

\*Notes: You must join the meeting audio through your computer audio/VoIP. You cannot listen to language interpretation if you use the dial-in or call-me phone audio features.

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

# Managing Disaster-Related Contingent Liabilities April 27, 2021

#### Disaster Risk Financing & Insurance Program



WORLD BANK GROUP



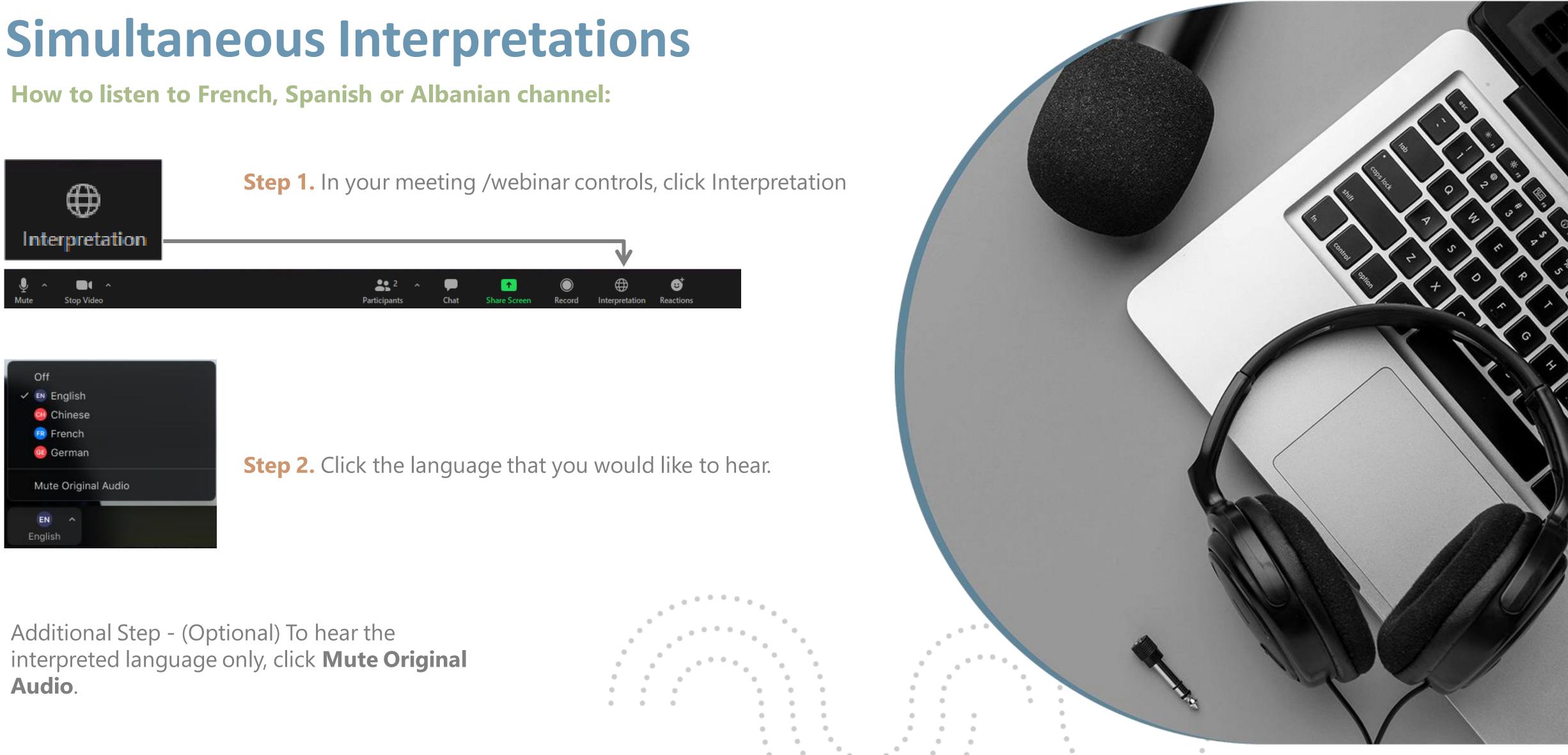
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#### Managing Disaster-Related Contingent Liabilities





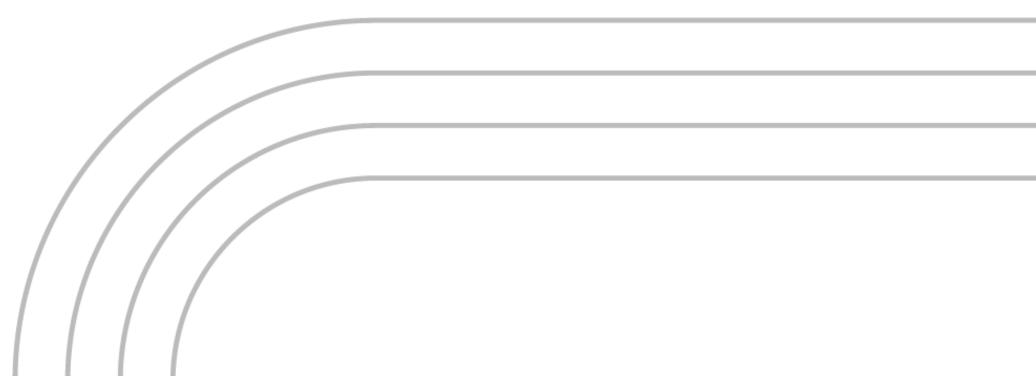
#### Managing Disaster-Related Contingent Liabilities



# **Opening Remarks**

### **Olivier Mahul**

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





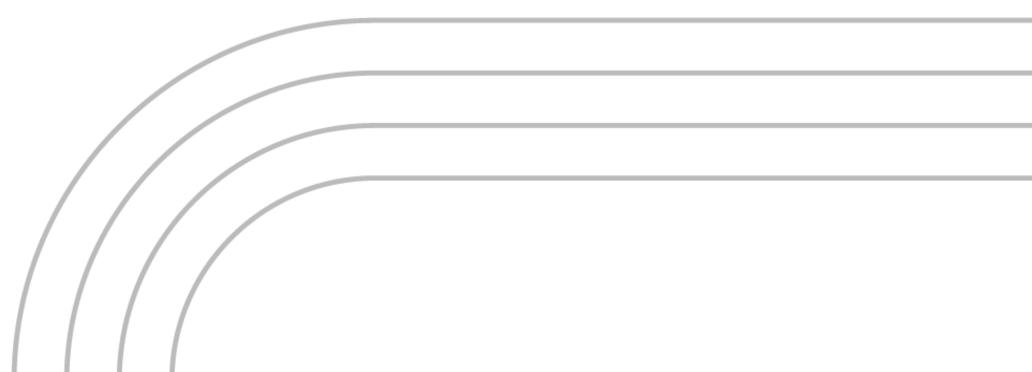


#### Managing Disaster-Related Contingent Liabilities



### **Martin Saladin**

Head of Operations, Economic Cooperation and Development Division, Switzerland's State Secretariat for Economic Affairs (SECO)





### 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.

#### Managing Disaster-Related Contingent Liabilities







### Webinar Series

#### **Policies and frameworks for managing disaster related** 1-2 **contingent liabilities**

Webinar 1: Managing disaster related contingent liabilities Webinar 2: Fiscal & financial resilience for subnational governments

- **Instruments for financial management of disasters** 3-5 Webinar 3: Disaster reserve funds Webinar 4: Sovereign disaster risk insurance Webinar 5: Catastrophe bonds

#### **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

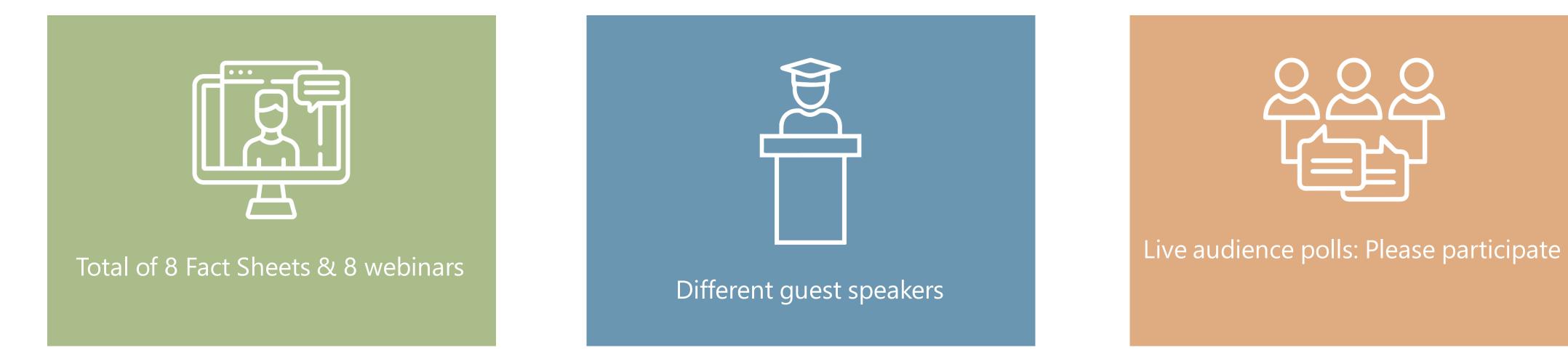






#### Managing Disaster-Related Contingent Liabilities









Simultaneous interpretation: French and Spanish



Certificate of Participation



## **Certificate of Participation**

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



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# Managing the financial impact of disasters – Why is it important?

