CARIBBEAN DEVELOPMENT BANK

PRESENTATION TO DONOR MEETING IN SUPPORT OF CCRIF

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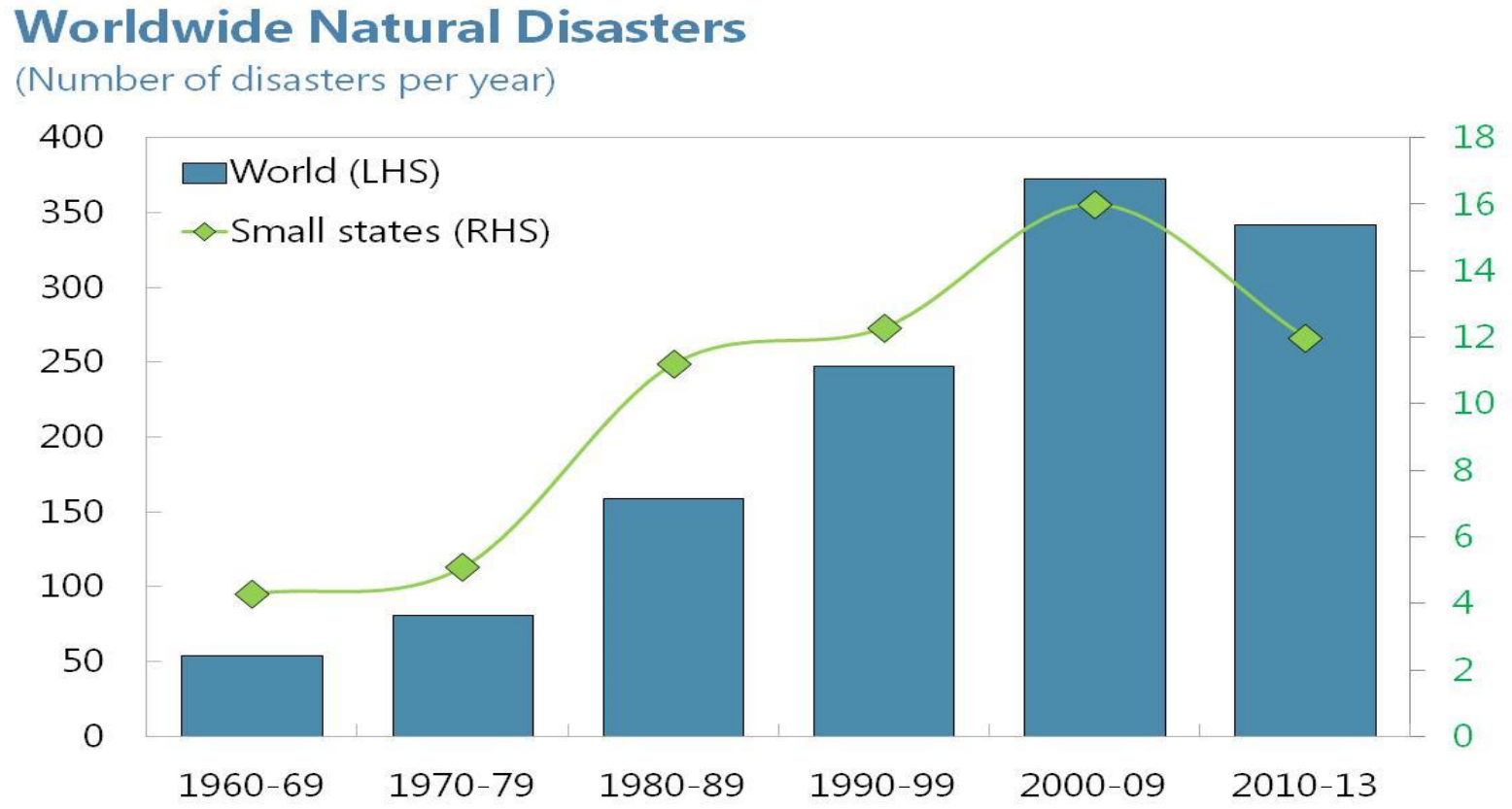
Structure of Presentation

- Facts and Disaster Risks of Caribbean Countries
- Socio-economic Impacts of Natural Disasters
- Disasters Risk Financing Options
- Implications for Fiscal Policy
- Discussion

