

DISASTER RISK FINANCING

ADB Operational Innovations in South Asia

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with input from

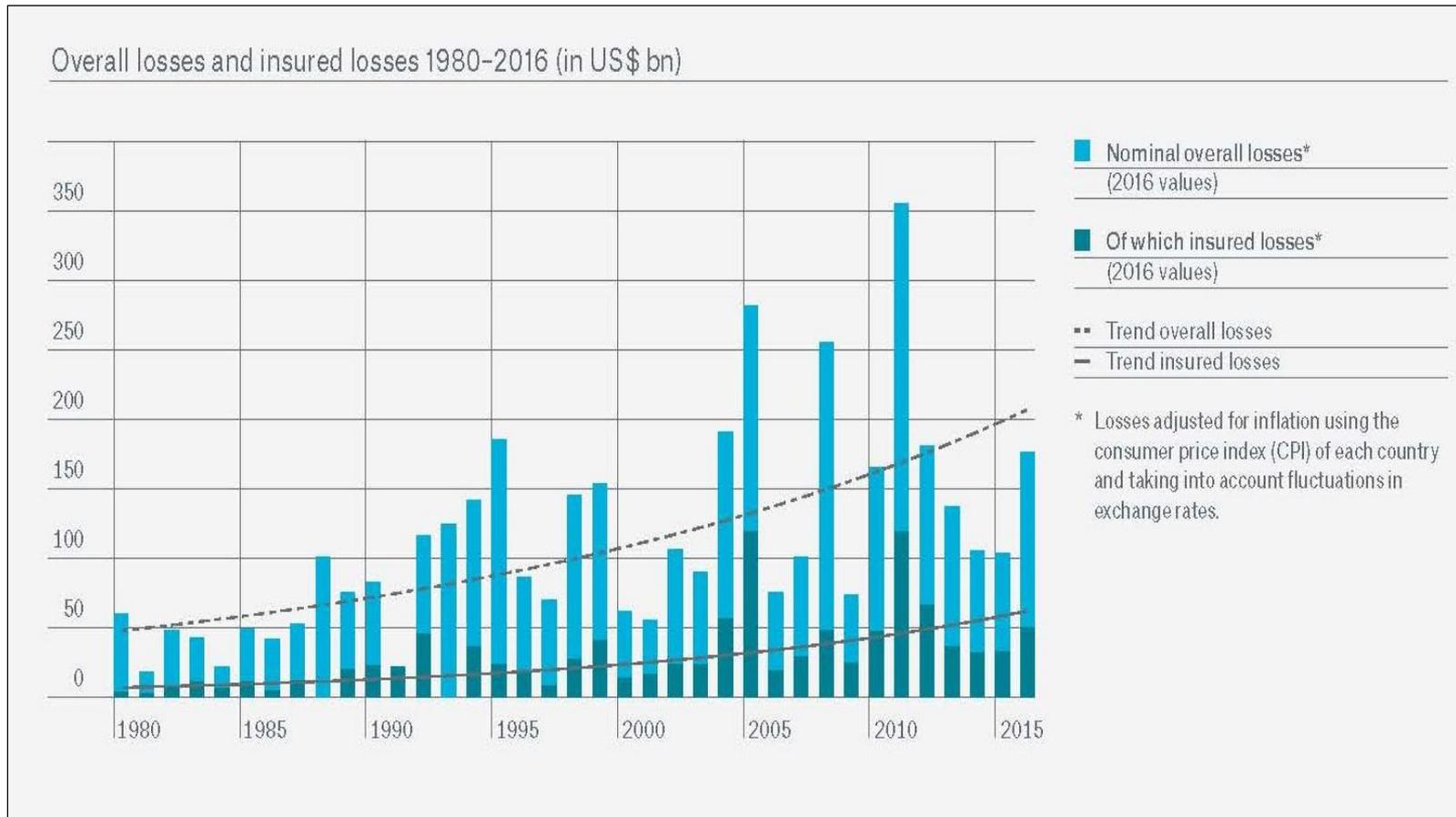
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Global Disaster Losses 1980-2016



Source: Munich Re: <https://www.munichre.com/topics-online/en/2017/topics-geo/overview-natural-catastrophe-2016>

ADB's Asia Pacific Disaster Response Fund

Grants to South and South West Asia totaling some \$ 15 million.