Government fiscal frameworks often do not account for disaster-related expenditure in the same way as planned recurrent expenditure (infrastructure, housing, education and other social services), and treat disaster-related expenditure as unquantified contingent liabilities in the national accounts.

> Challenges Disasters cause sudden and very significant:



increases in public expenditure;



decreases in **revenue**; Potentially increases in public debt and escalating borrowing costs.

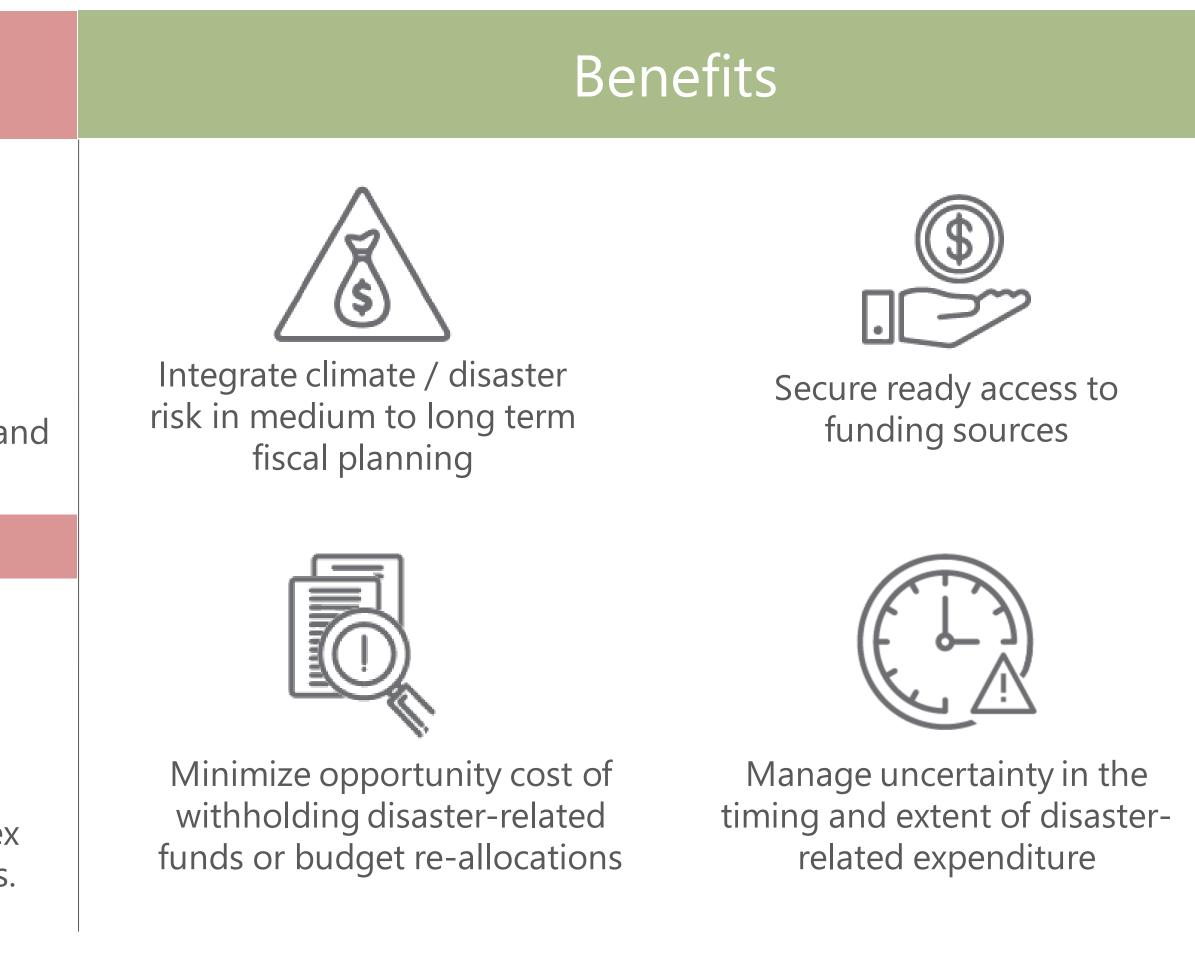
*More recent complicating factors include:* 



demographic changes (older workforce, less tax, increased welfare and medical costs) depleting government reserves;



increasingly complex and connected risks.





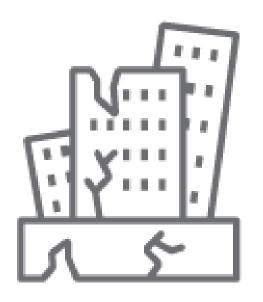


# **Disaster-related contingent liabilities**

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### **Explicit Liabilities:**

- compensate losses to private assets, farmers, or the wider community.



### **Implicit Liabilities:**

- increased risk of prolonged economic downturn
- economic stimulus measures.

Payment obligations based on contracts, laws, and/or clearly articulated government policies.

E.g. cost-sharing arrangements with subnational governments, recovery and reconstruction of damaged public assets, government guarantees for public corporations or PPPs, and other legal or policy commitments to

Government expenditure based on moral or political expectations to provide support and/or to avoid the

E.g. unplanned disaster relief and recovery assistance to affected households and business, tax relief and



# Putting a 'price tag' on government liabilities



### Why?

- Assist quantification of disaster response policy options and potential costs/benefits.
- Support risk ownership in clarifying who pays for what in the event of a disaster.
- Incorporate disaster-related fiscal risks into macro-fiscal planning and national budgets.  $\bullet$
- Inform mitigation of fiscal risk (clarify liabilities) and provision for residual risk (Disaster Risk Financing Policies) and instruments).



### How to think about this?

Disclose liabilities and their management plans





Identify disaster-related contingent liabilities

#### MANAGING DISASTER-RELATED CONTINGENT LIABILITIES

Quantify disaster-related contingent liabilities

<u>x=Q=</u>x

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Integrate liabilities into fiscal risk assessments and forecasting





# Putting a 'price tag' on government liabilities

#### Support planning and preparedness by acknowledging and planning for liabilities

#### **Identify** what the government pays for following shocks

Sources for identifying explicit liabilities: *legal and policy framework that determine a (central and subnational)* government's obligations to shoulder post-disaster costs.

Sources for identifying implicit liabilities: past practice, de-facto policy, implied statements of support.

Identify disaster-related contingent liabilities

Past data on government expenditures. government-backed insurance claim payments and government guarantees for public (or public-private) corporations that materialized.

**Probabilistic:** Probabilistic modelling can complement historical data and can also estimate liabilities that could arise during more extreme events that are possible but not part of the historical record.