Natural Disasters have become more frequent, including in small states…

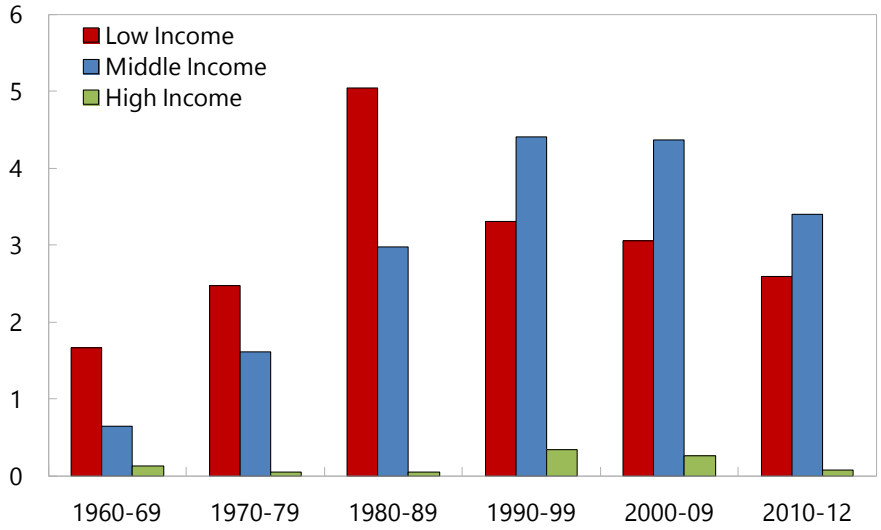


Sources: International Disaster Database, Center for Research on Epidemiology of Disasters; and IMF staff estimates.

Affects the most vulnerable more.

People Affected and Income Level

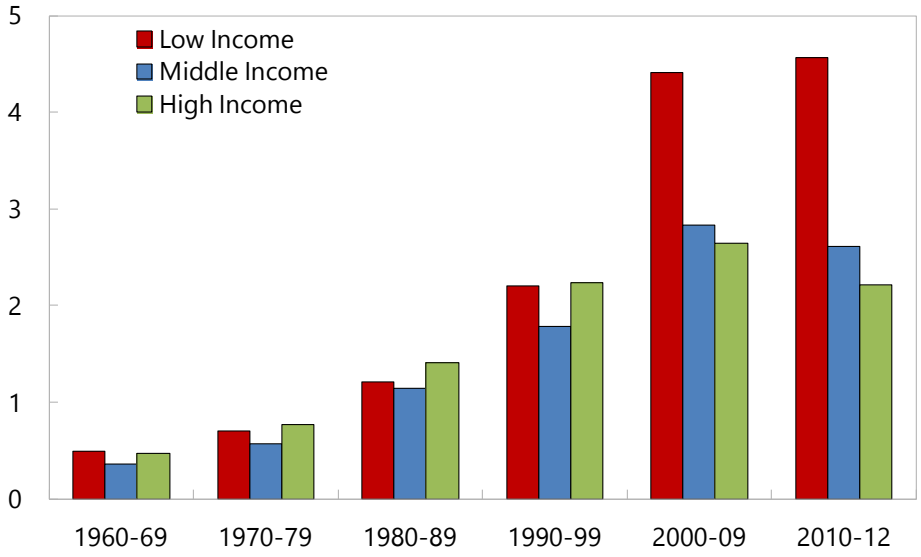
(In percent of population, average people affected per year)



Sources: EM-DAT; WDI; and IMF staff calculations.

Disasters per Land Area and Income Level

(Average annual disasters per 1 million km^2)

