3. BREAKDOWN BY COMPONENT	15
A. General framework of governance for disaster risk management (GF).....	17
B. Risk Identification and Knowledge (RI).....	22
C. Risk Reduction (RR)	26
D. Disaster preparedness (DP).....	31
E. Recovery planning (RP)	35
F. Financial protection (FP).....	38
4. CONCLUSIONS	44
5. RECOMMENDATIONS FOR POLICY REFORM	45
6. ANNEX 1: IGOPP CALCULATIONS	48

Graphs

Graphic 1: Components of public policy reform in DRM according to the iGOPP.	15
Graphic 2: Public policy phases according to the iGOPP.	16
Graphic 3: General Framework for Governance of DRM by Public Policy Phase.	17
Graphic 4: Risk Identification by Public Policy Phase.	22
Graphic 5: Risk Reduction by Public Policy Phase.	26
Graphic 6: Disaster Preparedness by Public Policy Phase.	31
Graphic 7: Recovery Planning by Public Policy Phase.	35
Graphic 8: Financial Protection by Public Policy.	38

Tables

Table 1: Components of public policy reform in DRM according to the iGOPP.	2
Table 2: Public policy phases according to the iGOPP.	2
Table 3: iGOPP, Classification and Codification.	11
Table 4: Components of public policy reform in DRM according to the iGOPP.	15
Table 5: Public policy phases according to the iGOPP.	16
Table 6: General Framework for Governance of DRM by Public Policy Phase.	17
Table 7: Risk Identification by Public Policy Phase.	22
Table 8: Risk Reduction by Public Policy Phase.	26
Table 9: Disaster Preparedness by Public Policy Phase.	31
Table 10: Recovery Planning by Public Policy Phase.	35
Table 11: Financial Protection by Public Policy.	38

Acronyms

AAL	Annual Average Losses
ACS	Association of Caribbean States
CARICOM	the Caribbean Community
CCA	Climate Change Adaptation
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDEMA	Caribbean Disaster Emergency Management Agency
CAPE	Caribbean Advanced Proficiency Examination
CERO	Central Emergency Relief Organization
CSEC	Caribbean Secondary Education Certificate
CUBiC	Caribbean Uniform Building Code
CZMU	Coastal Zone Management Unit
DEM	Department of Emergency Management
DEOs	District Emergency Organizations
DP	Disaster Preparedness
DRM	Disaster Risk Management
DRR	Disaster risk reduction
EIAs	Environmental Impact Assessments
EMAC	Emergency Management Advisory Council
FAO	Food and Agriculture Organization of the United Nations
FP	Financial protection
GFCF	Gross Fixed Capital Formation
IDB	Inter-American Development Bank
iGOPP	Index of Governance and Public Policy in Disaster Risk Management
PML	Probable Maximum Loss
RC	Post-Disaster Recovery Planning
RI	Risk Identification and Knowledge
RR	Risk reduction
SID	Small Island Developing State
UPC	Urban Produced Capital
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNISDR	United Nations Office for Disaster Risk Reduction
WB	World Bank

Executive Summary

Barbados is the most eastern island in the Lesser Antilles and is exposed to a range of hydro-meteorological, geological and anthropogenic hazards. These include floods, droughts, landslides, earthquakes, tsunamis, tropical storms and hurricanes. Occasionally there are bush fires associated with dry spells and drought conditions which typically occur during El Nino 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. Although earthquakes are frequent, buildings are generally built to withstand hurricanes rather than seismic activity. The Barbados National Building Code establishes various technical requirements and standards governing the design and construction of buildings in Barbados.

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. This Act covers all the different components and processes for reducing disaster risk, but in a centralized way. Furthermore, sectorial norms are silent in defining DRM responsibilities within each sector's framework of competence. Noting the importance of integrating disaster risk management into sectoral activities, the country has adopted and endorsed a comprehensive disaster management approach as a participating state of the Caribbean Disaster Emergency Management Agency (CDEMA) and the Association of Caribbean States (ACS) since inception.

The application of the Index of Governance and Public Policy in Disaster Risk Management (iGOPP) has revealed the situation of Barbados regarding the legal, institutional and budgetary conditions to implement an effective disaster risk management (DRM) public policy.

The following tables and graphs show the general levels of completion for each iGOPP indicator both by components of public policy reform in DRM and by public policy phases.

Table 1: Components of public policy reform in DRM according to the iGOPP. Barbados (2018)

1	General governance framework for DRM	25%
2	Risk identification	20%
3	Risk reduction	26%
4	Disaster preparedness	29%
5	Recovery Planning	7%
6	Financial Protection	17%

Table 2: Public policy phases according to the iGOPP. Barbados (2018)

1	Central policy coordination and articulation	36%
2	Definition of sector responsibilities	13%
3	Definition of territorial responsibilities	12%
4	Evidence of implementation progress	19%
5	Monitoring, accountability and participation	23%

The findings and conclusions are summarized as follows:

1. The “DRM General Framework” component has a score of 27%, ranking “Incipient” according to iGOPP categories. The Emergency Management Act of Barbados is quite comprehensive covering aspects related to risk reduction, response and recovery, but it does not establish a responsibility framework for all government levels (central, decentralized, local). For these reasons, the key indicators characterizing the regulatory conditions for DRM at central, sectorial and territorial levels are not met.
2. The Risk Identification component has a score of 15%, corresponding to a “low” rank. In Barbados, there are no regulations designating a responsible national party to provide technical assistance and guidelines at territorial and sectorial levels for the disaster risk analysis neither for the mandate for the creation and maintenance of a database on the impacts of disasters.

In terms of the implementation of this component, it is worth highlighting that both primary and secondary curricula have been adjusted to include disasters and sustainable development. This was achieved with the support of UNESCO, during the decade of

education for Sustainable Development. The iGOPP application also revealed that only the education sector, out of the ten key sectors in the country, allocated financial resources for disaster risk identification activities in the Fiscal Year 2016/2017.

3. The Risk Reduction component has a score of 21%, barely corresponding to the “incipient” rank and very close to the “low” rank. In Barbados there are no regulations for the integration or articulation of disaster risk reduction and climate change for the territorial and sectoral entities. Furthermore, acceptable risk criteria for at least two hazards have not been defined in the national regulations. No evidence was found of any regulations mandating the adoption of disaster risk reduction measures during the construction of public and private infrastructure projects.

In terms of the implementation of this component, out of the ten key sectors identified by the iGOPP methodology, only one (environment) received financial resources for disaster risk reduction activities in the Fiscal Year 2016/2017.

4. The Disaster Preparedness component has a score of 27%, corresponding to the “incipient” rank. The iGOPP application confirmed the existence of regulations for the preparedness and response processes that establish the formulation of emergency or contingency plans at the national level and the coordination of international humanitarian assistance and mutual help.
5. The Recovery Planning component has a score of 6%, the lowest score of all the DRM components, and corresponding to the “low” rank. The low score obtained by this component is common in the Latin American and Caribbean region, where it is rare to see recovery planning considered in the DRM legal frameworks for DRM, with few exceptions.
6. The Financial Protection component has a score of 17%, corresponding to a “low” rank. In terms of financial protection, Barbados has access to the CDERA’s Emergency Assistance Fund, which is enabled for financing emergency management activities. Additionally, regional risk transfer instruments are available, given that Barbados can access insurance policies for different events through the CCRIF.

Recommendations for policy reform

Short term

- 1) The implementation of a comprehensive public policy reform is recommended, to update the Emergency Management Act (EMA) of Barbados CAP 160 A, adopted in 2007. This reform should minimally include:
 - a) The definition of a comprehensive framework of responsibilities for Disaster Risk Management and Climate Change adaptation for all Ministries, Departments and Agencies (MDA) as well as local governments, in the scope of their mandates and jurisdiction;
 - b) The articulation of the DRM act with climate change, territorial planning and water management regulations;
 - c) The responsibility for control entities to conduct monitoring, audit and evaluation of DRM responsibilities established by law, as well as on the quality of implementation of the actions;
 - d) The responsibility of the Ministry of Finance and Economic Affairs for the development and coordination of a financial strategy or policy to guide the financial management of disaster risk in the country;
 - e) The mandatory development and implementation of contingency, emergency and service continuity of every Ministry, Department and Agency;
 - f) The mandate to implement regulations and mechanisms to make information about risk, disaster and climate change available;
 - g) The mandatory implementation of control, audit and evaluation processes during and after disaster impact;
 - h) The designation of an entity responsible for the definition of common methodologies and guidelines in disaster risk and climate change analysis, as well as for providing technical assistance to MDA and municipalities;
 - i) Explicit responsibility for the implementation of a national DRM information system and databases with information about the impacts of disaster;
 - j) The definition of the compulsory responsibility of all public service provider companies to reduce disaster risk in the scope of their operations;

- k) The mandatory formulation of emergency or contingency plans at national, sectorial and territorial level, as well as the implementation of drills and simulation exercises;
 - l) The establishment of specific criteria for the subsidiary support between different government levels, namely under which circumstances and procedures the central government operates in support of decentralized levels;
 - m) The mandate for institutions responsible for DRM to implement specific mechanisms for civil society, social and non-governmental organization participation;
 - n) The definition of specific responsibilities, functions and institutional arrangements for the planning and implementation of ex-ante and ex-post recovery actions;
- 2) The updated DRM Act, or specific sectorial policy reform processes (updating or enactment of sectorial regulations) should indicate:
- a) The regulations that decentralize responsibilities regarding development planning or territorial planning and land use should include DRM and CCA as part of the Municipal responsibilities and functions;
 - b) Mandatory, regular quality assessments of the technical and scientific processes, methodologies and standards, which form part of the existing regulations governing research, monitoring and dissemination of information about hazards.
 - c) Climate change, territorial planning and water resources management regulations should include explicit objectives, results, indicators or targets related to DRM.
- 3) The next revision of the Country's Development Strategy should explicitly include DRM and CCA objectives, results and indicators;
- 4) The design and implementation of a budgetary instrument for identifying the allocations related to climate change adaptation activities.
- 5) Considering that a comprehensive reform of the DRM Act could take time, in the scope of its mandate, the Ministry of Finance and Economic Affairs should develop a financial strategy or policy to guide the financial management of disaster risk in the country. Furthermore, the evaluation for the backing of a contingency credit is recommended, explicitly tied to the financing of emergent expenses in disaster situations.

- 6) As part of the development of a regulatory framework for public investments, the preparation of methodological guidelines is recommended for the mandatory inclusion of disaster risk and climate change analysis and measures in all phases of the process.
- 7) Establish specific regulations, for the design and adoption of risk reduction standards of essential buildings or critical infrastructure through measures of reinforcement or replacement.

Medium term

- 1) Existing regulations that govern DRM research and studies should be reformed – or new legislation adopted – to include the frequency of occurrence of natural hazardous events and their associated levels and intensities as part of the responsibilities of the institutions;
- 2) Institutions responsible for DRM should maintain advocacy processes during legislation reforms to include explicit and comprehensive DRM and CCA responsibilities within sectorial and territorial new regulations;
- 3) Enact specific regulations that include the insurance of critical public infrastructure;
- 4) Promote reforms of the national control system to include recovery within the framework of the controlling entities.

Long term

- 1) The design and implementation of a financial protection structure for the agricultural sector is recommended;

1. Introduction

The Index of Governance and Public Policy in Disaster Risk Management (iGOPP) has been designed to evaluate the formal, and therefore provable, existence of a series of legal, institutional and budgetary conditions that are considered fundamental for the processes of disaster risk management to be implemented in a country.

The iGOPP does not replace or substitute other indicators related to the subject, but rather complements the different methodologies that exist for the comprehensive evaluation of risk and disaster risk management.

The practical use of the iGOPP consists in identifying the voids in the legal, institutional and budgetary framework that may exist in a particular country. It helps to focus a country's efforts (and the IDB's support, when applicable) on relevant aspects of governance aimed at strengthening the disaster risk management public policy options in the countries of Latin America and the Caribbean.

The iGOPP is a composite or synthetic indicator that allows for verifying whether a particular country possesses the appropriate governance conditions for implementing a public policy for comprehensive disaster risk management. The index makes it possible to quantify to what extent the actions, policies and reforms of the government and its institutions are consistent with the objectives, results and processes of disaster risk management.

The design of the iGOPP is based on two conceptual pillars:

- The Disaster Risk Management conceptual framework and its main processes
- The Governance conceptual framework and public policy phases

Disaster Risk Management (DRM) refers to all the processes to design, apply and evaluate strategies, policies and measures aimed at improving the understanding of disaster risk, to foster disaster risk reduction, retention and transfer, and to promote the continuous improvement of preparedness, response and recovery practices for disaster scenarios, with the explicit objective of increasing human safety, well-being, quality of life, resilience and sustainable development. It includes prospective, corrective and reactive risk management. DRM constitutes an indispensable development policy for ensuring territorial sustainability and security and collective rights and interests, and therefore is intrinsically associated with the planning of safe development and sustainable territorial environmental management in all levels of government.

Within the conceptual framework of the iGOPP, DRM is approached as a set of processes aimed at adopting and implementing policies, strategies and practices to reduce risk and its potential effects, and is analyzed based on 6 components that are necessary in order for it to be effectively

implemented. The selection of these components is based on the experience of the political reform processes developed by the Bank:

1. General Framework of Governance for DRM (GF): This refers to the regulatory foundation suitable for the organization and coordination of DRM in each country, which includes both the specific regulations in DRM and the enabling territorial and sectorial regulations that guarantee their viability. Likewise, the availability of resources to implement the DRM processes, and the establishment of adequate data and citizen participation mechanisms, as well as mechanisms for the monitoring, evaluation and follow-up of said processes.
2. Risk Identification and Knowledge (RI): This is the process of DRM focused on the knowledge of the origins, causes, scope, frequency and possible evolution, among other aspects, of the potentially dangerous phenomena, as well as of the location, causes, evolution and resistance and recovery capacity of the exposed socioeconomic elements. This process includes the preliminary analysis of the consequences and contains both objective and scientific interpretations as well as social and individual perception interpretations. The conceptual framework of the iGOPP references the existence of a regulatory, institutional and budgetary framework that facilitates the continuous development of risk analysis, a tool that makes it possible to identify risk factors and causes and evaluate the probable damages and losses to be caused by natural events.
3. Risk reduction (RR): This is the DRM process focused on minimizing vulnerabilities and risks in a society, to avoid (prevention) or limit (mitigation) the adverse impact of hazards, within the broad context of sustainable development. This process includes the prospective and corrective interventions of disaster risk, and in order for it to be appropriately implemented it is necessary to have a good foundation of data on the risk conditions. The conceptual framework of the iGOPP references the existence of a regulatory, institutional and budgetary framework that enables the timely and appropriate intervention in the causes that generate the conditions of vulnerability.
4. Disaster Preparedness (DP): This is the DRM process whose objective is to plan, organize and test the society's response procedures and protocols in the event of a disaster, guaranteeing appropriate and timely assistance to affected persons, facilitating the normalization of the essential activities in the zone affected by the disaster. Preparedness is carried out through the monitoring of events and the definition of risk scenes, the planning, organization, training, resources and simulation for actions of alert, evacuation, search, rescue, aid, and humanitarian assistance that must be made in case of emergency. The

conceptual framework of the iGOPP references the existence of a regulatory, institutional and budgetary framework that enables the implementation of mechanisms for a quick and appropriate response to an event or imminent event of an emergency situation.

