

Knowledge Exchange Series on Building Sovereign Financial Resilience in Middle Income Countries

Fiscal and Financial Resilience for Subnational Governments

June 15, 2021



**Disaster Risk Financing
& Insurance Program**



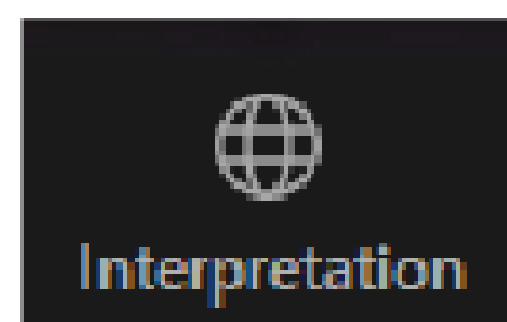
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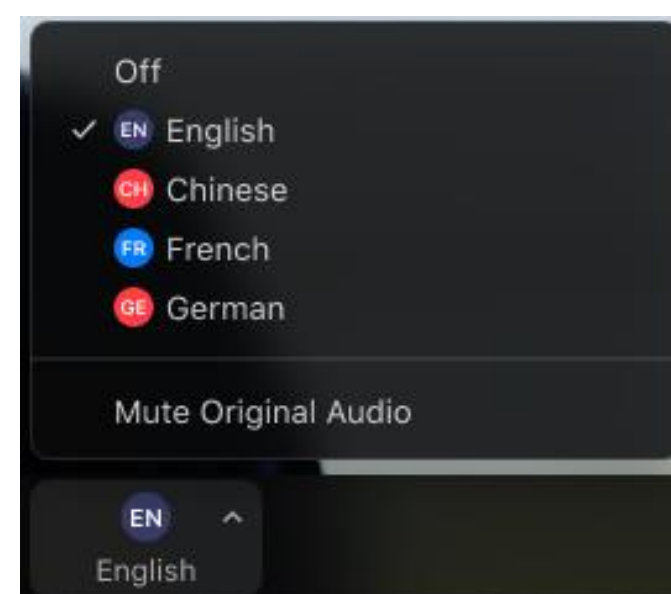
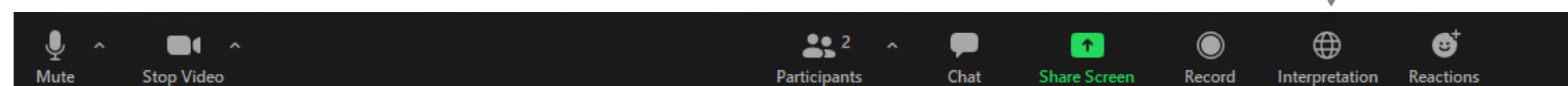
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Simultaneous Interpretations

How to listen to Albanian, English, French, Spanish or Vietnamese channel:



Step 1. In your meeting /webinar controls, click Interpretation



Step 2. Click the language that you would like to hear.

Additional Step - (Optional) To hear the interpreted language only, click **Mute Original Audio**.






Opening Remarks

Olivier Mahul

Practice Manager, Crisis and Disaster Risk Finance, Finance,
Competitiveness and Innovation (FCI) Global Practice, World
Bank Group



Overview

Middle-income countries face fiscal challenges in effectively responding to disasters, with many governments primarily relying on (short term) international support to fund disaster response.

Since 2012, Switzerland's State Secretariat for Economic Affairs (SECO) and the World Bank's Disaster Risk Financing and Insurance Program (DRFIP) have developed a joint program to support middle-income countries (MICs) in building their financial resilience against natural disasters. The Sovereign Disaster Risk Financing and Insurance Program for Middle-Income Countries (the Program) is one component of a broader WB-SECO partnership on fiscal risk management for MICs.

This webinar series, as part of the Program, aims to: assist governments with developing and implementing more effective and cost-efficient financial protection strategies to better manage government disaster related contingent liabilities; and bring countries together to share knowledge, experiences and good practices on disaster risk financing.

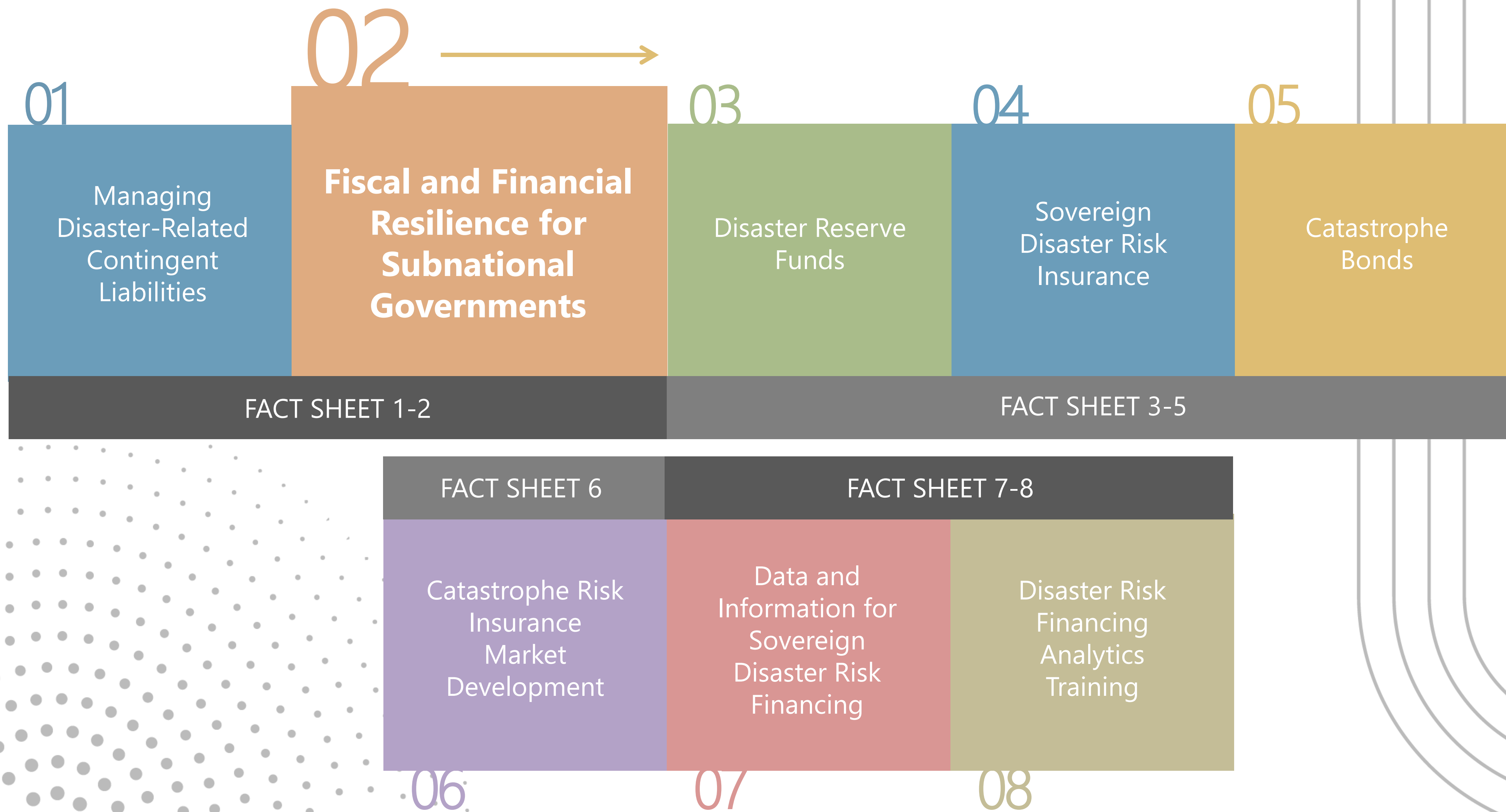




Webinar Series

- 1-2** **Policies and frameworks for managing disaster related contingent liabilities**
Webinar 1: Managing disaster related contingent liabilities
Webinar 2: Fiscal & financial resilience for subnational governments
- 3-5** **Instruments for financial management of disasters**
Webinar 3: Disaster reserve funds
Webinar 4: Sovereign disaster risk insurance
Webinar 5: Catastrophe bonds
- 6** **Market development for disaster risks**
Webinar 6: Catastrophe risk insurance markets development
- 7-8** **Data, information and analytics for sovereign risk financing**
Webinar 7: Data and information for sovereign DRF
Webinar 8: DRF analytics training

Webinar Road Map



Structure of Webinars



Total of 8 Fact Sheets & 8 webinars



Different guest speakers



Live audience polls: Please participate



Q&A: Please share your questions via chat box (If possible, please indicate which speaker(s) to address your question(s))



Simultaneous interpretation:
Albanian, English, French, Spanish or
Vietnamese. Please be patient with
interpreters when lag time occurs!



Certificate of Participation

Certificate of Participation

Participants will have an opportunity to obtain certificate(s) on successful completion of following criteria:



Certificate of Participation:
Participants need to attend 4 out of 8 webinars and complete a short survey



Certificate of Completion:
Participants need to attend 7 out of 8 webinars and complete a short survey

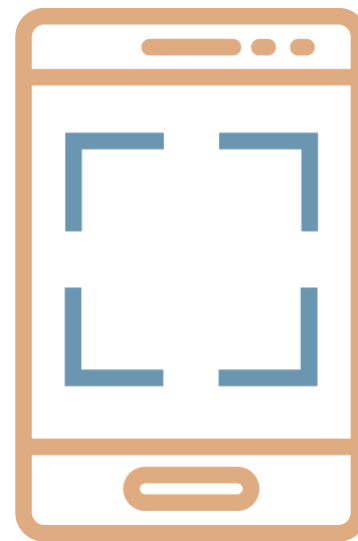


Word Cloud: Where are you currently based?



Option 01

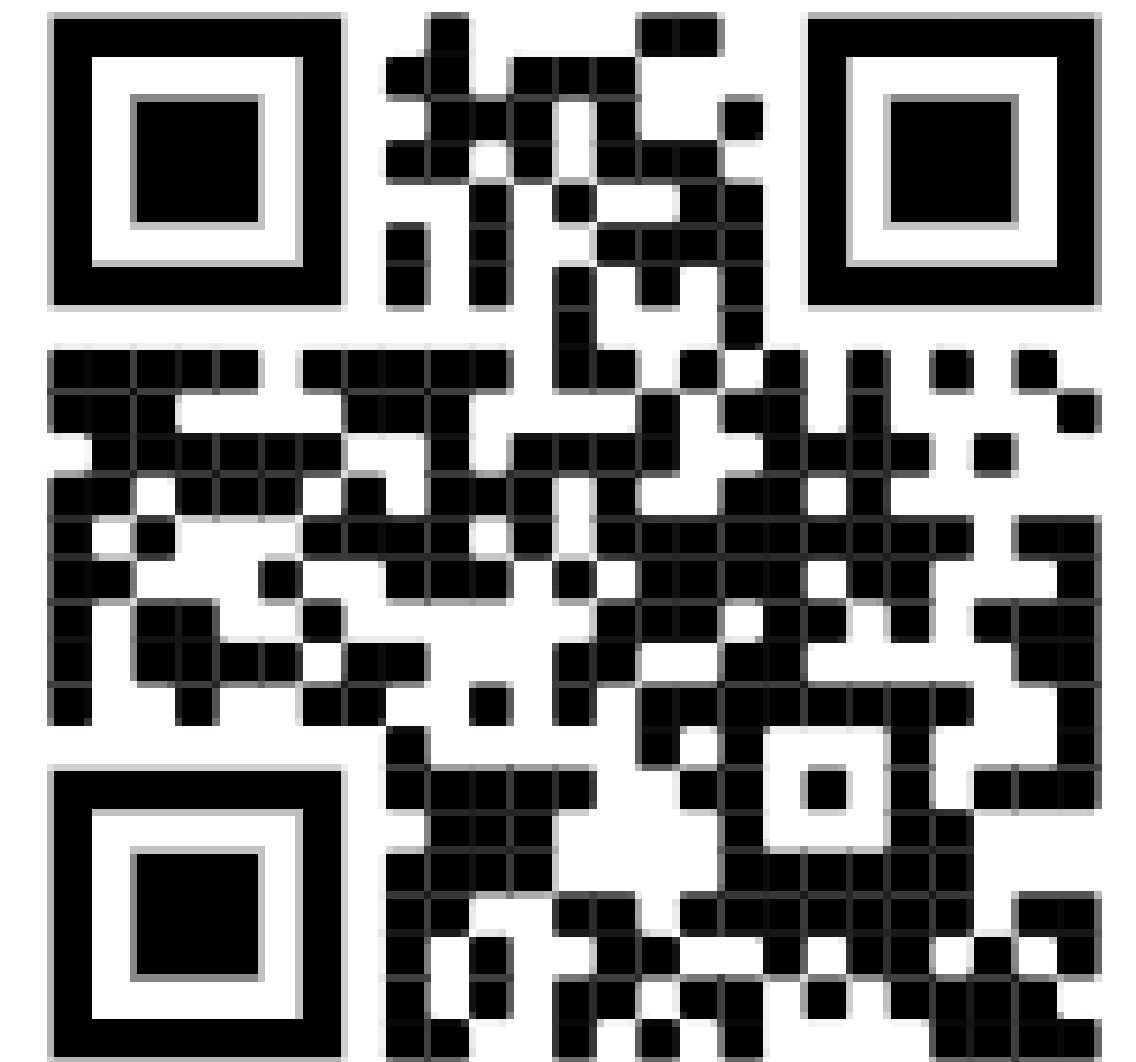
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Option 02

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Use Code: **7242 3568**



Poll 1: Recap

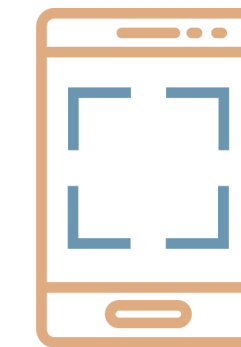
What was the last Webinar about?

