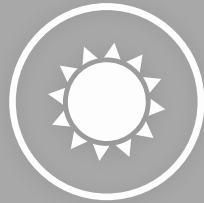




Disaster Risk



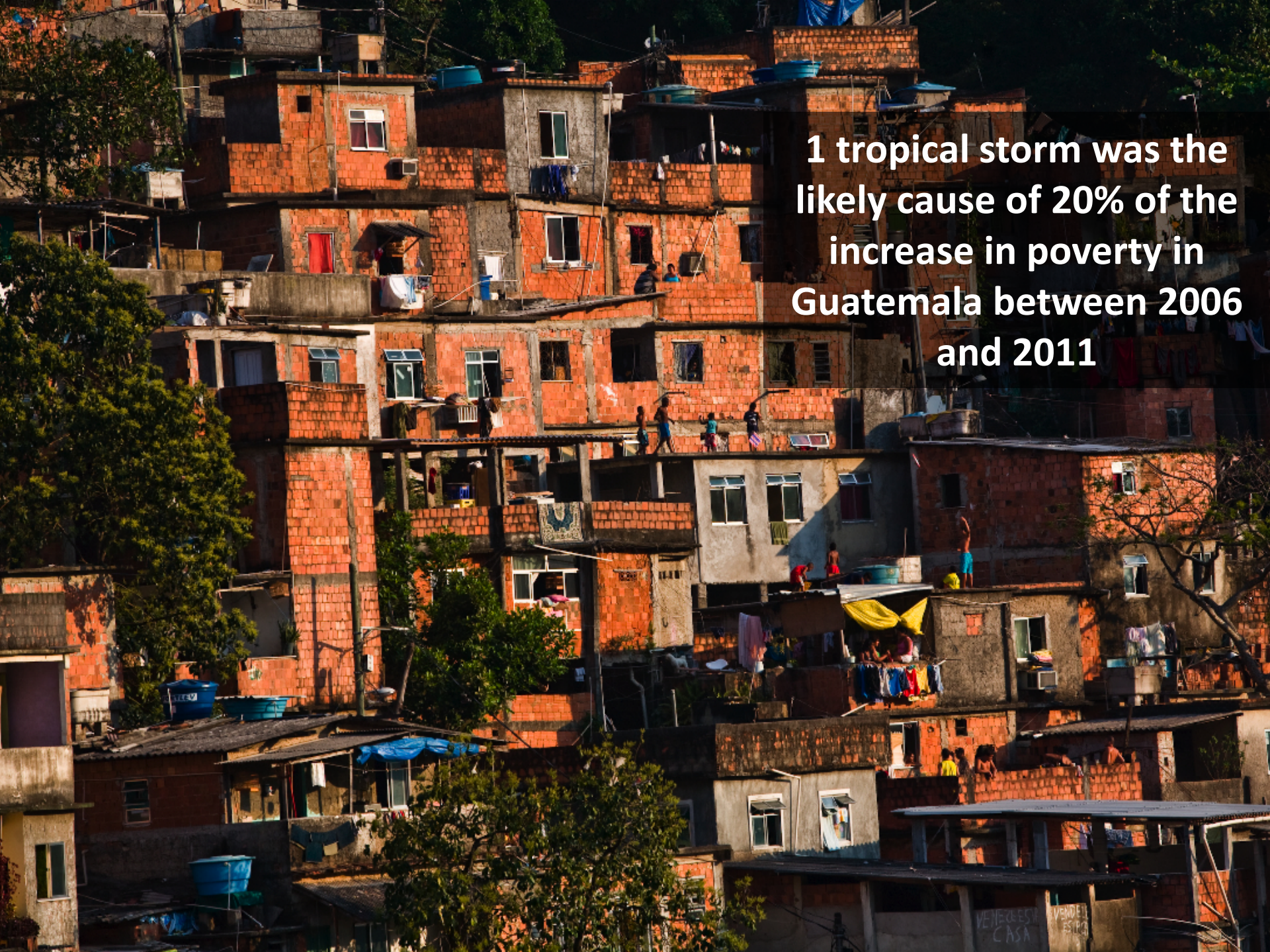
Management

Niels Holm-Nielsen

Lead Specialist
Disaster Risk Management

1

Who
Cares?



1 tropical storm was the likely cause of 20% of the increase in poverty in Guatemala between 2006 and 2011

Global Credit Portal

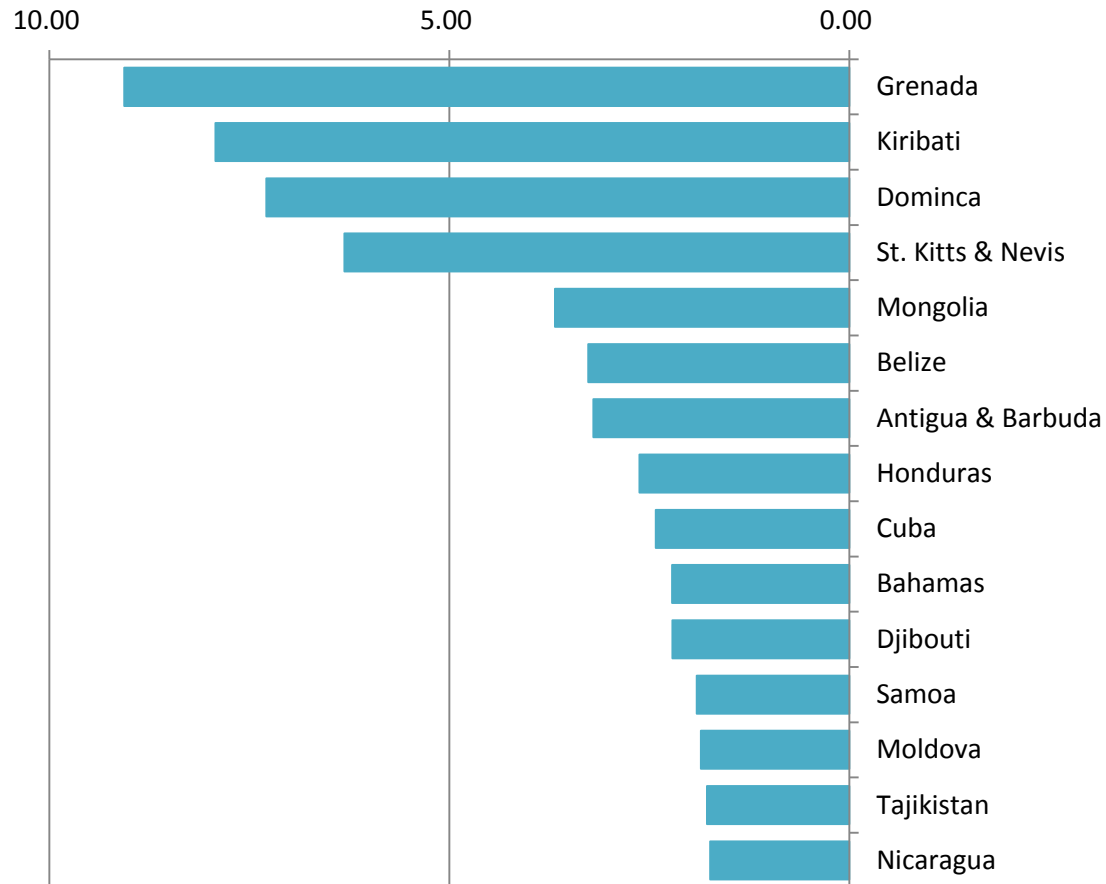
RatingsDirect®

June 14, 2010

Assessing The Impact Of Natural
Disasters On Sovereign Credit
Ratings

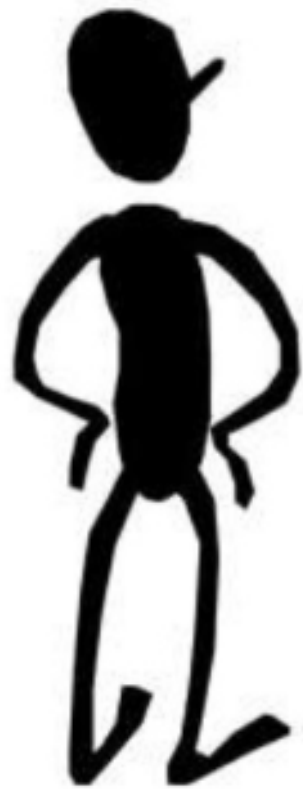
Average losses due to extreme weather events for Selected countries from 1993-2012