5. Post-Disaster Recovery Planning (RC): Ex-ante process focused on preparation for a quick and appropriate reestablishment of acceptable and sustainable living conditions through the rehabilitation, repair or reconstruction of infrastructure, goods and services that were destroyed, interrupted or deteriorated in the affected area, and the reactivation or impulse of the economic and social development of the community under conditions of lower risk than what occurred before the disaster. The conceptual framework of the iGOPP references the existence of a regulatory, institutional and budgetary framework that enables the implementation of mechanisms to reestablish means to life, basic services and infrastructure in such a way that reduces the improvisation, inefficiency and ineffectiveness in the post-disaster recovery processes.
6. Financial Protection (FP): This is the DRM process that seeks the optimal combination of financial mechanisms or instruments for the retention and transfer of risk in order to have ex-post access to timely economic resources, which improves the response capacity to disasters (smaller and recurrent events and large infrequent disasters) and protects the fiscal balance of the State¹. The conceptual framework of the iGOPP refers to the existence of a regulatory, institutional and budgetary framework that enables the design and implementation of a suitable structure for the retention and transfer of disaster risk.

On the other hand, **Governance** refers to the capacity to govern a public problem. This capacity manifests itself in the ongoing and stable management of the governments and administrations but also of the sectorial and private stakeholders within a country. As the capacity to govern a public problem increases, there should be an observable increase in the effectiveness of the adopted decisions and implemented policies, thus helping to prevent a greater number of negative consequences that result in the event of a disaster.

Within the conceptual framework of the iGOPP, governance is approached from the perspective of the phases of the public policy process, namely:

¹ Ghesquiere and Mahul, (2010). Financial Protection of the State against Natural Disasters, A Primer, The World Bank, Latin American and the Caribbean Region, Finance and Private Sector Development, Sustainable Development Network, September 2010

A. Inclusion in the governmental agenda and in policy-making

The inclusion in the policy agenda is largely a response to the degree of the public problem and to the level of political and social pressure exerted on the institutions. In order for the political leadership and social and economic pressure to give rise to substantive action it may be necessary for the political administration to make significant progress toward defining the responsibilities of the different stakeholders involved in the analysis process. The iGOPP analyzes the agenda inclusion by verifying the existence of appropriate legal frameworks for DRM, or the inclusion of the subject in sectorial and territorial regulations. The iGOPP analyzes the inclusion on the agenda and formulation of public policy at three levels: (i) Central policy coordination and articulation; (ii) Definition of sectorial responsibilities; and (iii) Definition of territorial responsibilities.

B. Policy implementation

The iGOPP analyzes evidence of implementation by verifying the actions taken or the availability of resources allocated to the parties responsible for implementing the DRM policy, in its different components and governmental levels.

C. Policy Evaluation

The iGOPP analyzes public policy evaluation by looking at the existence of monitoring and accountability mechanisms, as well as citizen participation and data mechanisms.

Both dimensions (DRM and Governance/Public Policy) are shown on the iGOPP matrix structure, in 5 columns that analyze the public policy phases, and in 6 rows that analyze the components of the public policy reform process in DRM. This matrix structure is expressed in 30 cells that make up a variable number of binary indicators.

The index scoring goes from 0 to 100 and uses the following classification system:

%	Rating
91 - 100%	Outstanding
71 - 90%	Very good
41 - 70%	Considerable
21 - 40%	Incipient
0 - 20%	Low

Table 3: iGOPP, Classification and Codification

Public Policy Phases	1. Inclusion on the Governmental Agenda and in Policy-Making			2. Policy implementation	3. Policy evaluation:
Components of public policy reform in DRM	Central policy coordination and articulation	Definition of sectorial Responsibilities	Definition of territorial Responsibilities	Evidence of Progress in Implementation	Monitoring, accountability and participation
General Framework of Governance for DRM (GF)	GF-1A	GF-1B	GF-1C	GF-2	GF-3
Risk identification (RI)	RI-1A	RI-1B	RI-1C	RI-2	RI-3
Risk reduction (RR)	RR-1A	RR-1B	RR-1C	RR-2	RR-3
Disaster preparedness (DP)	DP-1A	DP-1B	DP-1C	DP-2	DP-3
Post- disaster recovery planning (RC)	RC-1A	RC-1B	RC-1C	RC-2	RC-3
Financial Protection (FP)	FP-1A	FP-1B	FP-1C	FP-2	FP-3

2. Institutional framework

Barbados is the most easterly island in the Lesser Antilles and is exposed to a range of hydro-meteorological, geological and anthropogenic hazards. These include floods, droughts, landslides, earthquakes, tsunamis, tropical storms, and hurricanes. Occasionally there are bush fires associated with dry spells and drought conditions which typically occur during El Nino 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. Most floods are localized with contributing factors including poor drainage systems, urbanization and indiscriminate garbage disposal. Maximum damage recorded to the country has therefore been associated with natural hazards such as tropical storms², hurricanes³ and flooding⁴.

Although earthquakes are frequent, buildings are generally built to withstand hurricanes rather than seismic activity. The Barbados National Building Code establishes various technical requirements and standards governing the design and construction of buildings in Barbados. It addresses issues relating to structural sufficiency and durability, fire safety, health and amenity. The Government has established a Building Authority whose primary functions include the administration and enforcement of the Building Code.

Disaster Risk Management in Barbados is coordinated by the Department of Emergency Management (DEM). The DEM was established on April 1, 2007 through the Emergency Management Act Cap. 160A, which is an Act of Parliament. The DEM replaced the Central Emergency Relief Organisation (CERO) which was established in the 1940s by authority of the Governor as an entity responsible for hurricane relief. Noting the importance of integrating disaster risk management into sectoral activities, the country has adopted and endorsed a comprehensive disaster management approach as a participating state of the Caribbean Disaster Emergency Management Agency (CDEMA) and the Association of Caribbean States (ACS) since inception. In addition, the country hosts the offices of the CDEMA and the Regional Security System as the regional inter-governmental agency for disaster management in the Caribbean

² Barbados received a payout of US 8.5 million from the CCRIF under its parametric risk insurance policy which was triggered by the passage of Tropical Storm Tomas in October, 2010

³ The country received a payout of US 975k from the CCRIF under its parametric risk insurance policy which was triggered by the passage of Hurricane Matthew in 2016

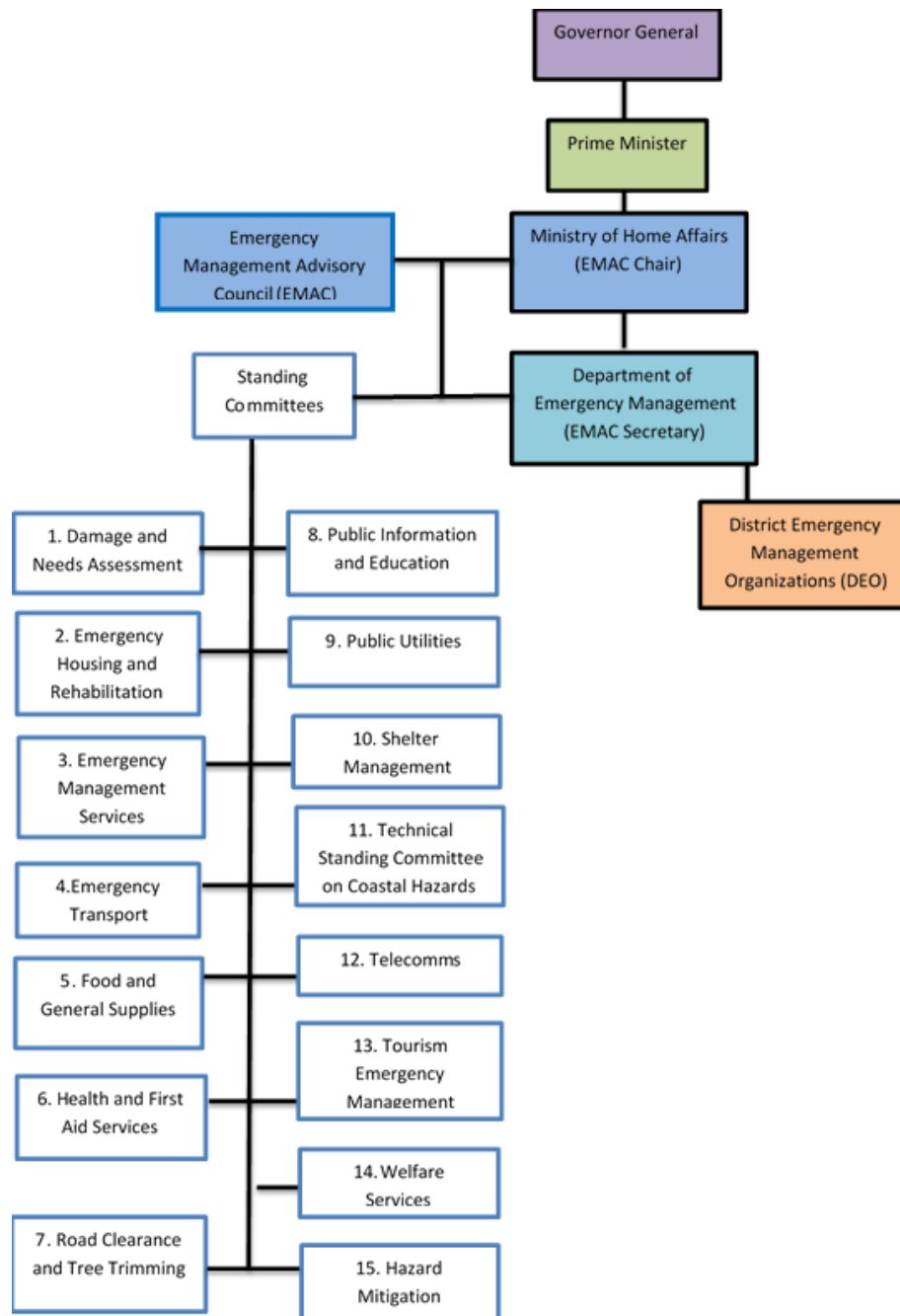
⁴ Barbados received a payout of US1.2 million from the CCRIF under its excess rainfall insurance policy which was triggered by rains from a trough system that occurred in the Eastern Caribbean in November, 2014.

Community (CARICOM), and the regional entity tasked with collective response for the defense and security of the Eastern Caribbean respectively.

In Barbados, the Emergency Management Act passed in 2006 establishes the DEM and secures the appointment of a Director to administer the Act. It also establishes an Emergency Management Advisory Council. DEM is responsible, inter alia, for the development of the National Multi-hazard Disaster and Emergency Management Plan which must be prepared annually. There is exceptional provision through the Emergency Powers Act, Cap. 161., for the protection of the community in cases of emergency. The Act empowers the Governor General to declare a state of public emergency by proclamation and mandates that the Governor General communicates this fact to the Parliament and to summon both Houses. Once a declaration is in force, the Cabinet of Barbados is authorized to make emergency directives to provide for the supply of specified essentials such as food, basic public utilities; maintaining transportation; taking possession or control of property other than land; and paying compensation. The Governor General has not declared a disaster event since the passing of the Act in 2006.

A local government system was disbanded in 1969 and replaced with a centralized system. A process of decentralization of the governance system began in 2008 with the establishment of Constituency Councils as a mechanism for identifying priorities of each constituency and addressing associated socioeconomic issues through capacity building and implementation of suitable programmes. The role of the Constituency Councils in Disaster Risk Management is not clear and can, at times, be viewed as a conflicting role with that performed by District Emergency Organizations (DEOs). The constituency level of disaster management is carried out by DEOs which are the volunteer arm of the Department of Emergency Management (DEM). The DEM coordinates first responder agencies during and after national emergencies and is supported by the 15 Standing Committees of the Emergency Management Advisory Council.

Figure 1 National Disaster Management System of Barbados



3. Breakdown by component

The following tables and graphs show the general levels of completion for each iGOPP indicator both by components of public policy reform in DRM and by public policy phases.

Table 4: Components of public policy reform in DRM according to the iGOPP. Barbados (2018)

1	General governance framework for DRM	25%
2	Risk identification and knowledge	20%
3	Risk reduction	26%
4	Disaster preparedness	29%
5	Post-Disaster Recovery Planning	7%
6	Financial Protection	17%

Graphic 1: Components of public policy reform in DRM according to the iGOPP. Barbados (2018)

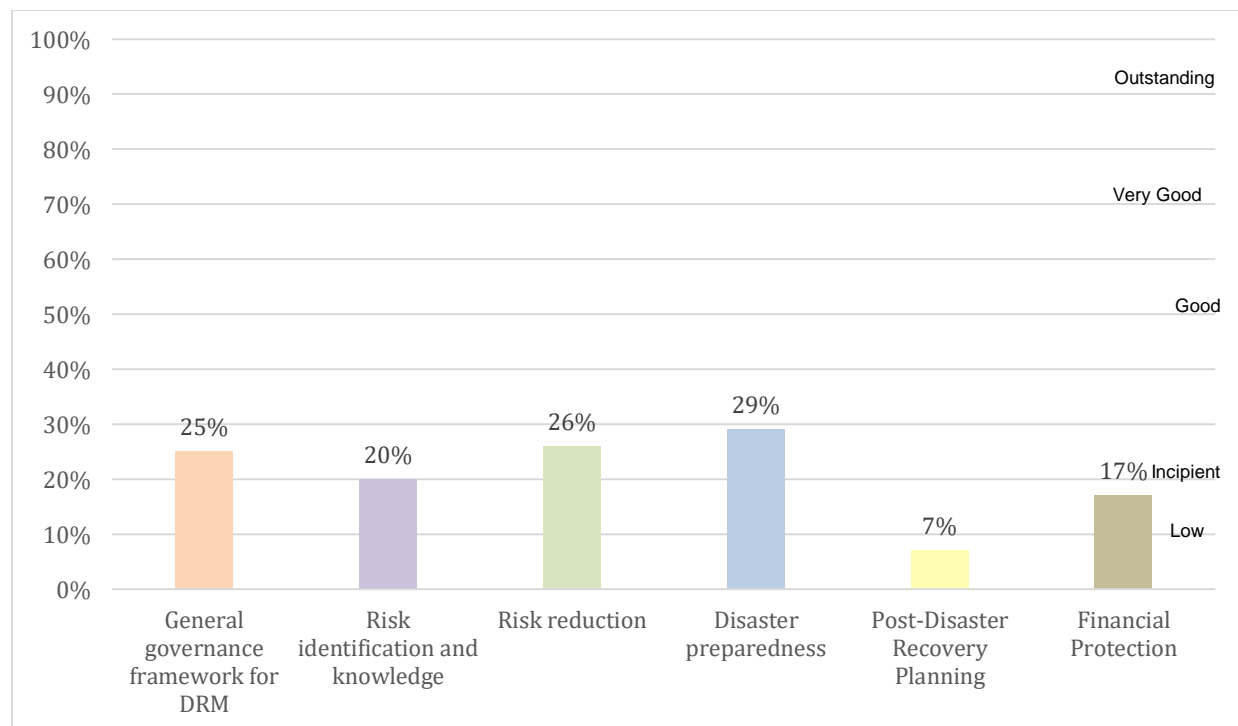
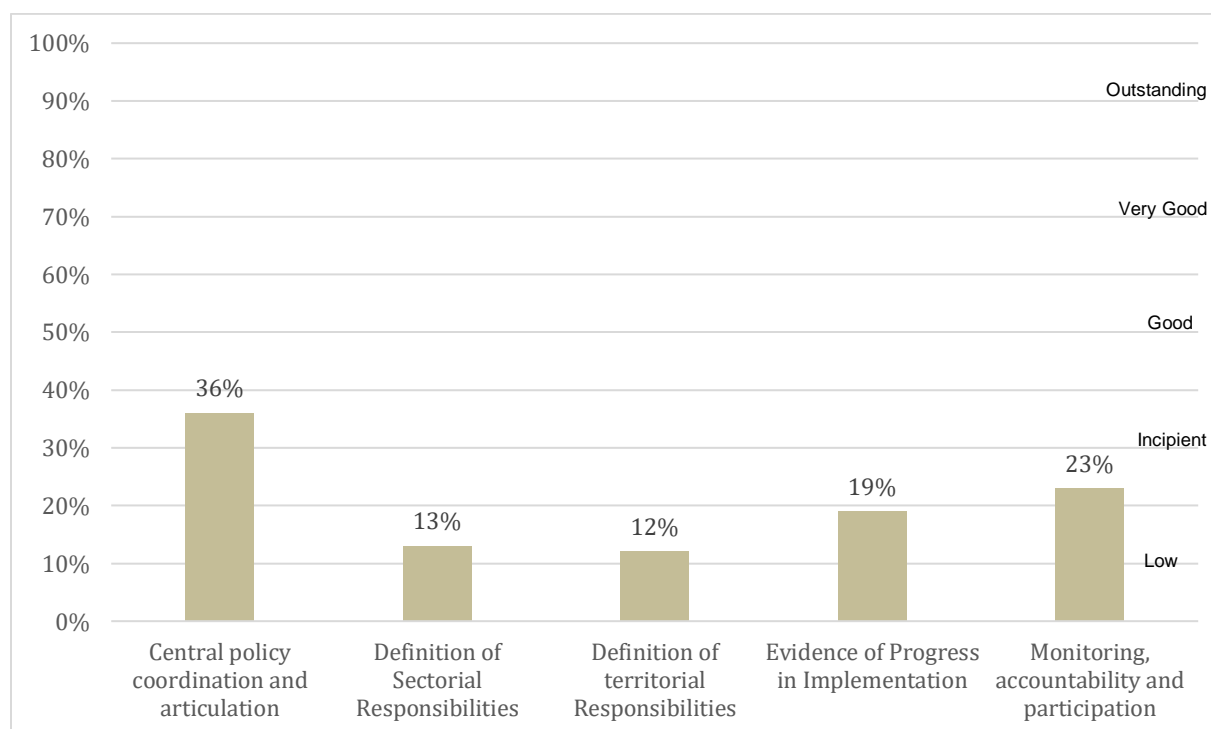