- Basic framework of managing disaster related contingent liabilities
- Case study on national financial protection strategies, lessons learned, and future roadmaps of different countries
- I did not attend the previous webinar – this is my first time
- I don't remember



Option 01 –

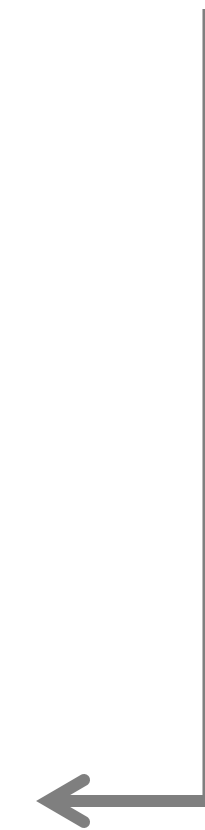
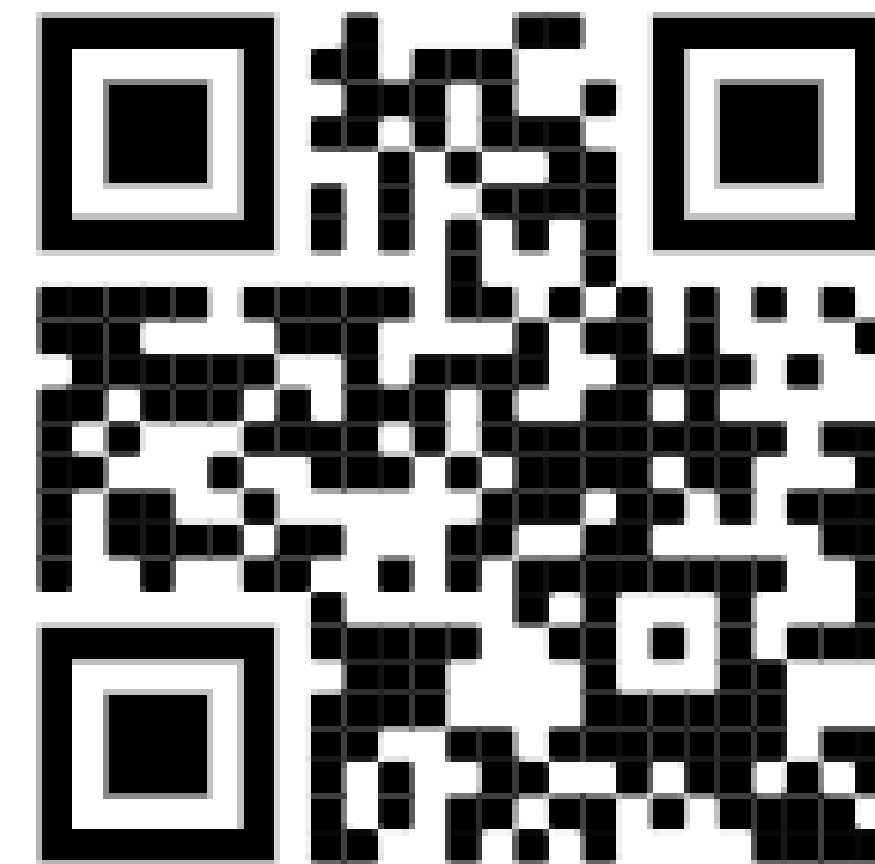
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Option 02 –

Scan the **QR Code**

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Managing fiscal/financial impacts of disasters on subnational governments – Why is it important?

Challenges

Subnational governments:

- Bear a large share of disaster costs as part of their (contingent) liabilities because they
 - act as first responders following disasters;
 - maintain assets and infrastructures and continuity of essential public services;
 - support recovery of local livelihoods, businesses and economy,
- **BUT** they often have limited funds at their discretion for disaster response and recovery, or for procurement of risk transfer instruments due to
 - limited revenue/tax raising capabilities and dependence on national governments;
 - regulatory constraints that hinder them from accessing risk transfer instruments

Impacts from subnational governments' financial constraints:

- Economic and social (direct and indirect) costs of disasters may be exacerbated;
- National governments bear most of the costs of disasters as part of their contingent liabilities



Who owns the risk? Who pays for the risk?

Risk ownership matters

Who?

Who is the ultimate owner of the risk?

Risk ownership provides a clear delineation of accountability for disaster response and recovery between subnational vs national governments.

How?

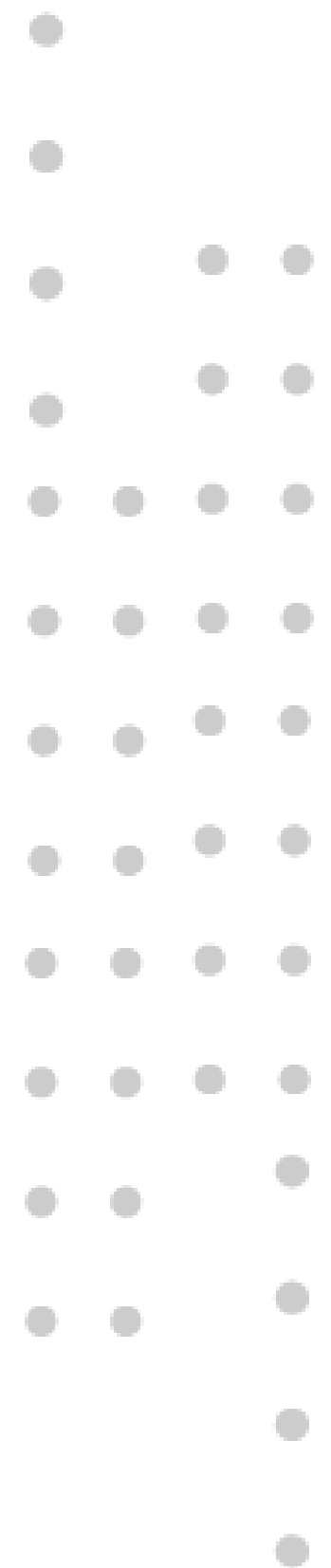
How is the risk managed?

Risk owner decides how the risk will be managed appropriately.

What?

What is the financial capacity of the risk owner?

Subnational capacity for risk financing: own budgetary resources, national government post-disaster financial assistance, and risk transfer mechanisms.



Post-disaster funding arrangements (1)

Clearly defined post-disaster funding arrangements

Main principles:

- Funding subnational disaster costs should be part of a nationally coordinated and integrated national fiscal risk management and disaster risk management framework
- Post-disaster cost-sharing mechanisms across governmental levels should be clearly defined and applied to ensure certainty and transparency
- National and subnational funding should involve a mix of pre- and post-disaster funding approaches including incentivising pre-disaster initiatives by subnational governments including risk-transfer products and communities to reduce/mitigate anticipated disaster events.

Benefits:

- Reduce the contingent liabilities that national governments could otherwise have to bear for subnational governments
- Remove uncertainty about risk ownership
- Improve transparency in managing disaster related liabilities and funding
- Provide incentives or limit disincentives to manage risks and build back better
- Assist both subnational and national governments in pro-actively investing in fiscal, physical and social resilience



Post-disaster funding arrangements (2)

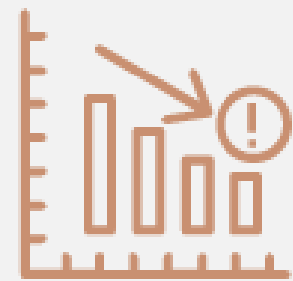
Nationally coordinated and integrated policies across levels of government

Colombia

Integrated approach for managing disaster risks including through Law 1523 and national disaster risk financing management strategy



1. Improve risk identification and monitoring and increase awareness of risk,



2. Increase prevention and mitigation measures for risk reduction,



3. Strengthen the national system for disaster management and prevention,



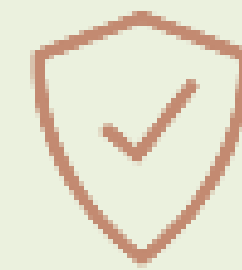
4. Reduce the fiscal vulnerability of the state to natural disasters.

Subnational risk financing complements national fiscal management with regulatory requirements including

- mandatory insurance for public buildings including at subnational level
- subsidiarity where national authorities only support the subnational authorities when they do not have the resources to manage the risk

Indonesia

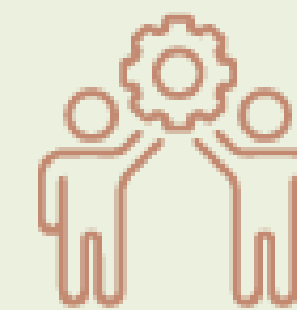
Coordination approach for risk financing framework under the 2018 national disaster risk finance and insurance strategy with key priorities, amongst others:



1. Protecting the state and subnational assets



2. Protecting households and people



3. Restoring livelihoods of communities



4. Strengthening the roles of subnational governments in risk financing

Pooling fund for disasters (PFB) with a potential dedicated program for pooling subnational risks

Post-disaster funding arrangements (3)

National funding should be more than just a bank

Post disaster national financial assistance from national to subnational governments could include incentivizing pre-disaster risk reduction and financial preparedness initiatives by subnational governments (including risk transfer products) and communities to reduce/mitigate anticipated disaster events.



Colombia: Post-disaster funding involves:



Combination of several financial instruments including public assets insurance including at subnational levels



Improving information and data gathering to inform the quality of insurance



Colombia's national disaster risk management authority is assisting many local governments in strengthening their disaster risk management capacity, which has led to over 600 municipalities adopting disaster risk management plans



Support for the preparation of disaster risk financing strategies at national level



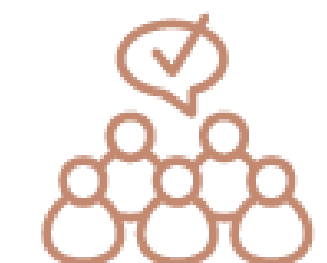
Australia: The 2018 DRFA also established principles against which the funding arrangements would be assessed



States are best placed to identify the type and level of assistance to make available following a natural disaster, in accordance with their responsibility for disaster and emergency management.



National assistance is intended to support certain relief and recovery measures delivered by the states in relation to eligible disasters, which complement other state-based strategies, such as insurance and natural disaster mitigation planning and implementation.



Recovery is a shared responsibility of individuals, communities, and governments

Clearly defined cost-sharing mechanisms

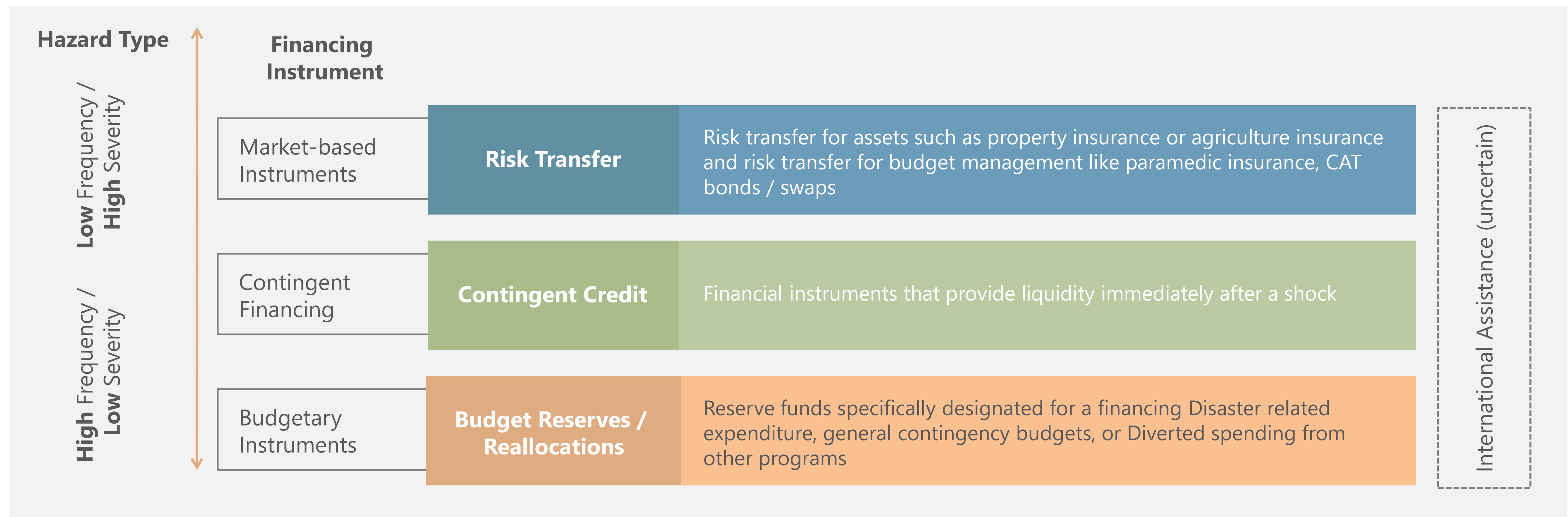
Select examples

Economy	Description cost sharing arrangements
Australia	Central government compensates up to 75 % of eligible costs on relief and recovery incurred by SNGs (exact amount depends on the total costs and the capacity of individual states to fund relief and recovery); eligible costs are clearly defined and are wide ranging from emergency assistance for populations to the restoration of public assets and assisting small businesses, etc.
Canada	Central government compensates between 50% and 90 % of eligible costs on relief and recovery incurred by SNGs (exact amount depends on the total costs and expenditure thresholds determined in line with each province/territory's population size); eligible costs are clearly defined and are wide ranging from disaster compensation for uninsurable primary residences to the restoration of public assets and assisting small businesses, etc.
Colombia	No cost-sharing agreement specified
Japan	SNGs need to finance emergency relief efforts by setting aside 0.5% of general-purpose local tax revenues as reserves (whereby the central government pays 50% of the costs if total spending is less than 2% of projected SNG tax revenue or 90% if costs are higher) Two thirds of expenditure for public infrastructure recovery covered by central government, one third by SNG's for their infrastructure In case SNGs issue bonds to cover expenditures for public asset recovery, 95% of the interest can be covered by the central government
Mexico	Central government provides up to 50% of the costs of rehabilitation and reconstruction of subnationally owned public infrastructure (reduces to 25% if co-financing is requested a second time and the infrastructure remains uninsured; further reduces to 0% for any subsequent request for uninsured assets) SNGs can request funding from central government for assistance they provide to affected populations, but no specificities are made
New Zealand	The central government pays 100% of SNG incurred costs stemming from caring for displaced or directly affected people The central government reimburses 60% of other response costs that reduce immediate danger to human life (e.g. draining floodwaters) Central government reimburses 60% of essential infrastructure recovery costs Other cost sharing mechanisms: advance payments for response costs; contributions made by joint Ministers through disaster relief funds set up by councils; special policy support under exceptional circumstances for repair and recovery
Peru	No cost-sharing agreement specified
Vietnam	No cost-sharing formula specified

Building Subnational Fiscal/Financial Resilience

Sub-National financial protection strategies against disasters

- Approach similar to national financial protection strategies could be adopted
- Requires alignment and coordination with national policies for risk financing
- Knowledge exchange among subnational governments, e.g. Medellin and Da Nang



Building Subnational Fiscal/Financial Resilience

Sub-National risk finance instruments

Queensland Government Insurance Fund (QGIF)



A captive insurance pool for Queensland's physical assets and liabilities against natural disasters for all state government, budget dependent agencies (except road infrastructure)

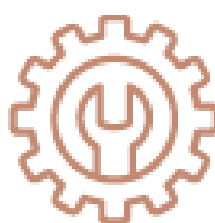


Maintains a centralized geo-referenced database for all state government assets and updated annually

City of Wellington insurance management strategy



Seeks financial protection for catastrophic losses, including those caused by natural disasters (including above and below ground assets), as well as sufficient cover for significant 1 in 1,000-year seismic event



Is an integral part of a broader risk management framework to manage and mitigate risks: risk transfer or insurance will be considered only if the residual risk is at a level that is not acceptable and no further measures can be implemented to reduce the likelihood or consequence



Ensures that insurance proceeds can be used to support a return of the Council assets and services to its pre-event state.