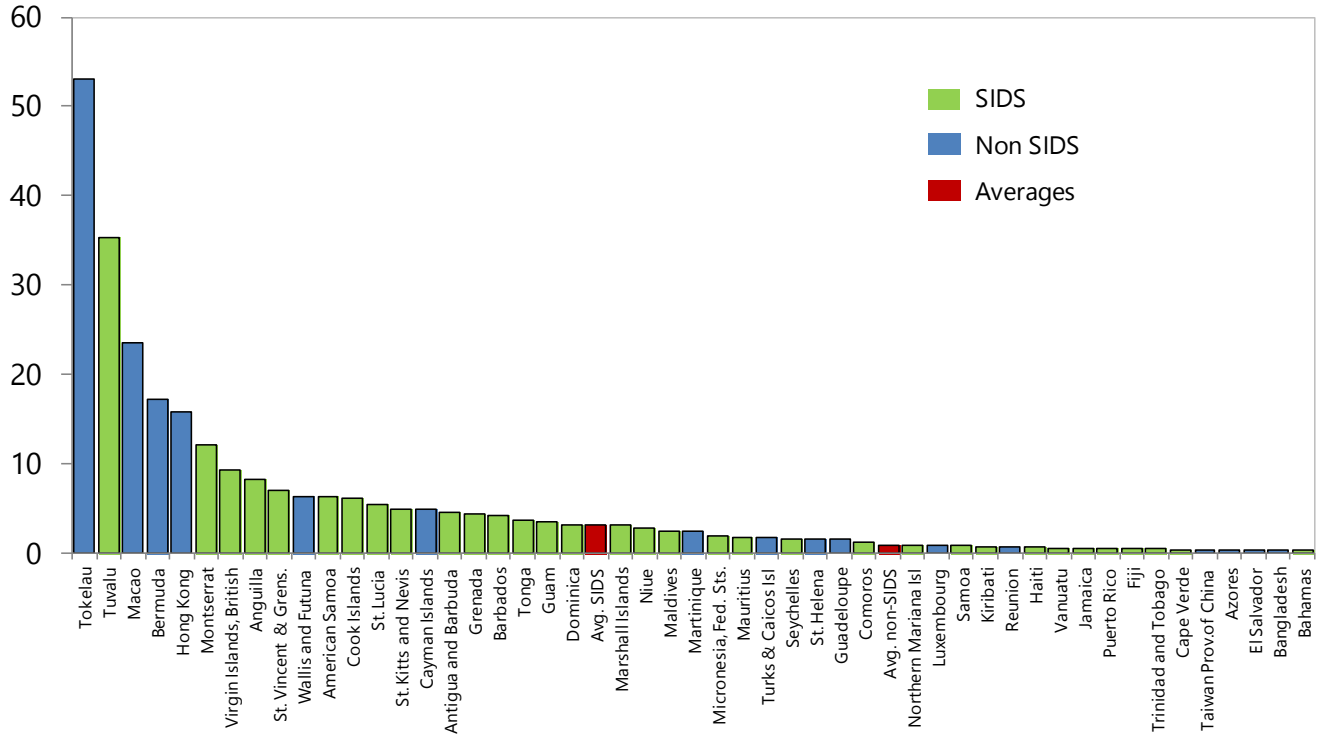


Sources: EM-DAT; WDI; and IMF staff calculations.

SIDS are more susceptible to natural disasters.

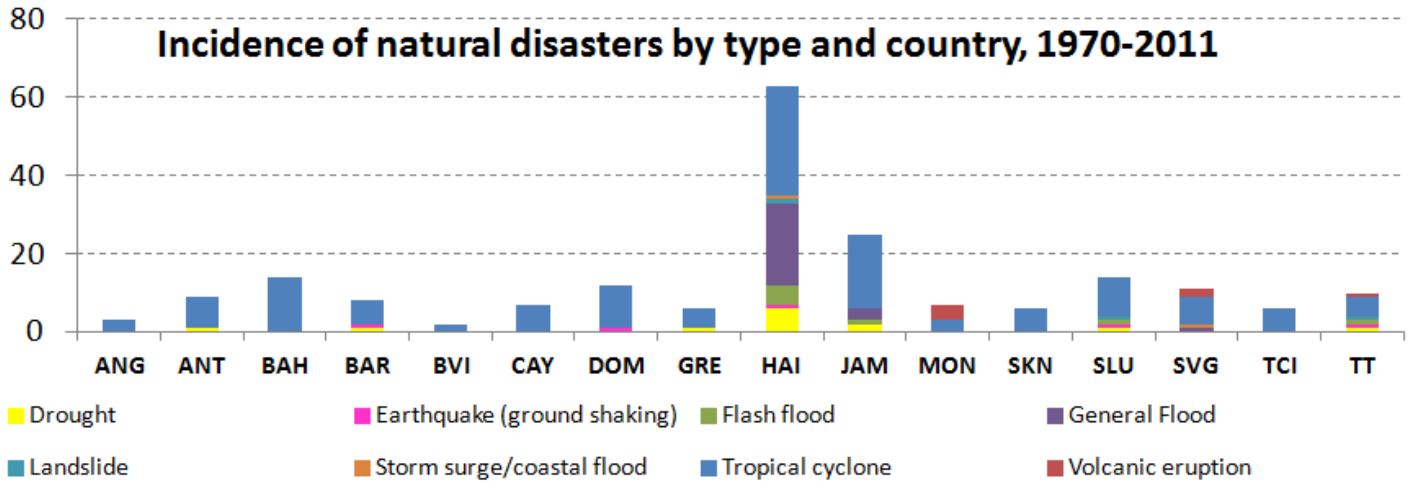
Probability of at Least 1 Natural Disaster in a Year

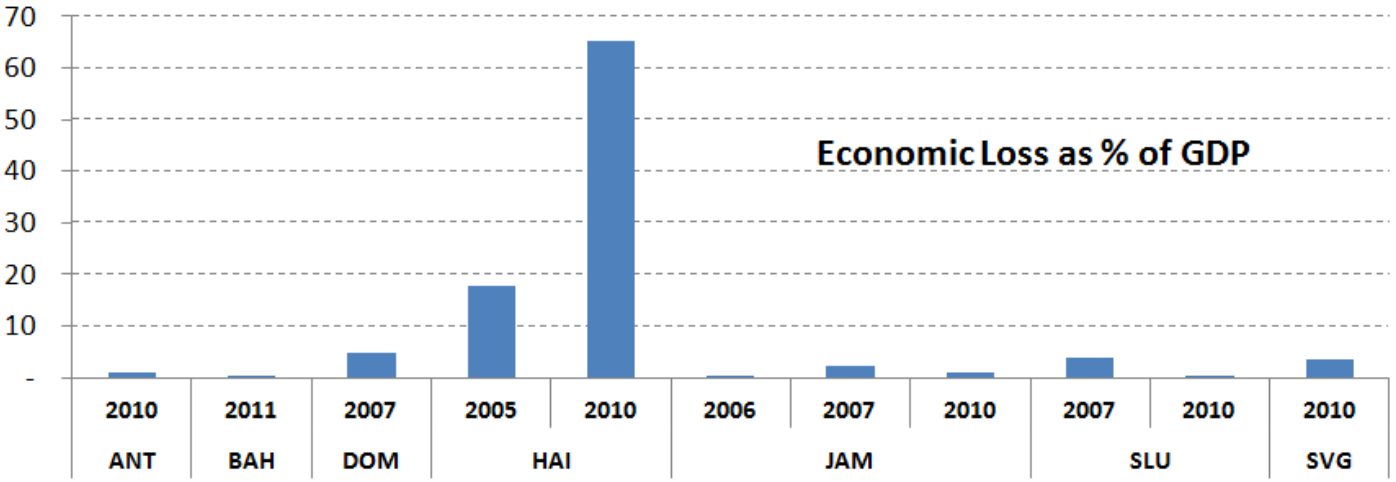
(In percent, per 100 km^2)