Table 5: Public policy phases according to the iGOPP. Barbados (2018)

1	Central policy coordination and articulation	36%
2	Definition of Sectorial Responsibilities	13%
3	Definition of territorial Responsibilities	12%
4	Evidence of Progress in Implementation	19%
5	Monitoring, accountability and participation	23%

Graphic 2: Public policy phases according to the iGOPP. Barbados (2018)



The following shows a qualitative analysis of the indicators for each component of DRM organized by public policy phase: 1. Inclusion on the Governmental Agenda and in Policy- Making: 1.1. Central policy coordination and articulation, 1.2. Definition of sectorial responsibilities, 1.3 Definition of territorial responsibilities; 2. Policy implementation: 2.1 Evidence of Progress in Implementation; 3. Policy Evaluation: 3.1. Monitoring, accountability and participation.

A. General framework of governance for disaster risk management (GF)

Result for this component: 25% (Incipient)

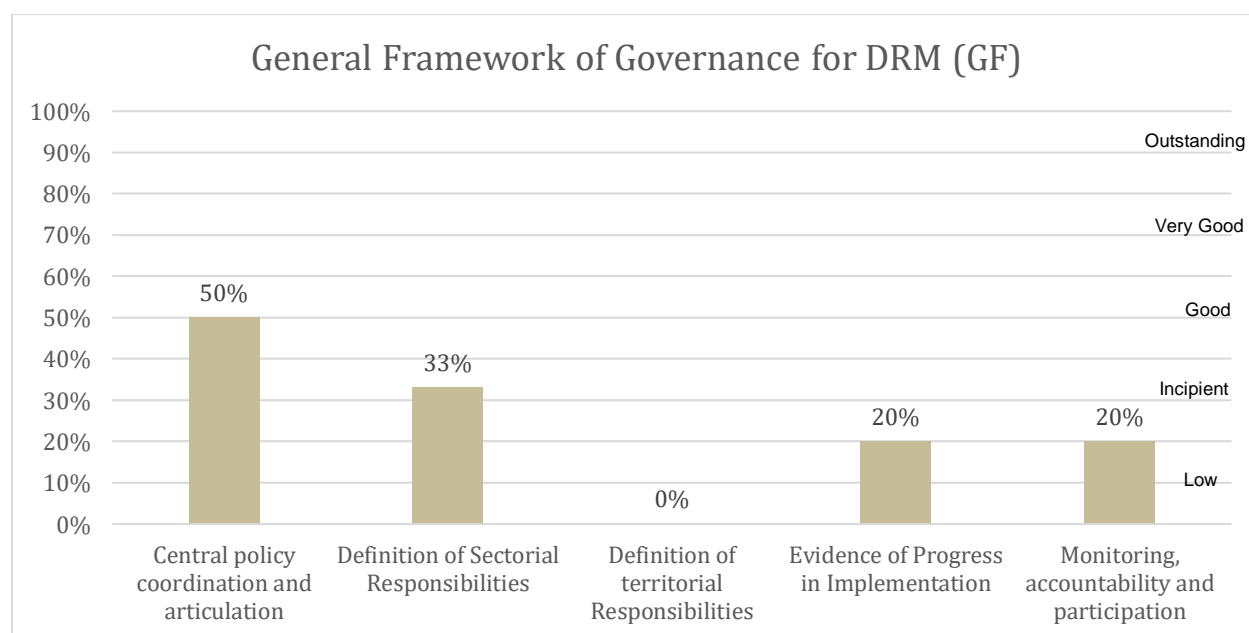
Introduction:

The aspects related to the General Framework of Governance for DRM and their inclusion in the governmental agenda are in the "incipient" range, with a completion score of 25%. The "Central policy coordination and articulation" phase shows the highest rate of completion with 50% for a resulting score in the "considerable" rank, while in "Definition of Sectorial Responsibilities" 33% of indicators were met, ranking "incipient". The lowest phase is "Definition of Territorial Responsibilities" with no indicator fulfilled.

Table 6: General Framework for Governance of DRM by Public Policy Phase. Barbados (2018)

	Public Policy Phases	Maximum %
1	Central policy coordination and articulation	50%
2	Definition of sectorial responsibilities	33%
3	Definition of territorial responsibilities	0%
4	Evidence of progress in implementation	20%
5	Monitoring, accountability and participation	20%

Graphic 3: General Framework for Governance of DRM by Public Policy Phase. Barbados (2018)



The following is a description of the most significant findings of the iGOPP analysis for this component as they relate to the three main public policy phases 1. Inclusion on the government agenda and in policy making, 2. Policy implementation, and 3. Policy evaluation, at the different levels addressed by the iGOPP.

1. Inclusion in the Governmental Agenda and in Policy-Making:

1.1 Central policy coordination and articulation

One of the key indicators in the iGOPP structure is the one that refers to the existence of national regulations that establish a responsibility framework on disaster risk management for all Government levels⁵. Although the Emergency Management Act of Barbados is quite comprehensive - covering aspects related to risk reduction, response and recovery - the Act does not establish a responsibility framework for all government levels (central, decentralized, local). Concrete DRM responsibilities remain with the Director of the Department of Emergency Management, local authorities are not mentioned in the law and responsibilities of national institutions are partial. The DRM law is also silent in terms of articulation with other policies, such as climate change, hydric resources management or land use⁶.

The Emergency Management Act (CAP 160 A, 2007) does define instruments for implementation, such as the Emergency Management Advisory Council (EMAC), the Emergency Management Policy, Plans among others⁷.

One of the indicators that has been met is the one that refers to the establishment of coordination and articulation of policy tools at a hierarchical level equal or higher than ministerial⁸, given that the First Schedule of the Emergency Management Act states that the Emergency Management Advisory Council (EMAC) shall consist of (a) the Minister as ex officio Chairman, and any other Minister or public officer nominated by the Minister⁹.

Barbados' legal framework establishes a regime of Public Services which is applicable to the entities in charge of DRM in the country⁹. The Public Services (Qualifications) Order, 2001 CAP 29 of Barbados, "*Article 10. Civil Service*" stipulates qualifications for "*1. Chief personnel officer – 2. Deputy Chief Personnel Officer*" and others. Furthermore, article 35 establishes the regulations

⁵ See indicator GF-1A-1

⁶ See indicator GF-1A-4

⁷ See indicator GF-1A-2

⁸ See indicator GF-1A-3

⁹ See indicator GF-1A-8

related to the professional pathway for public administration stipulating that Home Affairs is the ministry responsible for emergency management specifically stipulating the qualifications for the roles of Director, Deputy Director and Programme Officer.

The Barbados Medium-Term Growth and Development Strategy (2013-2020) contains goals and commitments related to disaster risk management processes under *"section 5.5.1.4. with the objective to maintain and improve a comprehensive disaster management system. Specific strategies to achieve this objective include: Update the National Multi- Hazard Disaster Management Plan, continue the disaster management mainstreaming into key sectors program, enhance the legislation which governs disaster management, strengthen the policy, regulatory environments and institutional capacity of the Coastal Zone Management Unit (CZMU)."*¹⁰

In terms of the existence of climate change regulations containing DRM objectives, targets or indicators, the Barbados Medium-Term Growth and Development Strategy (2013-2020) makes several references to climate change adaptation under Goal 4 *"to enhance environmental sustainability in the context of the green economy noting the specific threats it poses to the country as a Small Island Developing State (SID) across various sectors including agriculture, tourism, health as well as overall economic competitiveness and development."*¹¹ Although climate change regulations are not explicitly related or articulated to disaster risk management.¹²

1.2 Definition of sectorial responsibilities

One of the three indicators of this phase was met: The Physical Development Plan of Barbados (Amended 2003) stipulates the requirements for conducting Environmental Impact Assessments (EIAs) or equivalent processes and makes references to disaster components including natural hazard areas, potential land use conflicts and environmentally significant areas exposed to disaster risk¹³. Reference Section 2.5. titled "Environment" and its related objectives 2.5.1.2 as well as general policies laid out in section 2.5.2.1 (d) "03) process for consultation" stipulates the requirements for conducting Environmental Impact Assessments (EIAs).

1.3 Definition of Territorial Responsibilities

In this policy phase, none of indicators were met.

¹⁰ See indicator GF-1A-5

¹¹ See indicator GF-1A-6

¹² See indicator GF-1A-7

¹³ See indicator GF-1B-3

2. Policy implementation:

2.1 Evidence of progress in implementation:

The iGOPP evidenced funding for the entity responsible for leadership, coordination or articulation of disaster risk management in the country in the fiscal period 2016-2017. The Barbados Estimates 2016-2017 includes resources for the Ministry of Home Affairs, Head 28, for the Programme *"200 National Emergency Preparedness"*, with the Programme Statement *"To coordinate the Disaster Management programs and activities both within the public service and on a national scale"*, for the Subprogramme *"0206 Department of Emergency Management"*, with the Programme Statement *"Facilitates the implementation of the programs and activities of the Department of Emergency Management in the execution of its National Comprehensive Disaster Management Strategy and Framework"*¹⁴.

The iGOPP evidenced a spending budget line for ex ante DRM activities. The Barbados Estimates 2016-2017 includes the Programme *"200 National Emergency Preparedness"*, with the Programme Statement *"To coordinate the Disaster Management programmes and activities both within the public service and on a national scale"*¹⁵.

The country does not have a disaster risk financial strategy document that establishes a policy for reducing its fiscal vulnerability against the occurrence of disasters¹⁶. Similarly, the iGOPP did not find budget categories or instruments for allocating resources to climate change activities¹⁷. The iGOPP also shows that there are no funds for financing or co-financing ex ante risk management activities¹⁸.

Finally, the country has not yet developed incentive budgetary instruments to encourage the sectors, or sub-national units, to implement activities in disaster risk management either.¹⁹

3. Policy evaluation:

3.1 Monitoring, accountability and participation

¹⁴ See indicator GF-2-2

¹⁵ See indicator GF-2-3

¹⁶ See indicator GF-2-1

¹⁷ See indicator GF-2-4

¹⁸ See indicator GF-2-5

¹⁹ See indicator GF-2-9 and GF-2-10

In this policy phase, only the indicator related to the existence of mechanisms of civil society participation applicable to the disaster risk management was met. These mechanisms are described in the National Emergency Management System for Planning, Response and Recovery, which includes the participation of volunteers, District Emergency Organizations and other civil society representatives²⁰.

²⁰ See indicator GF-3-5

B. Risk Identification and Knowledge (RI)

Result for this component: 20% (low)

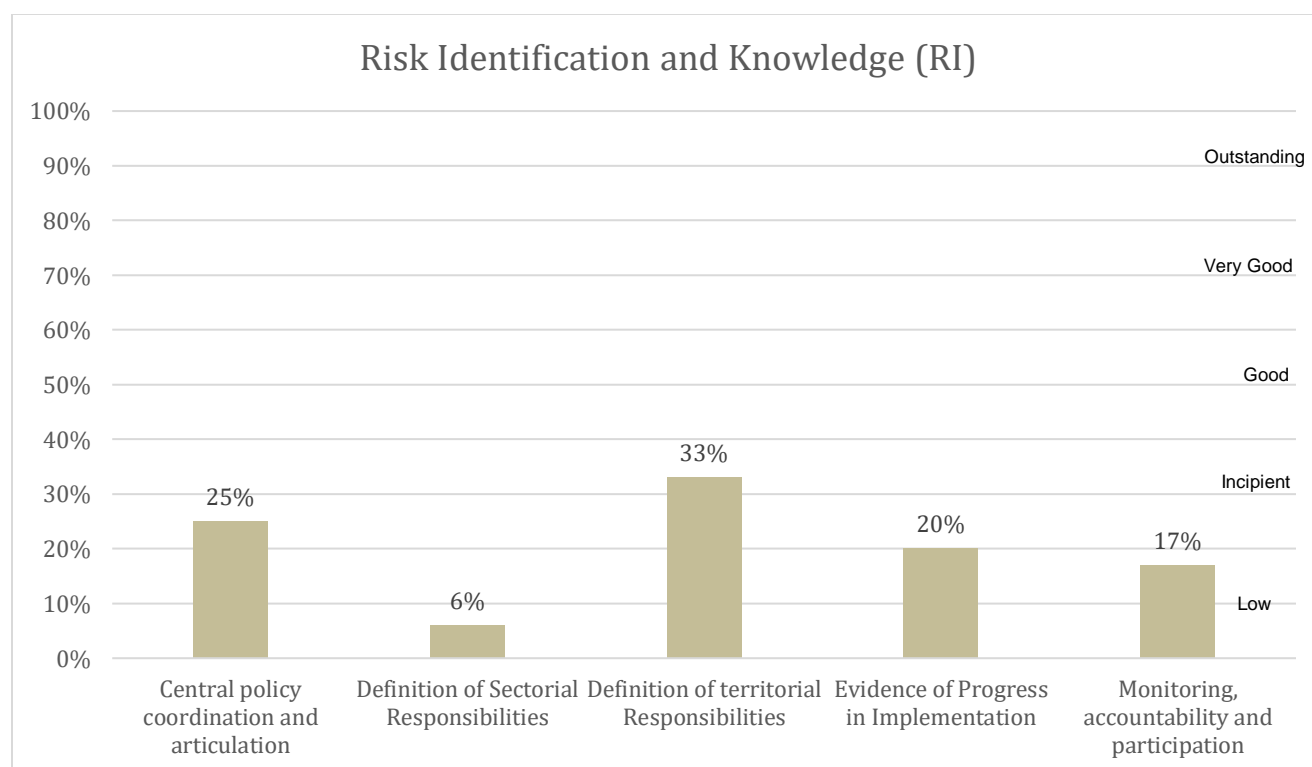
Introduction:

In the Risk Identification component for Barbados, the iGOPP shows a completion level of 20% of all categories in a resulting "low" range. The phase with the highest level of achievement is the "Definition of Territorial Responsibilities" with 33% of the indicators met while the lower is the "Definition of Sectorial Responsibilities" with 6% of the indicators met.