- 2010/11 Pakistan Flood response
- 2011 Sri Lanka Flood response
- 2011 Afghanistan Drought response
- 2015 Nepal Earthquake response
- 2016 Sri Lanka Flood and landslide disaster response
- 2017 Sri Lanka Flood and drought disaster response

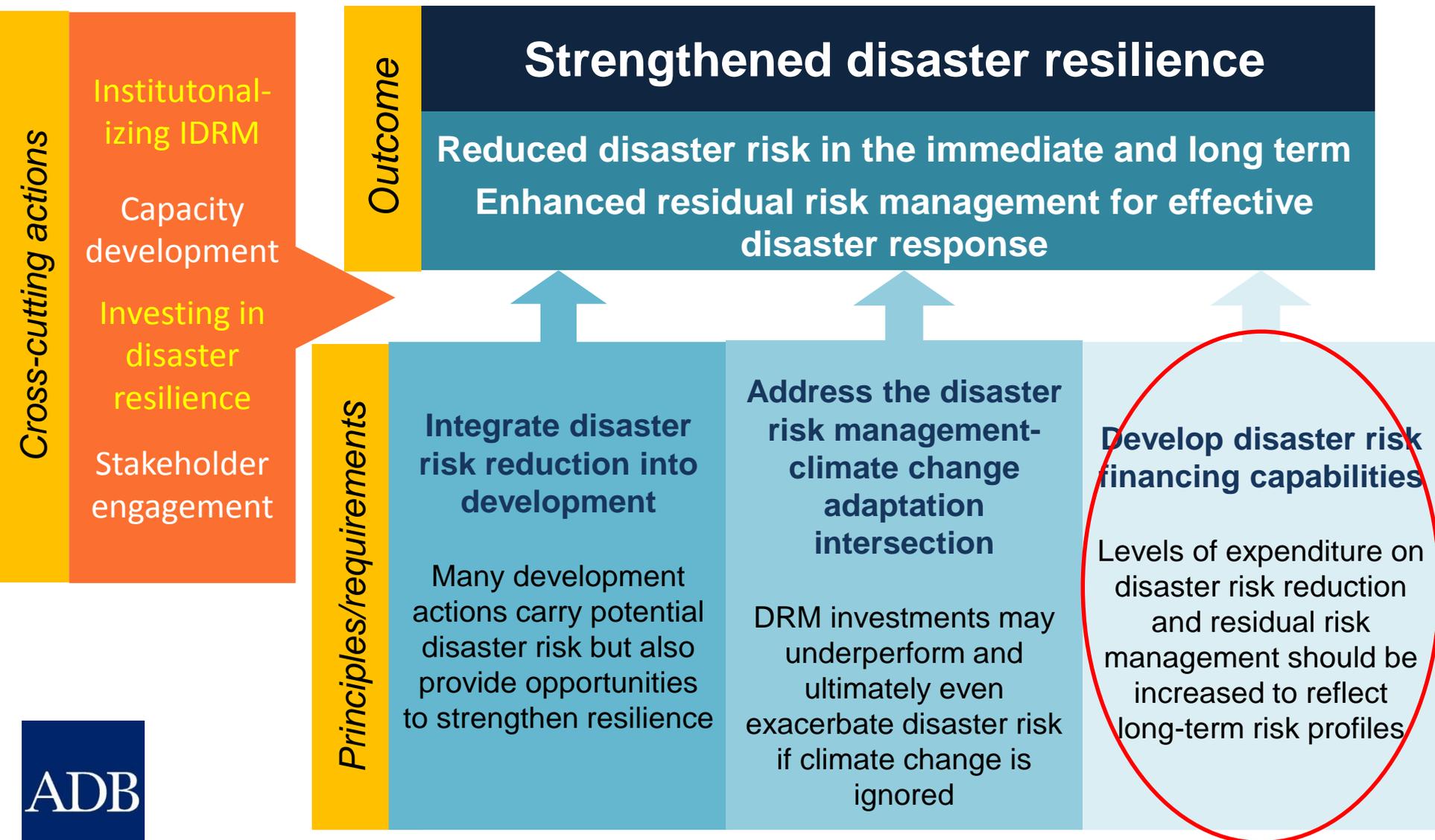
Benefits:

- Timely, flexible and quick-disbursing source of stopgap financing in the immediate aftermath of disasters

Challenges:

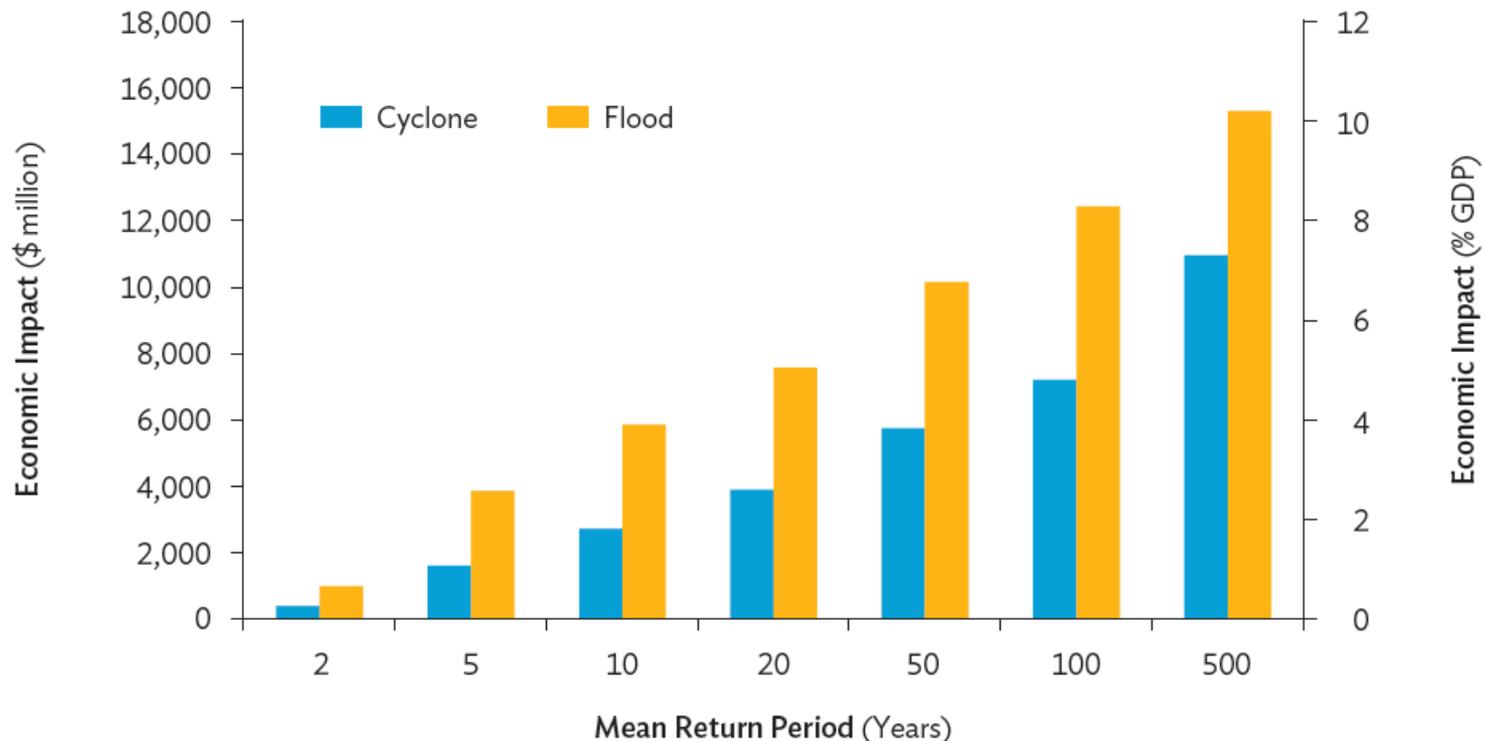
- Limited evidence is available on the impact of APDRF grants
- Grant implementation, liquidation and auditing
- Capacity development of government counterparts

ADB's Integrated DRM Approach



Bangladesh Tropical Cyclone/Flood Probabilistic Risk Assessment

Figure 2: Tropical Cyclone Modeled Risk Model of Bangladesh



GDP = gross domestic product.