Average Annual Losses per GDP (%)
top 15 countries

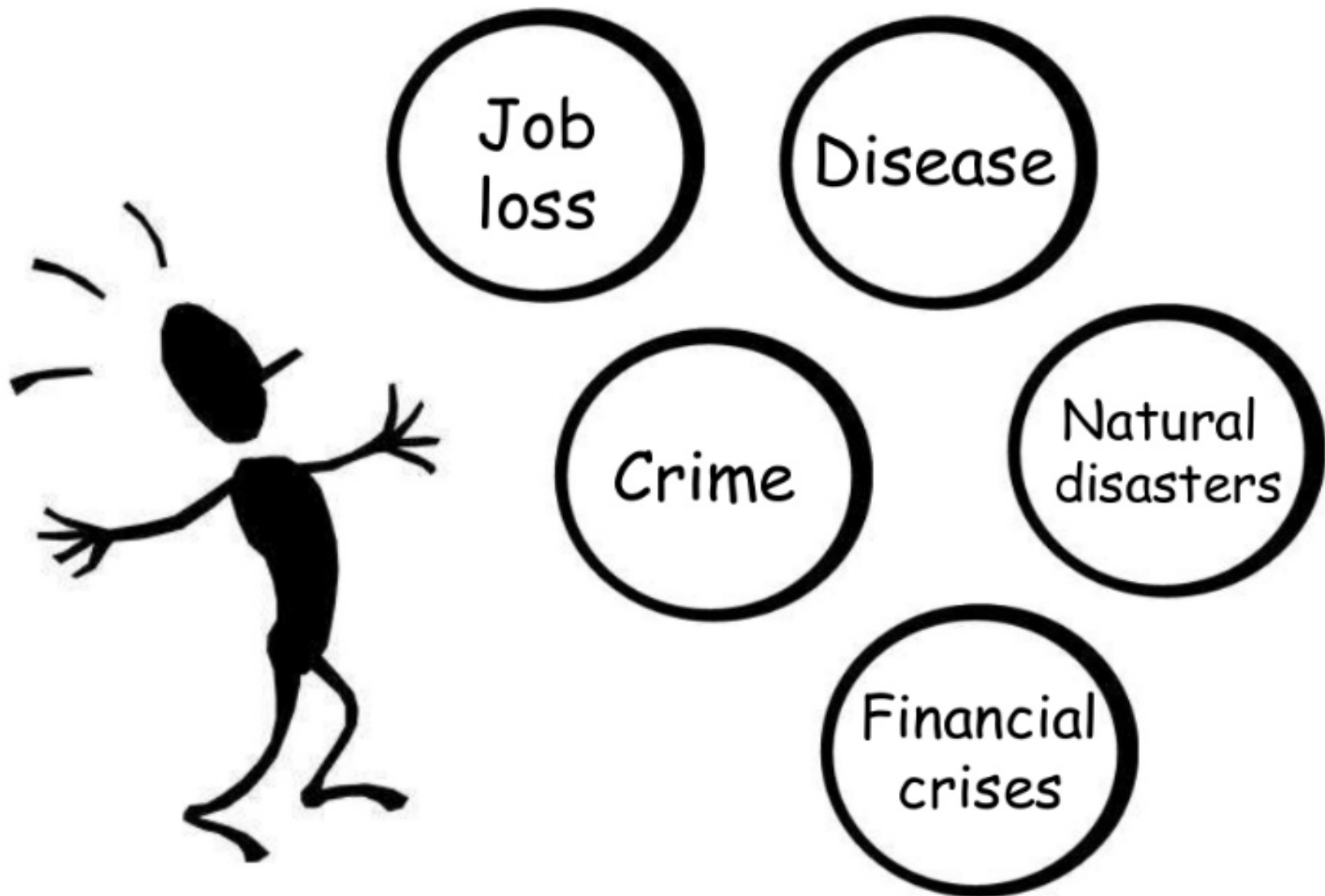


- Showing the top 15 countries in global rank.
- Sorted by Losses per GDP (%)

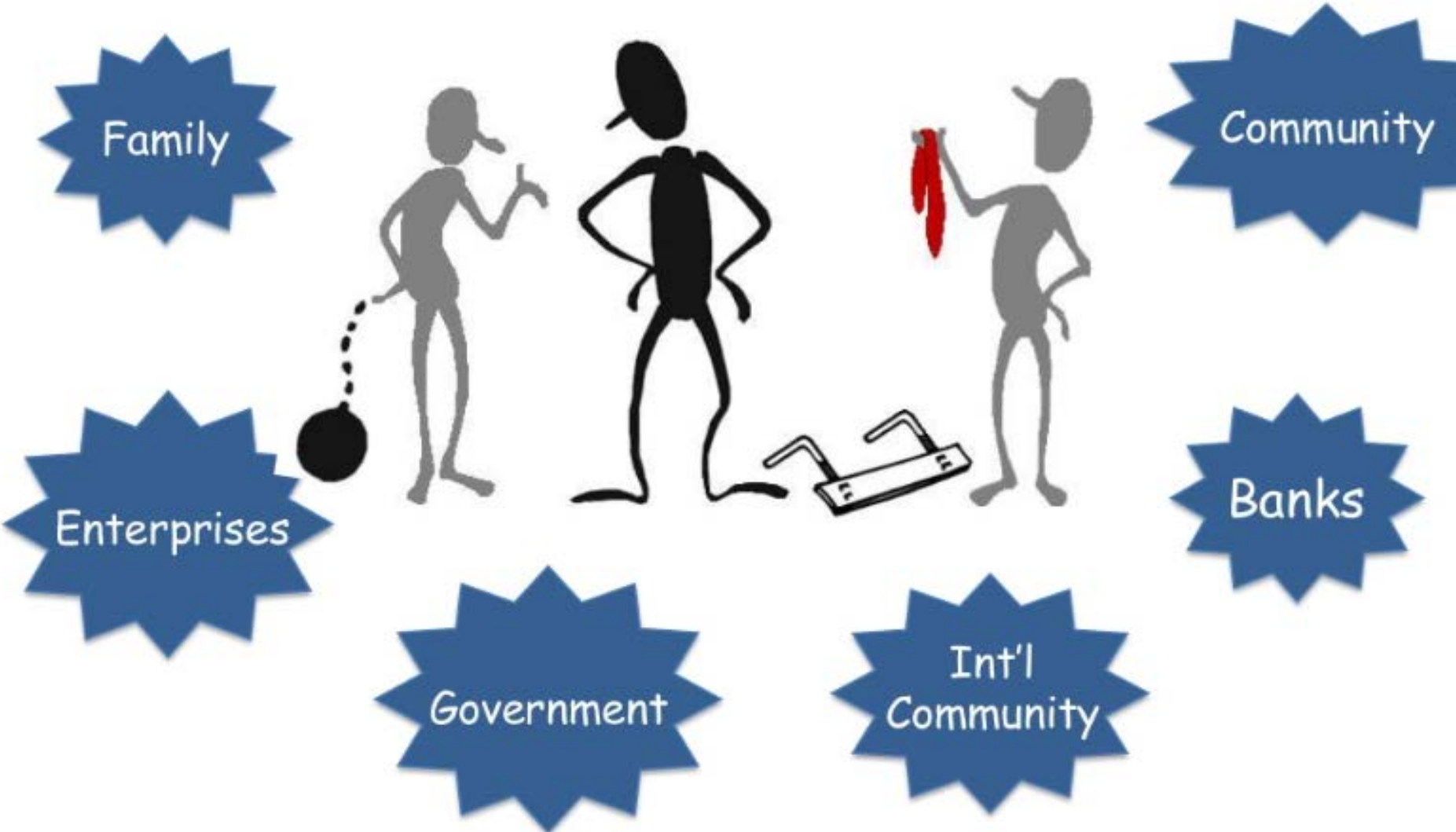
... people must confront risk



..not one risk, but many...



Sharing risk with others can overcome these obstacles...