Secured coverage with limits in the range of USD 700 to USD 1 billion during 2010-2016

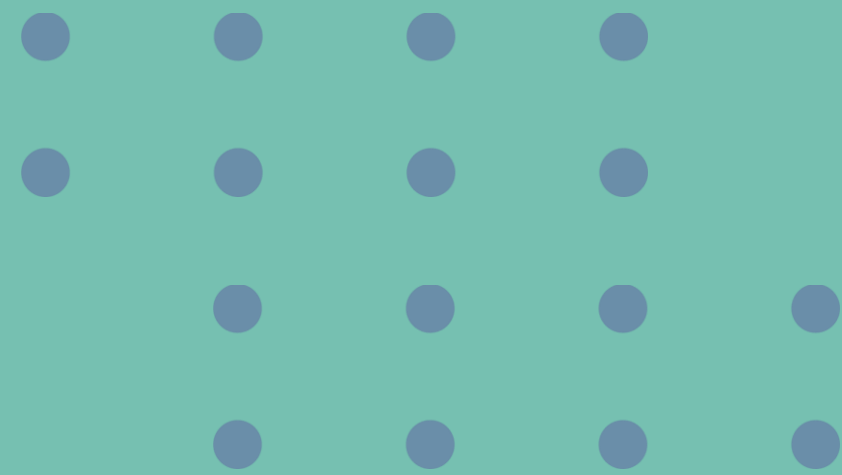


Fiscal and Financial Resilience for Subnational Governments

Canberra, Australia

June 15, 2021

Nico Padovan, PSM, Deputy
CEO of the National Recovery
and Resilience Agency,
Canberra, Australia



**Disaster Risk Financing
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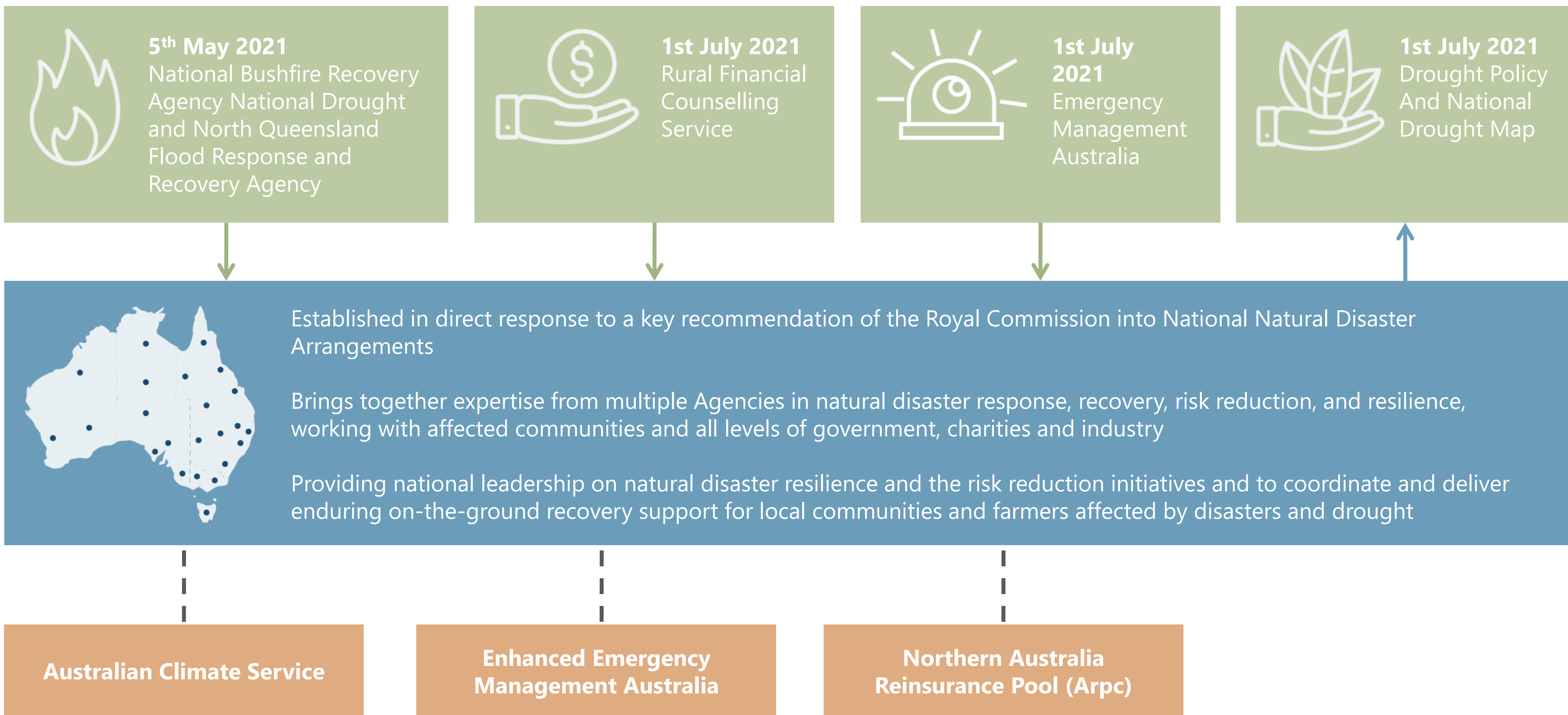
Australia's National Recovery and Resilience Agency

Background

- 
- A vertical timeline on the left side of the page, consisting of a brown line with four green circular markers. To the right of each marker is a brown rectangular box containing a date, followed by a text box containing a description of the event. The events are listed in chronological order from top to bottom.
- 20 February 2020** A Royal Commission is established into National Natural Disaster Arrangements
 - 30 October 2020** The Royal Commission tables its report to Parliament. Among its recommendations is the establishment of a standing resilience and recovery entity.
 - 13 November 2020** Prime Minister Scott Morrison and Emergency Management Minister David Littleproud announce major reforms as part of the Australian Government's response to the Royal Commission into National Natural Disaster Arrangements.
The response includes establishing a standing national resilience, relief and recovery agency by 1 July 2021.
 - 5 May 2021** Prime Minister Scott Morrison announces the establishment of the National Recovery and Resilience Agency, initially combining the National Bushfire Recovery Agency and the National Drought and North Queensland Flood Response and Recovery Agency.



Establishment of the NRRRA



Working within a national framework

Responsibility for all aspects of emergency management, including disaster recovery, is shared between governments, individuals, the business and non-government sectors, and communities



The National Recovery and Resilience Agency will have federal responsibility for Disaster Recovery Funding Arrangements and other Commonwealth disaster payments, such as Disaster Recovery Payment and the Disaster Recovery Allowance.



Operating within the Australian Government's Crisis Management Framework, the NRRRA will coordinate disaster response from a whole-of-government perspective.



The Agency will coordinate and align Australia's national capability to build on our country's natural resilience, and better prepare for natural disasters and recover from all hazards.

Federated model

Australian state and territory governments continue to have primary responsibility for providing recovery assistance to affected individuals and communities within their jurisdiction.



Redressing the imbalance

The Insurance Council of Australia cites a Productivity Commission estimate that 97% of all disaster funding is spent on the clean-up and just 3% on mitigation, preparedness and resilience.



Resilience initiatives

Preparing Australia Program

The NRRRA will design and deliver the \$600 million Preparing Australia Program to improve long-term resilience of Australian communities and households.

The program will support both public and private risk reduction to decrease the overall risk and cost for recovery support following future disasters.

It will fund projects that increase the capacity of homes to withstand natural disasters like bushfires and cyclones, building levees and improving telecommunications – projects which lessen the economic, environmental and social impact of the next large-scale event.

Future Drought Fund

The \$5 billion Future Drought Fund provides secure, continuous funding for drought resilience initiatives. It provides up to \$100 million each year.

The Future Drought Fund underpins the Government's Drought Response, Resilience and Preparedness Plan.

Emergency Response Fund

The Emergency Response Fund allows the Government to draw up to \$200 million in any given year, beyond what is already available to fund emergency response and natural disaster recovery and preparedness.

It is available to be used if it is determined that existing recovery and resilience-building programs are insufficient to provide an appropriate response to natural disasters.



Resilience initiatives continued

North Queensland Strata Title Resilience Pilot Program

The \$40 million North Queensland Strata Title Resilience Pilot Program aims to reduce insurance costs for strata properties, which face significant insurance affordability pressures.

This three-year pilot program will subsidise the cost of cyclone risk mitigation works to improve insurance affordability and access for strata title properties in North Queensland.

Reinsurance pool

On top of this, the establishment of the \$10 billion reinsurance pool will make home and small business insurance more affordable and accessible for northern Australian residents.

A final design for the reinsurance pool is being developed by the Treasury.



Building Fiscal and Financial Resilience for Subnational Governments against Natural Disasters

Medellín, Colombia

June 15, 2021

Alethia Arango,
Director of Administrative
Department of Disaster Risk
Management (DAGR),
Medellín, Colombia

Juan Moreno,
Project Leader of the
Knowledge and Risk Reduction,
DAGR,
Medellín, Colombia

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Alcaldía de Medellín



Financial Protection

Understanding Risk

Action Strategies

Action Plan



Source: POMCA Digital Elevation Model

Conditioning Factors

- Topography
- Hydrometeorology
- Geology
- Tectonics
- Occupation of the territory
- Culture
- Industry

Threatening Phenomena

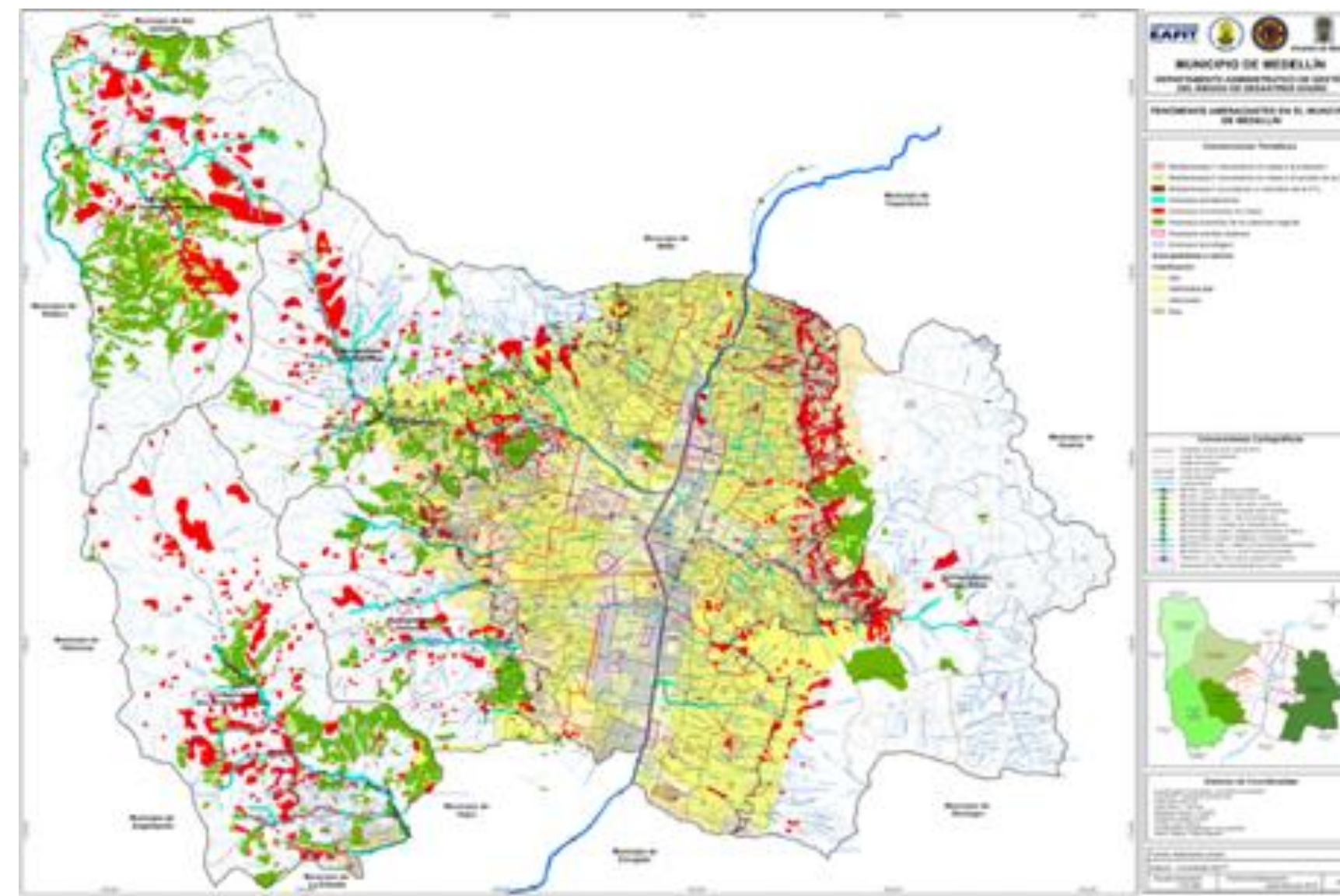
- Floods
- Mass movements
- Torrential flows
- Technological risks
- Ceraunic threat
- Forest fires
- Earthquakes
- Structural damage