MANAGING **DISASTER-RELATED** CONTINGENT LIABILITIES

Quantify disaster-related contingent liabilities

#### Historical:

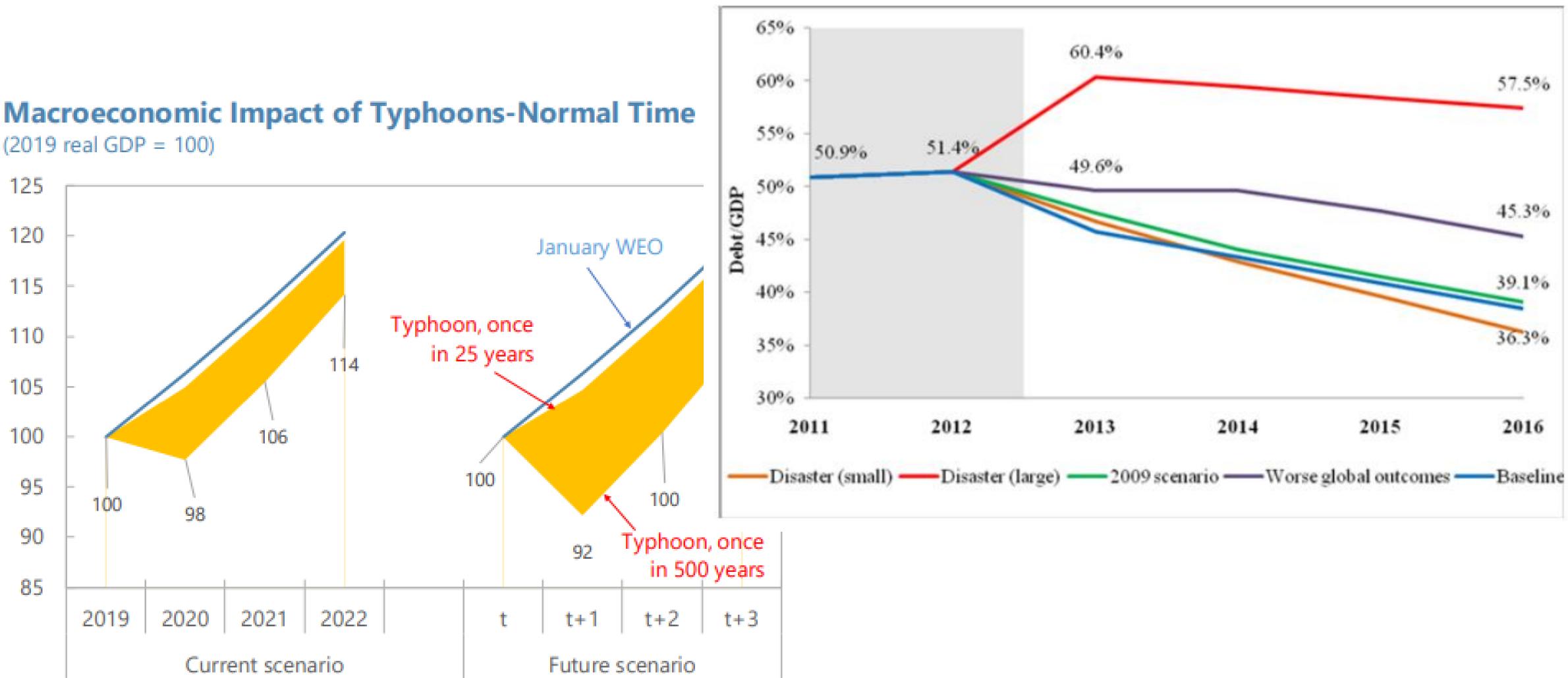




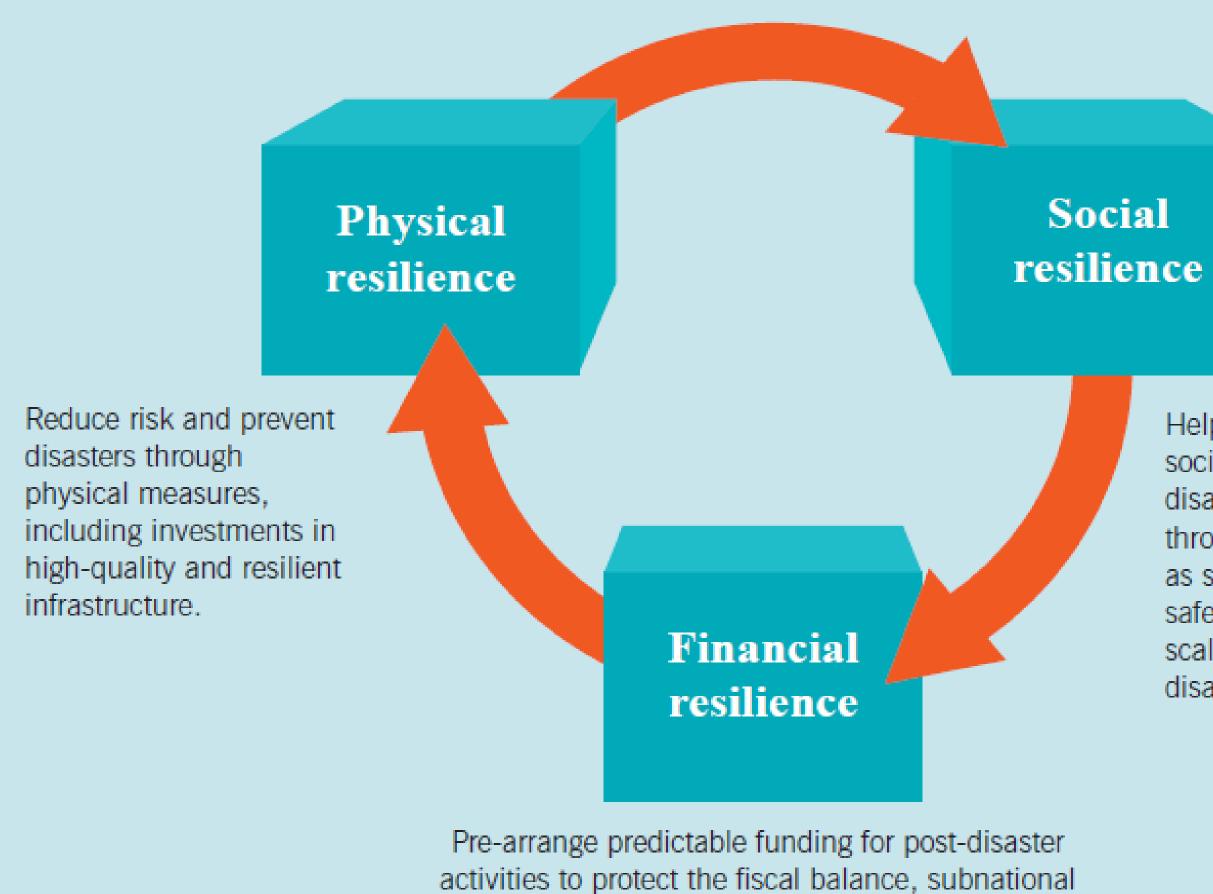


# Informing fiscal risk management and forecasting

### Macroeconomic Impact of Typhoons-Normal Time



### Mitigate liabilities and provision for residual risk



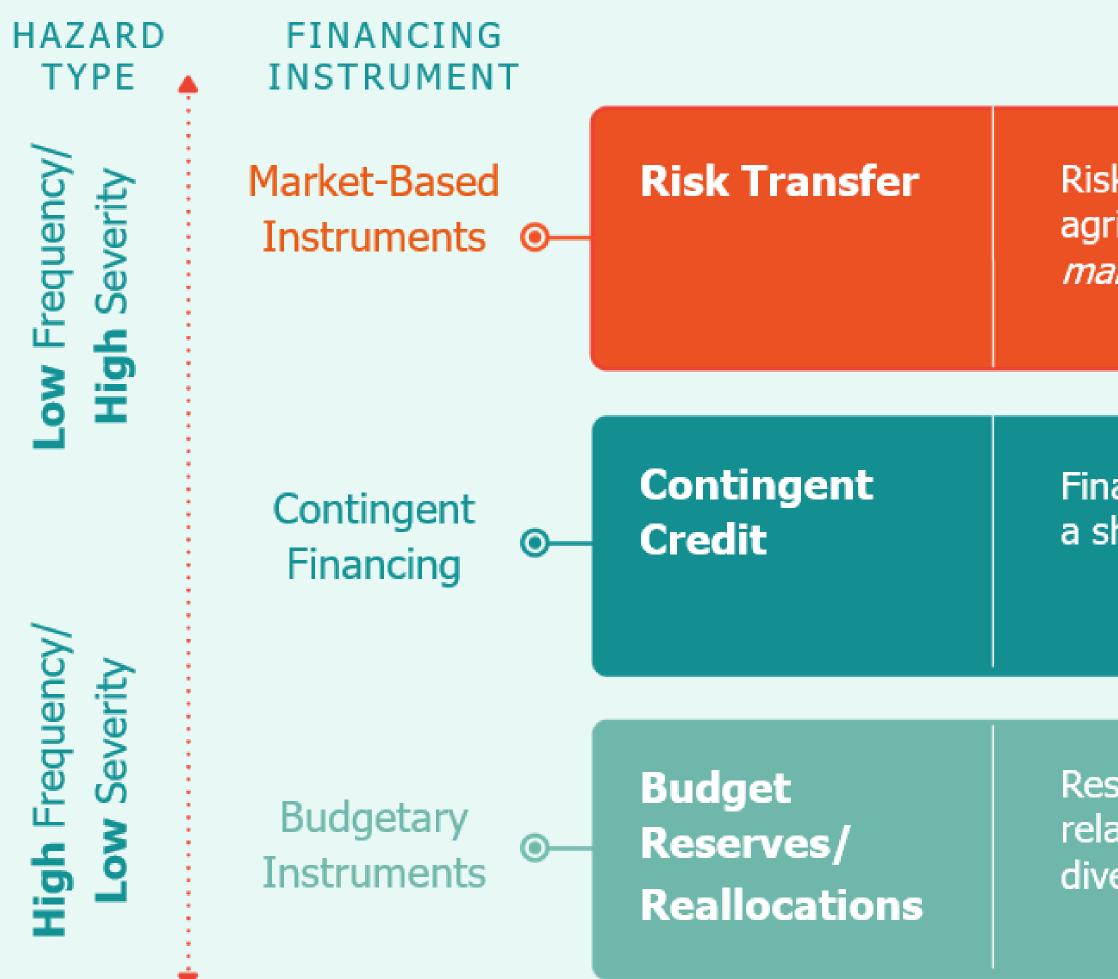
governments, households, and businesses. This is a core mandate of ministries of finance.

Help households and society cope with disaster shocks, through measures such as shock-responsive safety nets that can scale up following a disaster.