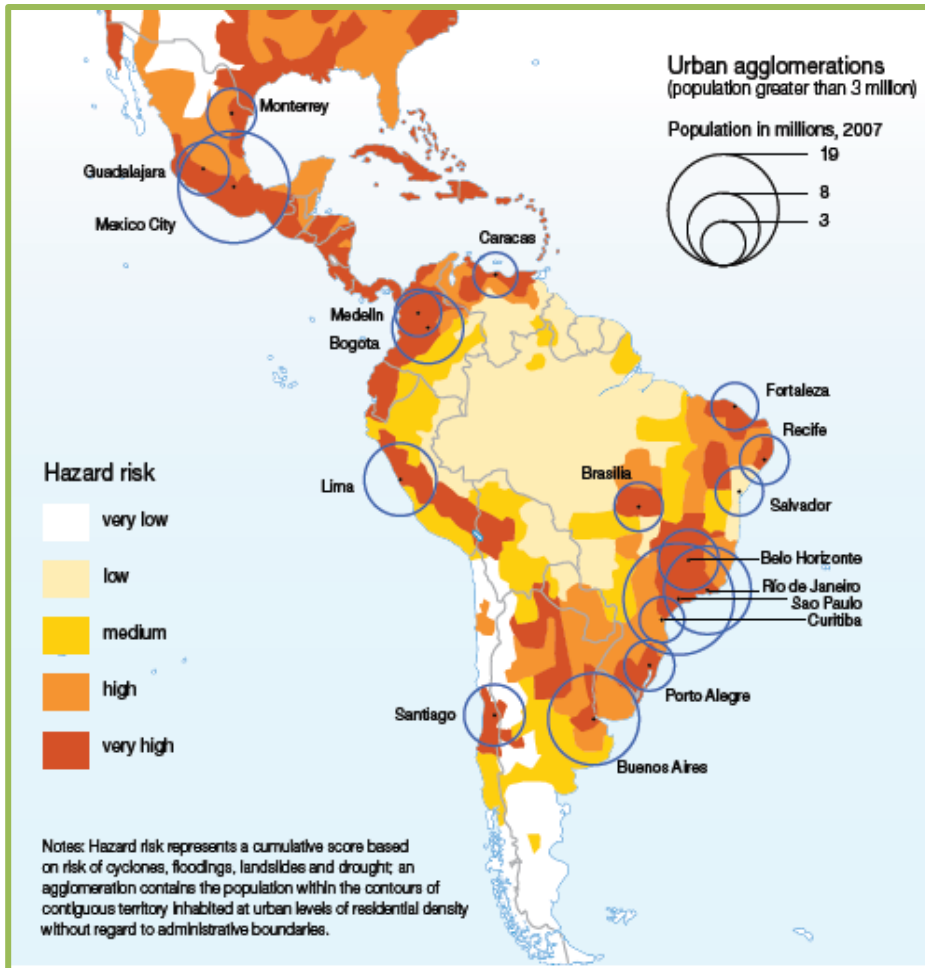


2

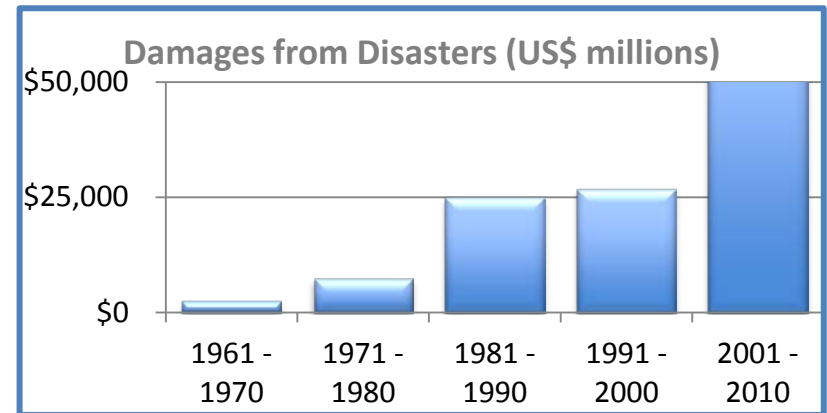
Disaster risk
today

Risks & Disaster Events

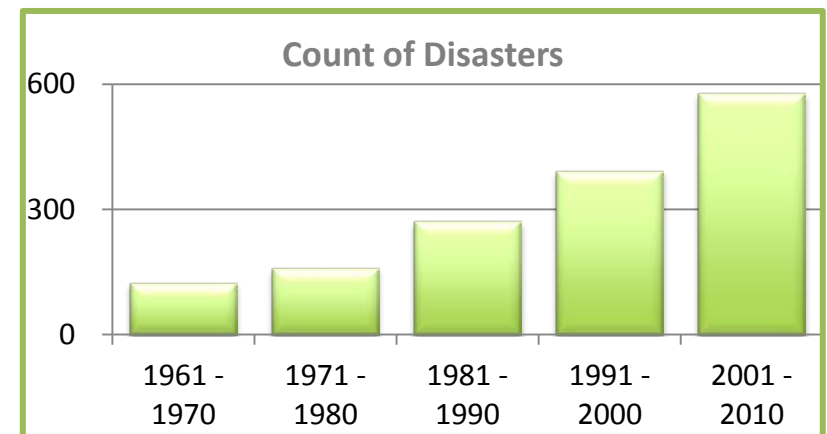
Urban Agglomerations Concentrate Risks



Disaster events in LAC are increasing, as are disaster losses



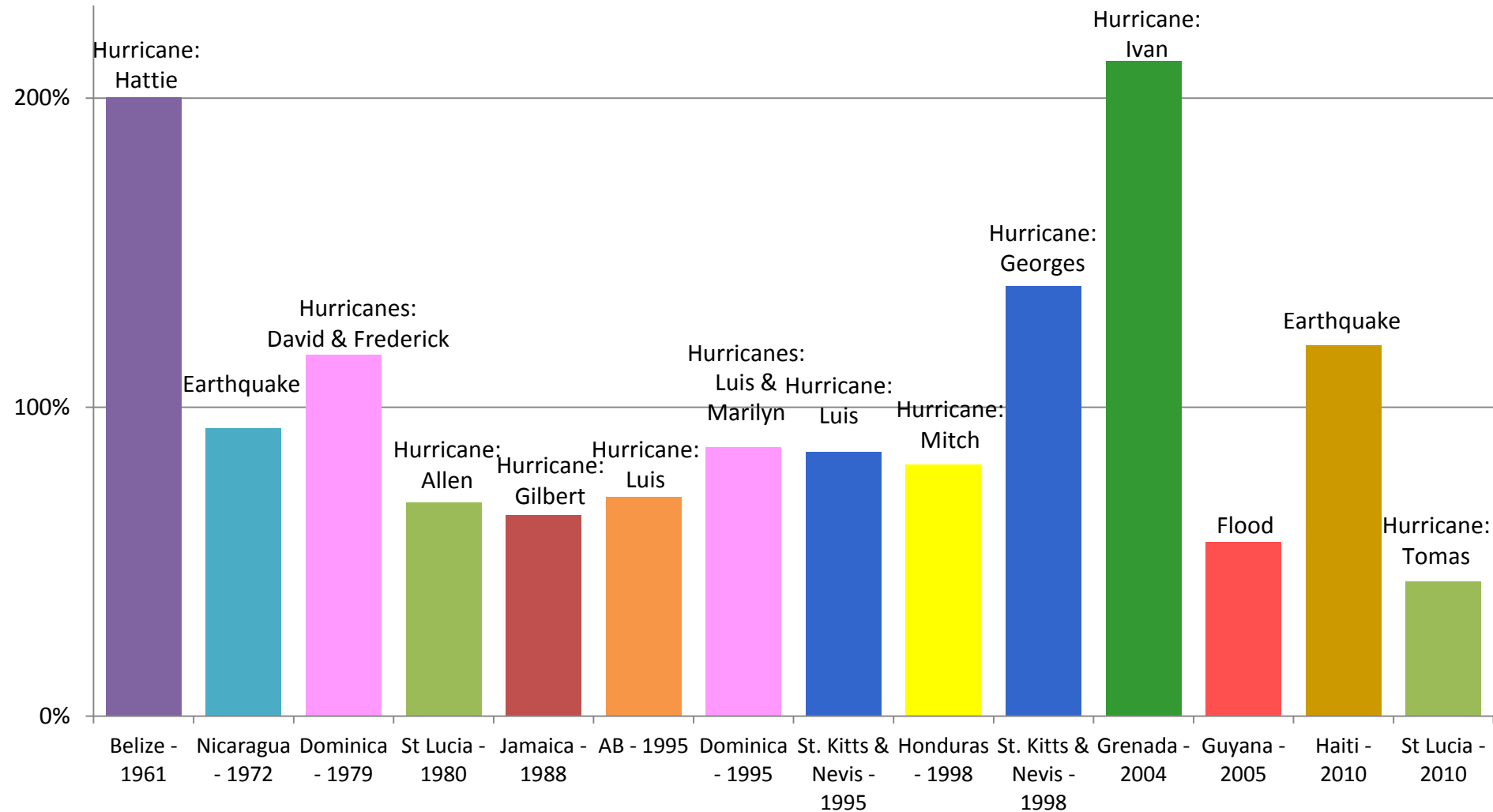
Source: EM-DAT. Truncated for the 2010 losses.



Source: EM-DAT

Damages and Losses from disasters are fiscal shocks, which often result in budgetary deficits & increased debt