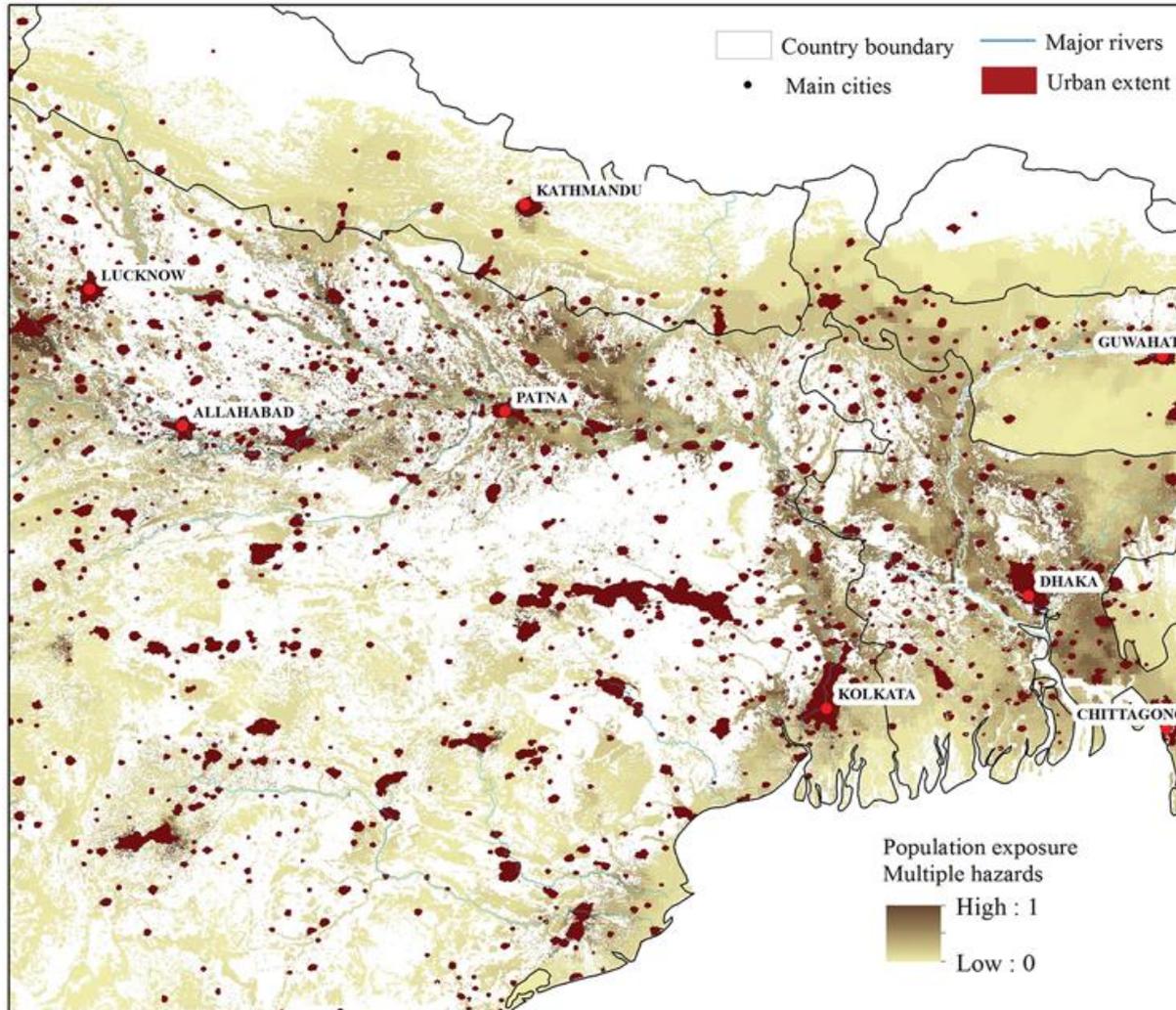
Source: ADB. 2015. *Capacity Building for Disaster Risk Finance in Bangladesh*. Consultant's report. Manila (TA8144-BAN).

Source: *Disaster Risk Financing in Bangladesh*. ADB South Asia Working Paper no. 46, Manila, September 2016.



Exposure to Climate-related Hazards

Spatial Risk Assessment



Source: IWMI
Research Report 170,
Colombo, 2017

Current DRF Realities

- Expenditure on disaster reduction is limited as more pressing demands on public resources take priority

For every \$100 spent on development aid in ADB's DMCs, just 60 cents was invested on disaster risk reduction between 1991 and 2000

- Governments typically have ad hoc financing arrangements for disaster response, relying heavily on post-disaster budget reallocations
- Post-disaster aid covers 4% of total losses on average
- There is extremely low penetration of market-based risk transfer instruments

Late and inadequate flows of post-disaster funding delay reconstruction and knock prior development plans off course