- **Clarify and Control Contingent** Liabilities
- **Reduce Moral Hazard**
- **Build resilience**
- **Provision for Residual Risk**



## Mitigate liabilities and provision for residual risk



Risk transfer for *assets* such as property insurance or agricultural insurance and risk transfer for *budget management* like paramedic insurance, cat bonds/swaps

Financial instruments that provide liquidity immediately after a shock

Reserve funds specifically designated for financing disaster related expenditures, general contingency budgets, or diverted spending from other programs



# Mitigate liabilities and provision for residual risk

### **Ex-ante**



Dedicated multi-year disaster reserve fund.



Contingency budget line drawn down in the event of a disaster.



Contingent loans arranged in advance that trigger upon a predetermined event.



(Sovereign) risk transfer instruments: Insurance, catastrophe bonds etc.



International aid: pre-arranged funding mechanisms through international donors.



Budget reallocation of funds from existing programs

**Ex-post** 



Borrowing (bonds or loans)



Tax increases



Emergency International aid







### Examples

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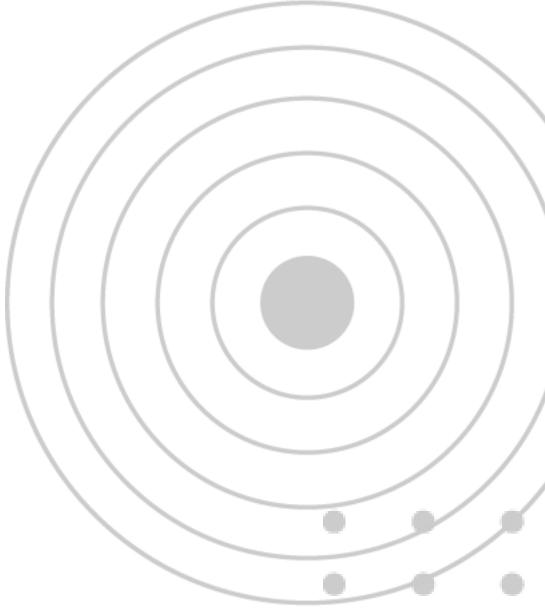
**Colombia, Chile, Mexico, and Peru**: In 2018, the World Bank issued a joint cat bond providing total earthquake coverage of US\$1.36 billion. The issuance consists of five classes of bonds to cover earthquake risks: one each for Chile, Colombia, and Peru, and two classes for Mexico.



**Indonesia:** Government of Indonesia (Gol) in 2019 initiated a program for the insurance of public assets, covering 2000 buildings of 21 Ministries / agencies by early 2021. The GoI is looking to scale up this program to include all agencies' and eventually other types of assets.



Japan: Japan's Ministry of Finance has developed a public-private earthquake insurance program for residential assets based on risk sharing between the private insurance sector and the government-backed Japan Earthquake Reinsurance Co. (JER). The Great East Japan Earthquake in 2011 resulted in total payouts of around US\$11.4 billion, with 60 percent of claims paid within two months and 90 percent within five months.







# In Summary

Benefits of identifying, disclosing and integrating disaster-related fiscal risks into macro-fiscal planning:



Inform fiscal decision on disaster and climate shock management to mitigate and/or prevent far more significant expenditure and social costs after events.



Increased focus on the social and wellbeing benefits of protecting more citizens from falling into poverty after a disaster.



Provides strong risk-based signals into fiscal policy, which can drive improved risk management across all government spending, and improved risk allocation / ownership.



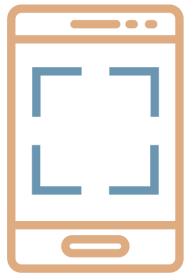
Stronger risk finance frameworks, by integrating disasters in key fiscal planning tools such as macro-models, fiscal risk statements, debt sustainability analyses, public expenditure reviews, and public investment and poverty diagnostics.



### Word Cloud: Where are you currently based?

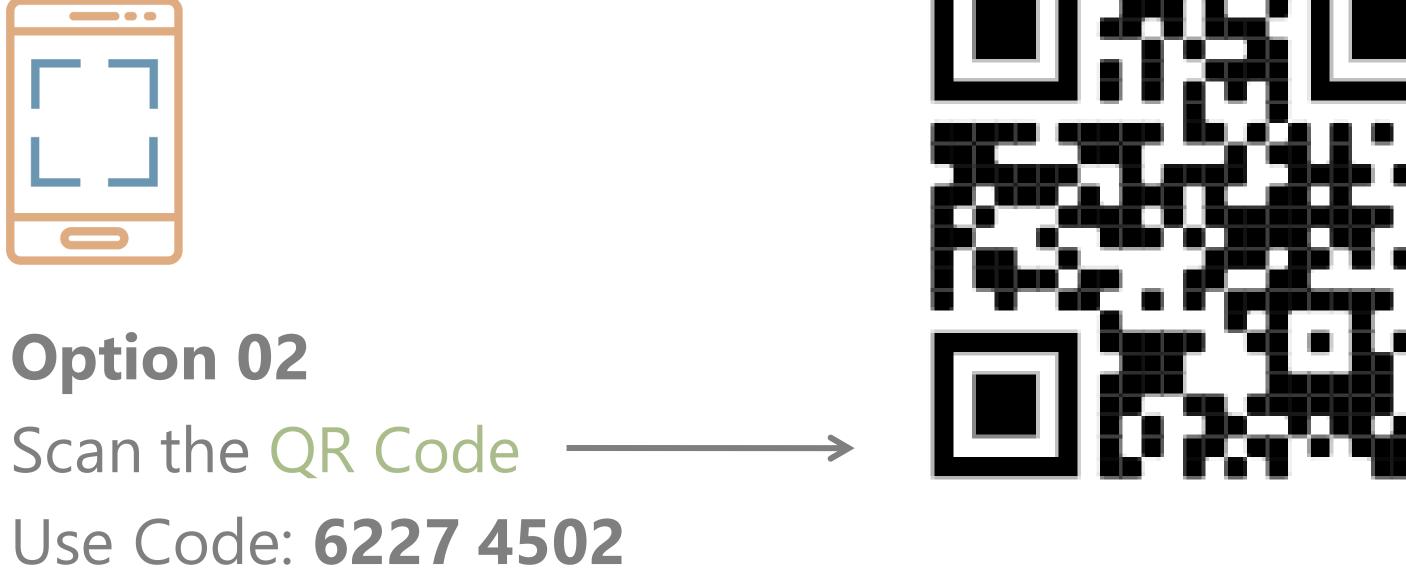


### **Option 01** Go to www.menti.com



**Option 02** 

Managing Disaster-Related Contingent Liabilities





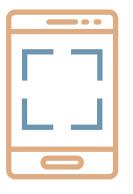
# Quiz 1

What percentage of government expenditure related to disaster resilience and response is funded as a contingent liability on the government's balance sheet? (Select one)

- 0 25 percent
- 25 50 percent
- 50 75 percent
- 75 100 percent



### **Option 01 –** Go to www.menti.com



**Option 02 –** Scan the QR Code Use Code: 6227 4502

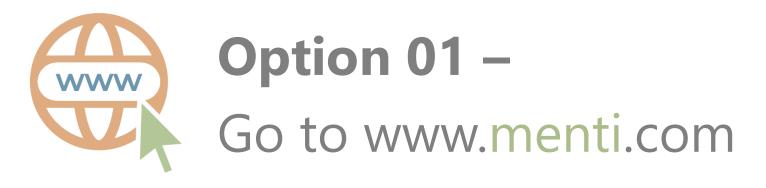


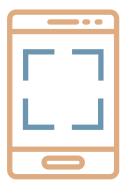


# Quiz 2

What types of pre-planned disaster financing instruments are used in your country? (choose one or more options)

- Disaster reserve fund
- Contingency budget
- Contingent credit
- Sovereign risk transfer instruments
- Pre-arranged international aid





**Option 02 –** Scan the QR Code Use Code: 6227 4502

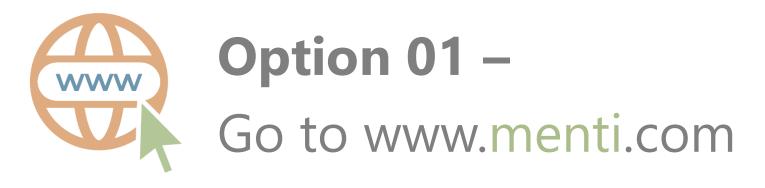


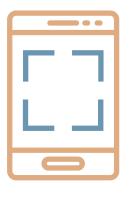


### Quiz 3

What types of disaster financing instruments are used after an event in your country? (choose one or more options)