Select Economic value of Damages and Losses from Disasters as a % of GDP



3

How we work

Managing disaster risk

Disaster Risk Management

in the

World Bank Group

Total World Bank commitments for FY2014

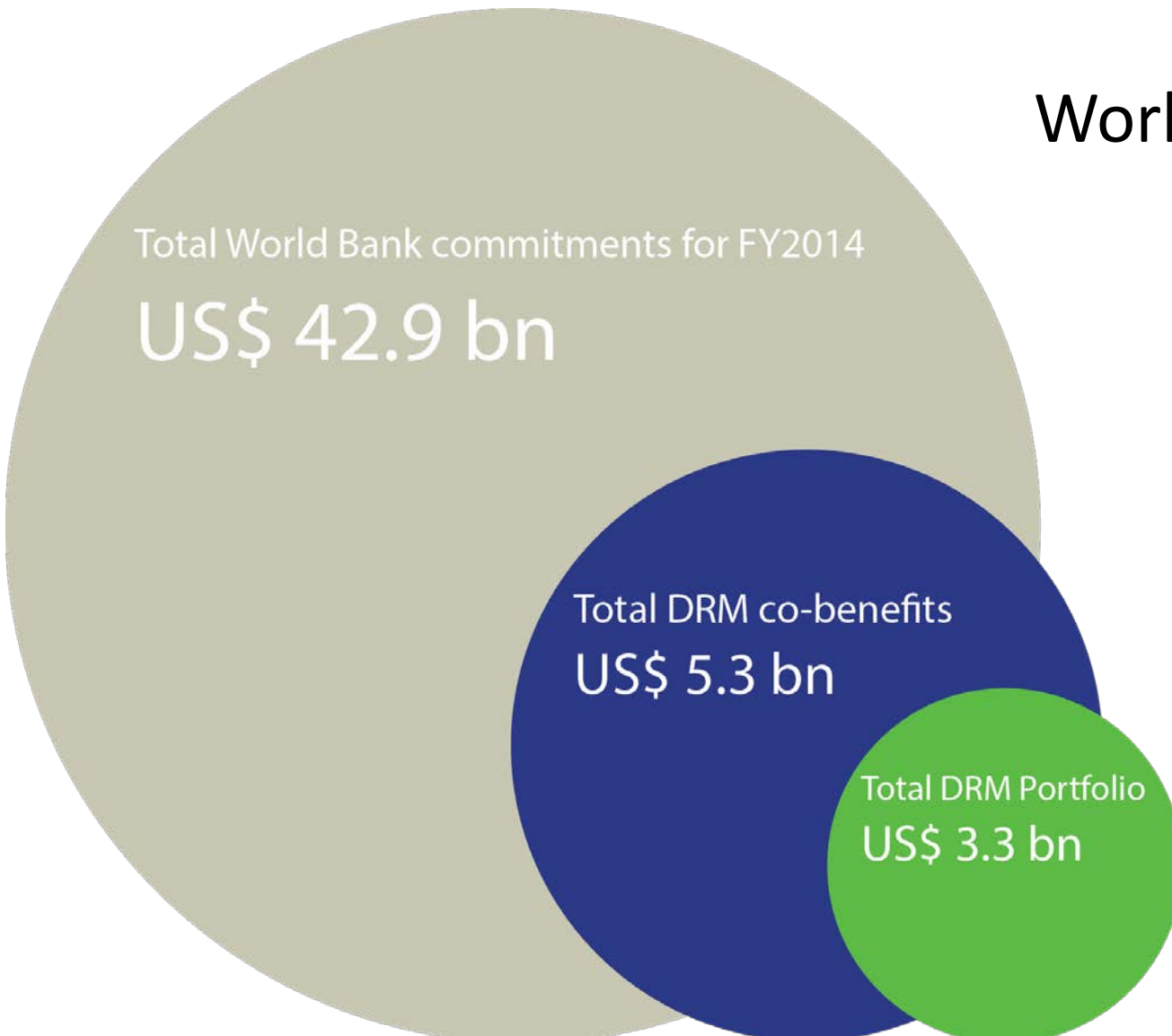
US\$ 42.9 bn

Total DRM co-benefits

US\$ 5.3 bn

Total DRM Portfolio

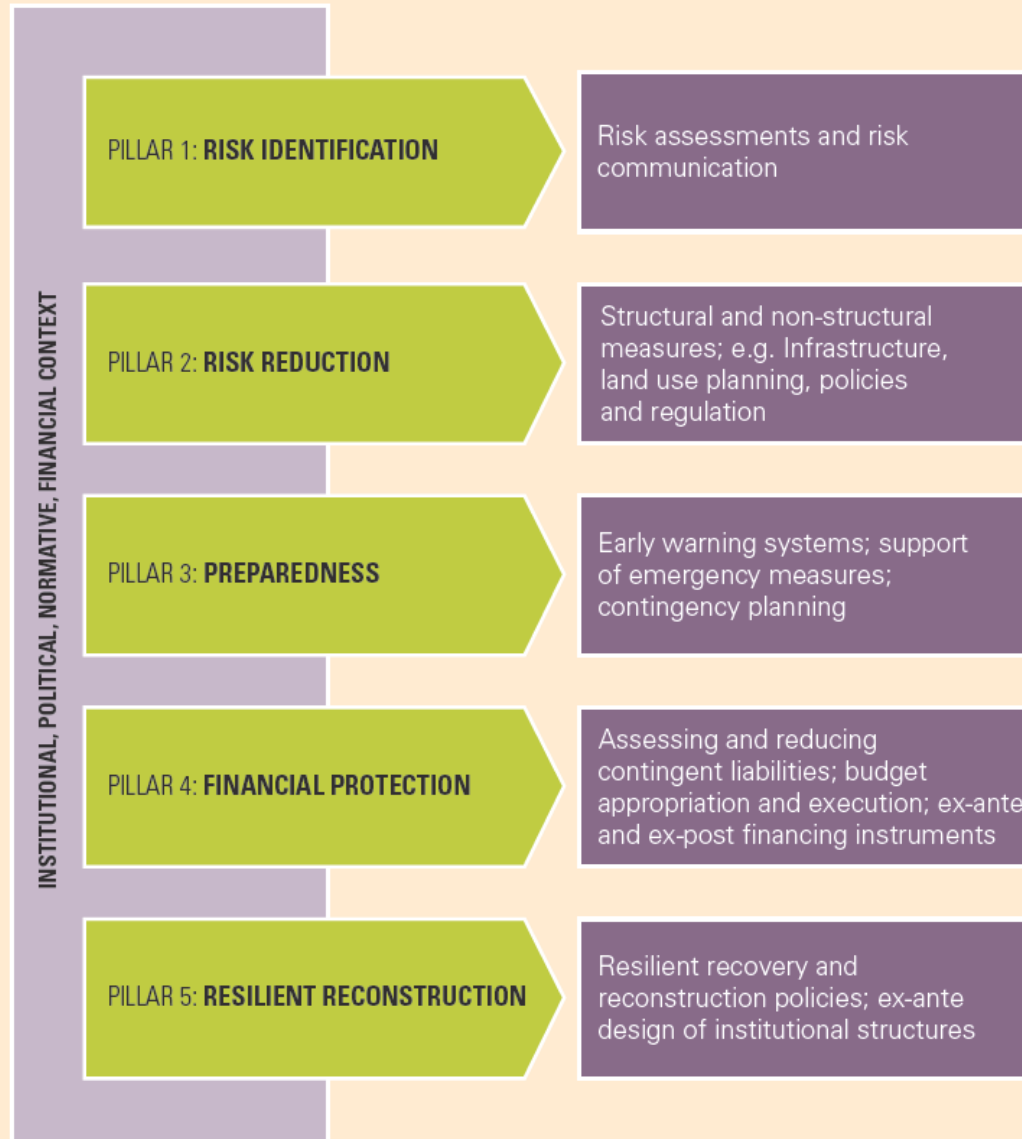
US\$ 3.3 bn



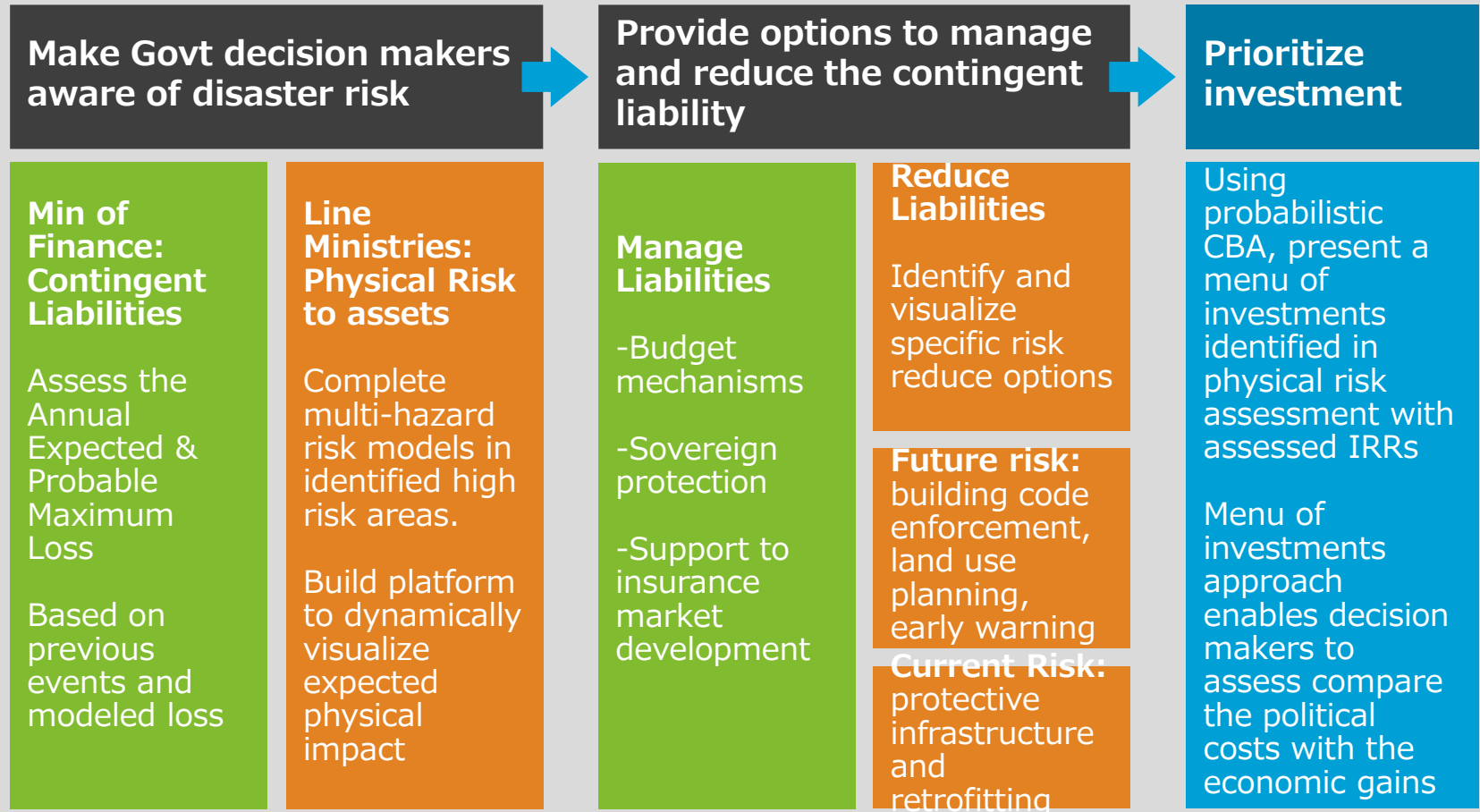


Addressing disaster risk