Note: Includes droughts, earthquakes, extreme temperatures, floods, mass movements, storms and volcanoes.
Sources: EM-DAT; and IMF staff estimates.

High incidence and impact of natural disasters





- High incidence due to geography (tropical climate, topography, etc.)
- High impact related, inter alia, to size, openness and insularity

SOURCE: *EM-DAT Disaster Database*, www.em-dat.be, Université Catholique de Louvain, Brussels, Belgium

Disaster Risks of Caribbean Countries

Two-thirds of all Caribbean countries are classified as highly vulnerable or worse, to natural disasters

Extremely vulnerable	Highly Vulnerable	Vulnerable	At Risk	Resilient
• Barbados • British Virgin Islands • Grenada • Jamaica • St. Lucia • Trinidad & Tobago	• Cayman Islands • Dominica • Haiti • Montserrat • St. Kitts & Nevis • St. Vincent & the Grenadines	• Anguilla • Antigua & Barbuda • Turks & Caicos Islands	• The Bahamas • Belize	• Guyana • Suriname

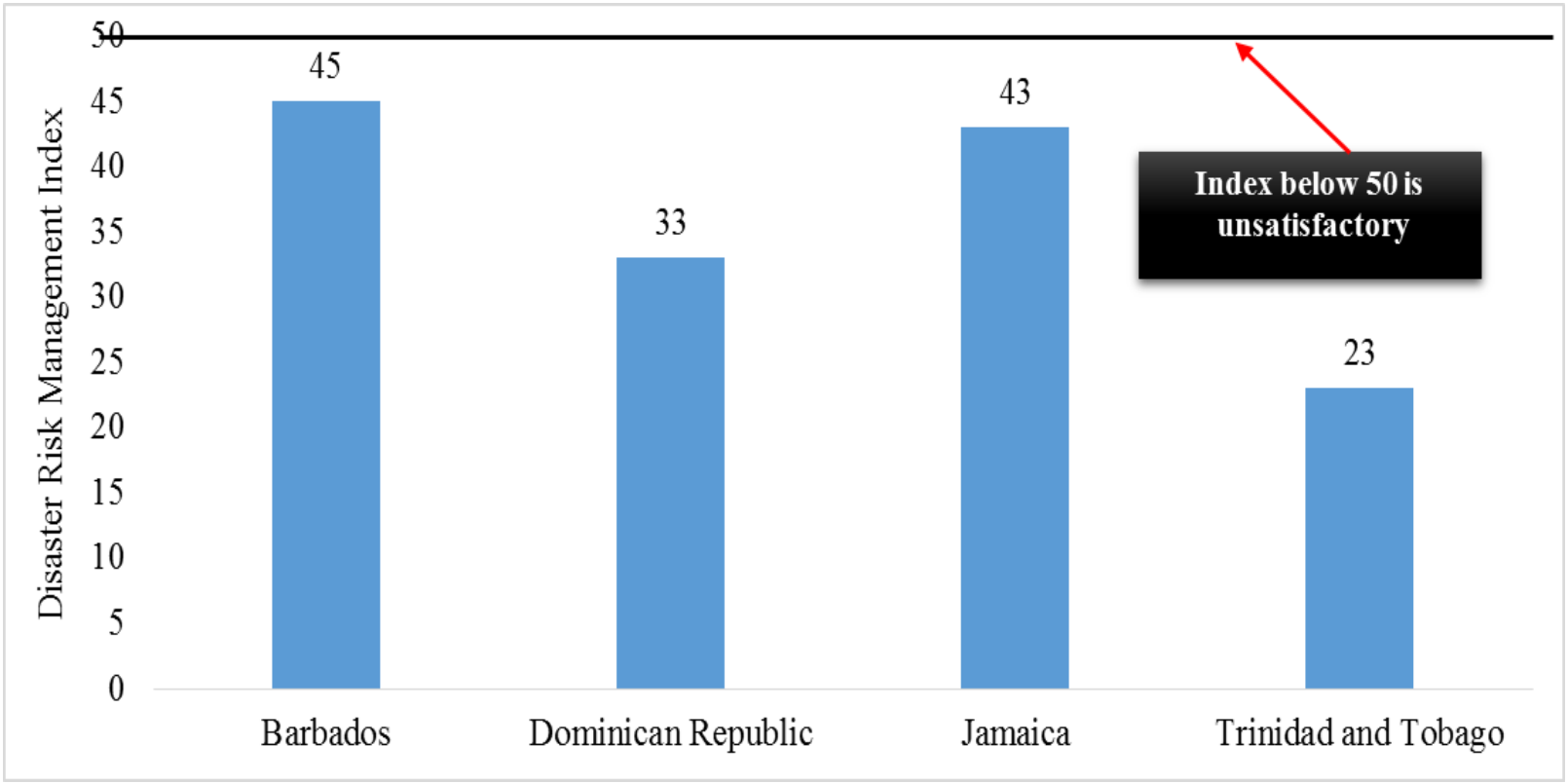
Source: CDB, 2013.