Table 7: Risk Identification by Public Policy Phase. Barbados (2018)

	Public Policy Phases	Maximum %
1	Central policy coordination and articulation	25%
2	Definition of sectorial responsibilities	6%
3	Definition of territorial responsibilities	33%
4	Evidence of progress in implementation	20%
5	Monitoring, accountability and participation	17%

Graphic 4: Risk Identification by Public Policy Phase. Barbados (2018)



The following is a description of the most significant findings of the iGOPP analysis for this component as they relate to the three main public policy phases: 1. Inclusion in the government agenda and in policy making, 2. Policy implementation, and 3. Policy evaluation, at the different levels addressed by the iGOPP.

1. Inclusion on the Governmental Agenda and in Policy-Making:

1.1 Central policy coordination and articulation

In this policy phase, the only indicator met was the one related to the existence of regulations ordering the creation and maintenance of Information Systems for Disaster Risk Management, The Emergency Act states in part III section 9.2 (p) “*the Emergency Management Plan shall include procedures for or related to the (p) maintenance of a national database and geographical information systems*”²¹.

However, in Barbados there are no regulations to designate a national party responsible for providing technical assistance and guidelines at territorial and sectorial levels for the disaster risk analysis²² and there are no regulations which mandate the creation and maintenance of a database on the effects of disasters²³. Furthermore, there are no regulations that designate a national party responsible to define methodologies for preparation studies on the effects of climate change as the Draft National Climate Change Policy Framework has not yet been approved by Parliament²⁴.

1.2 Definition of Sectorial Responsibilities

In this phase of public policy, the only indicator met was the one related to the existence of at least one rule that defines which buildings are essential, indispensable or critical infrastructures of the country²⁵. The Emergency Management Act, Part I, Section - defines critical infrastructure as: “*... those facilities or assets, the loss or destruction of which would have a debilitating impact on the economic and social well-being of the country;*”

1.3 Definition of Territorial Responsibilities

²¹ See indicator RI-1A-3

²² See indicator RI-1A-1

²³ See indicator RI-1A-4

²⁴ See indicator RI-1A-2

²⁵ See indicator RI-1B-18

In this phase, only one of the three indicators were met. It was verified that the Emergency Management Act specifies regulations that establish the obligation to zone cities in Part VI, 17 (2) *“The Minister may, on the recommendation of the Director, a) designate vulnerable areas or critical infrastructure for the purposes of emergency management by delimiting such areas or infrastructure under this section”*²⁶.

2. Policy implementation:

2.1 Evidence of progress in implementation:

In this phase, 20% of the indicators were met. It is important to mention that under the Decade of Education for Sustainable Development, with the support of UNESCO, the curriculum was adjusted to include the delivery of instruction on disasters, sustainable development and climate change in primary and secondary schools through the inclusion of this subject in Social Studies (primary and secondary schools) and Geography (Secondary Schools). Environmental Clubs also include activities on DRR and Sustainable development.²⁷ Likewise, there are aspects of climate change integrated into the syllabus for Geography at the CSEC and CAPE levels as well as in the individual syllabus of each individual secondary school throughout the year levels in Geography²⁸.

It was also found that of the ten key sectors only the Coastal Risk Assessment and Management Programme, which includes Coastal risk assessment, monitoring and management as component, assigned resources for disaster risk identification activities in the fiscal year 2016/2017 ²⁹.

Regarding public utilities companies, no allocation of resources for disaster risk identification activities was found³⁰.

3. Policy evaluation:

3.1 Monitoring, accountability and participation

In this phase of public policy, only one indicator was met: the national DRM regulations mandate the responsibility to inform citizens about disaster risk, as the Emergency Management Act states

²⁶ See indicator RI-1C-3

²⁷ See indicator RI-2-1

²⁸ See indicator RI-2-2

²⁹ See indicators RI-2-3

³⁰ See indicator RI-2-13 to RI-2-15

in section 12 subsection 2-part c, the *“notification of persons under paragraph (a) and the public in Barbados and elsewhere of the existence of a threatened hazard under section 28 or of the existence of a disaster or other emergency”*³¹.

³¹ See indicator RI-3-6

C. Risk Reduction (RR)

Result for this component: 26% (Incipient)

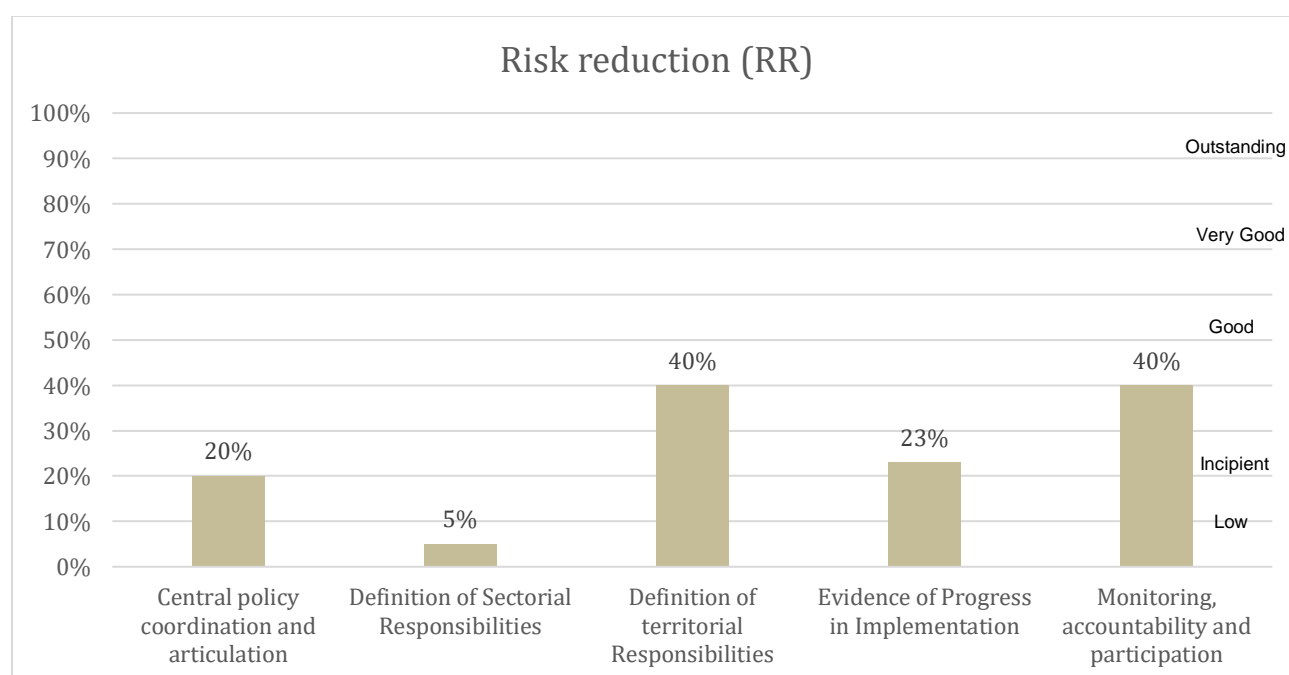
Introduction:

In the Risk Reduction component for Barbados, the iGOPP shows a completion level of 26% of all categories for a resulting score in the "Incipient" range. The Definition of Territorial Responsibilities and Monitoring, Accountability and Participation have the highest levels with 40% reflecting considerable range, as there is also "Low" ranking of 5% for Definition of Sectorial Responsibilities.

Table 8: Risk Reduction by Public Policy Phase. Barbados (2018)

	Public Policy Phases	Maximum %
1	Central policy coordination and articulation	20%
2	Definition of Sectorial Responsibilities	5%
3	Definition of Territorial Responsibilities	40%
4	Evidence of Progress in Implementation	23%
5	Monitoring accountability and participation	40%

Graphic 5: Risk Reduction by Public Policy Phase. Barbados (2018)



The following is a description of the most significant achievements of the iGOPP analysis for this component as they relate to the three main public policy phases 1. Inclusion in the government agenda and in policy making, 2. Policy implementation, and 3. Policy evaluation, at the different levels addressed by the iGOPP.

1. Inclusion in the Governmental Agenda and in Policy-Making:

1.1 Central policy coordination and articulation

In this phase, only one of the five indicators were met, considering the existence of specific penalties for the breach of regulations related to infrastructure at risk in the Town and Country Planning Act Part V, section 49 (1,2&3) ³².

There are no regulations for the integration or articulation of disaster risk reduction and climate change adaptation for territorial and sectorial entities³³, and acceptable risk criteria for at least two hazards have not been defined in the national regulations. Furthermore, no evidence was found regarding the incorporation of disaster risk reduction measures during the construction of public and private infrastructural projects³⁴.

1.2 Definition of sectorial responsibilities

The distribution of responsibilities among development actors is not included in the Country's DRM regulations, thereby, risk reduction has not been defined as a responsibility of each sector³⁵. The same applies for public service provider companies for which no responsibilities have been defined in the regulations³⁶.

There is at least one national safety standard (code) for earthquake resistant building designs, which is mandatory for public and private projects. Reference is made to the national building code in the "Barbados Country Document for Disaster Risk Reduction" (p. 37-38) *"Specifically relating to Disaster Risk Reduction, Part 5 on Structural Requirements includes the following provisions: Section 5.3 Structural stability and serviceability: A building shall be designed and constructed so that, taking into account the nature of the ground, the combined dead loads (i.e.*

³² See indicator RR-1A-4

³³ See indicator RR-1A-1

³⁴ See indicator RR-1A-5

³⁵ See indicator RR-1B-1

³⁶ See indicator RR-1B-2

weight of walls, permanent partitions, floors, roofs, ceilings and finishes including services and other permanent construction) and imposed loads. Wind loads (basic wind speed 208km/h in 3s gusts) and earthquake loads (CUBiC Part 2 Section 3: 1985) are sustained and transmitted to the ground. This shall be achieved without impairing the safety of any part of the building or causing such movement of the ground as shall impair the stability (i.e. shall not collapse – failure of one or more parts, subsidence, displacement, overturning or buckling) and serviceability of any part of the building or another building."³⁷

In terms of technical aspects of construction and special design parameters for essential buildings or critical infrastructure in the country, the existence of general construction parameters in the building code were found. Nevertheless, these parameters are not specific for critical or essential infrastructure³⁸. In addition, iGOPP found there are no regulations that mandate the performing of disaster risk analysis or the integration of climate change studies during any investment phase³⁹.

Furthermore, regarding the inclusion of the responsibility to reduce disaster risk within the powers of the sector's regulations, only the environment sector defines these types of responsibilities⁴⁰.

1.3 Definition of Territorial Responsibilities

Similar to the previous policy phase, responsibilities for the territorial entities are not defined in the DRM regulations of the country⁴¹. This is a very important condition in order to ensure decentralization and reinforcement of local capacities.

The Physical Development and Planning Act mentions zoning and land use. Section 2.5.11 refers to Erosion Prone Lands and identifies and states that applications for all areas that are prone to slippage which *involve "residential development or the construction of permanent structures will be by the Soil Conservation Unit, Ministry of Agriculture and Rural Development. Applications which are located on which are susceptible to erosion or land slippage will not be permitted."*⁴²

In terms of improvement of human settlements, the National Spatial Development Strategy in its *Section 1.4. of the Physical Development Plan, amended 2003 (RR-1C-4a)* identifies "the

³⁷ See indicators RR-1B-3

³⁸ See indicator RR-1B-4

³⁹ See indicators RR-1B-17 to RR-1B-19

⁴⁰ See indicators RR-1B-7

⁴¹ See indicator RR-1C-1

⁴² See indicator RR-1C-3

following principles (which) underlie the community structure and policies which will guide development in the future including ‘the efficient use of land, resources and finances of the nation; the promotion of social equity, health and safety for all residents; the conservation, protection and enhancement of environmental and man-made resources; a settlement structure that maintains and creates vibrant and safe places for people to live, work and play...’⁴³.

Finally, the Physical Development Plan, Amended in 2003⁴⁴ states in section 2.2.2.8 that *“The Government will take steps to improve housing conditions in the National Park by upgrading roads, water and electricity services and existing housing, and by relocating residents from lands threatened by erosion or land slippage.”*

2. Policy implementation:

2.1 Evidence of progress in implementation:

Of the ten key sectors identified at iGOPP only three (environment, agriculture and tourism) allocated resources for disaster risk reduction activities in Fiscal Year 2016/2017⁴⁵.

Regarding public utility companies, iGOPP did not find resource allocations for disaster risk reduction activities⁴⁶. However, it should be noted that the public accounts for these utilities would not show such detail in their audited accounts and the DRM responsibilities are merged into operational department positions.

3. Policy evaluation:

3.1 Monitoring, accountability and participation

In this phase, only two indicators were met. In terms of penalties to public and private entities when violators cause damage to the environment, the Environmental Protection Department follows the Health Services (Nuisances) Regulations to treat persons in breach of the law. These regulations speak of penalties for daily fines etc. after being found guilty. According to section 6 of the Health Services (Nuisances) Regulations (1969), *“A person guilty of an offence under these regulations is liable on summary conviction to a fine not exceeding five thousand dollars or imprisonment for a term not exceeding twelve months, or both, and, in the case of a continuing*

⁴³ See indicator RR-1C-4

⁴⁴ See indicator RR-1C-5

⁴⁵ See indicators RR-2-1 and RR-2-2

⁴⁶ See indicators RR-2-11 to RR-2-13

*offence, to a further fine not exceeding two hundred dollars for each day or part thereof during which the offence continues after a conviction is first obtained.”*⁴⁷

Under the indicator of regulations that govern the formulation of development planning and land use and assign responsibilities for monitoring, evaluation and updates, the Physical Development Plan Amended (2003) states that *“The objectives and policies of the Physical Development Plan Amended 2003 are based on situations and assumptions that are subject to change over time. Therefore, a mechanism for monitoring these changes is required to: identify emerging trends and related issues; analyze the effectiveness of the Plan; allow for adjustments and updating as may be required.”* This is similarly acknowledged in section 5.6. of the draft Physical Development Plan 2017, which in discussion with Mark Cummins, Chief Town Planner, is already being implemented pending formal approval⁴⁸.