Bank DRM programs are organized around 5 pillars



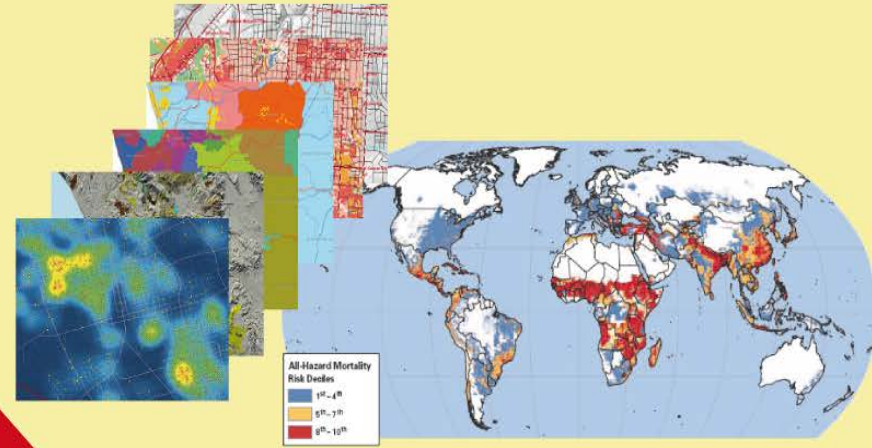
Our clients: Ministries of Finance and line Ministries



How we work:
Preparedness in action



Hazard Data and Forecasts



Risk Information



**Coordination
and
Collaborations**



**Communication and
Dissemination Mechanisms**



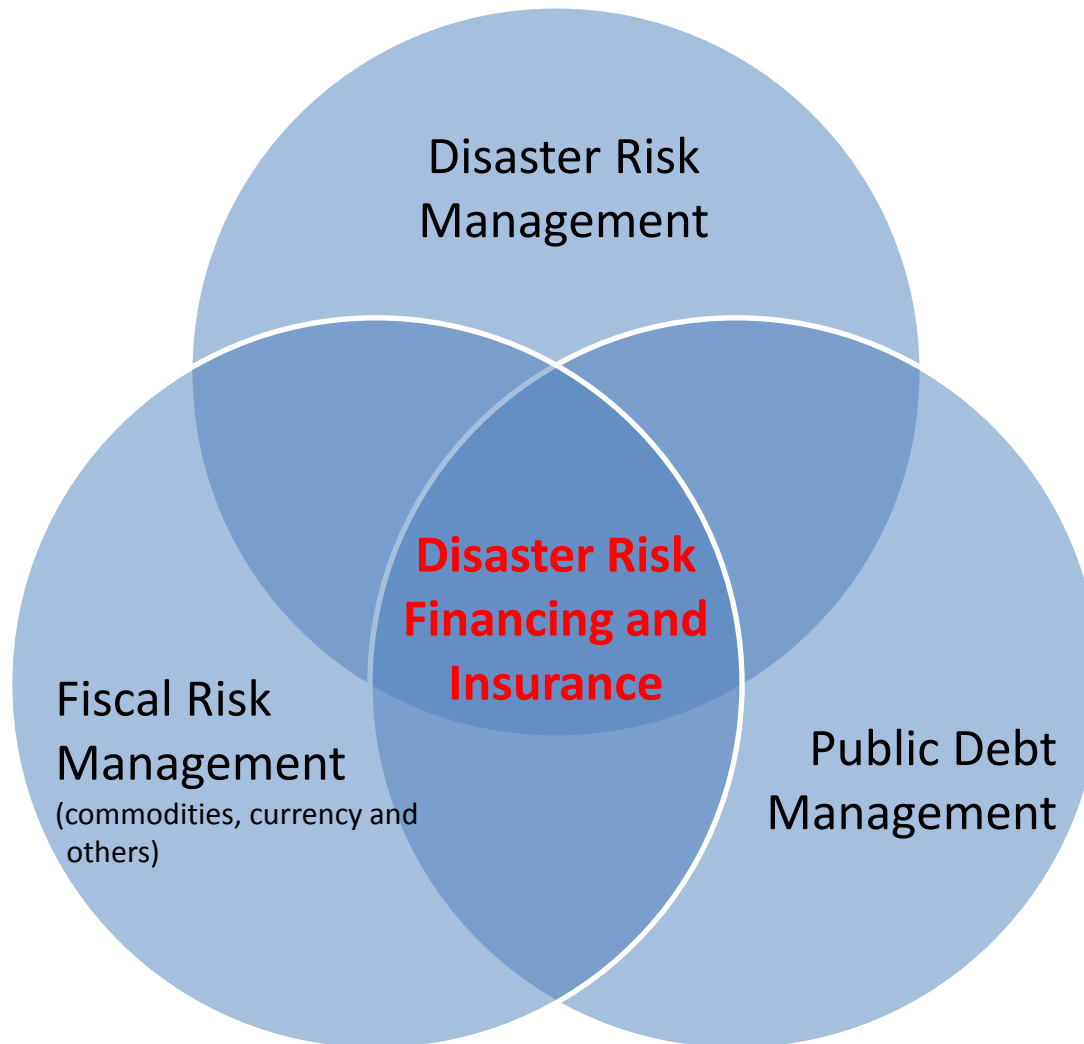
**Preparedness and
Early Response**



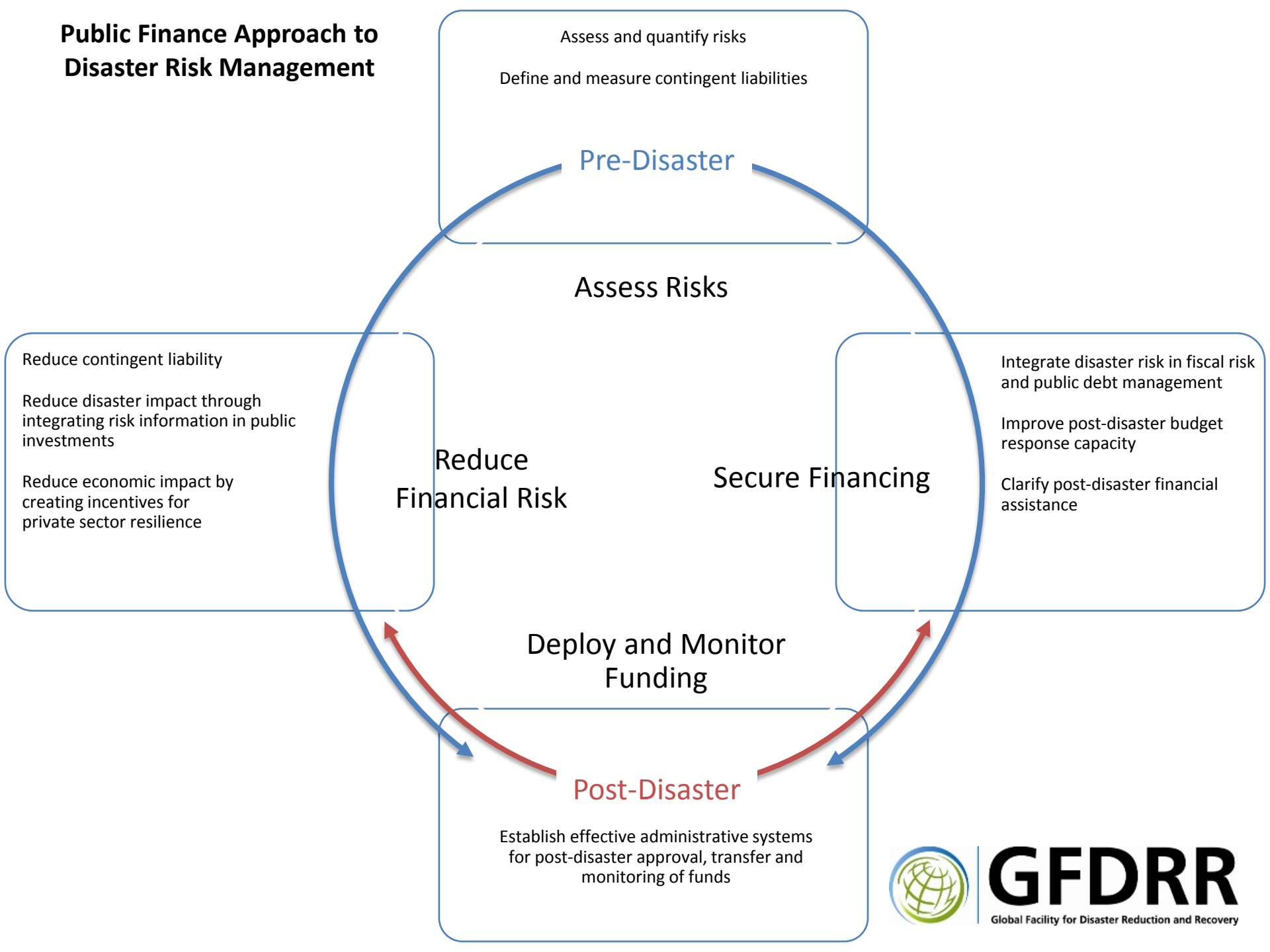
How we work: Financial Protection in Action