Financial Protection

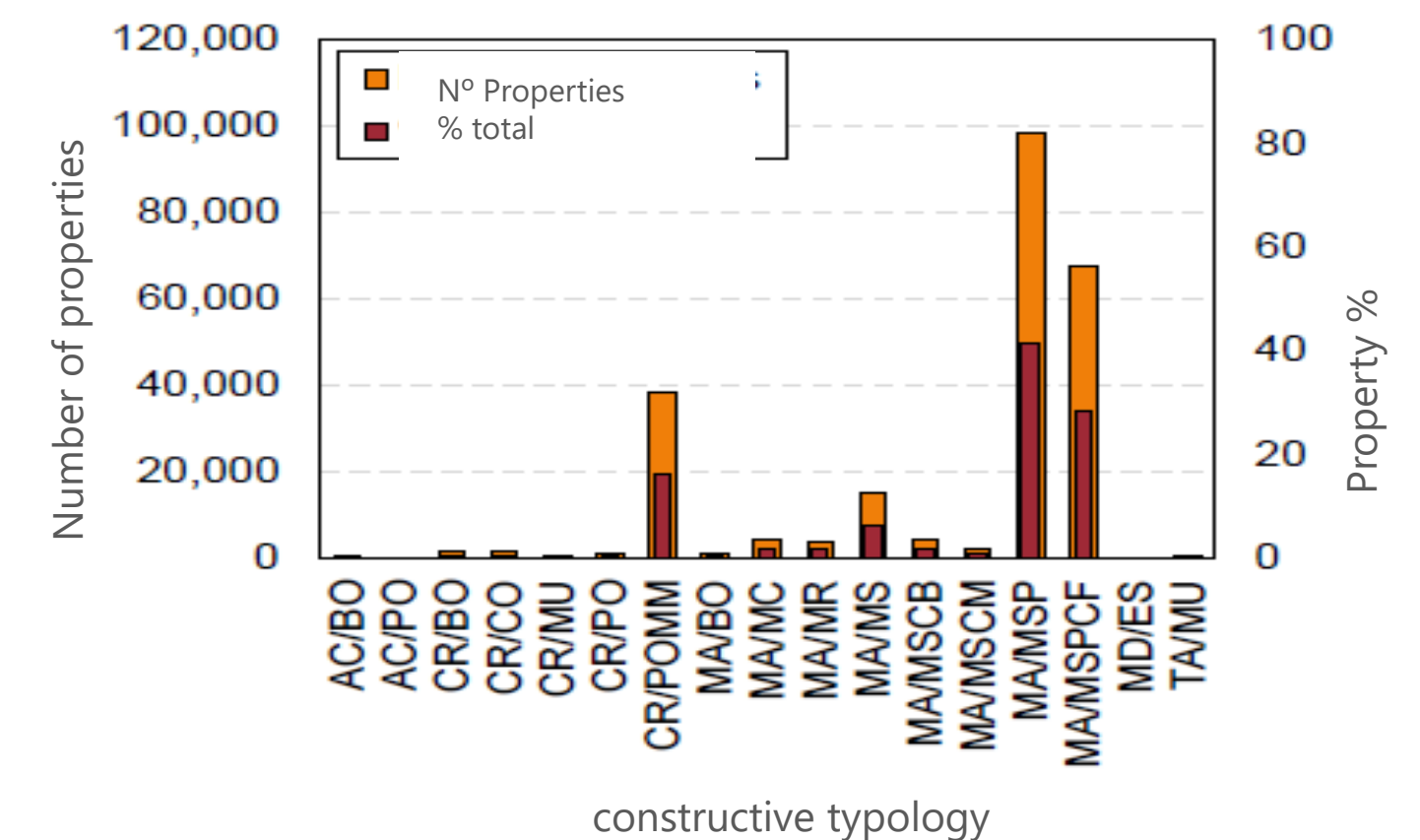
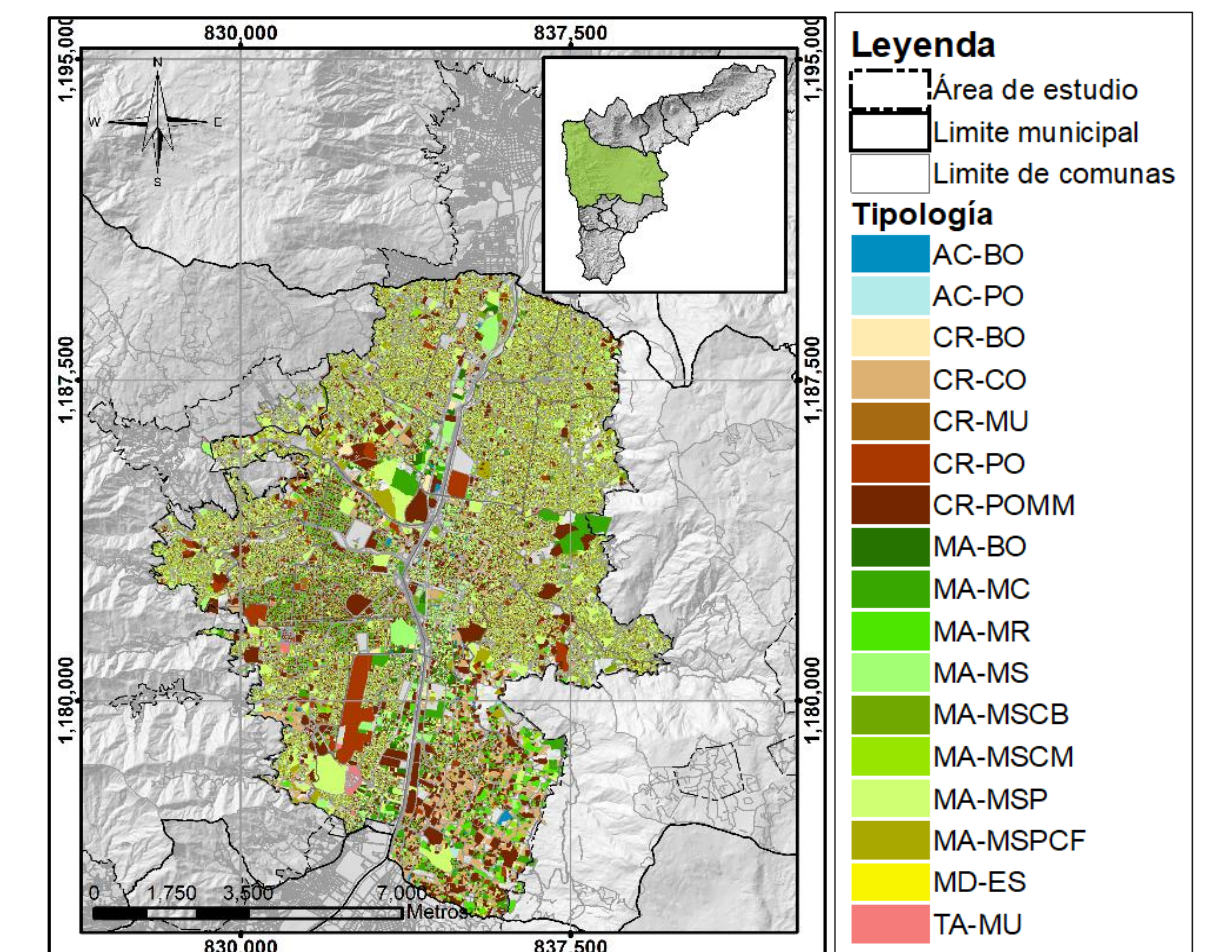
Understanding Risk

- **20%** of the territory has a **high or medium risk condition due to mass movements;**
- **4.45 square kilometers** of the territory are in **high risk due to flooding and torrential flows;**
- Between 2004 - 2014, **4,625 forest fires (FF)** were reported, equivalent to 14.4% of the total events registered in the Municipality of Medellín. According to the Metropolitan Area (2009), in the Aburra Valley, **84% of the FFs occur in the urban area, and not in the rural area**
- Approximately, **80% of the municipality buildings** are built in masonry, which exposes high levels of seismic vulnerability for a municipality with an intermediate seismic risk: the AAL is 3.32 %

Action Strategies



Action Plan



Financial Protection

Understanding Risk

Action Strategies

Action Plan

The study developed by the Metropolitan Area and the Universidad de los Andes, "PROBABILISTIC EVALUATION OF SEISMIC RISK" defined:

- **Residential Sector:** Financial Protection Options and Preparedness for Response
- **Fire stations:** Seismic risk and risk mitigation plan.
- **Health Sector (buildings of levels 2 and 3):** Requirements to prepare the seismic risk mitigation plan for the sector.
- **Education Sector (Portfolio of public schools):** Technical information for preparing the seismic risk mitigation plan.

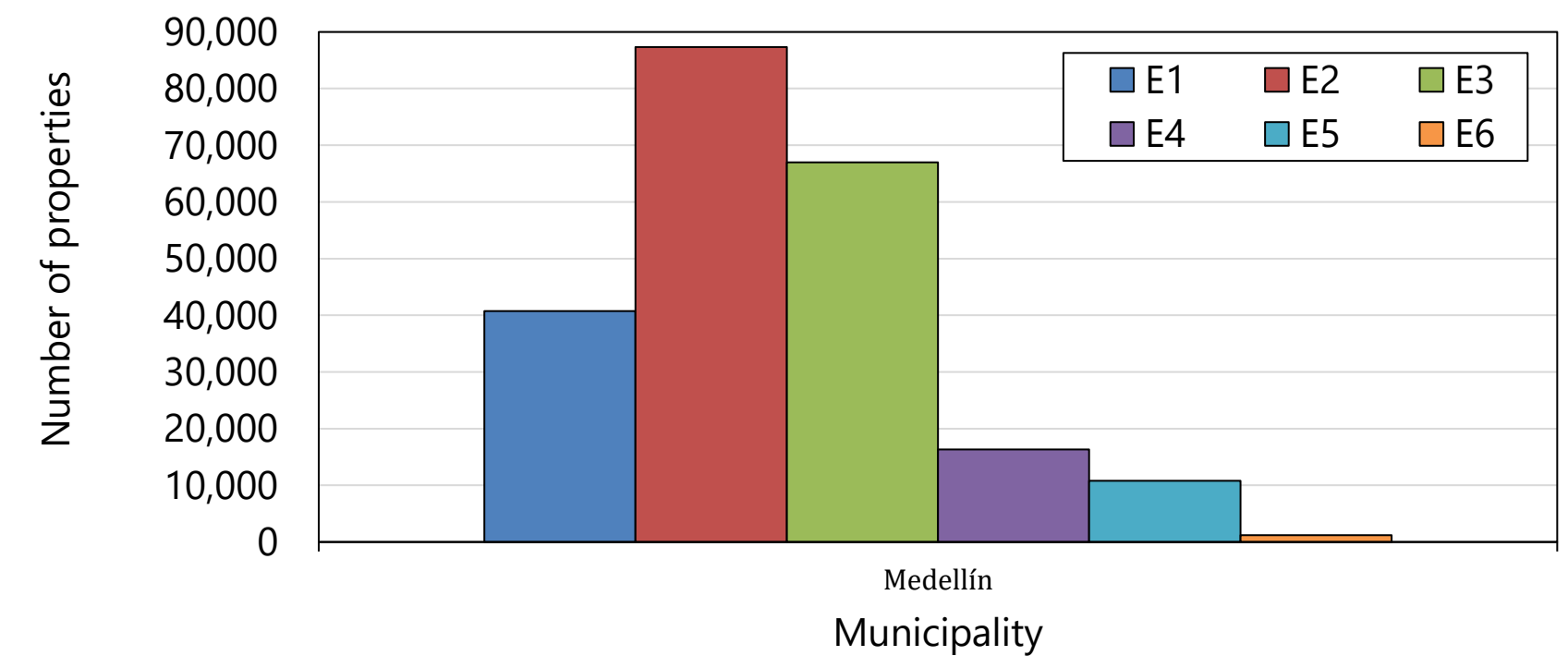
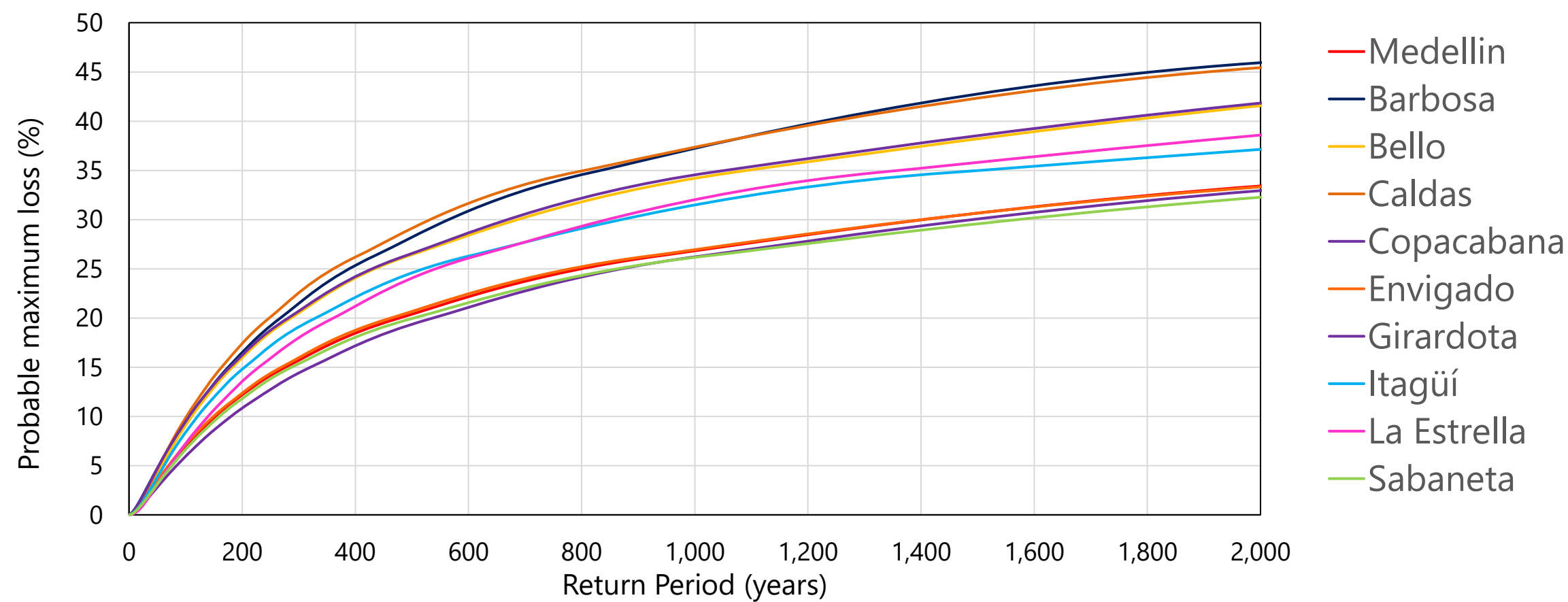
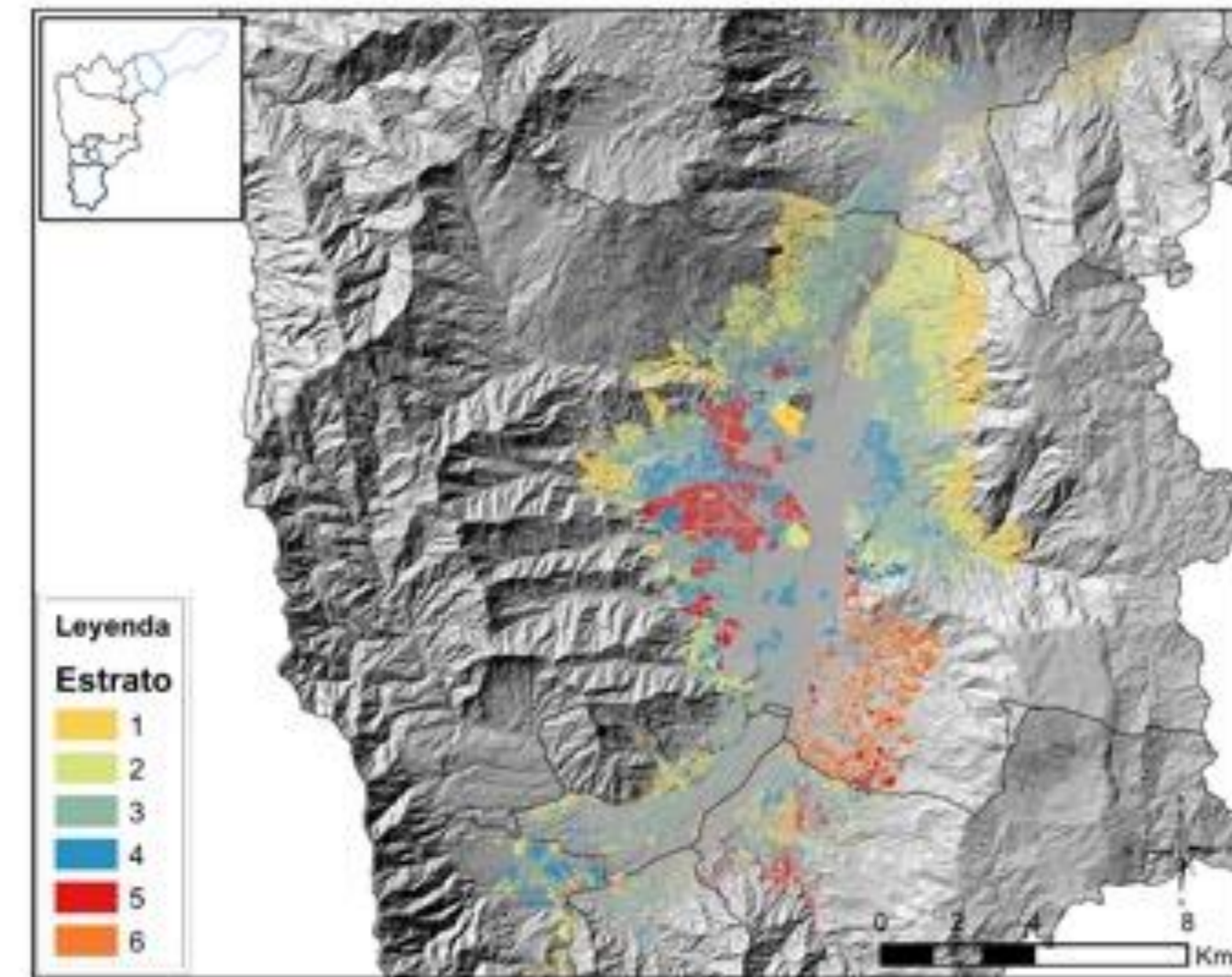
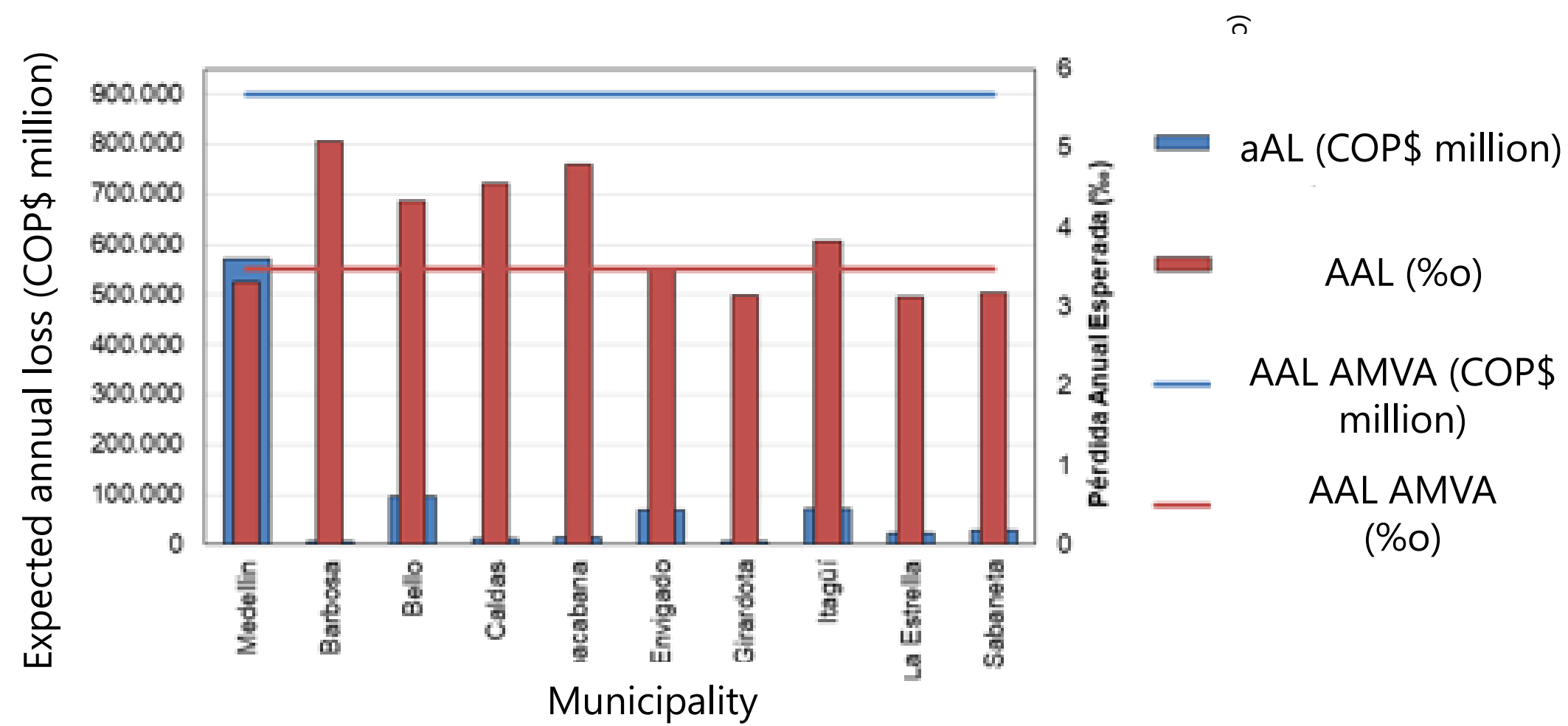