In the Caribbean, hurricanes lower growth and increase public debt.

- 1% drop in output (GDP) on average, 1970-2004 (Strobl, 2012)
- 3% decline in per capita GDP cumulative, 1975-2006 (Raddatz, 2009)
- 5% increase in debt/GDP ratio on average (Acevedo, 2013)

Disaster Risks of Caribbean Countries (Cont'd)

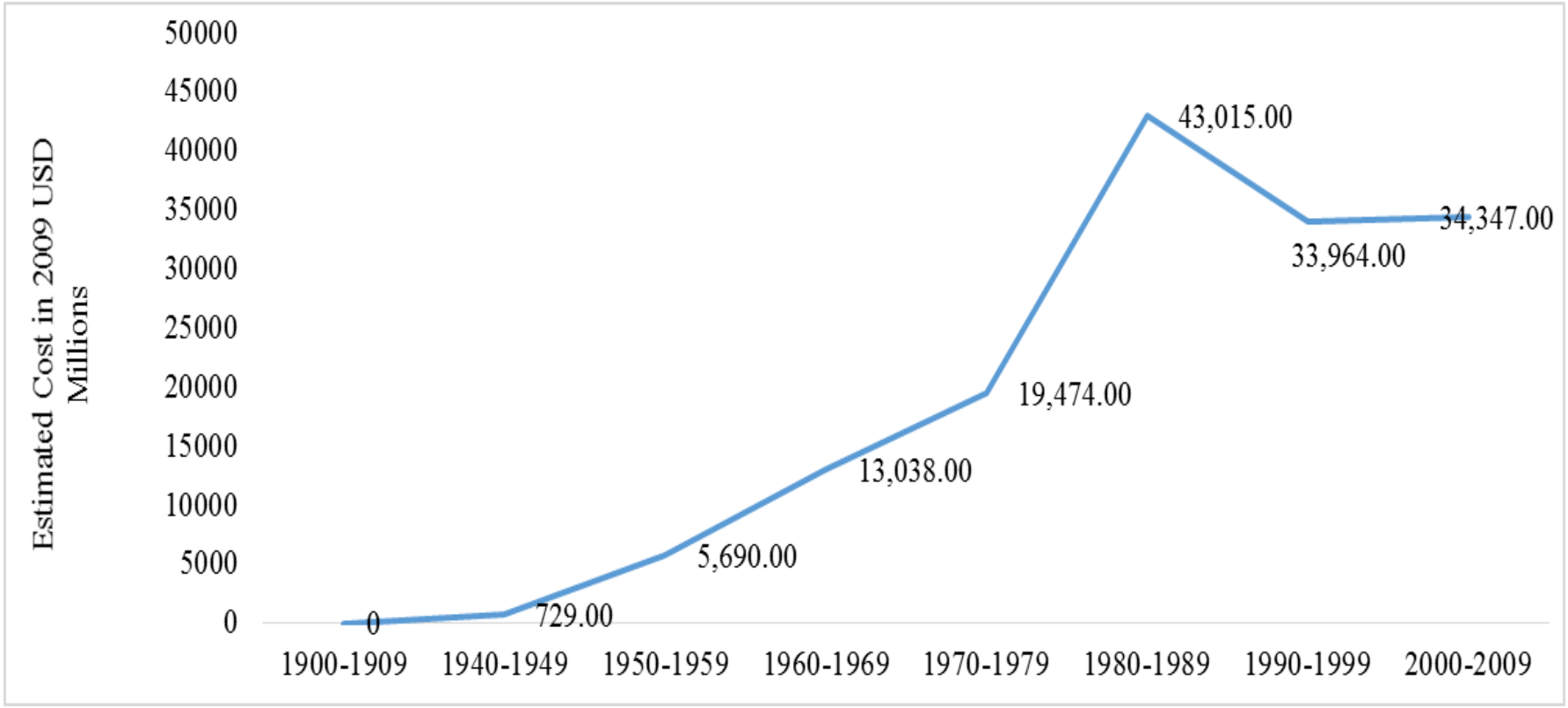
Unsatisfactory DRM scores suggest inadequate capacity to identify and respond to disasters



Source: Data from IDB, 2010

Socio-economic Impacts of Natural Disasters

Economic costs of natural disasters for Latin America and the Caribbean have increased dramatically over the past century



Source: Data from IDB, 2010.