Including disaster risk within an integrated fiscal risk management framework



Public Finance Approach to Disaster Risk Management



Risk Profile

	Antigua and Barbuda	Grenada	Jamaica	Source
Risk Profile				
Earthquake				
AAL, Earthquake (US\$ millions)	\$21	\$5	\$26	GAR 2013
AAL/Total Exposed Produced Capital, Earthquake (%)	8.7	3.7	0.9	GAR 2013
PML ₂₅₀ , Earthquake (US\$ millions)	\$376	\$170	\$1,216	GAR 2013
PML ₂₅₀ /GDP, Earthquake (%)	31.1	22.0	8.5	GAR 2013
Cyclones				
AAL, Cyclones (US\$ millions)	\$12	\$1	\$59	GAR 2013
AAL/Total Exposed Produced Capital, Cyclones (%)	4.9	1.2	2.0	GAR 2013
PML ₂₅₀ , Cyclones (US\$ millions)	\$446	\$81	\$2,255	GAR 2013
PML ₂₅₀ /GDP, Cyclones (%)	36.8	10.4	15.8	GAR 2013
Earthquake + Cyclones				
AAL, Eq+Cy (US\$ millions)	\$33	\$6	\$85	GAR 2013
AAL/Total Exposed Produced Capital, Eq+Cy (%)	13.6	4.9	2.9	GAR 2013
PML ₂₅₀ , Eq+Cy (US\$ millions)	\$822	\$251	\$3,471	GAR 2013
PML ₂₅₀ /GDP, Eq+Cy (%)	67.9	32.4	24.3	GAR 2013
Risk Financing Mechanisms				
Participation in CCRIF	Yes	Yes	Yes	CCRIF Annual Report 2011-2012
Payouts from CCRIF	No	No	No	CCRIF Annual Report 2011-2013
Property Insurance Penetration (%)	3.08	1.26	1.03	AXCO Global Statistics, 2013

SCHEMATIC OF A POTENTIAL CENTRAL AMERICA-CCRIF PARTNERSHIP

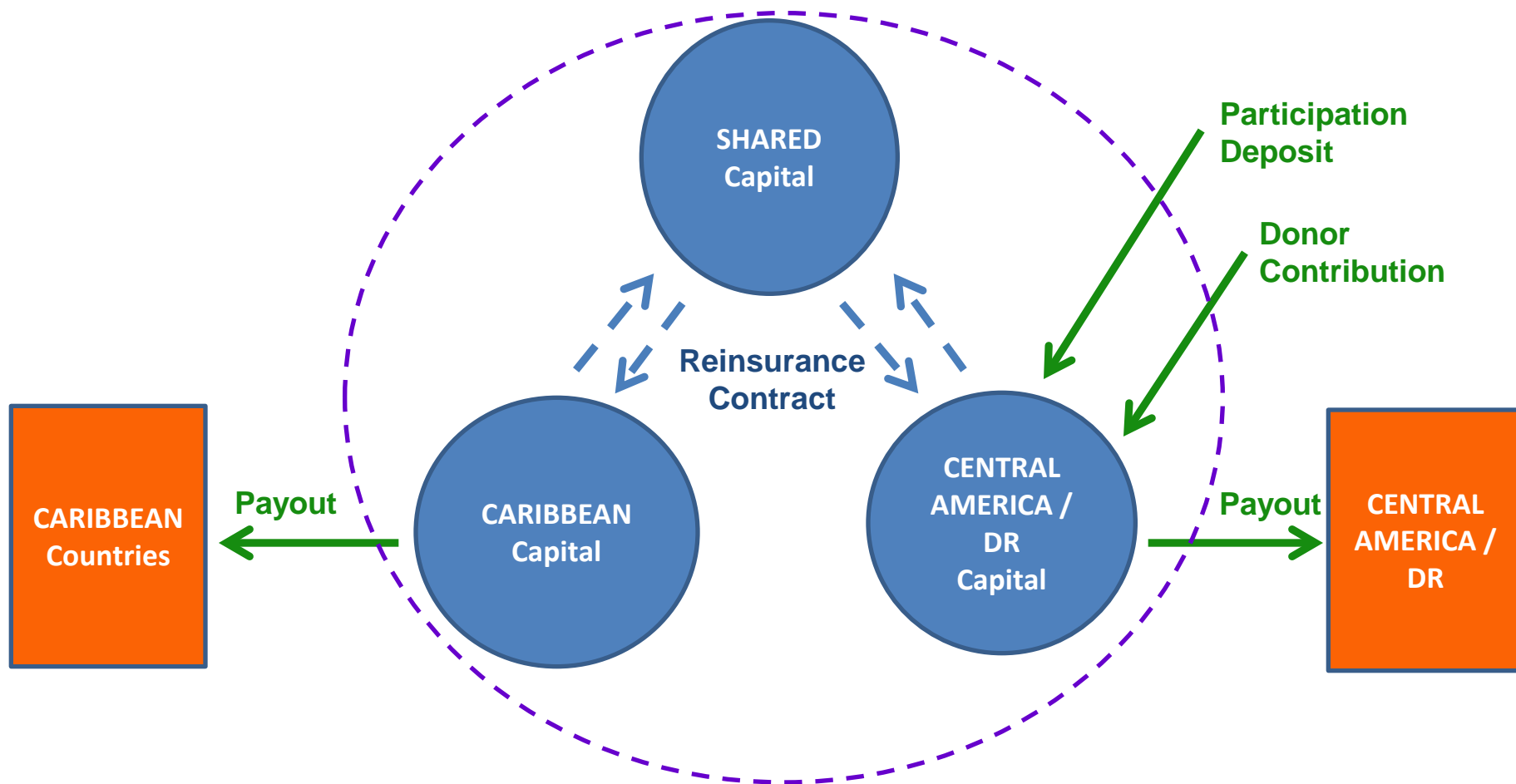
REINSURANCE
MARKET

Payout



Reinsurance
Contract

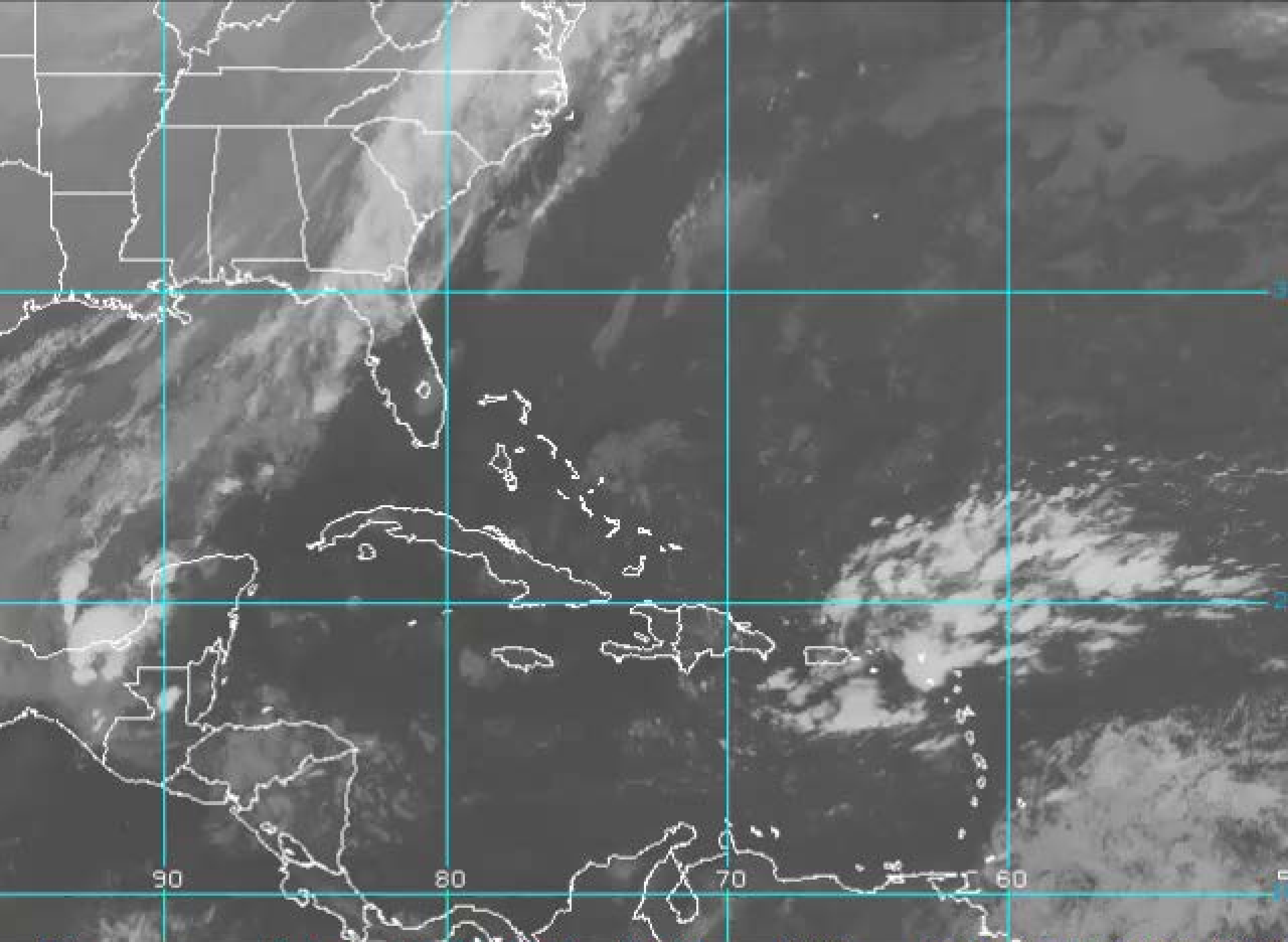
Caribbean Catastrophe Risk Insurance Facility (CCRIF)