- Budget reallocation
- Borrowing
- Tax increase
- International aid





**Option 02 –** Scan the QR Code Use Code: 6227 4502





### Managing Disasterrelated Contingent Liabilities

### Colombia

April 27, 2021

Alejandra Barragan

Coordinator, Comprehensive Risk Management Group, Ministry of Finance, Colombia

#### Disaster Risk Financing & Insurance Program



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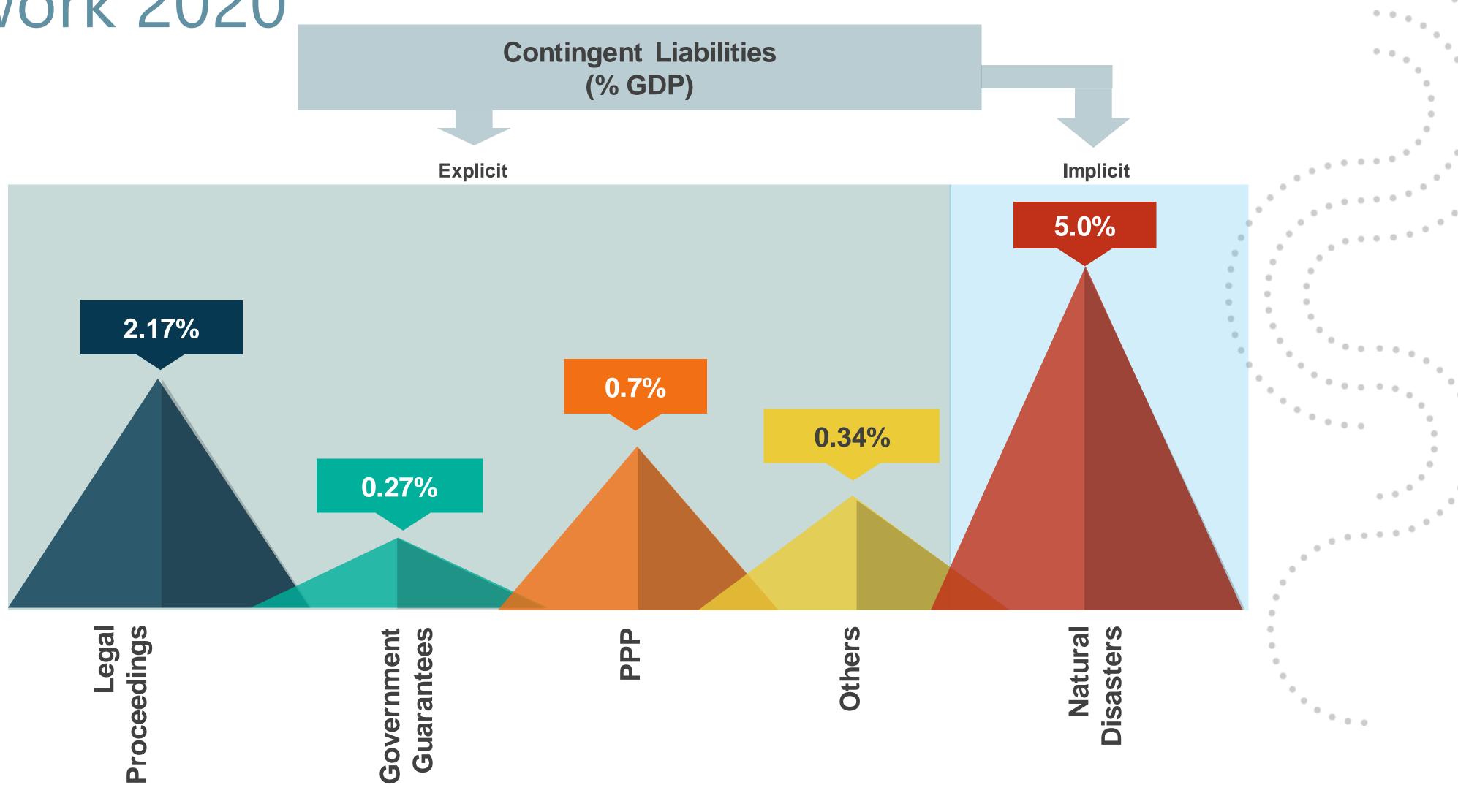
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## Contingent liabilities in the Medium-Term Fiscal Framework 2020

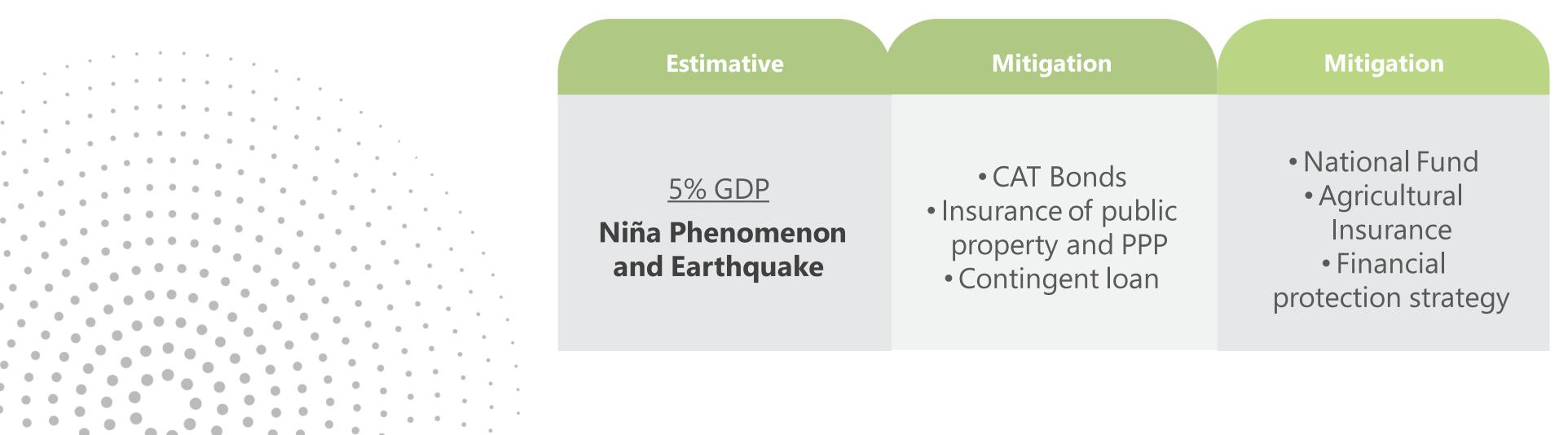




# Management of contingent liabilities

#### **Public-Private Partnerships**

Estimative	Mitigation	Estimative	Mitigation	Estimative	Mitigation
<u>0,55% GDP</u> Infrastructure Contracts	<ul> <li>Contingency Fund</li> <li>Insurance</li> <li>Risk Matrix</li> </ul>	<u>2,08% GDP</u> <b>Entities at General</b> <b>Budget of the</b> <b>Nation</b>	<ul> <li>Contingency Fund</li> <li>National Agency for the Legal Defense of the State</li> </ul>	<u>0,21% GDP</u> Guarantees granted by the Nation	<ul> <li>Contingency F</li> <li>Counter- guarantees</li> </ul>