Socio-economic Impacts of Natural Disasters (Cont'd)

- The average cumulative (1970-2002) damage of natural disasters in the ECCU was equivalent to 66% of annual GDP (IMF, 2004).
- Hurricane Ivan in 2004 had a devastating impact on Grenada causing damages valued in excess of 200% of the country's GDP (CDB, 2013).
- The floods in 2005 caused damages estimated at 60% of Guyana's GDP (CDB, 2012).
- Hurricane Dean in 2007 caused extensive flooding as well as loss of life in many parts of the Caribbean (CDB, 2013).
- Tropical Storm Gustav in 2008 caused extensive damage to food crops and infrastructure and resulted in over 300 deaths in Haiti (CDB, 2013).
- The 7.0 magnitude earthquake in Haiti in 2010 caused over 300,000 deaths, displaced over three million people and made more than a million homeless (CDB, 2013).
- December 2013 Trough in St. Vincent and the Grenadines and St. Lucia resulted in a total of eight deaths as well as extensive damage to infrastructure (CDB, 2015).

Socio-economic Impacts of Natural Disasters (Cont'd)

Projections suggest that tourism activity could be particularly affected by climate change

	Value of Tourism Receipts (Business as Usual)		Loss (High Emission Scenario)		Loss (Low Emission Scenario)	
	Bahamas	**Barbados**	**Bahamas**	**Barbados**	**Bahamas**	**Barbados**
2011-2020	25,219	10,114	-3,466	-1,410	-3,876	-549
2021-2030	25,489	21,741	-2,880	-4,761	-2,973	-2,597
2031-2040	24,062	36,080	-4,295	-10,254	-3,625	-6,762
2041-2050	21,857	53,574	-5,639	-18,309	-3,819	-13,224

Source: ECLAC, 2011.

Disasters Risks Financing Options (Global Practices)

Ex-ante Financing	Ex-post Financing
• Dedicated reserve fund • Contingent credit facility • Insurance • Catastrophe bond, other catastrophe-linked instruments / alternative risk transfer instrument	• Budget reallocation • Debt financing / borrowing • Taxation • Multilateral / international borrowing • International aid

Source: OECD, 2013.

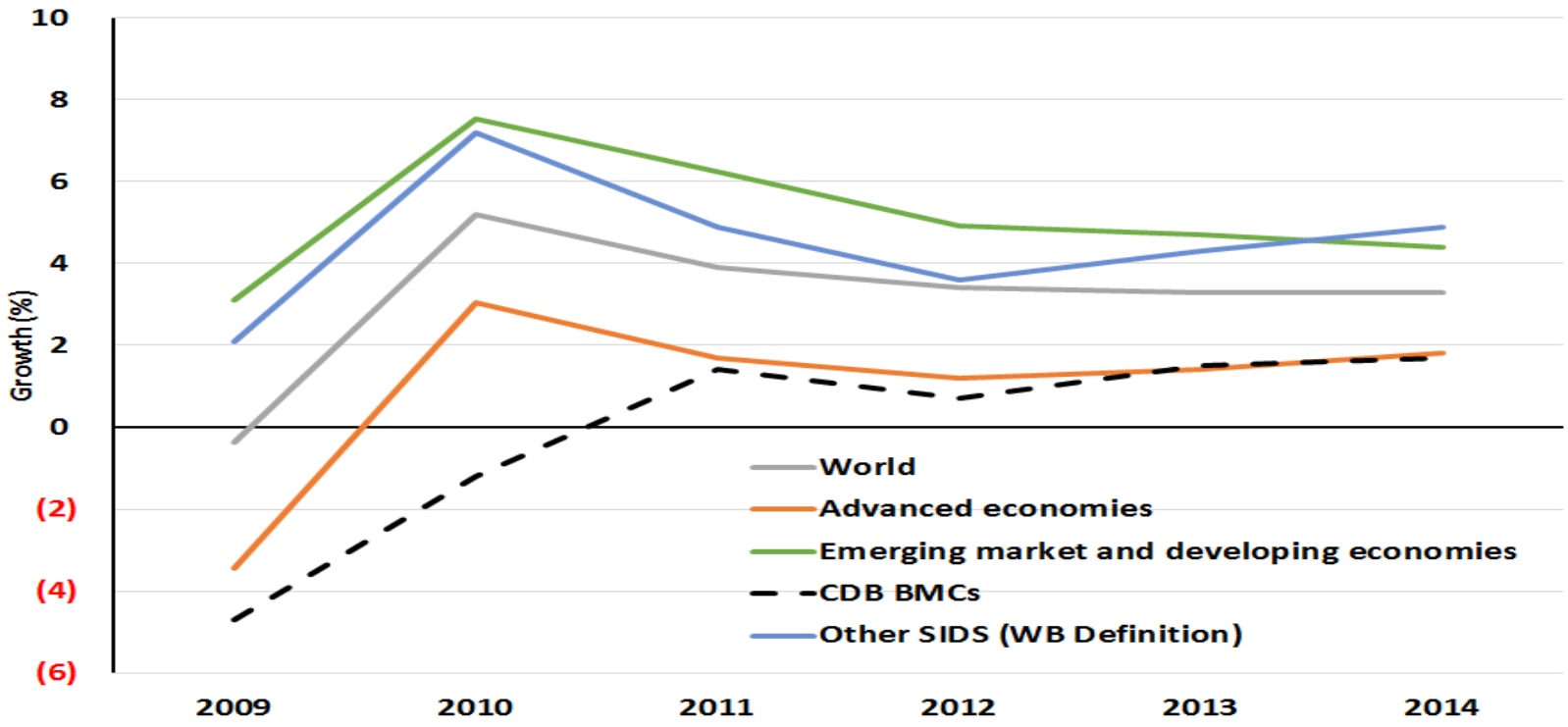
Disasters Risks Financing Options (Caribbean Practices)