Financial Protection

Understanding Risk

Action Strategies

Action Plan



Financial Protection

Understanding Risk

Action Strategies

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**Colombia: Policy strategy
for public financial management
of natural disaster risk**



Aburrá Valley Metropolitan Area:

**Strategy for Financial
Management
of Disaster Risk**

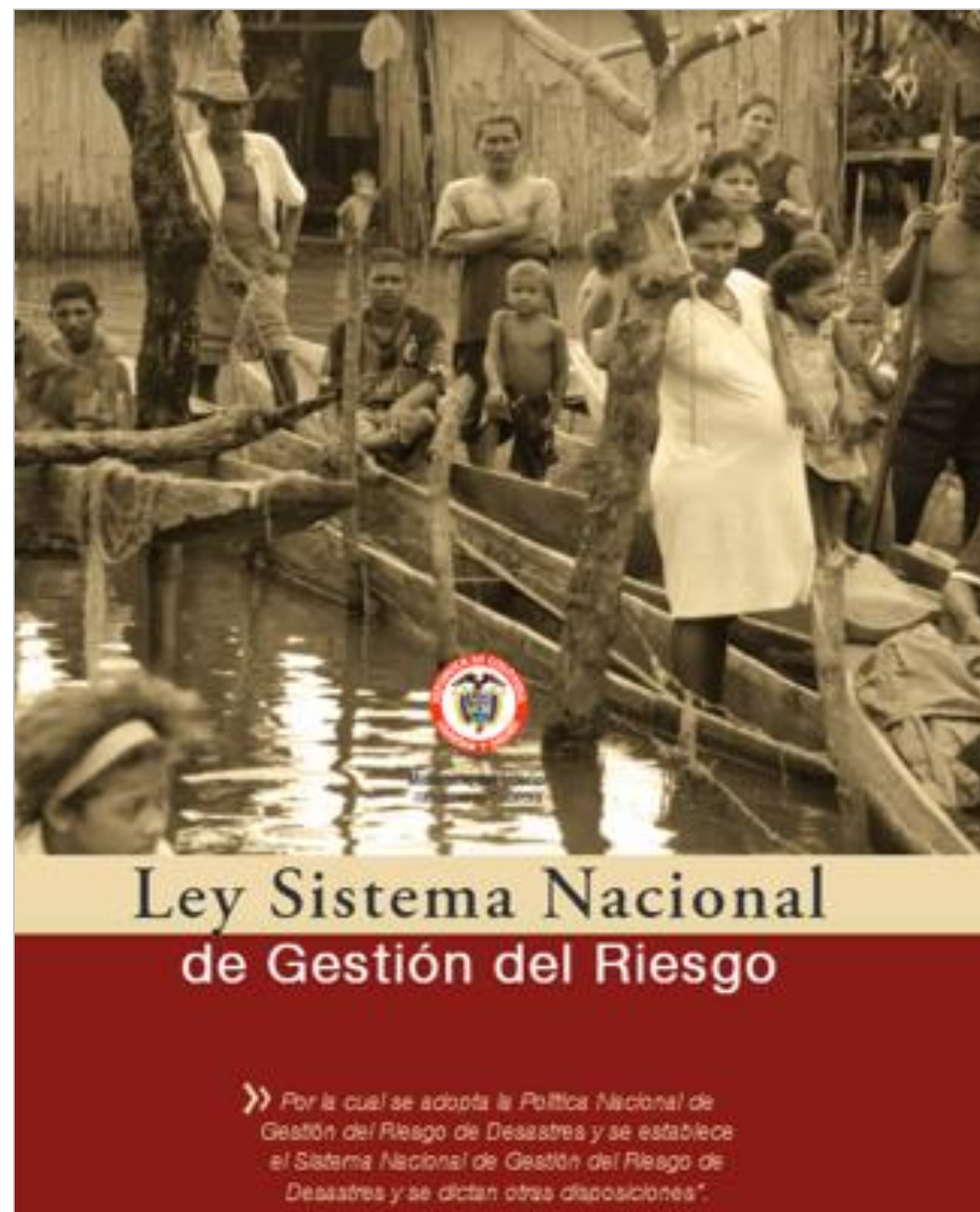


Financial Protection

Understanding Risk

Action Strategies

Action Plan



Decree No. 059 of 2011

"By which the Administrative Department for Disaster Risk Management and the Municipal Fund for Disaster Risk Management are created."

Draft Decree N° ____ of 2020

"Whereby the Territorial Public Policy for Disaster Risk Management of Medellin is adopted"

Title V

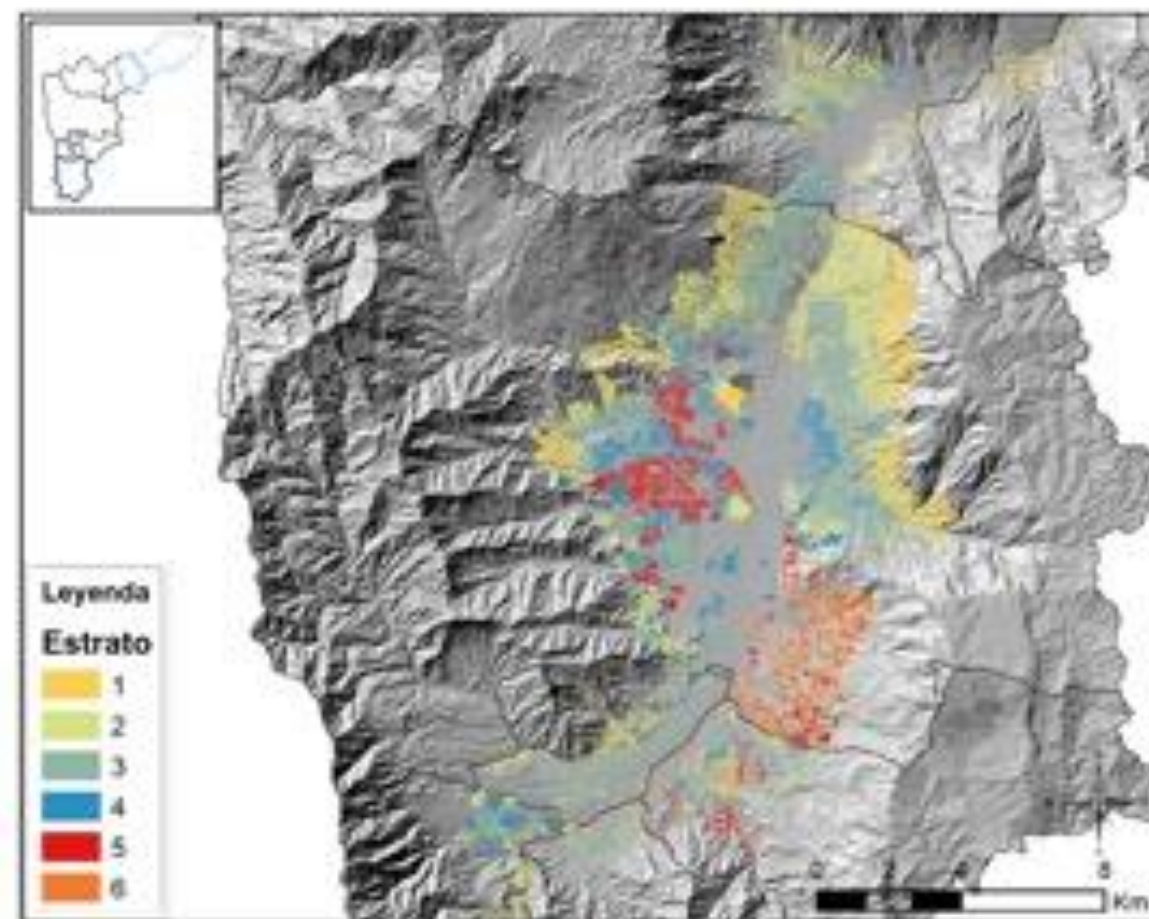
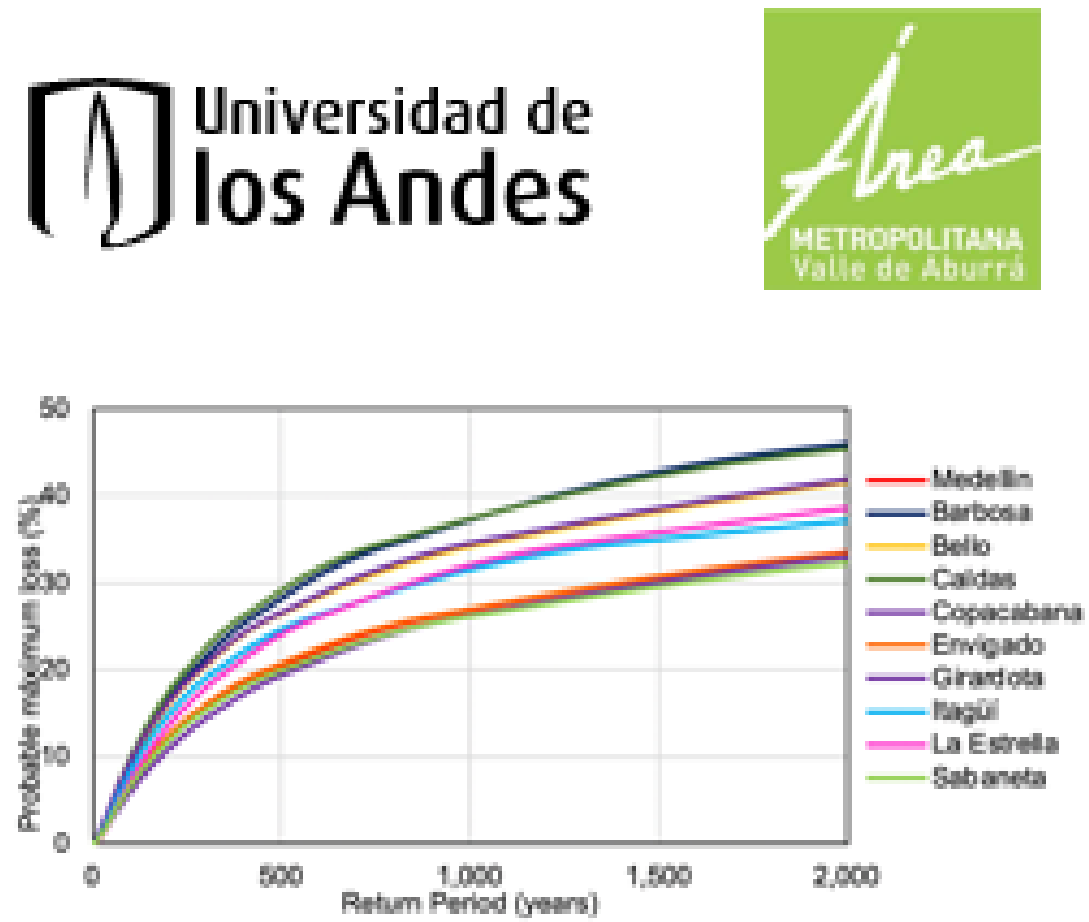
Financing instruments for disaster risk management

Article 36: Financial Protection Instruments. The municipality of Medellin must implement mechanisms and financial instruments for intentional retention and risk transfer that are established ex ante in order to have ex post access to opportune economic resources for disaster risk management, especially for the three post-disaster phases, response, rehabilitation and reconstruction.