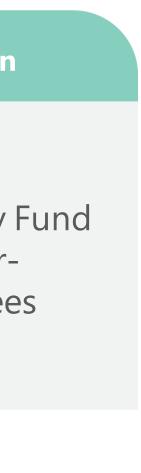


#### Legal Proceedings

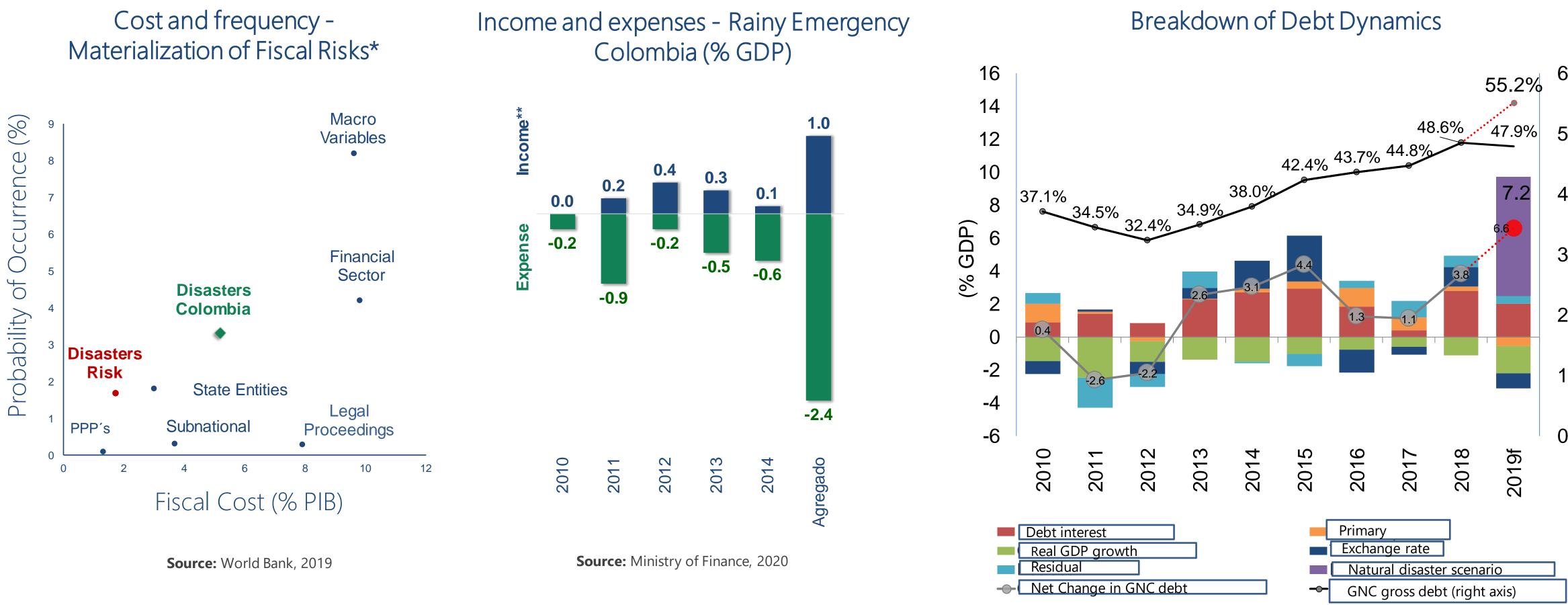
#### **Government Guarantees**

#### **Disaster Risk**





### Sources of fiscal risks / contingent liabilities

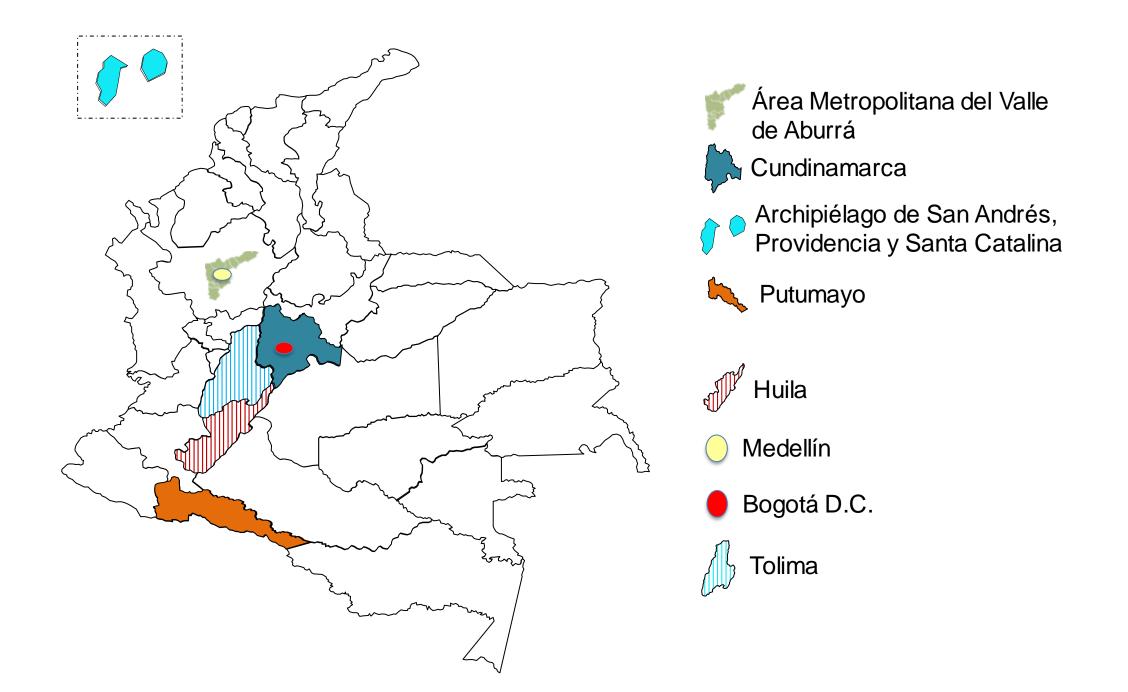


\* Survey conducted by the World Bank in 2013. It includes 31 OCDE countries and 2 non-OCDE countries (Brazil and South Africa) \*\* The income corresponds to the allocation of a quarter of the 4x1000 tax to attend the effects of the rainy season





# Progress in DRF, including DRF at sub-national level





Colombia: Estrategia de política de gestión financiera pública ante el riesgo de desastres por fenómenos de la naturaleza



Colombia: Lineamientos v objetivos para el aseguramiento de los bienes fiscales ante la ocurrencia de desastres por fenómenos de la naturaleza







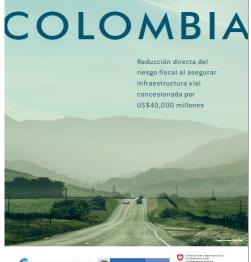
Preguntas Frecuentes sobre Aseguramiento

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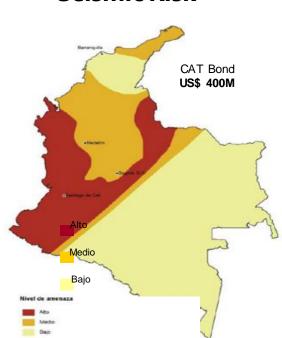


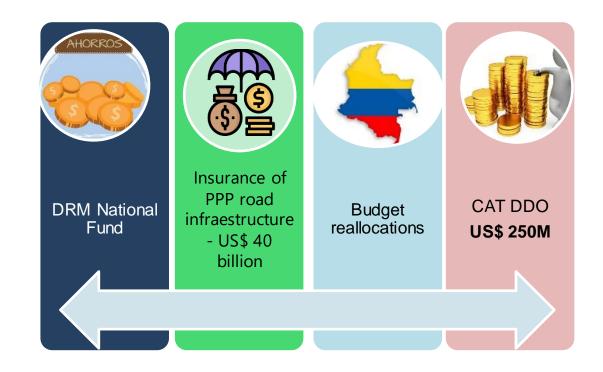






#### **Financial** Instruments





#### **Seismic Risk**



### Managing Disasterrelated Contingent Liabilities

Albania

April 27, 2021

Majlinda Demko, Advisor to the Minister of Finance and Economy, Albania

#### Disaster Risk Financing & Insurance Program



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### Albania's steps to manage contingent liabilities



#### **Understanding the size of contingent liabilities:**

the government works on assessing risks originating from PPPs, SOEs (energy, etc.) and exploring disaster risks



#### **Establishing legal and institutional frameworks:**

the government established the Fiscal Risk Unit within the Budget Department of the Ministry of Finance and Economy with objective to understand, record and disclose fiscal risks



Monitoring of the government progress in managing contingent liabilities and Disclosure: the government publishes the fiscal risk statement annually

#### Managing Disaster-Related Contingent Liabilities

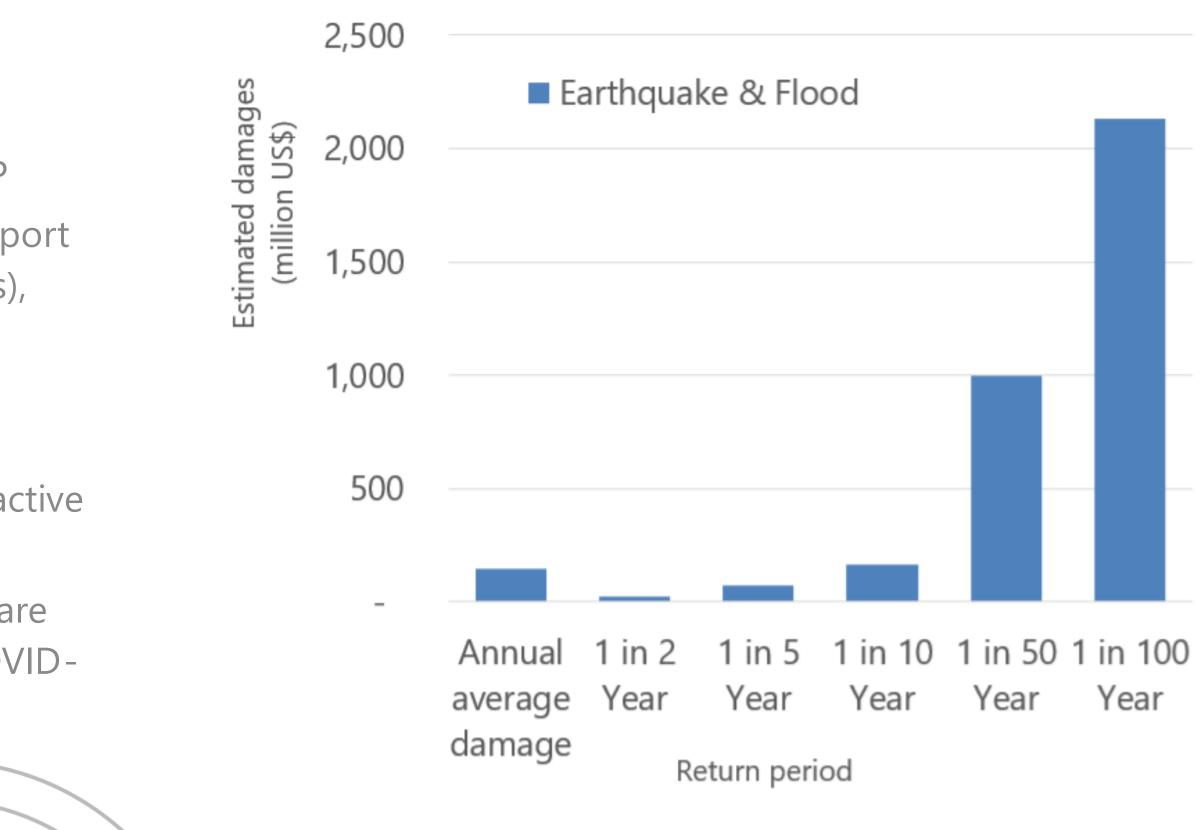




# Albania is prone to natural disasters

- **Frequent disasters**, including the recent earthquake in 2019 and floods in 2021 (amid the COVID-19 pandemic)
- World Bank assessment:
  - Average annual losses are around US\$ 147 million
  - Losses after a major earthquake can exceed 15% of GDP
- The government is responsible for emergency response, we support the affected population (for example, reconstruct private houses), reconstruct public assets – these are often financed through **budget cuts and borrowing**
- Albania is working on the **development of the Disaster Risk Finance Strategy**, which will help to move from reactive to proactive approach
- To better manage disaster-related contingent liabilities, we are working on the assessment of fiscal impacts of disasters and COVID-19 expenditure analysis together with the World Bank