Ex-ante Financing	Ex-post Financing
• CCRIF	• Budget • Borrowing ✓ CDB IRL ✓ CDB RRL • Regional/International aid ✓ CDB ERG

➢ Increasing ex-ante financing tools is imperative to reduce reliance on borrowing or taxation, especially given the fiscal challenges facing Caribbean countries.

Economic Growth Consistently Lower than other Small Island Developing States (SIDs)

Real GDP growth



Sources: IMF, ECCB and CDB
CDB BMCs data for 2014 are preliminary CDB estimates

Implications for Fiscal Policy: Extant Context

- Majority of Countries are highly indebted
  - Disaster response major cause of debt buildup
- Generally procyclical fiscal policy
- Fiscal indiscipline perpetuated by weak fiscal institutions
- Fiscal consolidation underway in the majority of countries

	Change in Debt/GDP ratio (percentage points)						Debt/GDP ratio
BMC	2009	2010	2011	2012	2013	2014	2014
JAM					-3.3	-1.2	142
BAR					12.9	3.9	115
GRE					5.8	-4.8	109
ANT					8.0	-0.9	94
SKN					-34.2	-16.9	86
SVG					2.5	5.5	78
BZE					1.0	1.0	77
DOM					2.4	0.7	76
SLU					1.5	1.6	75
High Debt	**7**	**3**	**2**	**0**	**-1**	**-1**	**95**
BAH					6.2	2.4	65
GUY					-9.1	1.6	58
TT					-2.9	1.8	42
SUR					7.5	-6.7	28
HAI					15.1	15.1	25
Low Debt	**-1**	**-8**	**-8**	**9**	**3**	**3**	**44**

Source: CDB, 2015.

PUBLIC INDEBTEDNESS AND ENVIRONMENTAL VULNERABILITY IN THE CARIBBEAN AS AT 2010

Item	Extremely/Highly Vulnerable	Vulnerable/At Risk	Resilient
Highly indebted (Debt/GDP > 60%)	Antigua and Barbuda Barbados Dominica Grenada Jamaica St. Kitts and Nevis St. Lucia St. Vincent and the Grenadines	Belize	
Moderately indebted (Debt/GDP 30 – 60%)	Trinidad and Tobago	Anguilla Bahamas, The	Guyana
Less Indebted < 30%	British Virgin Islands Cayman Islands Haiti Montserrat	Turks and Caicos Islands	Suriname

Decomposing the growth in debt

	Start	End	Δ Total Debt	Primary Recur. Balance	Capital Balance	Interest	Growth	Real Exch Rate	Events
Antigua and Barbuda	1997	2004	58	(20)	3	33	(35)	6	72
Barbados	2001	2009	46	(44)	34	7	2	(5)	49
Belize	1997	2004	59	(41)	59	14	(29)	11	45
Dominica	1998	2002	58	(11)	23	13	1	5	27
Grenada	2000	2004	66	(30)	46	8	(7)	2	47
Jamaica	1997	2003	65	(67)	12	38	(6)	4	84
St. Kitts and Nevis	1995	2004	85	(29)	67	(2)	(33)	(9)	92

Source: CDB

Implications

- Since the largest contributor to debt, is the effect of off-budget events, then neither fiscal consolidation nor improved debt management will be sufficient to remove the threat of rising indebtedness from the Region.
- Broader issues of public governance need to be addressed, such as the role and management of public enterprises, and the regulation and monitoring of financial sectors. These are especially challenging issues in small countries with already stretched capacities

Implications for Fiscal Policy: Required Changes for Disaster Risk Financing

- ***Disaster risk management fund*** (particularly recommended for resource-rich countries): Annual contributions can be equal to historic estimated cost of disasters.
- ***Self-insure by conducting counter-cyclical policies*:** generate public savings in good times to cover potential increases in expenditure necessitated by future natural disasters.
- ***Smarter (not necessarily more, or higher) taxes earmarked for disaster risk financing*** Reform tax system towards more carefully-designed environmental taxes targeted at the right base (on emission or fuel use rather than electricity consumption for example).
- ***Debt reduction*** through fiscal/structural reforms as well as growth-promoting policies and improved debt management.
- ***Improve fiscal discipline*** through fiscal rules, fiscal responsibility laws, fiscal "watch dogs" such as fiscal councils to enhance credibility and sustainability.
- ***Improve country systems to better access international climate finance.***
- ***Better use of capital spending*** to improve building practices and increase preventive measures to lessen a country's exposure to natural hazards.