How we work:
Resilient Reconstruction
in Action





IR

8 km

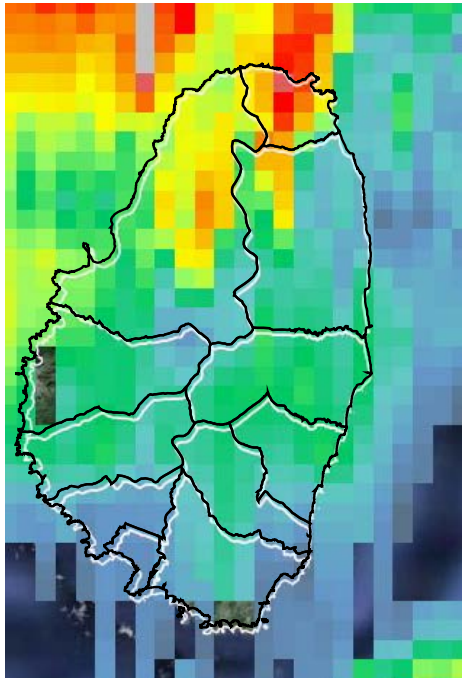
12 24 2013

0015Z

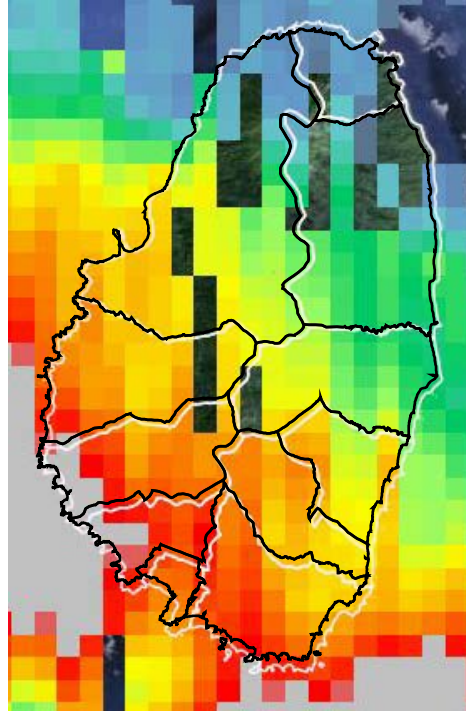
NOAA

[HTTP://WWW.GOV.NOAA.GOV](http://www.gov.noaa.gov)

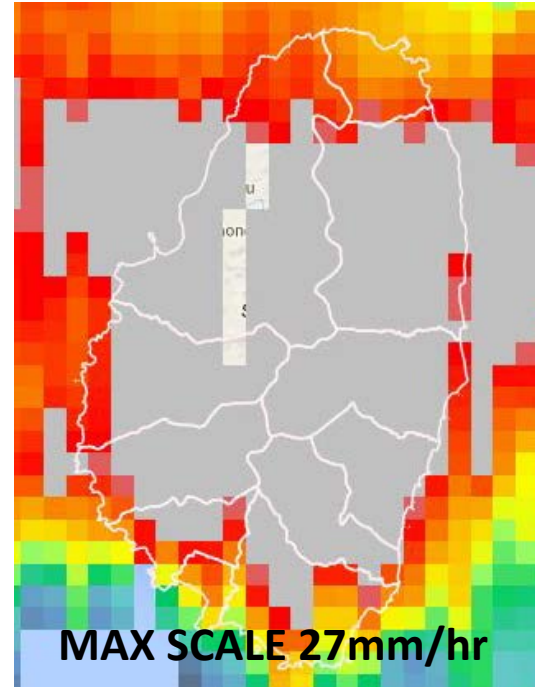
Barbados Doppler Radar



**Dec 24, 2013
7:55 PM
1.7 mm/hr
Rabacca Station**



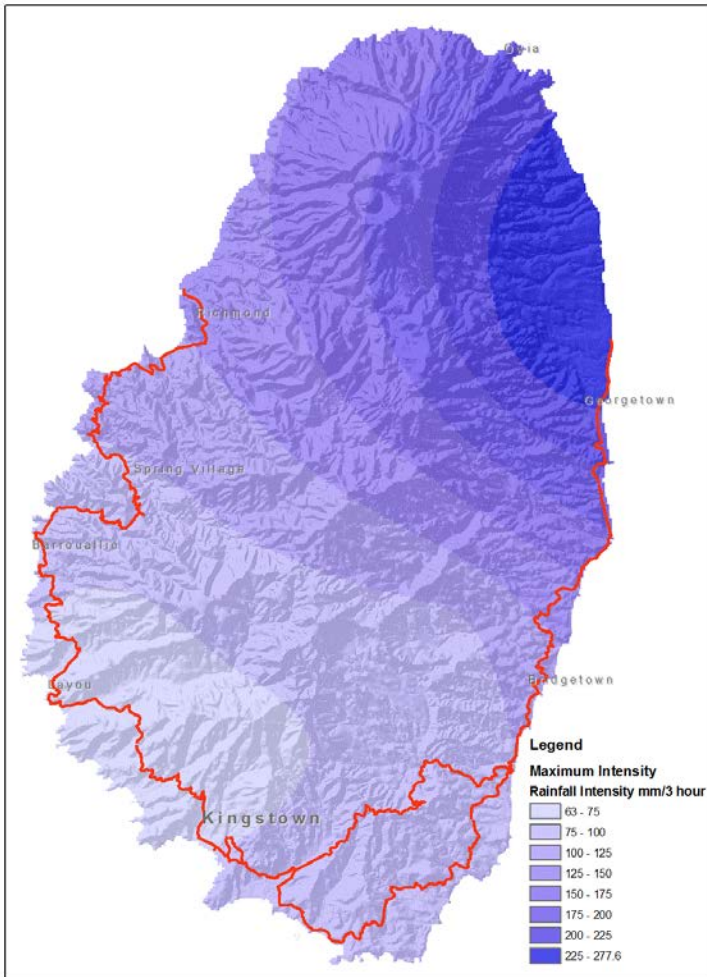
**Dec 24, 2013
8:50 PM
18.8mm/hr
Rabacca Station**



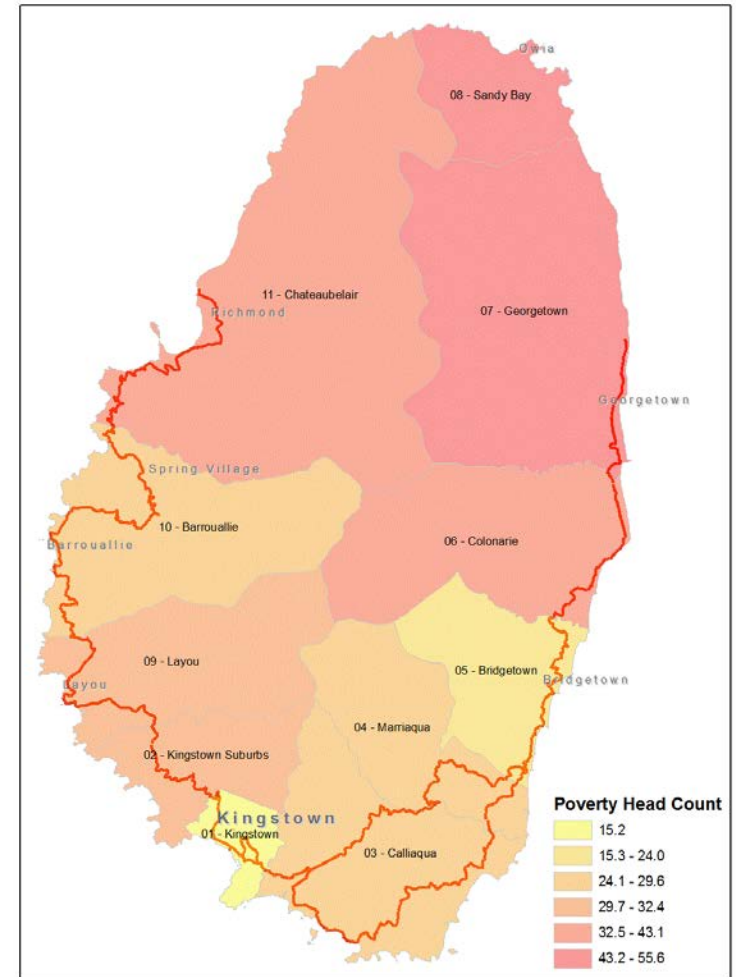
**Dec 24, 2013
9:00 – 10:00 PM
119.3mm/hr
Rabacca Station**