#### World Bank Assessment of Disaster Risks in Albania





### Assessment of fiscal impacts of disasters

The assessment will include:

- Mapping of disaster risk to prioritize scenarios
- **Estimation of fiscal impacts of selected disaster scenarios on the balance sheet** 
  - Impacts of disasters on expenditures such as through reconstruction public assets,  $\bigcirc$ compensation to the population, reconstruction of the private housing, emergency response costs
  - Impact on revenues such as through the impact of disasters on businesses and households  $\bigcirc$
  - Impact relative to total expenditures and GDP  $\bigcirc$

#### Results of AIR Worldwide catastrophe risk model for Albania: some scenarios of disaster impacts

### Earthquake

Exceedance Probability	Loss (All Billions)	Magnitude	Event Depth (Km)	Country
10.0%	12.19	6.3	9.6	Vlora
4.0%	43.42	6.0	4.7	Tirane
2.0%	102.32	6.4	10.1	Dibër, Tirana

#### Managing Disaster-Related Contingent Liabilities

### Floods



Exceedance Probability	Loss (All Billions)	Predominant Counties	Month of the Year	Duration (Days)
10.0%	5.83	Tirane, Lezhe	May	18
4.0%	11.55	Durrës, Fier	July	27
2.0%	18.59	Fier, Berat	October	20



### COVID-19 expenditure analysis



### **Purpose of the research:**

When a disaster hits Albania, the Government has to reallocate some of its budget to emergency response – either by moving money between budget lines or through normative budget acts. This research is looking to quantify the scale of these reallocations (in the case of COVID) and their **impact** – in terms of the opportunity cost of the returns foregone from the delayed/cancelled expenditures.

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### **Headline Findings**

At the level of programmes and economic classifications; total under spends against the counterfactual equal LEK 20bn (~\$200 million). *Counterfactual = modelled estimate of what spending would have* looked like in 2020 without the COVID.



### **Implication**:

With additional disaster risk financing, some of this **LEK 20bn** could have continued and would have produced some economic value.



#### Next steps:

Further refine the data; carry out interviews and economic analysis to understand the impact of these reallocations (what returns could GOA expect, had the spending gone ahead).



### Managing Disasterrelated Contingent Liabilities

Nepal

April 27, 2021

**Anil Pokhrel** Chief Executive, National Disaster Risk Reduction & Management Authority, Nepal

#### Disaster Risk Financing & Insurance Program





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Government of Nepal Ministry of Home Affairs National Disaster Risk Reduction & Management Authority



# Background

The World Bank supports the Government of Nepal implement its Disaster Risk Financing Strategy

#### **Objective:**

Minimize the financial impact of losses to private and public assets through implementing **an** appropriate risk layering strategy.

#### Implementation:

To maintain a sound fiscal balance at Federal, **Provincial and Local** after disasters by

- 1. Estimating the government's exposure to contingent liabilities arising from natural disasters for improved understanding of the potential financial risk to government.
- 2. Developing catastrophe risk models to simulate the impacts of natural disasters and quantify the probability of damage and loss.

To establish pre-arranged financing mechanisms, including a sovereign financial

**Instrument**, to provide immediate liquidity at the onset of a disaster.

Low Frequency / High Severity High Frequency / -ow Severity

#### **Disaster Risk Financing Instruments**

Sovereign Risk Transfer Ex: Bonds or Insurance

(Re) Insurance to banks, **Insurance and Financial** Service provider, Organizations and Cooperatives

Catastrophe Fund: Public service Infrastructures, Ex: Heritage Sites

Agriculture Insurance

Household Insurance (Domestic **Insurance Sector**)

**Contingent Credit: CAT-DDO** 

Budgetary Instruments: Budget Reallocation, Prime Ministers; Relief Fund, National Disaster Management Fund, Provisional Disaster Risk Funds, Local Disaster Relief Funds





# Identification of contingent liabilities

#### **Objective:**

#### Identification of the Government of Nepal's liabilities that may arise when natural disasters occur.

The analysis is on-going, and we are collecting and analyzing three types of information:

- **Expenditure data**, over a 5-10 year period, broken down by entity and type of expenditure. We are interested in understanding how much was spent, where the expenditure originated e.g. dedicated fund or budget line, and how it was financed
- **Qualitative information** to understand what happened for past disasters
- **Relevant policies and procedures** that guide expenditure decisions after a disaster









# Estimation of contingent liabilities

#### **Direct Estimation of Contingent Liabilities**

	2015 Earthquake	2016	2017	2018	2019	2020
Total post-disaster expenditure (NPR Million)	21571	46672	66004	135227	104888	64387
Total post-disaster expenditure (converted into USD Mil as per end-of-year exchange rate)	lion 200	425	643	1205	906	543
Post-disaster expenditure as % of total government expenditure (%)	4.06	7.77	7.88	12.44	9.45	10.54
Post-disaster expenditure per capita	769	1639	2285	4617	3531	2138
Post-disaster expenditure as % of GDP (%)	1.01	2.07	2.47	4.44	3.03	1.71
Average Annual Loss			•		• • • • • • • • • • • • • • • • • • •	
Flood \$80 Million	0 0	• •	•	•	• •	• •
Earthquake \$270 Million			•		•	•
Combined \$350 Million			•••••••		•	•

#### Managing Disaster-Related Contingent Liabilities

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Reconstructed School Building Post Earthquake



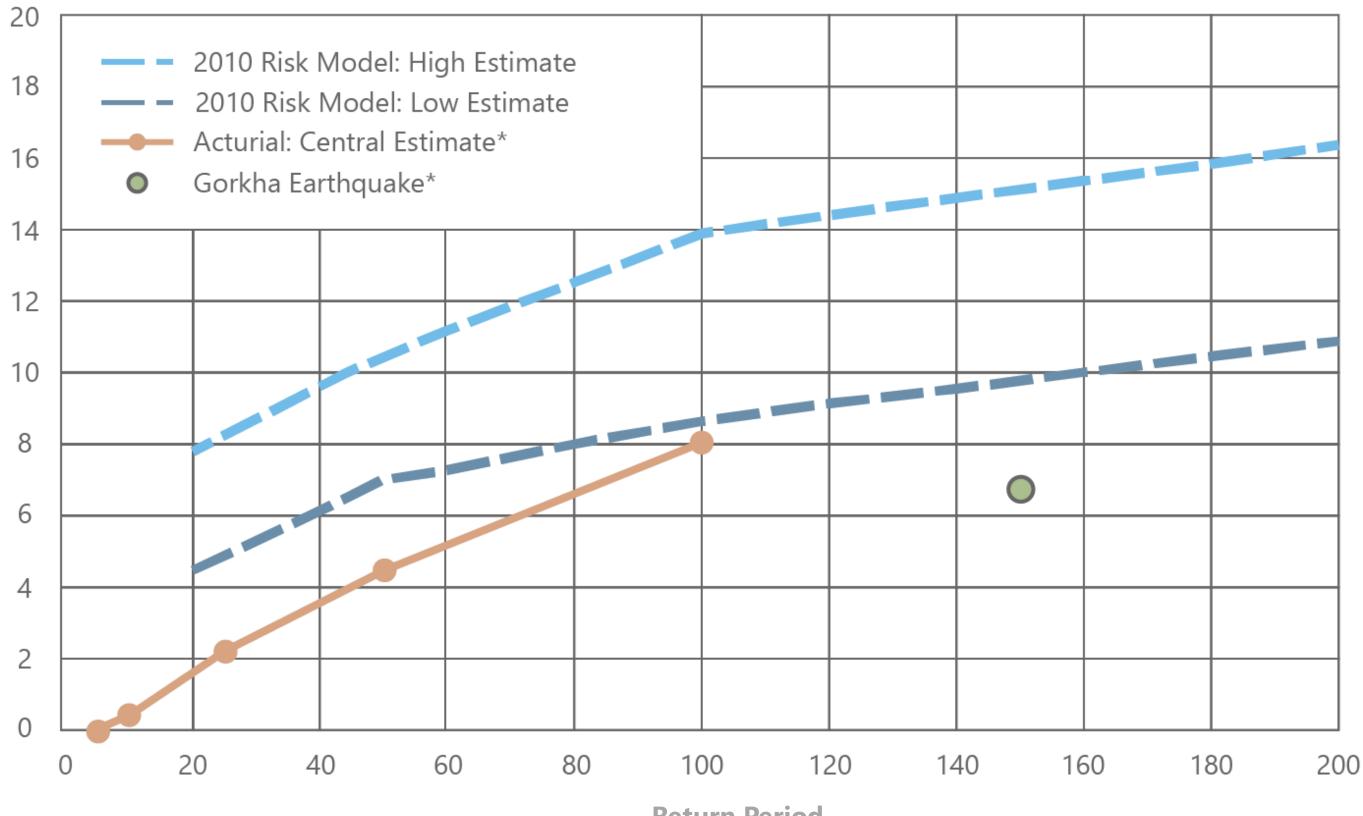
## Estimation of contingent liabilities

Damages (\$Billions)