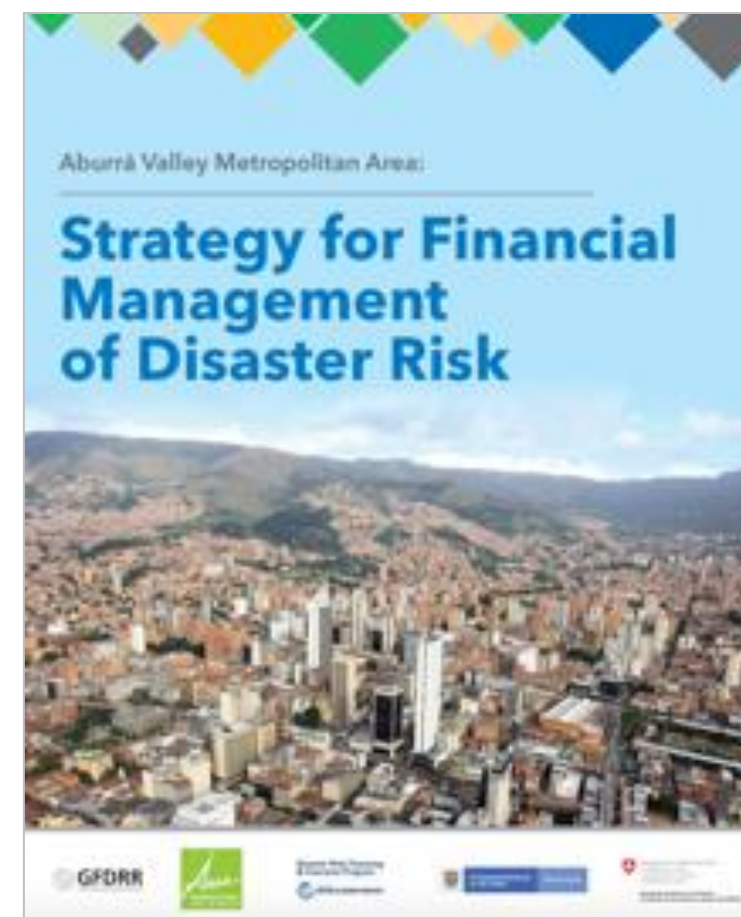
Article 37: Municipal Fund for Emergency and Disaster Risk Management: In accordance with article 7 of agreement 059 of 2011, the Municipal Fund for Emergency and Disaster Risk Management aims to facilitate the efficient and timely collection, allocation, administration, investment, management of financial protection instruments

Financial Protection

Understanding Risk



Action Strategies



Action Plan

Medellin: Program to implement the Disaster Risk Financial Protection Strategy

Disaster Risk Financing & Insurance Program

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El emprendimiento es de todos

Minhacienda

+

Improving Urban Resilience through Risk Transfer for extreme weather events in Colombia

Project status - December 2019

Promoted by:

Global Communities
Partners for Good

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Watson

Fiscal and Financial Resilience for Subnational Governments

Da Nang, Vietnam


June 15, 2021

Nguyen Van Phung

Director General, Department of Finance, City of Da Nang, Vietnam

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The City of Da Nang and Disaster Risk (1)

City of Da Nang (CDN)

- Home of **1.1 million people**, one of the most **dynamic cities** and a **driver of growth** in Central Vietnam.
- GDP per capita increased by **6.6 times** with average annual growth rate of **9.8%** during 2003–2018.

Main Perils

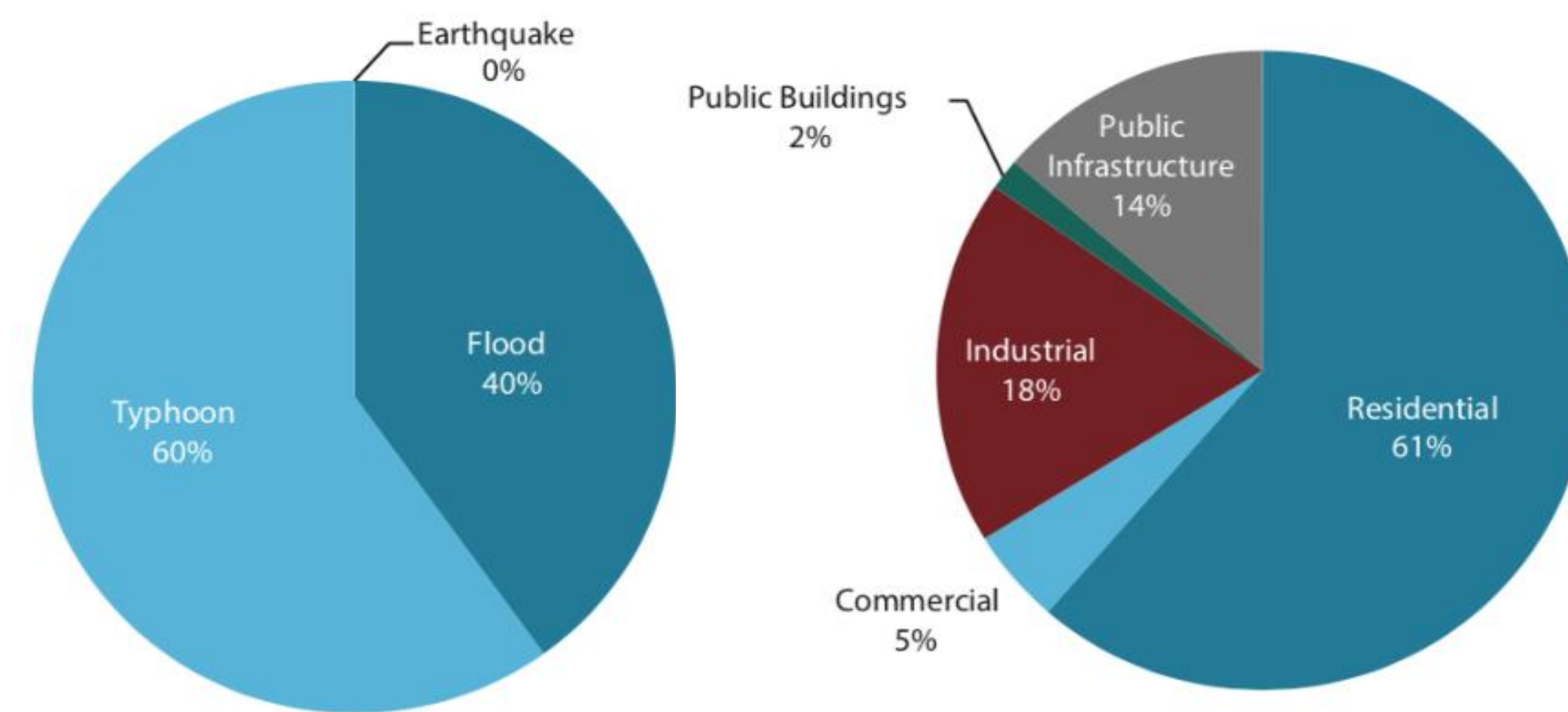
- Typhoons: CDN was heavily impacted by higher intensity storms (Xangsane in 2006, Nari in 2013). Typhoon is expected to be responsible for 60% of average annual losses. 5 storms on average per year.
- Floods of various types (riverine, flash, coastal floods), exacerbated by potential sea level rising.

Main Economic Exposures

- Large stock of assets at risk: more than half are residential assets
- 59% classified as medium to poor quality, 30,000 houses in need of structural upgrading (2016 assessment of 204,035 residential houses under 100 Resilient Cities Program)

Source: CDN Department of Agriculture and Rural Development; CDN Committee for Disaster Prevention and Control; Vietnam Disaster Risk Management Authority, World Bank.

Average Annual Loss in the CDN, by Peril (left) and Sector (right)



Source: World Bank Catastrophe Risk Model 2017

Estimated Replacement Value of Assets at Risk in CDN

Sector	Number of assets	Total value (USD Billion)
Residential	243,680	10.5
Commercial	60,173	2.6
Industrial	6,666	2.2
Public buildings	4,903	0.7
Public infrastructure		3.5
Total value (USD Billion)		19.5

Source: World Bank Catastrophe Risk Model 2017

The City of Da Nang and Disaster Risk (2)

Historical Economic Impact:

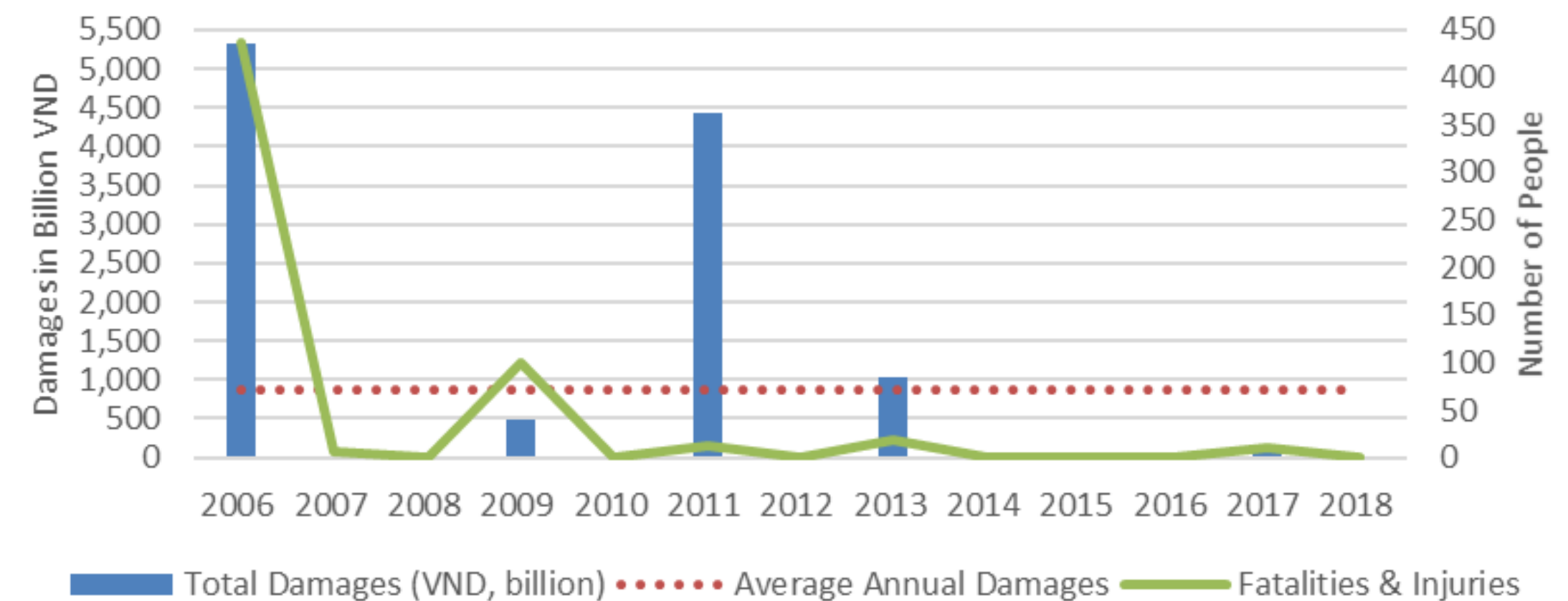
- Total direct damages of **VND 11,450 bn** (\$501m) or annual average damages of **VND 881bn** (\$38m) during 2006-2018.
- Historical damages driven by rare and severe storms (2006 and 2013) and a severe flood (2011): 94% of the total damages.

Probabilistic Risk Assessment

- The City of Da Nang can expect to incur annual average loss (AAL) of VND 987 billion (USD 43.2 million) per year.
- Residential housing is the most vulnerable sector, accounting for 54% of asset value but 61% of the modelled losses
- During an average year, the government of CDN can expect to incur:
 - Contingent liabilities of VND160 billion (USD 7 million)
 - Emergency Losses of VND37 billion (USD1.6 million)
- There is a 1% annual probability of the government incurring:
 - Contingent liabilities of VND1,289 billion (USD 56.4 million)
 - Emergency Losses of VND297 billion (USD 13 million)

Source: World Bank Catastrophe Risk Model 2017

Impact of Disasters on the CDN 2006-2018



Source: CDN Department of Agriculture and Rural Development; CDN Office of Climate Change and Natural Disaster Prevention and Control, February 2020.

Estimated Losses from Natural Disasters and Impact on the CDN Government

Estimated losses from natural hazards				
Return Period (years)	AAL	50	100	250
Risk Profile: Typhoon, Flood and Earthquake				
Direct Losses				
(Million USD)	43.2	281.6	383.3	504.2
(% GDP) ²	1.70%	11.30%	15.40%	20.30%
Contingent Liabilities				
(Million USD)	7	45.8	56.4	75.1
Emergency Losses				
(Million USD)	1.6	10.5	13	17.3
(% of total government expenditures) ³	1.20%	7.90%	9.70%	12.90%

² Provincial GDP is taken as USD 2,489.8 million (2014).

³ Of government's contingent liabilities and emergency losses.

Provincial total government expenditure is taken as USD 715.9 million (2014).