Implications for Fiscal Policy: Required Changes for Disaster Risk Financing

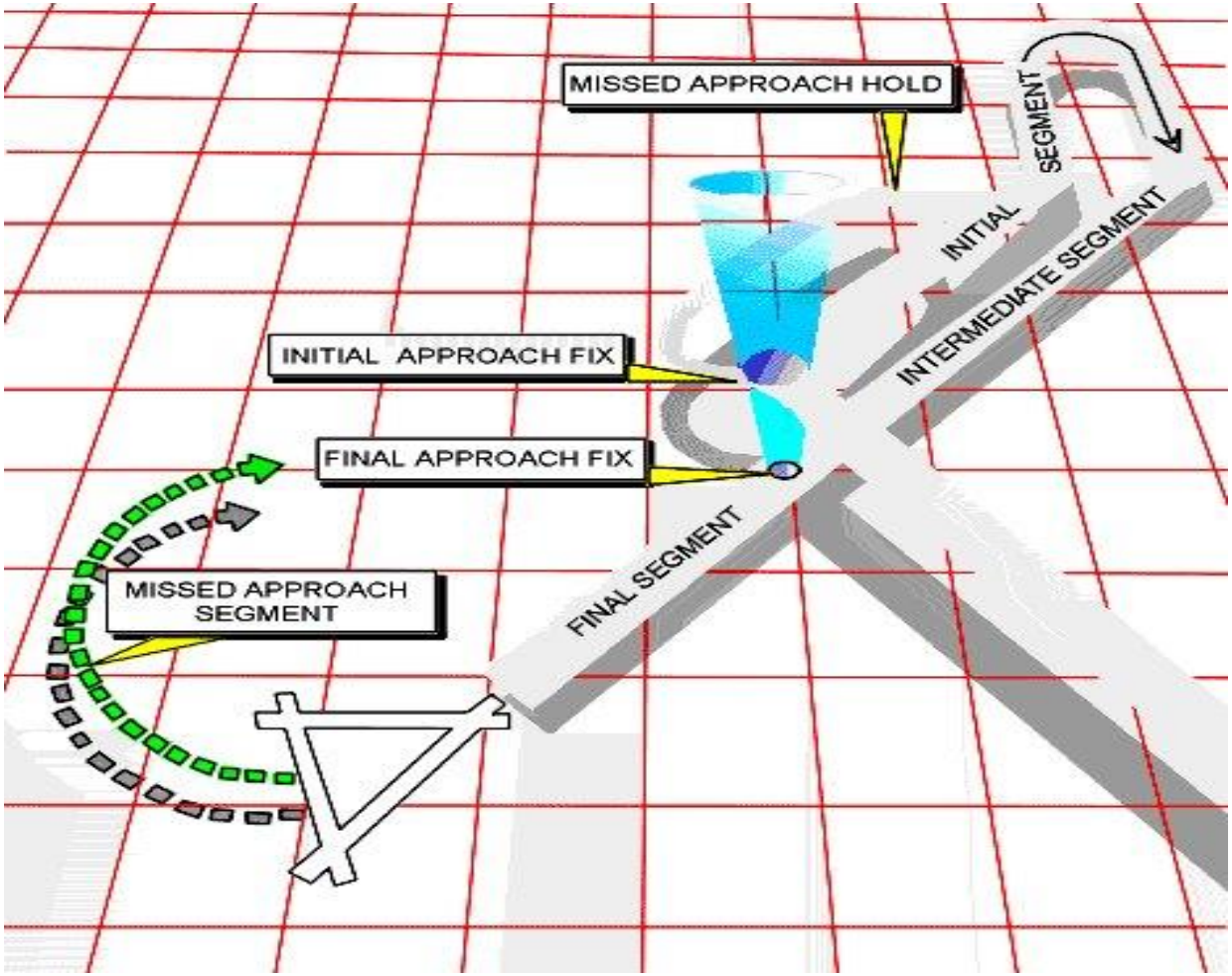
- At present, all Caribbean governments prepare inadequately for the risk of natural disasters given the inherent vulnerability of the Region and the history of disasters.

- Private insurers may be used to externalise risks that involve property, as is the case with natural disasters.

- Multilateral insurance schemes can play a major role in this respect. Governments need to ensure that their use of CCRIF is up to the maximum level possible given the risks they face, even while CCRIF continues to explore ways of expanding and extending its coverage.

- Catastrophe bonds also provide a means of mitigating natural disaster risk. The mandate of CCRIF could be expanded to broker the issuance of such securities.

After a disaster economies are flying through turbulence, could ex ante options assist with economic/soften landing?



Thank You.

Discussion