#### **Actuarial Risk Analysis:**

- Analysis for flood indicates losses could, on average, exceed **\$10 Million every four** years, \$50 Million every six years
- Limited loss events for earthquake results in greater uncertainty in actuarial analysis However, losses could be expected to exceed **\$4 Bn every 50 years**
- A protection gap exists above current financing arrangements – requires Disaster **Risk Finance and Insurance solutions**

#### **Existing Risk Assessments - Combined Earthquake and Flood**



**Return Period** 

# Key findings and options going forward

### **Key findings**

- Disasters are a **major liability** to the Government of Nepal and can at least double expenditures as shown by the 2015 EQ
- Nepal has many dedicated funds at federal, provincial and local level, budget lines and post-disaster budget reallocations, but not all allocated capital gets spent. Guidelines for use of funds as well as post disaster expenditure tracking remain incomplete.
- Nepal's domestic insurance market remains underdeveloped. Earthquake and COVID-19 are currently the only disaster risk-related products available, albeit in very limited forms, as knowledge of disaster impacts and insurance development expertise is limited
- Catastrophe risk models are available to develop a Disaster Risk Financing product for earthquake but not for flood model will need to be developed
- Opportunity to use catastrophe risk models within the domestic insurance market (regulators, Nepal Re, private insurance companies)

### **Options going forward**

- Conduct a **funding gap analysis** and strengthen public financial management systems
- Identify the optimal mix of instruments for disaster response including budget reserves, reallocations and risk transfer
- Strengthen post disaster public financial management including budget execution, mobilization and reporting
- **Strengthen cat risk modeling** to enhance existing market
- Develop an implementation plan for National DRM Strategy



### Roadmap

#### Activity

CL Report: Government of Nepal – Obtain remaining financial inform share with GoN for feedback, to be followed by World Bank Worksho **Contingent Liabilities** 

Strategy: Work on implementation plan for National DRM Strategy

Cat risk modelling: Appointment of catastrophe risk modeling firm, f cat risk modeling

Workshop on structure of potential risk transfer instrument, final risk developed

Coverage from risk transfer instrument in place



	Expected Delivery
nation on and op on	April – June 2021
	Q3, 2021
first results of	Dec 2021
k transfer	Until Q1/2 2022
	Q2 2022





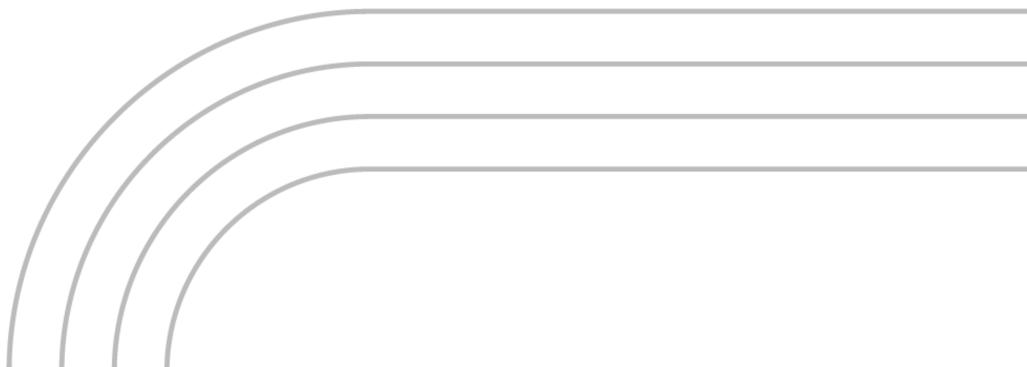


#### Managing Disaster-Related Contingent Liabilities



### Jean Pesme

Global Director, Finance, Competitiveness and Innovation Global Practice, World Bank Group







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





### Scan the QR code to join the Disaster Risk Finance **Community!**





# Next Webinar

Managing Disaster-Related Contingent Liabilities

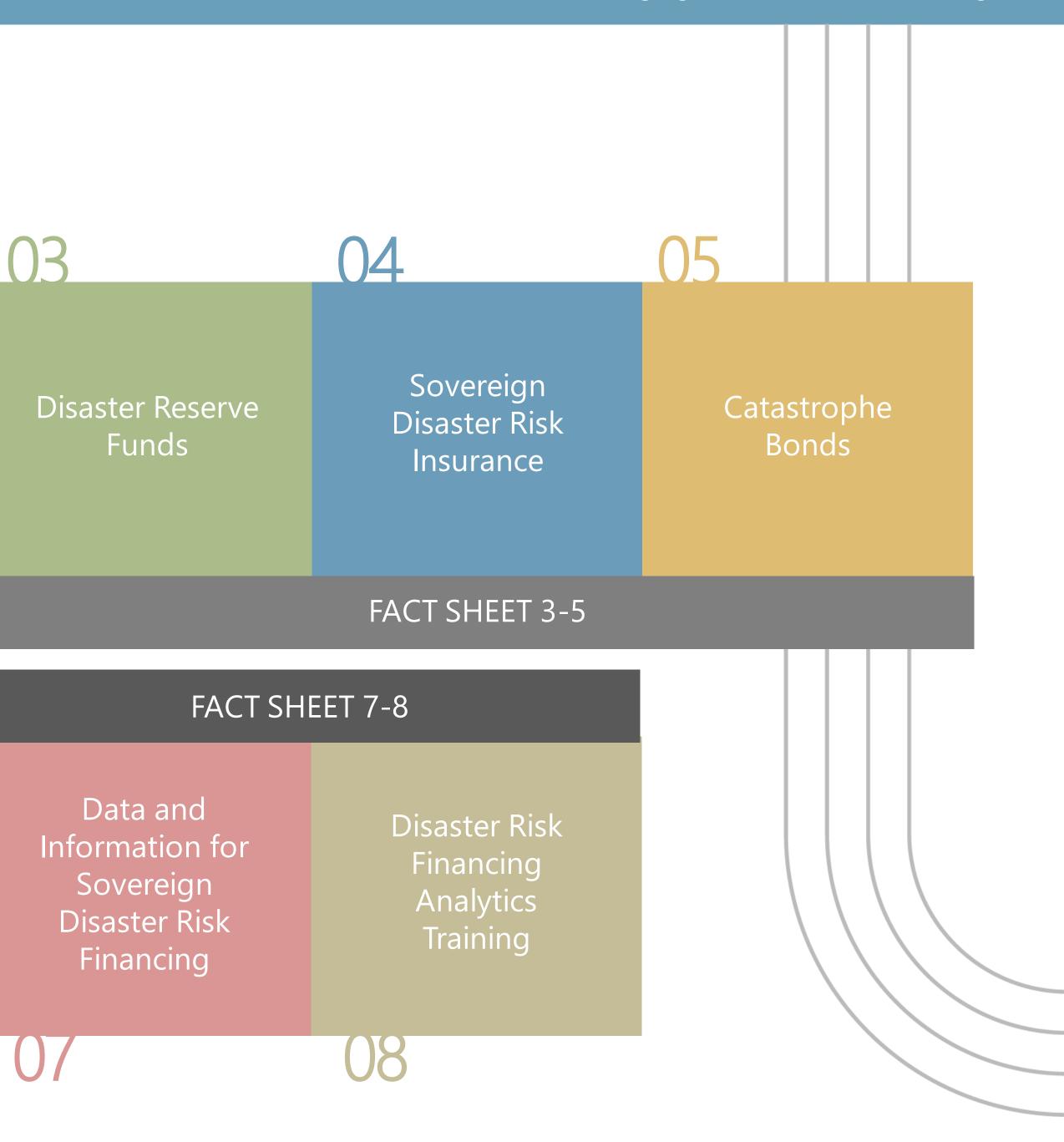
**Fiscal and Financial Resilience for Sub-national** Governments

#### FACT SHEET 1-2

#### FACT SHEET 6

Catastrophe Risk Insurance Market Development

#### Managing Disaster-Related Contingent Liabilities







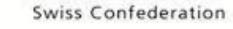


#### Disaster Risk Financing & Insurance Program

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