⁴⁷ See indicator RR-3-1

⁴⁸ See indicator RR-3-3

D. Disaster preparedness (DP)

Result for this component: 29% (*incipient*)

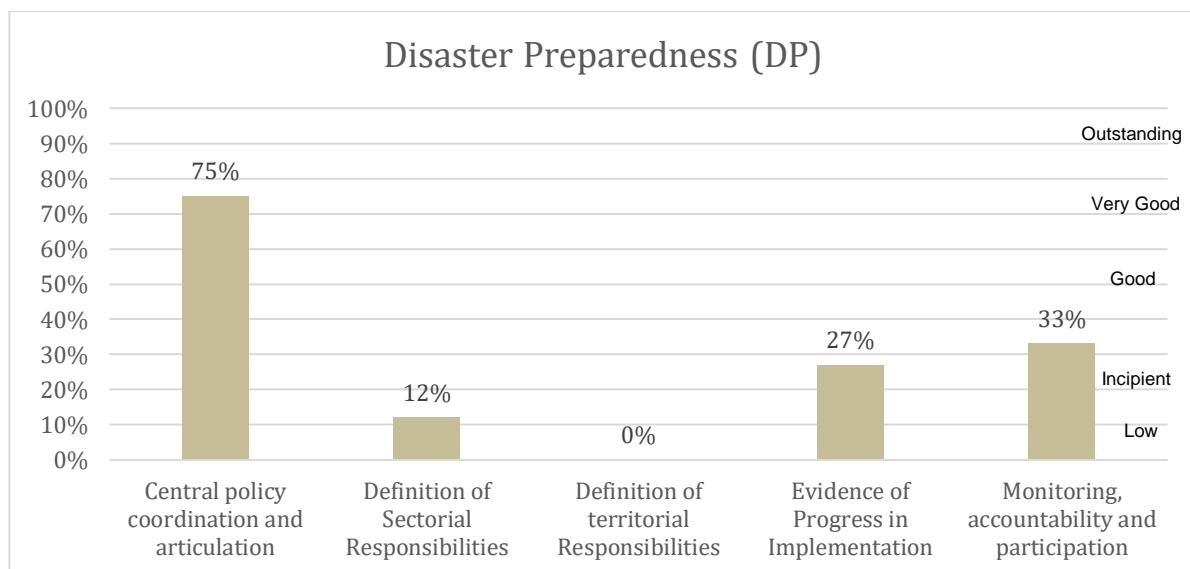
Introduction:

The iGOPP results show a completion rate of 29% of the indicators for the Disaster Preparedness component, for a resultant score in the "incipient" range. This is one of the components with the highest level of completion in the total application of the index. Central policy coordination and articulation has the highest rate, 75%, ranking at "very good"; this is also the highest ranked phase in the whole iGOPP application. Definition of territorial responsibilities has the lowest rate with 0%. The other phases are in the "low" and "incipient" range.

Table 9: Disaster Preparedness by Public Policy Phase. Barbados (2018)

	Public Policy Phases	Maximum %
1	Central policy coordination and articulation	75%
2	Definition of sectorial responsibilities	12%
3	Definition of territorial responsibilities	0%
4	Evidence of progress in implementation.	27%
5	Monitoring, accountability and participation	33%

Graphic 6: Disaster Preparedness by Public Policy Phase. Barbados (2018)



The following is a description of the most significant findings of the iGOPP analysis for this component as they relate to the three main public policy phases 1. Inclusion in the government agenda and in policy making, 2. Policy implementation, and 3. Policy evaluation, at the different levels addressed by the iGOPP.

1. Inclusion in the Governmental Agenda and in Policy-Making:

1.1 Central policy coordination and articulation

The Emergency Management Act establishes that *“there shall be a Department of Government to be known as the Department of Emergency Management (b) whose principal objects are to give effect to the general policy of Government with respect to emergency management by facilitating and coordinating the development and implementation of systems in accordance with the Emergency Management Plan”*.⁴⁹

Additionally, national regulations that govern the preparedness and response process establish a mechanism or instance for crisis management at the highest national political level. Article 8(1) of the Emergency Management Act mandates that *“The Director shall within 3 months after the end of every calendar year and not later than 1st April of each year, prepare for the approval of the Council an annual report of activities of the Department during that year, and when the report is approved by the Council it shall be forwarded by the Council to the Minister, who shall lay copies thereof before Parliament.”*⁵⁰

Furthermore, regulations also establish the development of official protocols for the coordination of operations or incident commands, where are provided for under Emergency Management Act, Article 9.2a-r.⁵¹

Evidence was also found on regulations that govern the implementation of temporary regime measures in the case of disaster, emergency or public calamity in the Emergency Management Act Cap 160A Articles 27.1 and 27.2a-b: *“(1) Where the Governor-General is satisfied that an emergency has arisen as a result of the occurrence of a disaster or other emergency of a kind set out in Column 1 of the Second Schedule, the Governor-General may by proclamation declare that an emergency exists. (2) For the purposes of this Act, a threatened disaster or other emergency exists when (a) the Governor-General declares by proclamation on the advice of the Prime*

⁴⁹ See indicator DP-1A-1

⁵⁰ See indicator DP-1A-2

⁵¹ See indicator DP-1A-3

*Minister after the Prime Minister has consulted or has been advised by the Director that a disaster, threatened disaster or other emergency of a kind set out in Column 1 of the Second Schedule, will strike within the applicable period set out in Column 2 of that Schedule*⁵²

One important aspect that is met is the existence of regulations for the preparedness and response processes that establish the formulation of emergency or contingency plans at the national level and the coordination of international humanitarian assistance and mutual help⁵³.

1.2 Definition of sectorial responsibilities

In Barbados, the regulations that govern the preparedness and response processes do not include an explicit mandate to sectors and ministries for the establishment of emergency or contingency plans⁵⁴. The Emergency Management Act Cap 160A establishes that sectors or ministries shall produce this kind of instrument on request of the Director.

The indicator related to monitoring, vigilance or warning systems was met⁵⁵. The Emergency Management Act stipulates in section 29.1 that *'there shall be a National Alert System for Barbados. (2) The National Alert System shall be operated under the supervision of the Director and shall consist of National Emergency Broadcast System or such other emergency systems as may be determined in writing by the Minister.*

Finally, the iGOPP found regulations regarding the establishment of the development and implementation of emergency or contingency plans in the environmental sector, as well as for fuel spill or oil pollution events⁵⁶.

1.3 Definition of territorial responsibilities

None of the indicators in this phase were met.

2. Policy implementation:

2.1 Evidence of progress in implementation:

In this phase 27% of the indicators were met. In the fiscal period 2016-2017, the Department of Emergency Management - responsible for preparedness and response coordination – did receive resources. The Barbados Estimates 2016-2017 included the Programme 200 - National

⁵² See indicator DP-1A-4

⁵³ See indicator DP-1A-5 and DP-1A-8

⁵⁴ See indicator DP-1B-1

⁵⁵ See indicator DP-1B-2

⁵⁶ See indicators DP-1B-3 and DP-1B-17

Emergency Preparedness, with the Programme Statement stipulating that resources allocated to this programme are to be used *“To coordinate the Disaster Management programmes and activities both within the public service and on a national scale”*⁵⁷.

The iGOPP found evidence of budgetary resource allocation for fire prevention and control activities in fiscal year 2016-2017⁵⁸. It is important to mention that the fire service regulations (Fire Service Act, Auxiliary Fire Service Act and Agricultural Fires Act) does not discriminate between fires and forest fires.

Regarding contingency plans, of the ten sectors selected by iGOPP, only the environment sector has one (the National Oil Spill Contingency Plan)⁵⁹.

Regarding contingency plans for the utility companies, iGOPP did not find evidence of its existence⁶⁰.

3. Policy evaluation:

3.1 Monitoring, accountability and participation

In the phase, only one indicator related to civil society participation was met. The First Schedule of the Emergency Management Act, (Section 7. 1 xv) makes provision for *“such other persons or organizations as the Minister thinks fit who volunteer or are required by law to perform functions related to the mitigation of, preparedness for, response to and recovery from emergencies and disasters in Barbados”*⁶¹.

⁵⁷ See indicator DP-2-1

⁵⁸ See indicator DP-2-2 and DP-2-3

⁵⁹ See indicator DP-2-4

⁶⁰ See indicators DP-2-13 to DP-2-15

⁶¹ See indicators DP-3-1

E. Recovery planning (RP)

Result for this component: 7% (Low)

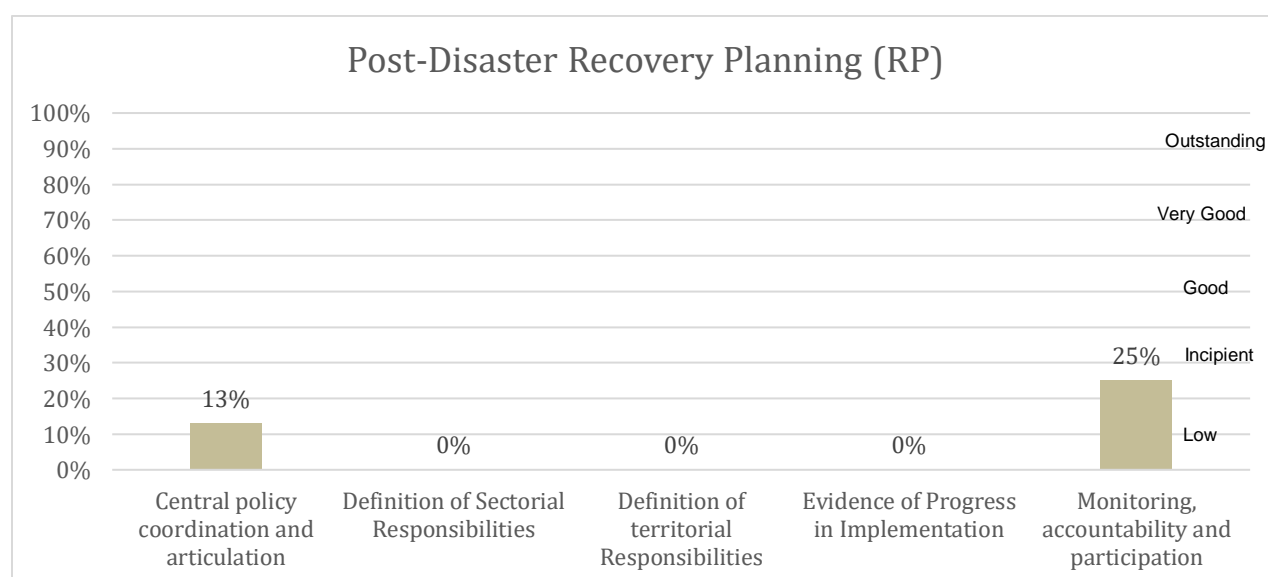
Introduction:

The iGOPP results indicate a score in the "low" range for this component with 7% completion of related indicators. This is the component with the lowest level of indicators achieved. In this respect, it is important to mention that ex-ante recovery planning is a relatively new tendency in the whole region. "Monitoring, Accountability and Participation" shows the highest level with 25% of indicators and "Central Policy Coordination and Articulation" is the second with 13%. Under the "Definition of Sectorial Responsibilities", "Definition of Territorial Responsibilities" and "Evidence of Progress in Implementation" no indicators were met.

Table 10: Recovery Planning by Public Policy Phase. Barbados (2018)

	Public Policy Phases	Maximum %
1	Central policy coordination and articulation	13%
2	Definition of sectorial responsibilities	0%
3	Definition of territorial responsibilities	0%
4	Evidence of progress in implementation.	0%
5	Monitoring, accountability and participation	25%

Graphic 7: Recovery Planning by Public Policy Phase. Barbados (2018)



The following is a description of the most significant achievements of the iGOPP analysis for this component as they relate to the three main public policy phases 1. Inclusion in the government agenda and in policy making, 2. Policy implementation, and 3. Policy evaluation, at the different levels addressed by the iGOPP.

1. Inclusion in the Governmental Agenda and in Policy-Making:

1.1 Central policy coordination and articulation

Only one indicator regarding Recovery Planning inclusion in central DRM policies was met. In Barbados, Part III, Section 9.2.d of the Emergency Management Act states *"The Emergency Management Plan shall include procedures for or related to the preparation and maintenance of and inventories of services, systems and supplies for the mitigation of, preparedness for, response to, and recovery from, emergencies and disasters during a threatened disaster alert or the existence of a disaster or other emergency."*⁶²

1.2 Definition of Sectorial Responsibilities

No indicator has been met for this phase of public policy.

1.3 Definition of Territorial Responsibilities

No indicator has been met for this phase of public policy.

2. Policy implementation:

2.1 Evidence of progress in implementation:

No indicator has been met for this phase of public policy.

3. Policy evaluation:

3.1 Monitoring, accountability and participation

Only one indicator regarding "Monitoring, Accountability and Participation" was met. Part I of the Emergency Management Act defines *"emergency management as including (c) the preparedness for, response to and recovery from emergencies, disasters and hazards"* and states in the First Schedule, xv of the Act that the Emergency Management Advisory Council functions as part of the National Emergency Management System and can be comprised of *"such other persons or organizations as the Minister thinks fit who volunteer or are required by law to perform functions*

⁶² See indicator RC-1A-1

related to the mitigation of, preparedness for, response to and recovery from emergencies and disasters in Barbados", thereby establishing mechanisms for the participation of civil society or social and non-governmental organizations in post-disaster recovery⁶³.

⁶³ See indicators RC-3-1

F. Financial protection (FP)

Result for this component: 17% (incipient)

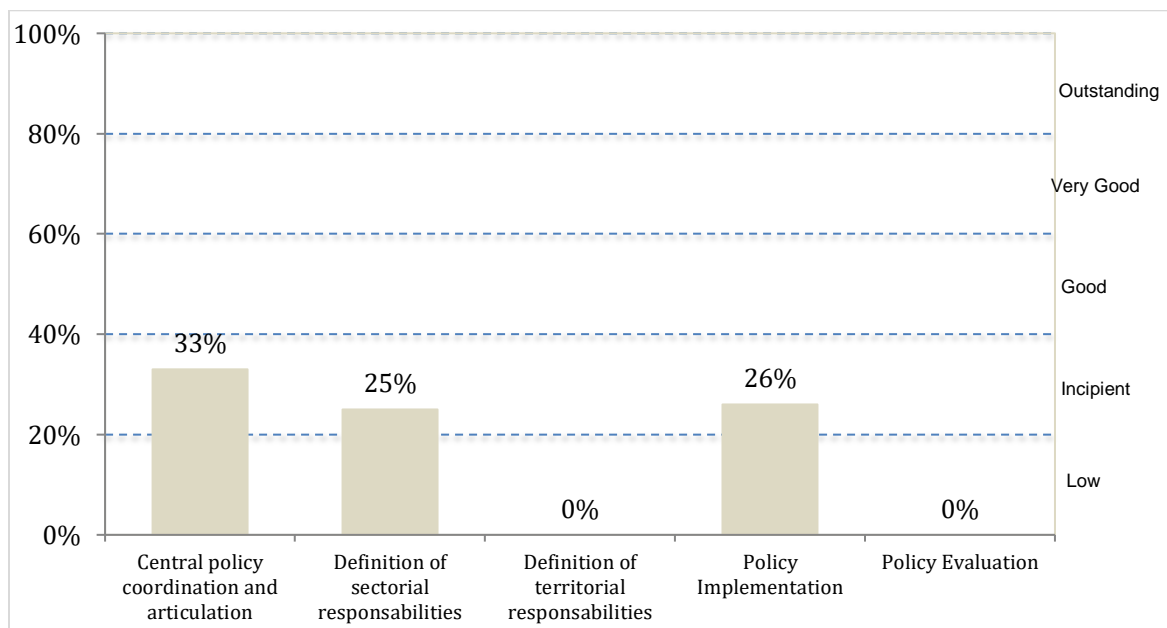
Introduction:

The iGOPP results for the FP component evidenced 17% of the fulfilled conditions. “Central policy coordination and articulation” shows results of 33%, “Evidence of Progress in Implementation” shows results of 26%, Definition of Sectorial Responsibilities” shows results of 25%, while no indicator is met for “Definition of Territorial Responsibilities” nor “Monitoring, Accountability and Participation”.

Table 11: Financial Protection by Public Policy. Barbados (2018)

	Public Policy Phases	Maximum %
1	Central policy coordination and articulation	33%
2	Definition of sectorial responsibilities	25%
3	Definition of territorial responsibilities	0%
4	Evidence of progress in implementation.	26%
5	Monitoring, accountability and participation	0%

Graphic 8: Financial Protection by Public Policy. Barbados (2018)



The following are the most noteworthy findings of the iGOPP analysis for this component according to the three major public policy phases: 1) Inclusion in the government's agenda and policy formulation; 2) Policy implementation; and 3) Policy evaluation; in the different levels considered by iGOPP.