Source: World Bank Catastrophe Risk Model 2017

Disaster Risk Financing in the City of Da Nang

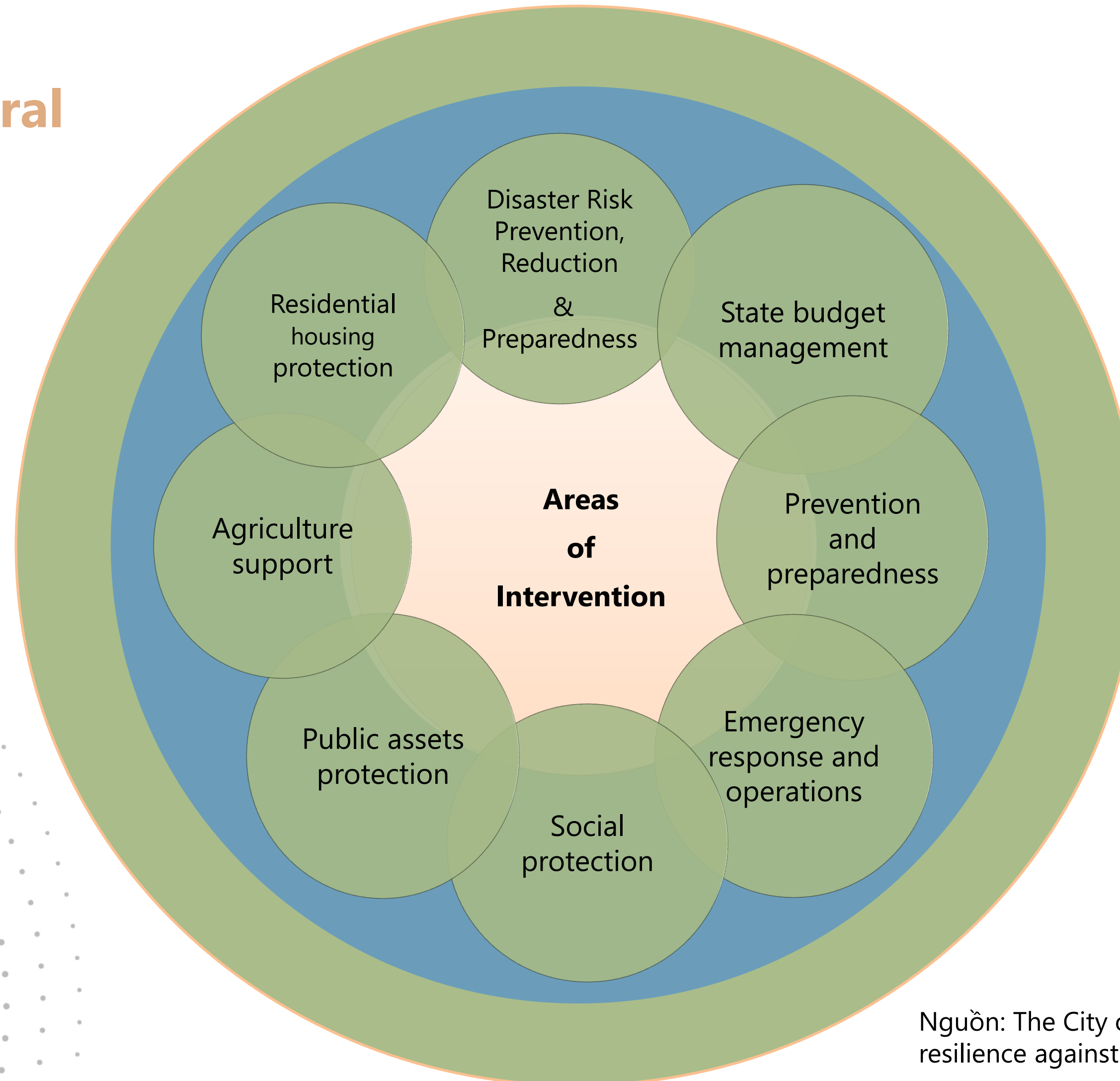
Policies and Regulations for Financial Management of Natural Disasters in the CDN

National Level

Law, Decree, PM's Decision, Ministerial Circulars

Da Nang, City Level

Follow GoV's regulations
Decisions of Da Nang people's committee



Disaster Risk Financing in the City of Da Nang

Key Institutions Involved in Managing Disaster Risk Financing and Insurance (DRFI) Instruments in the CDN

Instrument Types	DRFI instrument	Management of funding	Delivery	Beneficiaries
Budgetary Instruments	Budget (re)allocation for capital investment post-disaster	Department of Planning and Investment (DoPI)	Line departments for essential public assets	Public sector units
	Financial Reserve Fund	Department of Finance (DoF)	Department of Labour, Invalids and Social Affairs (DoLISA) for social protection Line departments for essential public assets	Public sector units Households
	In-kind State Reserve	Regional State Reserve Department	DoLISA	Households
	Tax breaks	Central tax authorities	Local tax authorities	Businesses
	Disaster Prevention and Control Fund (DPCF)	Department of Agriculture and Rural Development (DARD)	DARD	Public sector units Households
Contingent Financing	Contingency budget	DoF	DoLISA for social protection Line departments for essential public assets	Public sector units Households Private sector
	Credit solutions & debt relief	Policy banks		Households Businesses
	CDN Red Cross Fund	CDN Red Cross	CDN Red Cross	Households
	CDN Fatherland Front Fund	CDN Fatherland Front	CDN Fatherland Front	Households
Market-Based Instruments	Fishing boat insurance program; Agricultural insurance program; Property insurance product.	DARD, DoF	Local insurance companies	Households Public sector units

Potential Funding Gaps for Disaster Shocks

1. Past Expenditures on Disaster Prevention from the Da Nang Provincial Budget (million VND)

Expenditures	2013	2014	2015	2016	2017	2018
Expenses for natural disaster recovery from provincial budgets	19,802	116,962	4,601	3,559	10,182	20,931
Expenses to support purchase of insurance for fishing crew, ship hull, equipment, and fishing nets		275	4,507	6,312	8,825	1,510
Capital expenditure for disaster prevention construction works	17,645	74,896	94,000	97,804	120,891	126,473
Capital expenditure for upgrading and repairing roads from the transportation sector budget	405,656	352,748	154,448	717,589	709,396	657,911
Total recorded expenditure	443,103	544,881	257,556	825,264	849,294	806,825

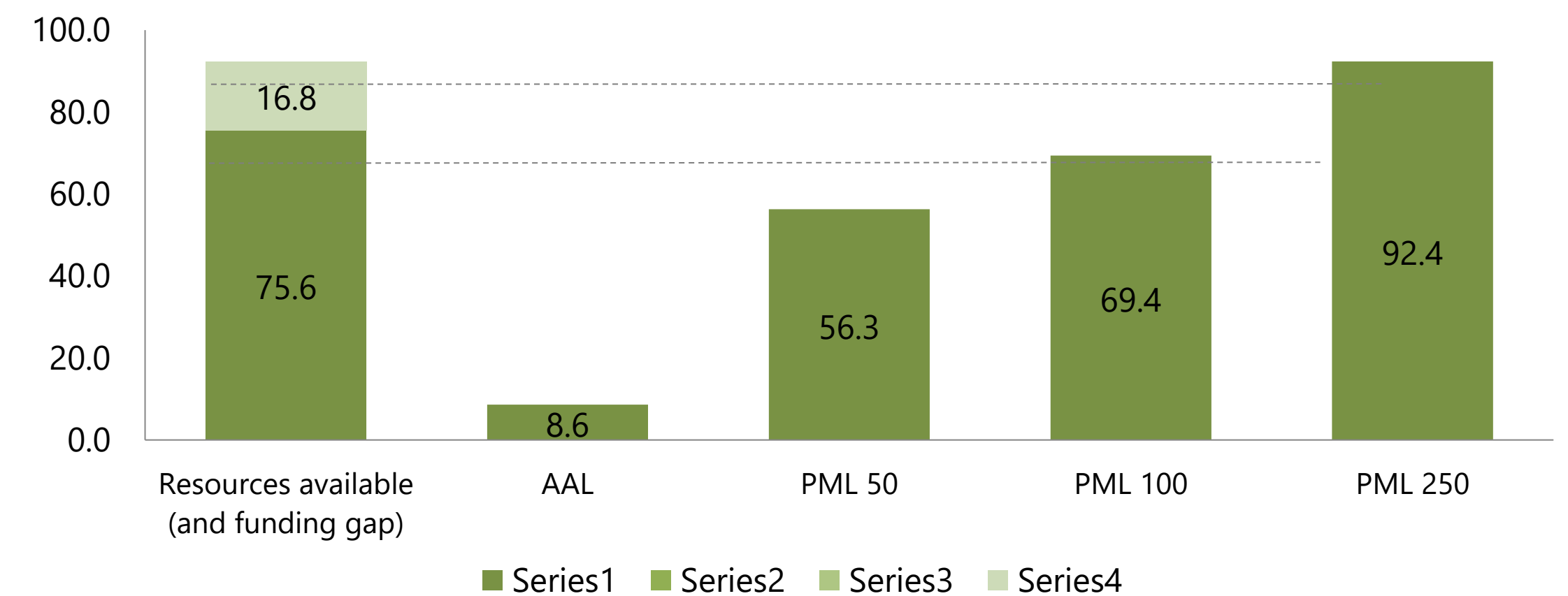
1. Source: Department of Finance of City of Da Nang, 2020.

Note: The annual expenditure on upgrading and repairing roads cannot be split between pre- and post-disasters.

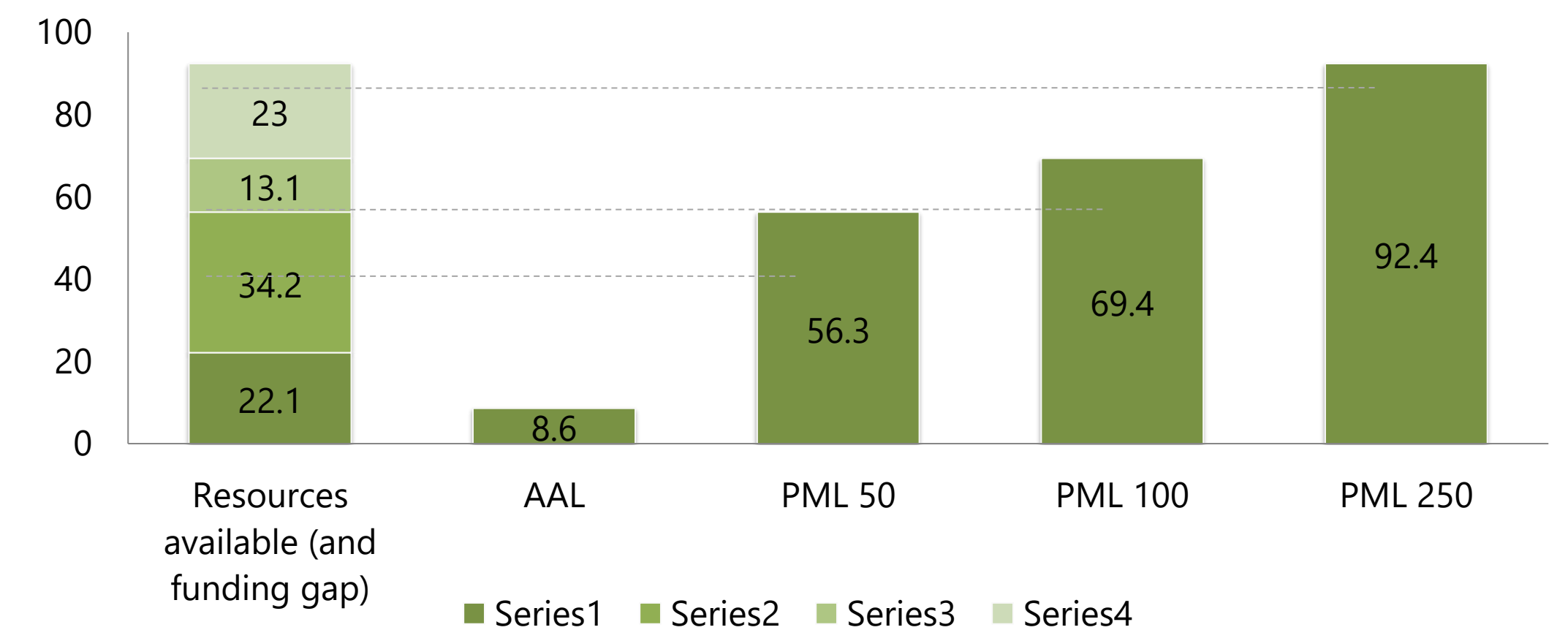
2. Source: World Bank Calculation with assumptions based on CDN Department of Finance budget data and World Bank Catastrophe Risk Model 2017

3. Source: World Bank Calculation with assumptions based on CDN Department of Finance budget data and World Bank Catastrophe Risk Model 2017

2. Potential Funding Gap Analysis for Post-disaster Response and Reconstruction – Disaster Shock Only



3. Potential Funding Gap Analysis for Post-disaster Response and Reconstruction – Compound Disaster and COVID-19



Compound shocks and funding gaps for governments, businesses, households

Impact on the CDN Government	Impact on CDN businesses	Impact on CDN households
<ul style="list-style-type: none"> • Da Nang's GRDP in 6M2020 contracted estimatedly by 3.61% in real terms YoY, while the service sector saw the greatest decline (4.62%) • Total 8M2020 revenue and expenditure registered only 49.2% and 45.2% respectively in compared to the budget estimation • Compound impacts from Covid-19 and natural disasters and climate shocks anticipate a financing gap of US\$8.6 million in addition to the contingency budgetary resources 	<ul style="list-style-type: none"> • 90% of businesses were negatively impacted by COVID-19 (17.1% temporarily suspended operation; 7.8% permanently suspended operation; 1.8% are pending liquidation or dissolution) • 9M2020 firms' revenues dropped by 32.5% YoY • Average firm would face a 12% operating loss • Firms could experience interruptions amounting to 18 days every year due to disaster and climate events and incur annual loss of VND 110 million • Average firm could face a 15% operating loss under a shock scenario with COVID-19 and a natural disaster 	<ul style="list-style-type: none"> • Unemployment rate rising to 7.55% from 2.89%. • 25% of current employees experienced a pay cut (large firms at 30%, micro firms at 24%, small firms at 22.5%, and medium firms at 20.5%)