Poorest areas got the most rainfall

Maximum Rainfall Intensity in 3 Hours, Dec 24



Poverty Head Count, 2008

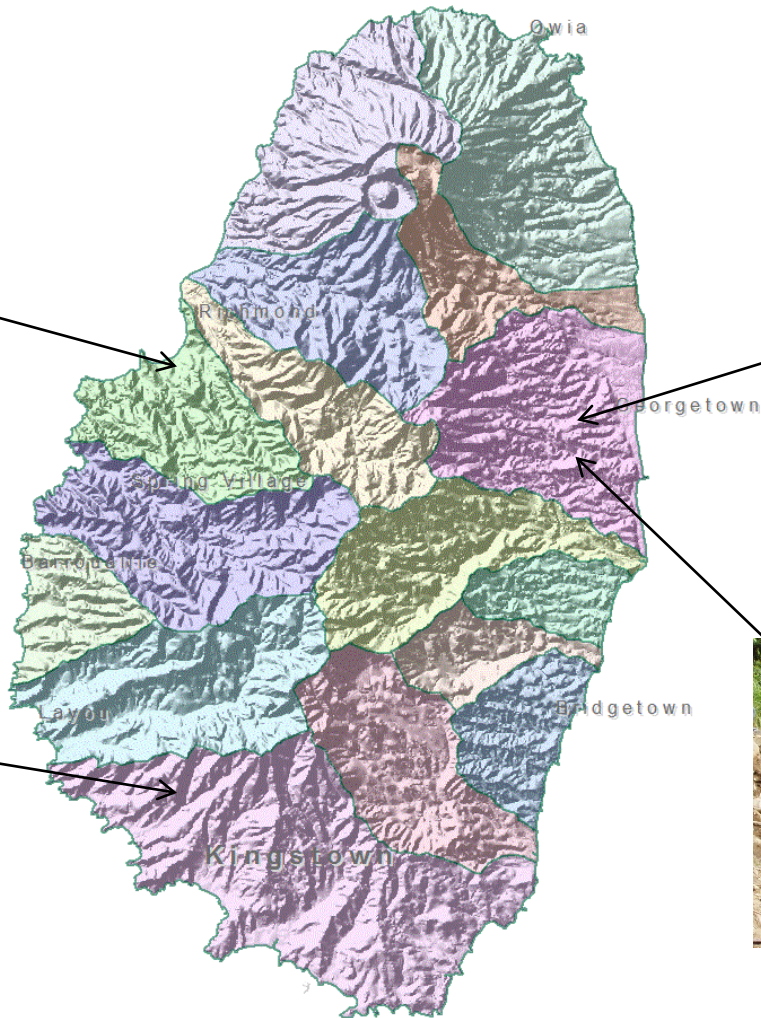


Average poverty head count in affected areas - 44%

Impact



Chateaubelair



Georgetown



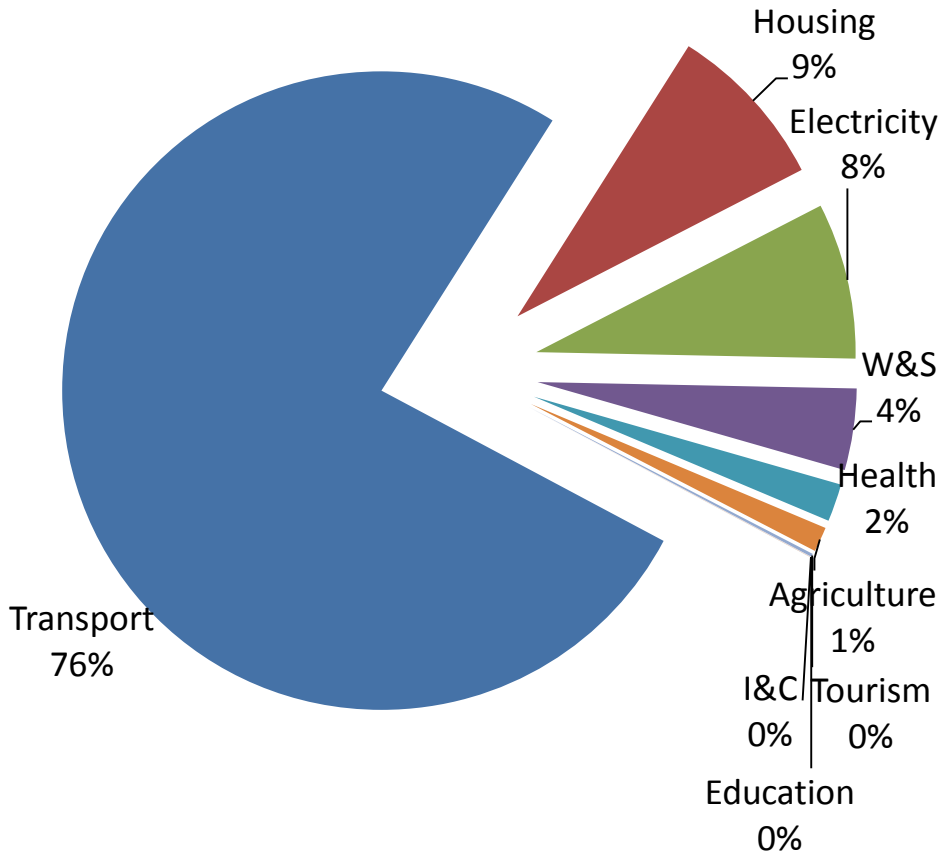
Buccament



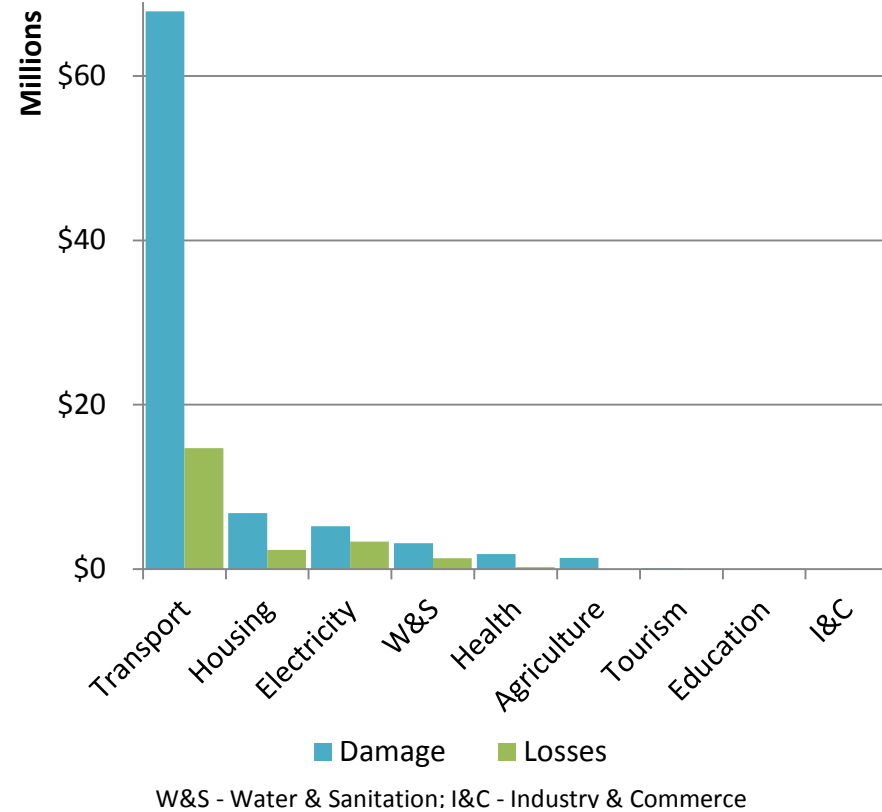
Congo Valley

Damage and Losses: By Sector

Damage and Losses by Sector



Damage and Losses by Sector (US\$ millions)



Approximately 93% of the damage and losses experienced in the infrastructure sector