1. Inclusion in the Governmental Agenda and in Policy-Making:

1.1 Central policy coordination and articulation

According to the DRM framework, Barbados has two funds to finance emergent expenses in disaster situations:

1. The Emergency Disaster Fund, established in the Emergency Management Act Chapter 160A, L.R.O 2007.

2. The Emergency Assistance Fund stipulated in the Agreement that established the Caribbean Disaster Emergency Management Agency - CDEMA (previously the Caribbean Disaster Emergency Response Agency - CDERA), that was endorsed by the Emergency Management Act, Chapter 160A. This fund shall be used solely to defray expenses incurred in connection with rendering assistance in the event of a disaster occurring in a Participating State.

In addition to having funds for emergent expenses in disaster situations, Barbados has The Catastrophe Fund, managed by the National Insurance Scheme, enabled for financing housing reconstruction. *"The purpose of the Fund is to provide financial aid to any low-income earner who owns and occupies a chattel house where (a) The value of the house does not exceed \$125.000; and (b) The house is damaged or destroyed by a catastrophe"*⁶⁴.

It is important to mention that there is no evidence of allocations of an annual percentage of resources for the abovementioned funds⁶⁵.

On the other hand, the country has a development fund enabled to finance disaster management activities⁶⁶. The Economic and Financial Policies of the Government of Barbados presented by the RT. Hon. Owen Arthur, Minister of Finance, December 7, 2004 was established *"...To assist the agricultural community in rebounding as quickly as possible after the occurrence of a disaster event therefore, we propose to establish a Disaster Relief Revolving Fund for commercial agriculture. This Fund will provide affected producers with access to a revolving loan facility that*

⁶⁴ See indicator FP-1A-1

⁶⁵ See indicator FP-1A-2

⁶⁶ See indicator FP-1A-6

offers lenient repayment terms, to assist in restoring the operation to its pre-disaster status...".

The Enterprise Growth Fund Limited (EGFL) manages the mentioned fund.

Additionally, the iGOPP did not find evidence of a mandate for the formulation of a disaster risk retention and transfer structure⁶⁷. Another gap revealed by the iGOPP is the lack of a mandate related to the estimation of catastrophic risk reserves for non-homogenous/special assets and homogenous/uniform assets, based on probabilistic risk assessment models defined or certified by the sector's regulating entity⁶⁸.

1.2 Definition of Sectorial Responsibilities

The iGOPP evidenced the existence of a legal mandate that establishes the fiscal responsibility of the Government regarding disaster risk⁶⁹. The Catastrophe Fund, managed by the National Insurance Scheme, has the mandate *"...to provide financial aid to any low income earner who owns and occupies a chattel house where (a) The value of the house does not exceed \$125.000; and (b) The house is damaged or destroyed by a catastrophe"*.

The iGOPP also evidenced there are no regulations assigning competencies to the Ministry of Finance and Economic Affairs regarding financial protection against disaster risk⁷⁰. In addition, there are no regulations establishing that sectorial entities must cover their public assets with insurance policies⁷¹, neither are there regulations on incentives for private housing insurance against disaster risk⁷².

1.3 Definition of territorial responsibilities

There is no progress at this level of the policy phase. The iGOPP shows that there are no regulations that include a mandate for sub national entities to cover their public assets with insurance policies⁷³, neither are there regulations that include a mandate for the sub national level to implement structures for financial protection from disasters⁷⁴. In addition, Bridgetown did not

⁶⁷ See indicator FP-1A-3

⁶⁸ See indicators FP-1A-4 and FP-1A-5

⁶⁹ See indicator FP-1B-1

⁷⁰ See indicator FP-1B-2

⁷¹ See indicator FP-1B-3

⁷² See indicator FP-1B-4

⁷³ See indicator PF-1C-1

⁷⁴ See indicator FP-1C-2

have a fund for financing or co-financing disaster management activities⁷⁵. In this respect, in the case of the occurrence of a disaster, in the context of a centralized country, the national government (i.e. central level) allocates financial resources for emergency response at the local level.

2. Policy implementation:

2.1 Evidence of progress in implementation:

Regarding risk retention instruments, Barbados has access to different funds for financing emergency expenses in disaster situations or co-financing risk management activities:⁷⁶

1. The Emergency Disaster Fund, established in the Emergency Management Act Chapter 160A, L.R.O 2007.

2. The Emergency Assistance Fund stipulated in the Agreement that established the Caribbean Disaster Emergency Management Agency - CDEMA (previously the Caribbean Disaster Emergency Response Agency - CDERA), that was endorsed by the Emergency Management Act, Chapter 160A. This fund shall be used solely to defray expenses incurred in connection with rendering assistance in the event of a disaster occurring in a Participating State.

3. The Catastrophe Fund, managed by the National Insurance Scheme. *“The purpose of the Fund is to provide financial aid to any low-income earner who owns and occupies a chattel house where (a) The value of the house does not exceed \$125.000; and (b) The house is damaged or destroyed by a catastrophe”.*

It is important to note that none of the abovementioned Funds included provisions related to the annual percentage of resources to be allocated⁷⁷. The Funds also cannot accumulate resources over time⁷⁸, neither apply the “golden rule” of accumulation and expenditure based on anticipated annual loss or records of losses from past disasters⁷⁹.

In addition, iGOPP found that the country does not have credit contingency items in case of the occurrence of disasters⁸⁰.

⁷⁵ See indicator FP-1C-3

⁷⁶ See indicator FP-2-8

⁷⁷ See indicator FP-1A-2

⁷⁸ See indicator FP-2-9

⁷⁹ See indicator FP-2-10

⁸⁰ See indicator FP-2-11

Regarding risk transfer instruments, Barbados is a member of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), which is a regional catastrophe fund for Caribbean governments, designed to limit the financial impact of devastating hurricanes and earthquakes by quickly providing financial liquidity when a policy is triggered. For the decision-making process related to buying the insurance policy offered by CCRIF, public entities - including Ministry of Finance and Economic Affairs - used both the estimative of Probable Maximum Loss (PML) from catastrophic events for different return periods⁸¹ and the expected annual losses (AAL) elaborated by CCRIF and the information about PML and AAL mentioned in the Country Document for Disaster Risk Reduction: Barbados, 2014, elaborated by the Department of Emergency Management⁸².

Furthermore, as previously mentioned, the insurance of public assets is not mandatory. In the same sense, iGOPP did not find evidence of the existence of standards for the insurance of the public assets⁸³, concessions⁸⁴, or related guidelines for the sub-national entities⁸⁵.

Bridgetown has no financial protection structure in the event of disaster⁸⁶, nor a disaster risk transference instrument for a portfolio of assets of its fiscal responsibility⁸⁷. In the case of the occurrence of a disaster, in the context of a centralized country, the national government (i.e. central level) will allocate financial resources for emergency response at the local level.

The iGOPP shows that there are *ex ante* financial instruments to encourage economic recovery in areas affected by disasters⁸⁸. The Economic and Financial Policies of the Government of Barbados presented by the RT. Hon. Owen Arthur, Minister of Finance, December 7, 2004 was established “...*To assist the agricultural community in rebounding as quickly as possible after the occurrence of a disaster event therefore, we propose to establish a Disaster Relief Revolving Fund for commercial agriculture. This Fund will provide affected producers with access to a revolving loan facility that offers lenient repayment terms, to assist in restoring the operation to its pre-disaster status...*”. The Enterprise Growth Fund Limited (EGFL) manages the above-mentioned fund.

⁸¹ See indicator FP-2-2

⁸² See indicator FP-2-3

⁸³ See indicator FP-2-4

⁸⁴ See indicator FP-2-5

⁸⁵ See indicator FP-2-7

⁸⁶ See indicator FP-2-1

⁸⁷ See indicator FP-2-12

⁸⁸ See indicator FP-2-14

The iGOPP also evidences the lack financial protection structures for the agricultural sector⁸⁹.

Policy evaluation:

3.1 Monitoring, accountability and participation

The iGOPP reveals the absence of control, accountability and participation for this component, as none of the indicators assessed have been fulfilled. In other words, the iGOPP reveals a lack of: i) provisions for assessing compliance with financial protection mechanisms ii) use of the probabilistic risk assessment model in the rate estimative of insurance policies (because it is not mandated by the regulations) and iii) application of financial protection assessments⁹⁰.

⁸⁹ See indicator FP-2-15

⁹⁰ See indicators FP-3-1 to FP-3-3

4. Conclusions

Following the significant elements revealed by the iGOPP application in Barbados, the conclusions are summarized below:

1. The “DRM General Framework” component has a 27% score, ranking “Incipient” according to iGOPP categories. The Emergency Management Act of Barbados is quite comprehensive covering aspects related to risk reduction, response and recovery, but it does not establish a responsibility framework for all government levels (central, decentralized and local). For these reasons, the key indicators characterizing the regulatory conditions for DRM at central, sectorial and territorial levels were not met.
2. The Risk Identification component has a 15% score, corresponding to a “low” rank. In Barbados, there are no regulations designating a responsible national party to provide technical assistance and guidelines at territorial and sectorial levels for disaster risk analysis nor those mandating the creation and maintenance of a database on the impacts of disasters.
3. In terms of the implementation of the Risk Identification component, it is worth highlighting that the curricula of both primary and secondary education have been adjusted to include disasters and sustainable development. This was achieved with the support of UNESCO, under the decade of education for Sustainable Development. The iGOPP application revealed that only the education sector, out of the ten key sectors of the country, allocated financial resources for disaster risk identification activities in the fiscal year 2016/2017.
4. The Risk Reduction component has a score of 21%, barely corresponding to the “incipient” rank and very close to the “low” rank. In Barbados there are no regulations for the integration or articulation of disaster risk reduction and climate change for territorial and sectorial entities, and acceptable risk criteria for at least two hazards have not been defined in the national regulations. No evidence was found of any regulations mandating the adoption of disaster risk reduction measures during the construction of public and private infrastructure projects.
5. In terms of the implementation of the Risk Reduction component, out of the ten key sectors identified by the iGOPP methodology, only one (environment) received financial resources for disaster risk reduction activities in the Fiscal Year 2016/2017.
6. The Disaster Preparedness component has a score of 27%, corresponding to the “incipient” rank. The iGOPP application confirmed the existence of regulations for the preparedness and response processes that establish the formulation of emergency or contingency plans at the national level and the coordination of international humanitarian assistance and mutual help.
7. The Recovery Planning component has a score of 6%, the lowest score of all the DRM components, corresponding to the “low” rank. The low score obtained by this component is common in the Latin American and Caribbean region, where it is difficult to see recovery planning considered in the DRM legal frameworks, with few exceptions.
8. The Financial Protection component has a score of 17%, corresponding to a “low” rank. In terms of Financial Protection, Barbados has access to the CDERA’s Emergency

Assistance Fund, which is enabled for financing emergency management activities. Furthermore, regional risk transfer instruments are available, given that Barbados can access insurance policies for different events through the CCRIF.

5. Recommendations for policy reform

Short term

- 1) The implementation of a comprehensive public policy reform is recommended, to update the Emergency Management Act (EMA) of Barbados CAP 160 A, adopted in 2007. This reform should minimally include:
 - a) The definition of a comprehensive framework of responsibilities for Disaster Risk Management and Climate Change adaptation for all Ministries, Departments and Agencies (MDA) as well as local governments, in the scope of their mandates and jurisdiction;
 - b) The articulation of the DRM act with climate change, territorial planning and water management regulations;
 - c) The responsibility for control entities to conduct monitoring, audit and evaluation of DRM responsibilities established by law, as well as on the quality of implementation of the actions;
 - d) The responsibility of the Ministry of Finance and Economic Affairs for the development and coordination of a financial strategy or policy to guide the financial management of disaster risk in the country;
 - e) The mandatory development and implementation of contingency, emergency and service continuity of every Ministry, Department and Agency;
 - f) The mandate to implement regulations and mechanisms to make information about risk, disaster and climate change available;
 - g) The mandatory implementation of control, audit and evaluation processes during and after disaster impact;
 - h) The designation of an entity responsible for the definition of common methodologies and guidelines in disaster risk and climate change analysis, as well as for providing technical assistance to MDA and municipalities;
 - i) Explicit responsibility for the implementation of a national DRM information system and databases with information about the impacts of disaster;

- j) The definition of the compulsory responsibility of all the public service provider companies to reduce disaster risk in the scope of their operations;
 - k) The mandatory formulation of emergency or contingency plan at national, sectorial and territorial level, as well as the implementation of drills and simulation exercises;
 - l) The establishment of specific criteria for the subsidiary support between different government levels, namely under which circumstances and procedures, the central governments operates in support of decentralized levels;
 - m) The mandate for institutions responsible for DRM to implement specific mechanisms for civil society, social and non-governmental organization participation;
 - n) The definition of specific responsibilities, functions and institutional arrangements for the planning and implementation of ex-ante and ex-post recovery actions;
- 2) The updated DRM Act, or specific sectorial policy reform processes (updating or enacting of sectorial/multisectoral norms) should indicate:
- a) The regulations that decentralize the responsibilities regarding development planning or territorial planning and land use should include DRM and CCA as part of the Municipal responsibilities and functions;
 - b) Mandatory, regular quality assessments of the technical and scientific processes, methodologies and standards, which form part of the existing regulations governing research, monitoring and dissemination of information about hazards;
 - c) Climate change, territorial planning and water resources management regulations should include explicit objectives, results, indicators or targets related to DRM.
- 3) The next revision of the country's Development Strategy should be explicitly including DRM and CCA in the form of objectives, results, indicators, of such document;
- 4) The design and implementation of a budgetary instrument for identifying the allocations related to climate change adaptation activities.
- 5) Considering that a comprehensive reform of the DRM Act could take time, in the scope of its mandate, the Ministry of Finance and Economic Affairs should develop a financial strategy or policy to guide the financial management of disaster risk in the country. Furthermore, the

evaluation for the backing of a contingent credit is recommended, explicitly tied to the financing of emergent expenses in disaster situations

- 6) As part of the development of a regulatory framework for public investments, the preparation of methodological guidelines is recommended for the mandatory inclusion of disaster risk and climate change analysis and measures in all phases of the process.
- 7) Establish specific regulations, for the design and adoption of risk reduction standards of essential buildings or critical infrastructure through measures of reinforcement or replacement.

Medium term

- 5) Existing regulations that govern DRM research and studies should be reformed – or new legislation adopted – to include the frequency of occurrence of natural hazardous events and their associated levels and intensities as part of the responsibilities of the institutions;
- 6) Institutions responsible for DRM should maintain an advocacy processes during legislation reforms to include explicit and comprehensive DRM and ACC responsibilities – including all the components – within sectorial and territorial new regulations;
- 7) Enact specific regulation that includes the insurance of critical public infrastructure;
- 8) Promote reforms of the national control system to include recovery within the framework of the controlling entities.

Long term

The design and implementation of a financial protection structure for the agricultural sector is recommended.