Impact of Compound Shocks on Firms

Firms' State of Financial Health Before COVID-19

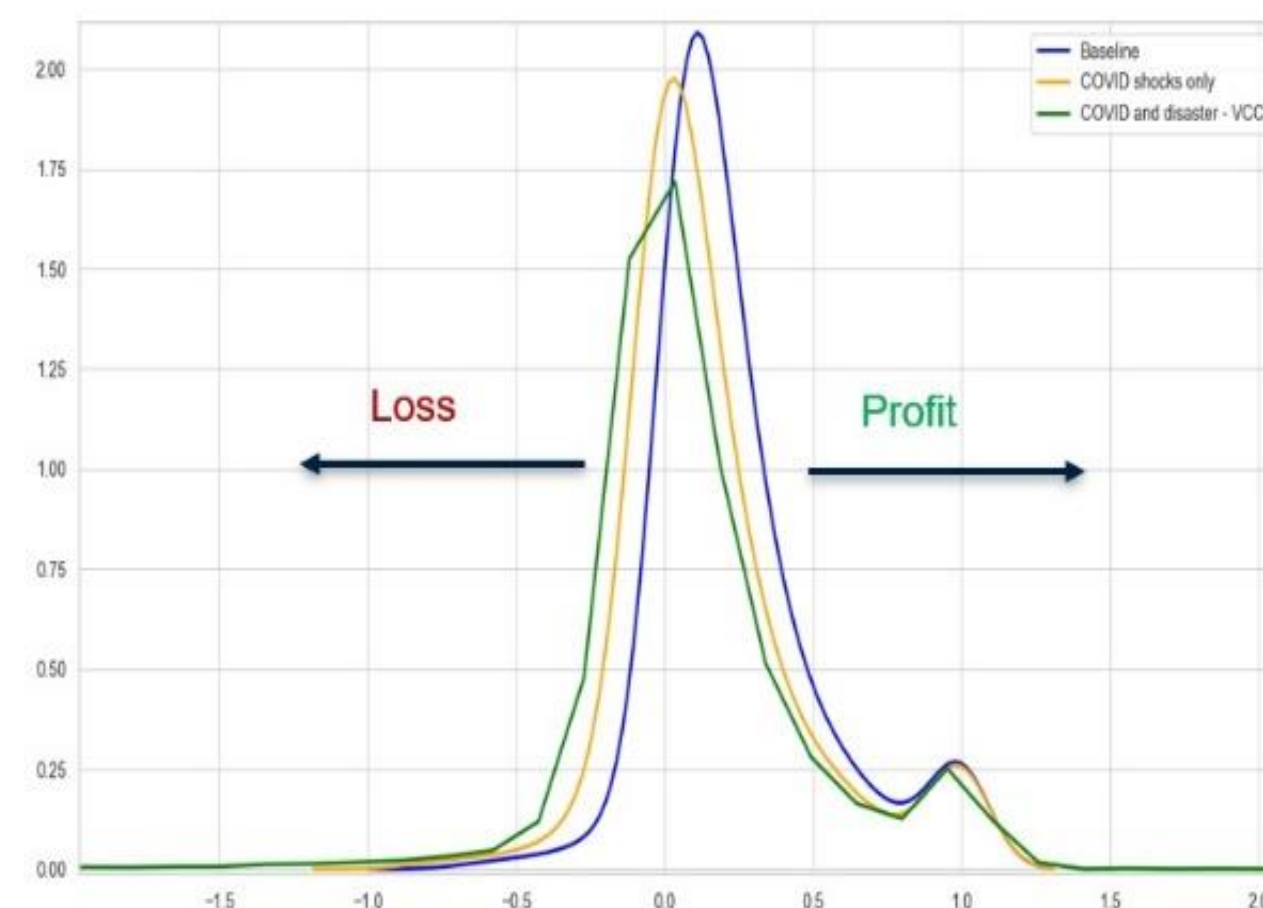
- <1 At least 25% of firms have liquidity ratio < 1 (except for construction industry)
- >0.5 More than 25% of firms have leverage ratio (total liabilities/total assets) > 0.5
- <0 At least 25% of firms in key sectors (manufacturing, services, construction, utilities) have negative profit margins

Firms' Finances After COVID-19 and Disaster Shocks

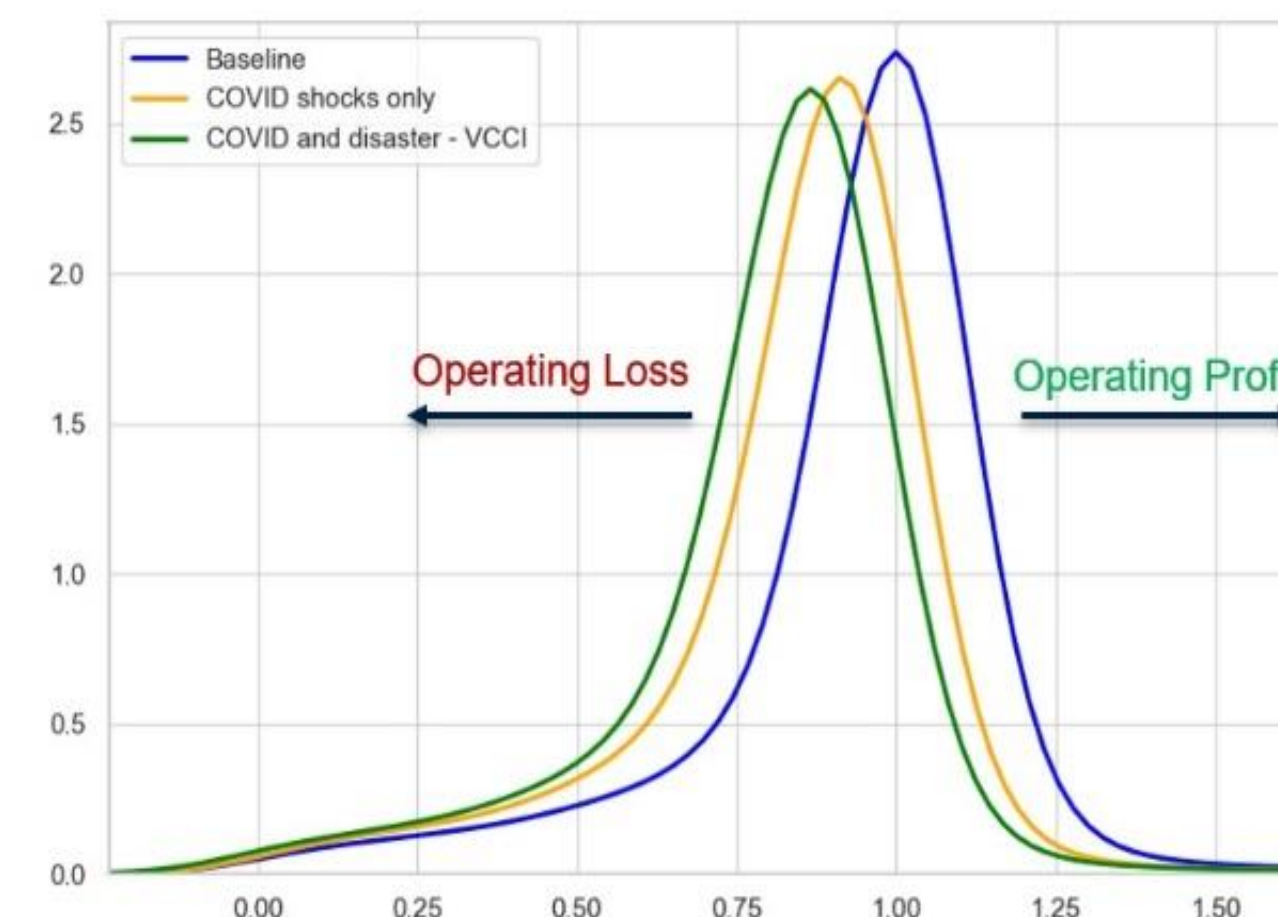
The average firm from ~0% operating profit under baseline scenario to 12% operating loss under COVID-19 shock and 15% operating loss under COVID-19 and disaster shocks

CDN Firms' simulated finances following COVID-19 and disaster shocks

Gross Profit Margin



Revenue over Operating Cost



Source: World Bank calculation based on firms' 2019 financial statements, FIIN Group

Financial management strategy for disaster and pandemics: key principles, building blocks and solutions

Building blocks and solutions

Policy, Legal, Institutional Arrangements

- Promulgate a CDN-specific DRF mechanism and policy
- Develop the rules for coordination and management of financial resources

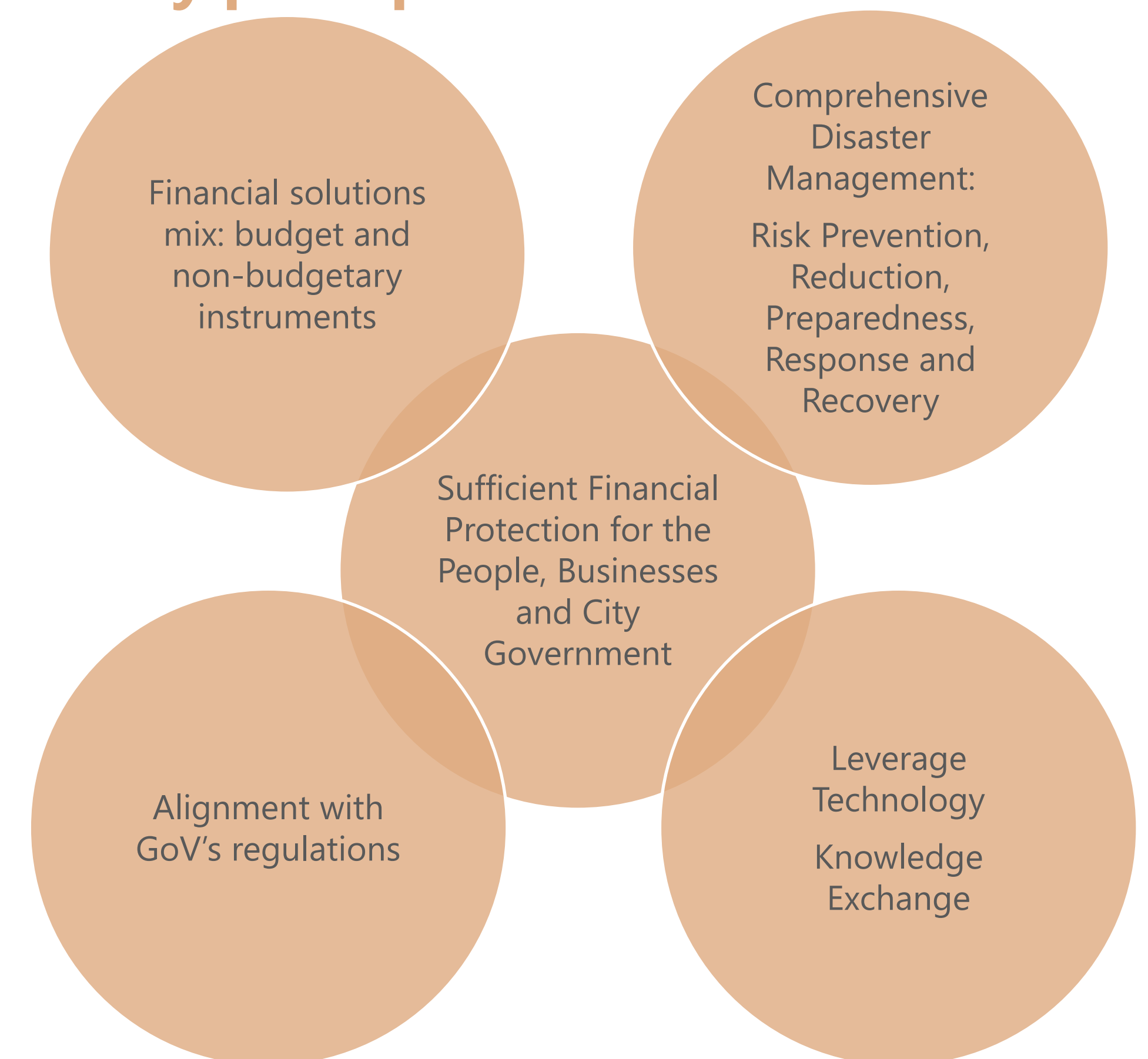
Financial solutions

- Strengthen the City government's fiscal resilience through financial protection of public assets and services
- Support CDN households with access to finance for resilient housing
- Strengthen the resilience of CDN's SMEs through access to finance post disaster and health shocks

Technical Solutions

- Improve CDN's infrastructure for DRF data and analytics
- Capacity building, training, and knowledge exchange

Key principles



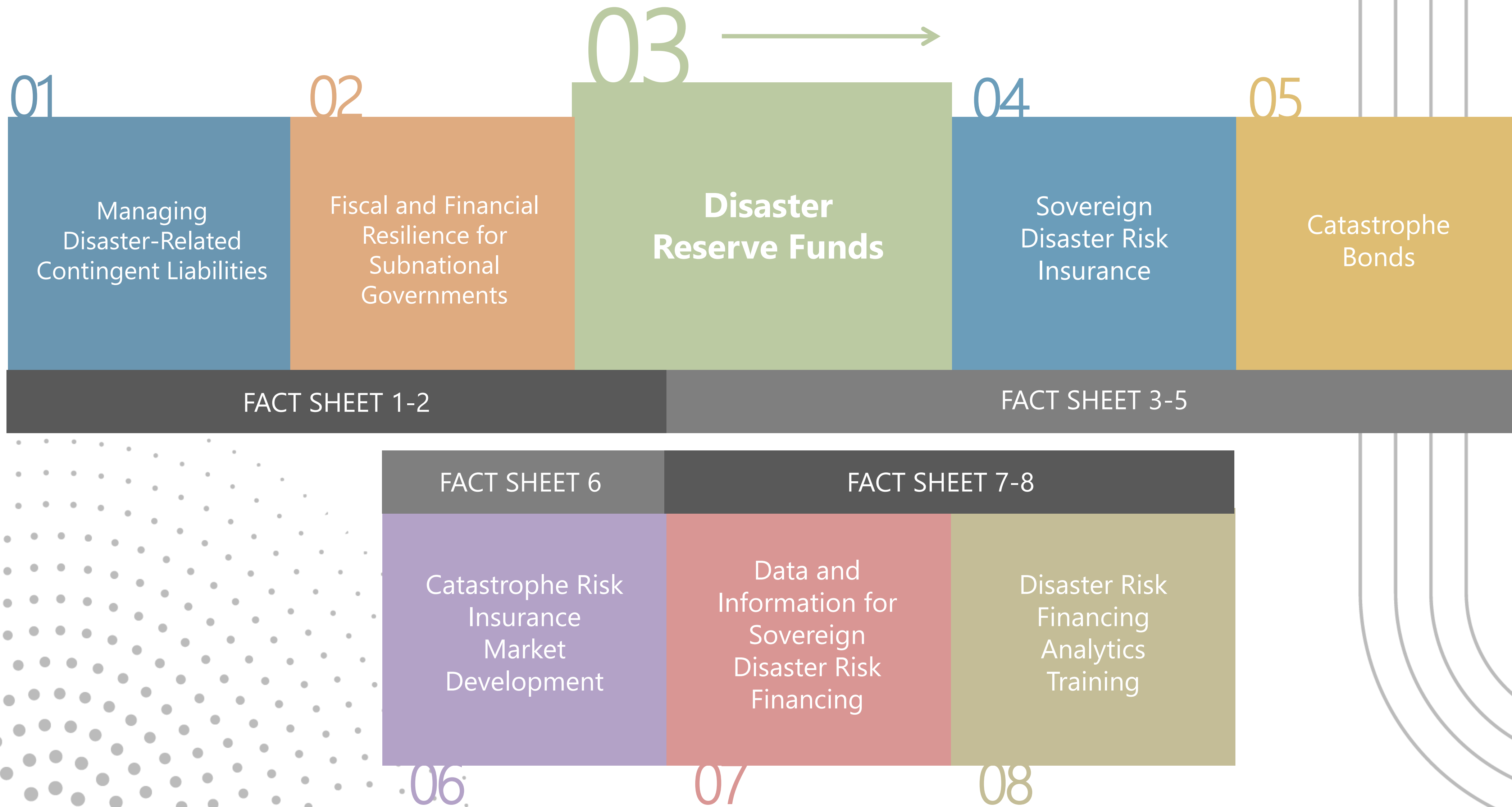
Q&A

- Please share your questions in English via chat box.
- If possible, please indicate which speaker(s) to address your question(s).



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