6. ANNEX 1: IGOPP CALCULATIONS

Index component:General Framework of Governance [GF]		
GF-1A Coordination and central articulation of the policy		
Code	Closed answer question	YES/NO
GF-1A-1	Are there national regulations which establish a responsibility framework on disaster risk management for all Government levels?	No
GF-1A-2	Are there Policy tools for the implementation of national regulations on Disaster Risk Management?	Yes
GF-1A-3	Do the national regulations on DRM establish that the coordination and articulation of the policy tools be made at a hierarchical level equal or higher than ministerial?	Yes
GF-1A-4	Do the national regulations on DRM coordinate with other related standards for climate change adaptation, integrated water resources management or territorial planning and land use?	No
GF-1A-5	Does the National Development Plan (or equivalent instrument), contain objectives, targets or indicators in Disaster risk management? (Note: Can also be indicators, or other DRM programmatic tolls considered in national development)	Yes
GF-1A-6	Does the National Development Plan (or equivalent instrument) contain objectives, targets or indicators in CCA? (Note: Can also be indicators, or other DRM programmatic tolls considered in national development)	Yes
GF-1A-7	Are there climate change regulations which contain disaster risk management as a target, aim, purpose or result? (Note: Also called 'climate risk management' in some countries, also applicable in such case)	No
GF-1A-8	Are there regulations which establish a regime of professional career in public administration applicable to the responsible entities in charge of DRM in the country?	Yes
GF-1B Definition of sectorial responsibilities		
Code	Closed answer question	YES/NO
GF-1B-1	Are there regulations for integrated water resources management which establish disaster risk management as a purpose, aim or result?	No
GF-1B-2	Are there regulations on integrated water resources management which establish climate change adaptation as a purpose, aim or result?	No
GF-1B-3	Do the regulations that standardize the carrying out of environmental impact assessment (or equivalent process), integrate disaster risk analysis?	Yes
GF-1C Definition of territorial responsibilities		
Code	Closed answer question	YES/NO
GF-1C-1	Are there regulations that decentralize the responsibilities in the matter of development planning or territorial planning and land use to territorial management units?	No

GF-1C-2	Are there regulations that establish an approach of basin eco-region for environmental management or water resources?	No
GF-1C-3	Are there regulations that empower Territorial Management Units to create networks, agreements, alliances or territorial agreements in DRM?	No
GF-1C-4	Are there regulations that empower the formation of structures of territorial management for integrated water resources management or ecosystem management?	No

GF-2 Evidence of progress in implementation		
Code	Closed answer question	YES/NO
GF-2-1	Is there an approved document by the Ministry of Economy and Finance (or its agent), which establishes a financial strategy or policy for financial management of disaster risk in the country?	No
GF-2-2	Has the entity responsible for functions of leadership or coordination or articulation of disaster risk management in the country, received funding for these functions in the last fiscal period?	Yes
GF-2-3	Is there an objective or classified spending budget (or equivalent) in the national budget to allocate resources to disaster risk management "before the event" activities?	Yes
GF-2-4	Is there an objective or classified spending budget (or equivalent) in the national budget to allocate resources to climate change adaptation activities?	No
GF-2-5	Is there a fund or equivalent mechanism which finances or co-finances before the event disaster risk management activities?	No
GF-2-6	Is there a fund or equivalent mechanism which finances or co-finances climate change adaptation activities?	No
GF-2-7	Is there a fund or equivalent mechanism at the national level that enables contracting for disaster risk transfer instruments for asset portfolio of actual fiscal responsibility of the state?	No
GF-2-8	Is at least one of the three national development funds (or equivalent) with the largest allocation of resources used to finance or co-finance disaster risk management before the event activities?	No
GF-2-9	Is there an incentive budget for territorial management units that are responsible for implementing disaster risk management activities?	No
GF-2-10	Is there an incentive budget for the different sectors (ministries) responsible for implementing ex ante disaster risk management activities?	No

GF-3 Monitoring, accountability and participation		
Code	Closed answer question	YES/NO
GF-3-1	Is it stated within the national regulations on Disaster Risk Management that disaster risk management must be subjected to control by the respective authorized organizations?	No
GF-3-2	Are there regulations regarding transparency of how DRM is publicly managed?	No
GF-3-3	Has the national controlling entity concluded at least one compliance assessment on the existing regulations in disaster risk management within the last 5 years?	No

GF-3-4	Has the responsible national coordinating organization along with any other territorial sector conducted an assessment on disaster risk management within the last 3 years?	No
GF-3-5	Is there at least a mechanism of civil society participation applicable to the disaster risk management?	Yes

Index component: Risk Identification and Knowledge [RI]

RI-1A Coordination and central articulation of the policy		
Code	Closed answer question	YES/NO
RI-1A-1	Are there regulations to designate a responsible national party to provide technical assistance and guidelines at territorial and sectorial levels for the disaster risk analysis?	No
RI-1A-2	Are there regulations to designate a responsible national party to define methodologies for preparation studies on climate change effect?	No
RI-1A-3	Are there regulations ordering the creation and maintenance of Information Systems for Disaster Risk Management?	Yes
RI-1A-4	Are there regulations that establish the creation, systemization or updating of database on the effects of disasters?	No

RI-1B Definition of sectorial responsibilities		
Code	Closed answer question	YES/NO
RI-1B-1	Are there regulations which establish that studies on the threat by geological events should consider the frequency of occurrence of such event and their associated levels and intensities?	No
RI-1B-2	Are there regulations which establish that threat by climate or hydrological events should consider the frequency and occurrence of such event along with the associated levels and intensities?	No
RI-1B-3	Do the National Disaster Risk Management regulations stipulate that each sector is responsible to carry out disaster risk analysis in the sectorial scope of its powers?	No
RI-1B-4	Do the National Disaster Risk Management regulations mandate that public service companies or utilities are responsible to carry out disaster risk analysis in the scope of their operations?	No
RI-1B-5	Do the sciences, technology and innovation regulations (or equivalent), include the promotion of knowledge on disaster risk in the country?	No
RI-1B-6	Do the sciences, technology and innovation regulations (or equivalent), include the promotion of knowledge on climate change in the country?	No
RI-1B-7	Are there regulations to continue development and maintenance of observation and monitoring networks of at least two natural hazards in the country?	No
RI-1B-8	Do the environmental sector regulations define the responsibility to carry out disaster risk analysis or adverse effects of climate change in the scope of its powers?	No
RI-1B-9	Do the agriculture sector regulations define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No

RI-1B-10	Do the Health sector regulations define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No
RI-1B-11	Do the housing sector regulations define the responsibility to carry out disaster risk analysis in the scope of its powers?	No
RI-1B-12	Do the education sector regulations define the responsibility to carry out disaster risk analysis in the scope of its powers?	No
RI-1B-13	Do the tourism industry regulations define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No
RI-1B-14	Do the transport sector regulations (or equivalent) define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No
RI-1B-15	Do the water or sanitation sector regulations (or equivalent) define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No
RI-1B-16	Do the telecommunications industry regulations (or equivalent) define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No
RI-1B-17	Do the energy sector regulations (or equivalent), define the responsibility to carry out disaster risk or adverse effects analysis of climate change in the scope of its powers?	No
RI-1B-18	Is there at least one rule that defines which buildings are essential, indispensable or critical infrastructures of the country?	Yes

RI-1C Definition of territorial responsibilities		
Code	Closed answer question	YES/NO
RI-1C-1	Do the National Disaster Risk Management regulations establish that territorial management units are responsible for disaster risk assessment in their respective territories?	No
RI-1C-2	Are there regulations to appoint a national stakeholder responsible to define the scale or resolution in which risk analysis should be carried out at different government levels?	No
RI-1C-3	Are there regulations that establish the obligation to zone threatened cities?	Yes

RI-2 Evidence of process in implementation		
Code	Closed answer question	YES/NO
RI-2-1	Is the subject of disaster risk integrated into educational curricular programs at least at the primary or secondary levels?	Yes
RI-2-2	Is the subject of climate change integrated into educational curricular programs at least at the primary or secondary levels?	Yes
RI-2-3	In the last fiscal period, were funds assigned to the Ministry of Environment to perform disaster risk analysis which could be verified through instruments of budget classification?	Yes
RI-2-4	In the last fiscal period, were funds assigned to the Ministry of Agriculture to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-5	In the last fiscal period, were funds assigned to the Ministry of Health to perform disaster risk analysis which could be verified through instruments of budget classification?	No

RI-2-6	In the last fiscal period, were funds assigned to the Ministry of Housing to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-7	In the last fiscal period, were funds assigned to the Ministry of Education to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-8	In the last fiscal period, were funds assigned to the Ministry of Tourism to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-9	In the last fiscal period, were funds assigned to the Ministry of transport to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-10	In the last fiscal period, were funds assigned to the national entity responsible for water and sanitation to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-11	In the last fiscal period, were funds assigned to the national entity responsible for telecommunications to perform disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-12	In the last fiscal period, were funds assigned to the national entity responsible for energy to carry out disaster risk analysis which could be verified through instruments of budget classification?	No
RI-2-13	Has the country's largest water or sanitation supplier performed at least one disaster risk analysis on its infrastructure within the last 5 years?	No
RI-2-14	Has the country's largest energy (generation, transmission and distribution) company performed at least one disaster risk analysis on its infrastructure within the last 5 years? (Note: in case they are separate companies, the same questions apply to each)	No
RI-2-15	Has the country's largest telecommunication company performed at least one disaster risk analysis on its infrastructure within the last 5 years?	No

RI-3 Monitoring, accountability and participation		
Code	Closed answer question	YES/NO
RI-3-1	Are there regulations that mandate the availability of information on risk analysis which also define the mechanisms or tools for their exchange?	No
RI-3-2	Are there regulations that mandate the availability of information on climate change studies which also define the mechanisms or tools for their exchange?	No
RI-3-3	Has the national entity responsible for generate information on geological phenomena, performed at least one quality assessment of their research, monitoring and dissemination process in the last 3 years?	No
RI-3-4	Has the national entity responsible for generating information on hydrological and meteorological phenomena, performed at least one quality assessment of their research, monitoring and dissemination process in the last 3 years?	No
RI-3-5	Has the national control entity performed at least one verification or assessment on information generation and its availability on disaster risk in the last 5 years?	No

RI-3-6	Do the national DRM regulations mandate the responsibility to inform the citizens about disaster risk?	Yes
--------	--	-----

Index component: Disaster Risk Reduction and Adaptation [RR]

RR-1A Coordination and central articulation of the policy		
Code	Closed answer question	YES/NO
RR-1A-1	Are there regulations that establish authority in an articulated manner between disaster risk reduction and climate change adaptation for territorial and sectorial entities?	No
RR-1A-2	Are there regulations that define example of acceptable risk for at least 2 threats in the country?	No
RR-1A-3	Is there at least one national standard that mandates public entities to reduce the vulnerability of essential buildings, indispensable or critical infrastructure through measures of reinforcement or replacement?	No
RR-1A-4	Are there regulations that stipulate specific penalties for the breach of regulations related to the design, construction or location of public and private infrastructure or buildings?	Yes
RR-1A-5	Are there regulations that mandate that disaster risk reduction measures are incorporated during the construction of public and private infrastructural projects?	No

RR-1B Definition of sectorial responsibilities		
Code	Closed answer question	YES/NO
RR-1B-1	Within the National Disaster Risk Management regulations is each sector responsible for reducing disaster risk in the areas of its sectorial competence?	Yes
RR-1B-2	Within the National Disaster Risk Management regulations are public service provider companies responsible to reduce disaster risk in the scope of their operations?	No
RR-1B-3	Is there at least one national safety standard (code) for earthquake resistant design of buildings, or similar (eg wind), which is mandatory for public and private projects?	Yes
RR-1B-4	Are there regulations that standardize the technical aspects of construction, recommend special design parameters for essential buildings, indispensable or critical infrastructure in the country?	No
RR-1B-5	Have the earthquake-resistant standards been reviewed at least once in the last 10 years?	No
RR-1B-6	Are goals or results of disaster risk reduction integrated within the objectives of the standard environmental management regulations?	No
RR-1B-7	Do the environmental sector regulations define the responsibility to reduce disaster risk within its powers?	Yes
RR-1B-8	Do the agriculture sector regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-9	Do the health sector regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-10	Do the housing sector regulations define the responsibility to reduce disaster risk within its powers?	No

RR-1B-11	Do the education sector regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-12	Do the tourism sector regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-13	Does the transport sector (or equivalent) regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-14	Do the water or sanitation (or equivalent) regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-15	Does the telecommunication sector (or equivalent) regulations, define the responsibility to reduce disaster risk within its powers?	No
RR-1B-16	Does the energy sector (or equivalent) regulations define the responsibility to reduce disaster risk within its powers?	No
RR-1B-17	Are there regulations that mandate the performing of disaster risk analysis during the pre-investment phase of the project cycle?	No
RR-1B-18	Are there regulations that mandate the integration of climate change studies during the pre-investment phase of the project cycle?	No
RR-1B-19	Are there regulations which mandate that disaster risk analysis be carried out in other phases of the project cycle outside the pre-investment phase?	No

RR-1C Definition of territorial responsibilities		
Code	Closed answer question	YES/NO
RR-1C-1	Does the National Disaster Risk Management regulation establish that territorial management units are responsible for disaster risk reduction in their respective territories?	No
RR-1C-2	Do the functions and competence regulations of the territorial management units in the country establish disaster risk reduction as one of its powers?	No
RR-1C-3	Are there regulations on development planning and land use (or equivalent), which establish the zoning of areas at risk as a determinant factor in the definition of use and occupation of the land?	Yes
RR-1C-4	Are there regulations for the overall improvement of human settlements?	Yes
RR-1C-5	Are there regulations for the relocation of human settlements located in risk zones?	Yes

RR-2 Evidence of process in implementation		
Code	Closed answer question	YES/NO
RR-2-1	In the last fiscal period, were funds assigned to the Ministry of Environment to perform disaster risk reduction activities that can be verified through budget classification tools?	Yes
RR-2-2	In the last fiscal period, were funds assigned to the Ministry of Agriculture to perform disaster risk reduction activities that can be verified through budget classification tools?	Yes
RR-2-3	In the last fiscal period, were funds assigned to the Ministry of Health to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-4	In the last fiscal period, were funds assigned to the Ministry of Housing to perform disaster risk reduction activities that can be verified through budget classification tools?	No

RR-2-5	In the last fiscal period, were funds assigned to the Ministry of Education to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-6	In the last fiscal period, were funds assigned to the Ministry of Tourism to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-7	In the last fiscal period, were funds assigned to the Ministry of Transport to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-8	In the last fiscal period, were funds assigned to the national entity responsible for water and sanitation to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-9	In the last fiscal period, were funds assigned to the national entity responsible for telecommunication to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-10	In the last fiscal period, were funds assigned to the national entity responsible for energy to perform disaster risk reduction activities that can be verified through budget classification tools?	No
RR-2-11	Has the public service providing company for water and sanitation with the largest portfolio of users in the country, implemented at least one project or programme that includes disaster risk reduction activities in their infrastructure in the last 5 years?	No
RR-2-12	Has the country's largest energy (generation, transmission and distribution) company implemented at least one project or programme that includes disaster risk reduction activities in their infrastructure in the last 5 years? (NOTE: in case they are different companies, the same question applies).	No
RR-2-13	Has the country's largest telecommunications company implemented at least one project or programme that includes disaster risk reduction activities in their infrastructure in the last 5 years?	No

RR-3 Monitoring, accountability and participation		
Code	Closed answer question	YES/NO
RR-3-1	Are there regulations that establish a system of penalties to public and private entities when violators cause damage to the environment?	Yes
RR-3-2	Has the national controlling entity performed at least a verification or evaluation on the performance of actions regarding disaster risk reduction in the last 5 years?	No
RR-3-3	Do the regulations that govern the formulation of development planning and land use (or similar), assign responsibilities for monitoring, evaluation and updates?	Yes
RR-3-4	Do the regulations that govern watershed planning and management (or planning tool equivalent), assign responsibilities for their monitoring, evaluation and update?	No
RR-3-5	Has the national controlling entity or sector regulator performed at least one assessment on the implementation of risk reduction measures during the construction phase of infrastructure in last 5 years?	No

Index component: Disaster Preparedness [DP]

DP-1A. Coordination and central articulation of the policy		
Code	Closed answer question	YES/NO
DP-1A-1	Are there regulations that establish an inter-institutional organization at the national level for the process of preparedness and response?	Yes
DP-1A-2	Do the regulations that govern the preparedness and response process establish a mechanism or instance for crisis management at the highest national political level?	Yes
DP-1A-3	Are there regulations that govern the preparedness and response process which also establish the development of official protocols for the coordination of operations or incident commands?	Yes
DP-1A-4	Are there regulations that govern the implementation of temporary regime measures in the case of disaster, emergency or public calamity?	Yes
DP-1A-5	Do the regulations that govern the preparedness and response processes also establish the formulation of emergency or contingency plans at the national level?	Yes
DP-1A-6	Do the regulations that govern the arrangement and response processes establish that the response actions and humanitarian assistance are based on damage assessments and needs analysis?	No
DP-1A-7	Do the regulations that govern the preparedness and response processes establish that drills and simulations are carried out? ,	No
DP-1A-8	Are there regulations for the coordination of international assistance and mutual help in case of disaster?	Yes

DP-1B. Definition of sectorial responsibilities		
Code	Closed answer question	YES/NO
DP-1B-1	Do the regulations that govern the preparedness and response processes mandate the establishment of emergency or contingency plans in the different sectors or ministries?	No
DP-1B-2	Do the regulations that govern the preparedness and response processes, foresee the implementation and operation of (monitoring, vigilance or warning systems) surveillance systems that are able to trigger an alarm when natural hazardous phenomena occur?	Yes
DP-1B-3	Do the environmental sector regulations define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	Yes
DP-1B-4	Do the agriculture sector regulations define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-5	Do the health sector regulations define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-6	Do the housing sector regulations define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-7	Do the education sector regulations define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No

DP-1B-8	Do the tourism sector regulations define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-9	Do the transport sector regulations (or equivalent sector) define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-10	Do the water and sanitation sector regulations (or equivalent) define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-11	Do the telecommunication sector regulations (or equivalent) define the responsibility to carry out preparedness for disaster response activities in the scope of their powers?	No
DP-1B-12	Do the energy sector regulations (or equivalent) define the responsibility of carry out preparedness for disaster response activities in the scope of their powers	No
DP-1B-13	Do the regulations that govern public service companies that provide water and sanitation, require the formulation and implementation of plans for business continuity or disaster operations?	No
DP-1B-14	Do the regulations that govern public telecommunication companies require the development of business continuity plan of operations before a disaster event?	No
DP-1B-15	Do the regulations that govern public energy companies require the development of business continuity plan for operations before a disaster event?	No
DP-1B-16	Are there regulations that mandate development and implementation of emergency or contingency plans associated with transport, handling or processing of hazardous substances?	No
DP-1B-17	Are there regulations regarding the establishment of the development and implementation of emergency or contingency plans in the event of fuel spill or oil pollution?	Yes

DP-1C. Definition of territorial responsibilities		
Code	Closed answer question	YES/NO
DP-1C-1	Do the regulations that govern the preparedness and response processes provide instances of coordination in the territory?	No
DP-1C-2	Do the regulations that govern the preparedness and response processes establish subsidiary assistance criteria between the different government levels?	No
DP-1C-3	Do the regulations that govern the preparedness and response processes establish the formulation of emergency or contingency plans at territorial levels?	No
DP-1C-4	Are there regulations (other than the DRM or preparedness) that define competence for the territorial management units in preparedness and response?	No
DP-1C-5	Are there regulations that enable municipalities to use their own resources outside their jurisdiction in situations of emergency?	No

0

DP-2. Evidence of process in implementation		
Code	Closed answer question	YES/NO
DP-2-1	Has the national responsible entity for preparedness and response coordination received funding for these functions in the last fiscal period?	Yes

DP-2-2	Has at least one national firefighter service received funding for disaster preparedness activities in the last fiscal period?	Yes
DP-2-3	Has the national responsible entity for forest fire prevention and control received funding for disaster preparedness activities in the last fiscal period?	Yes
DP-2-4	Does the environmental sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years?	Yes
DP-2-5	Does the agricultural sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years, and has the coordinator or guiding entity received funding for disaster preparedness activities in the last fiscal period?	No
DP-2-6	Does the health sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years, and has the coordinator or guiding entity received funding for disaster preparedness activities in the last fiscal period?	No
DP-2-7	Does the housing sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years?	No
DP-2-8	Does the education sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years, and has the coordinator or guiding entity received funding for disaster preparedness activities in the last fiscal period?	No
DP-2-9	Does the tourism sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years?	No
DP-2-10	Does the transport sector (or equivalent) have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years, and has the coordinator or guiding entity received resources for disaster preparedness activities in the last fiscal period?	No
DP-2-11	Does the water and sanitation sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years, and has the coordinator or guiding entity received resources for disaster preparedness activities in the last fiscal period?	No
DP-2-12	Does the energy sector have any National Emergency, contingency or continuity of operations or equivalent plan which has been formally approved at least in the last 5 years, and has the coordinator or guiding entity received funding for disaster preparedness activities in the last fiscal period?	No
DP-2-13	Does the country's largest national water supply and sanitation company have any emergency, contingency or continuity operation plans in case of disaster?	No
DP-2-14	Does the country's largest energy (generation, transmission and distribution) company have any emergency, contingency or continuity operation plans in case of disaster? (Note: in case of multiple companies, the same question apply to each)	No
DP-2-15	Does the country's largest telecommunication service provider have any emergency, contingency or continuity operation plans in case of disaster?	No

DP-3. Monitoring, accountability and participation		
Code	Closed answer question	YES/NO
DP-3-1	Are there regulations that establish mechanisms in which civil society, social and non-governmental organization to participate in the disaster preparation?	Yes
DP-3-2	Has the national controlling entity performed at least one assessment on disaster preparedness in the last 5 years?	No
DP-3-3	Has the national controlling entity carried out at least one 'After event' assessment on the government performance in relation to its recovery after the last 5 major disasters were declared at the national level or when international assistance was requested?	No
DP-3-4	Has the national entity responsible for coordinating disaster preparedness and response carried out at least one assessment on the quality of their process in the last 3 years?	No
DP-3-5	Has the national entity responsible for preparedness and response adopted quality standards in humanitarian assistance at least in relation to the water, sanitation, nutrition and temporary shelter?	No
DP-3-6	Was any mechanism of community participation activated in response to at least one of the last 5 nationally declared disasters or when international assistance was requested?	No

Index component: Post-disaster Recovery Planning [RP]

RP-1A. Coordination and central articulation of the policy		
Code	Closed answer question	YES/NO
RP-1A-1	Are there regulations on post-disaster recovery which define the responsibility of the State facing this process?	Yes
RP-1A-2	Are there regulations that establish the recovery of livelihoods as a purpose of post-disaster recovery?	No
RP-1A-3	Are there regulations that mandate institutional arrangements for coordinating post-disaster reconstruction?	No
RP-1A-4	Are there regulations that mandate the conduct of studies on the causes of disasters to guide recovery that would prevent the rebuilding of risk associated with the pre-existing conditions?	No
RP-1A-5	Are there regulations mandating the development of post-disaster recovery plans that explicitly seek to reduce pre-existing vulnerability?	No
RP-1A-6	Are there regulations mandating the development of before event post-disaster recovery plans?	No
RP-1A-7	Are there regulations which mandate that post-disaster recovery plans should define the duration of the stage that will support the restoration of during the transition between the response and reconstruction?	No
RP-1A-8	Are there regulations which mandate that post-disaster recovery plans should define the period in which affected homes are repaired or rebuilt?	No

RP-1B. Definition of sectorial responsibilities		
Code	Closed answer question	YES/NO

RP-1B-1	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the environmental sector regulations?	No
RP-1B-2	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the agriculture sector regulations?	No
RP-1B-3	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the health sector regulations?	No
RP-1B-4	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the housing sector regulations?	No
RP-1B-5	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the education sector regulations?	No
RP-1B-6	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the tourism sector regulations?	No
RP-1B-7	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the transport sector regulations (or equivalent)?	No
RP-1B-8	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the water and sanitation sector regulations (or equivalent)?	No
RP-1B-9	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the telecommunication sector regulations (or equivalent)?	No
RP-1B-10	Are the responsibilities for carrying out Post-disaster recovery preparation activities defined under the energy sector regulations (or equivalent)?	No

RC-1C. Definition of territorial responsibilities		
Code	Closed answer question	YES/NO
RP-1C-1	Are there regulations that govern the assessment, review or update of development plans after a disaster has affected the territorial management units?	No
RP-1C-2	Are there regulations that standardize the assessment, review or update of development plans for the territorial planning and land use after a disaster has affected the territorial management units?	No

RP-2. Evidence of process in implementation		
Code	Closed answer question	YES/NO
RP-2-1	Does the Ministry of Environment (or guiding entity or environmental coordinator) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No
RP-2-2	Does the Ministry of Agriculture (or equivalent) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No
RP-2-3	Does the Ministry of Health (or equivalent) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No
RP-2-4	Does the Ministry of Housing (or equivalent) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No
RP-2-5	Does the Ministry of Education (or equivalent) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No

RP-2-6	Does the Ministry of Tourism (or equivalent) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No
RP-2-7	Does the Ministry of Transport (or equivalent) have a post-disaster recovery before event plan for the sector that has been formally approved at least in the last 5 years?	No
RP-2-8	Does any government entity or water and sanitation sector have a post-disaster recovery before event plan that has been formally approved at least in the last 5 years?	No
RP-2-9	Does any government entity or telecommunication sector have a post-disaster recovery before event plan that has been formally approved at least in the last 5 years?	No
RP-2-10	Does any government entity or energy sector have post-disaster recovery before event plan that has been formally approved at least in the last 5 years?	No

RP-3. Monitoring, accountability and participation		
Code	Closed answer question	YES/NO
RP-3-1	Are there regulations which establish mechanisms for participation of civil society or social and non-governmental organizations in post-disaster recovery?	Yes
RP-3-2	Has any national controlling entity carried out at least one assessment on how the government managed the recovery process in the last 5 major disaster nationally declared or when international assistance was requested?	No
RP-3-3	Were any information mechanisms activated which affected recovery in at least one of the last 5 nationally declared disaster or when international assistance was requested?	No
RP-3-4	Were any community mechanisms activated which affected recovery in at least one of the last 5 nationally declared disaster or when international assistance was requested?	No

Index component: Financial Protection [FP]

FP-1A. Coordination and central articulation of the policy		
Code	Closed answer question	YES/NO
FP-1A-1	Do the national regulations on Disaster Risk Management establish national funds to finance emergent expenses in disaster situations?	Yes
FP-1A-2	Do the national regulations on Disaster Risk Management establish the annual percentage of resources to allocate to the national fund for emergent expenses in disaster situations?	No
FP-1A-3	Are there regulations that establish the creation of disaster risk retention and transfer structure in the country?	No
FP-1A-4	Do the regulations governing the technical provisions of the insurance sector mandate that the estimation of catastrophic risk reserves for non-homogenous/special assets be sustained by probabilistic risk assessment models defined or certified by the sector's regulating entity?	No

FP-1A-5	Do the regulations governing the technical provisions of the insurance sector mandate that the estimation of catastrophic risk reserves for homogenous/uniform assets be sustained by probabilistic risk assessment models defined or certified by the sector's regulating entity?	No
FP-1A-6	Are there regulations that establish development funds for financing disaster management activities?	Yes

FP-1B. Definition of sectorial responsibilities		
Code	Closed answer question	YES/NO
FP-1B-1	Are there regulations that establish the State's fiscal responsibility surrounding disaster risk?	Yes
FP-1B-2	Are there regulations that assign competencies to the Treasury, Finance or Economy sector, for financial protection from disaster risk?	No
FP-1B-3	Are there regulations that establish that sectorial entities must cover their public assets with insurance policies or another type of equivalent mechanism?	No
FP-1B-4	Are there regulations on incentives for private housing insurance against disaster risk?	No

FP-1C. Definition of territorial responsibilities		
Code	Closed answer question	YES/NO
FP-1C-1	Are there regulations that establish that territorial entities must cover their public assets with insurance policies or another type of equivalent mechanism?	No
FP-1C-2	Are there regulations that mandate the implementation of structures for financial protection from disasters in cities with more than 100,000 inhabitants?	No
FP-1C-3	Does the country's capital city have a fund or equivalent mechanism for financing or co-financing disaster management activities?	No
FP-1C-4	Does the capital city's fund or equivalent mechanism for financing or co-financing disaster management activities have the capacity to accumulate resources over time?	No
FP-1C-5	Is the capital city's fund or equivalent mechanism for financing or co-financing disaster management activities, based on an optimal rule of accumulation and expenditure based on the Anticipated Annual Loss and on the information recorded on the losses from disasters in previous years?	No

GF-2. Evidence of process in implementation		
Code	Closed answer question	YES/NO
FP-2-1	Has the Ministry of Treasury, Finance or Economy determined the resources needed to cover Probable Maximum Loss (PML) from catastrophic events for different return periods?	No
FP-2-2	Has the Ministry of Treasury, Finance or Economy determined the resources needed to cover Probable Maximum Loss (PML) from catastrophic events for different return periods?	Yes
FP-2-3	Has the Ministry of Treasury, Finance or Economy determined the anticipated resources needed to annually cover the processes of response, rehabilitation and reconstruction caused by smaller and frequent events?	Yes

FP-2-4	Has the Ministry of Treasury, Finance or Economy (or other competent entity) approved standards for insuring public constructions in the event of disaster?	No
FP-2-5	Has the Ministry of Treasury, Finance or Economy (or other competent entity), approved standards for insuring the concessions of at least one basic service or critical infrastructure in the event of disaster?	No
FP-2-6	Has the Ministry of Treasury, Finance or Economy (or other competent entity), approved minimum requisites for the participation of the insuring and reinsuring agents in insurance and reinsurance contracts for at least one asset of the State fiscal responsibility?	No
FP-2-7	Has the Ministry of Treasury, Finance or Economy (or other competent entity), developed guidelines for the territorial entities for the financial protection against disaster risk?	No
FP-2-8	Is there a fund or equivalent mechanism in place to finance or co-finance risk management activities?	Yes
FP-2-9	Does the fund or equivalent mechanism for financing or co-financing disaster management activities have the capacity to accumulate resources over time?	No
FP-2-10	Is the fund or equivalent mechanism for financing or co-financing disaster management activities, based on the golden rule of accumulation and expenditure based on the Anticipated Annual Loss and the recorded information on the losses from disasters in previous years?	No
FP-2-11	Has the country underwritten at least one contingent credit explicitly tied to the financing of emergent expenses in disaster situations?	No
FP-2-12	Does at least one municipality of the country's capital city have a current instrument of disaster risk transference for a portfolio of assets of State fiscal responsibility?	No
FP-2-13	Has at least one risk transference mechanism to collectively cover the portfolio of fiscal assets of at least a sector been implemented?	Yes
FP-2-14	Does the Ministry or Secretariat of National Development Planning; or the Ministry of Treasury, Finance or Economy; or the Entity in charge of Disaster Risk management; or the Agriculture sector; have at least one financial instrument designed ex-ante to stimulate economic reactivation in areas affected by disasters?	Yes
FP-2-15	Does the Ministry of Agriculture have a structure for the financial protection of the agriculture sector (or	No

equivalent) against disaster risk?

FP-3. Monitoring, accountability and participation		
Code	Closed answer question	YES/NO
FP-3-1	Has the national controlling entity carried out at least one evaluation of compliance with current regulations on financial protection mechanisms in the last 5 years?	No
FP-3-2	Has the governing body of the insurance sector carried out at least one verification or assessment of the use of the probabilistic evaluation model of the risk for the estimation of catastrophic risk reserves of the insurance companies in the last 3 years?	No
FP-3-3	Has the Ministry of Treasury, Finance or Economy carried out at least one evaluation of the application of the financial Protection processes in the country in the last 3 years?	No