ADB's DRF Goals and Approach

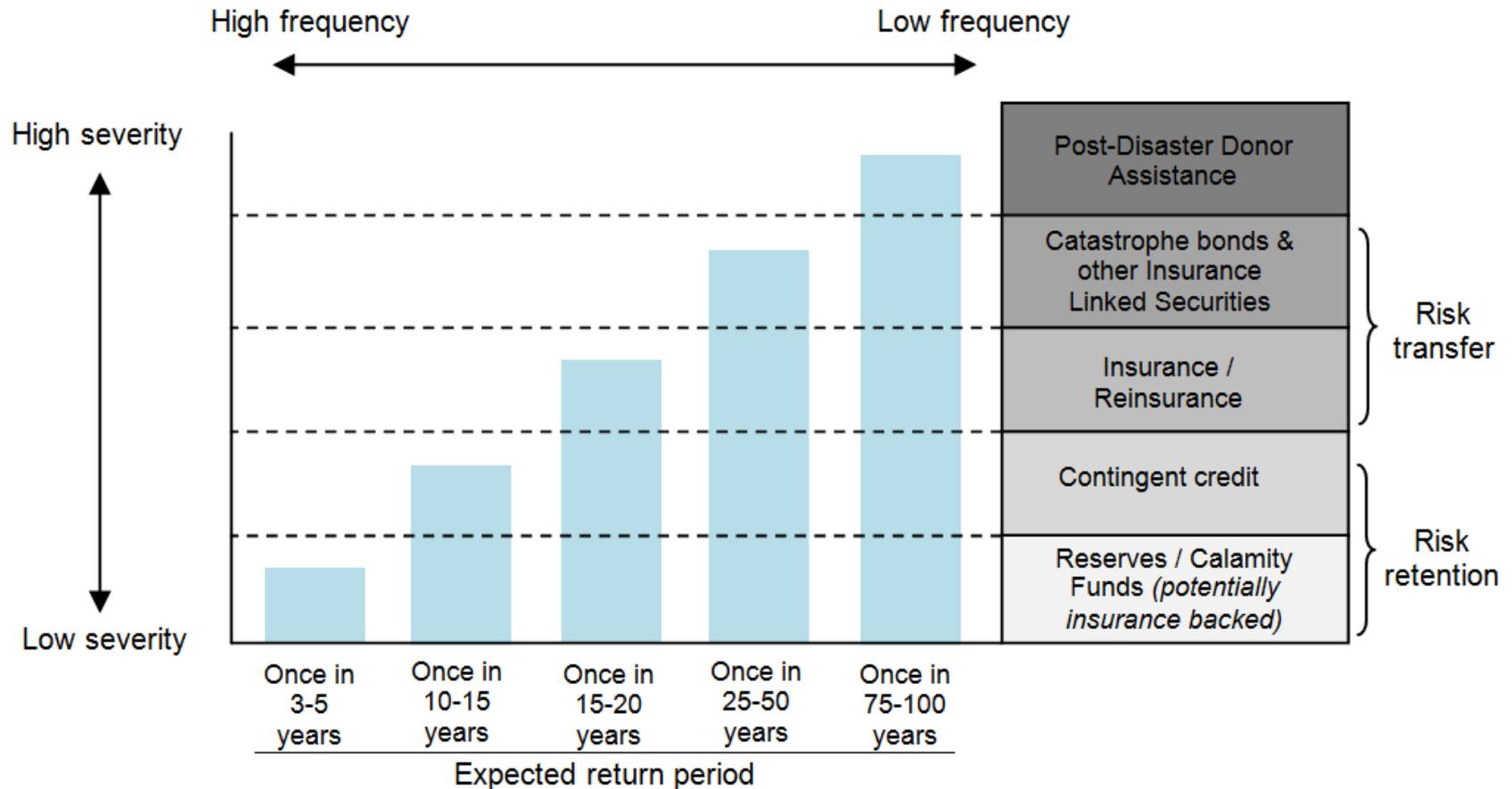
Goals

- Develop and implement financially sustainable, scalable disaster risk financing (DRF) strategies and solutions
 - applying a risk layered approach
 - stimulating the development of commercial risk transfer markets

Approach

- Embed disaster risk financing solutions within broader efforts to strengthen disaster resilience
- Work in close coordination with governments, global and regional disaster risk financing initiatives and the insurance industry

Risk Layered Approach



Source: Adapted from World Bank, 'Financial Protection of the State Against Natural Disasters - A Primer', 2010.

ADB DRF Activities 1/2

1. Strengthening the enabling environment

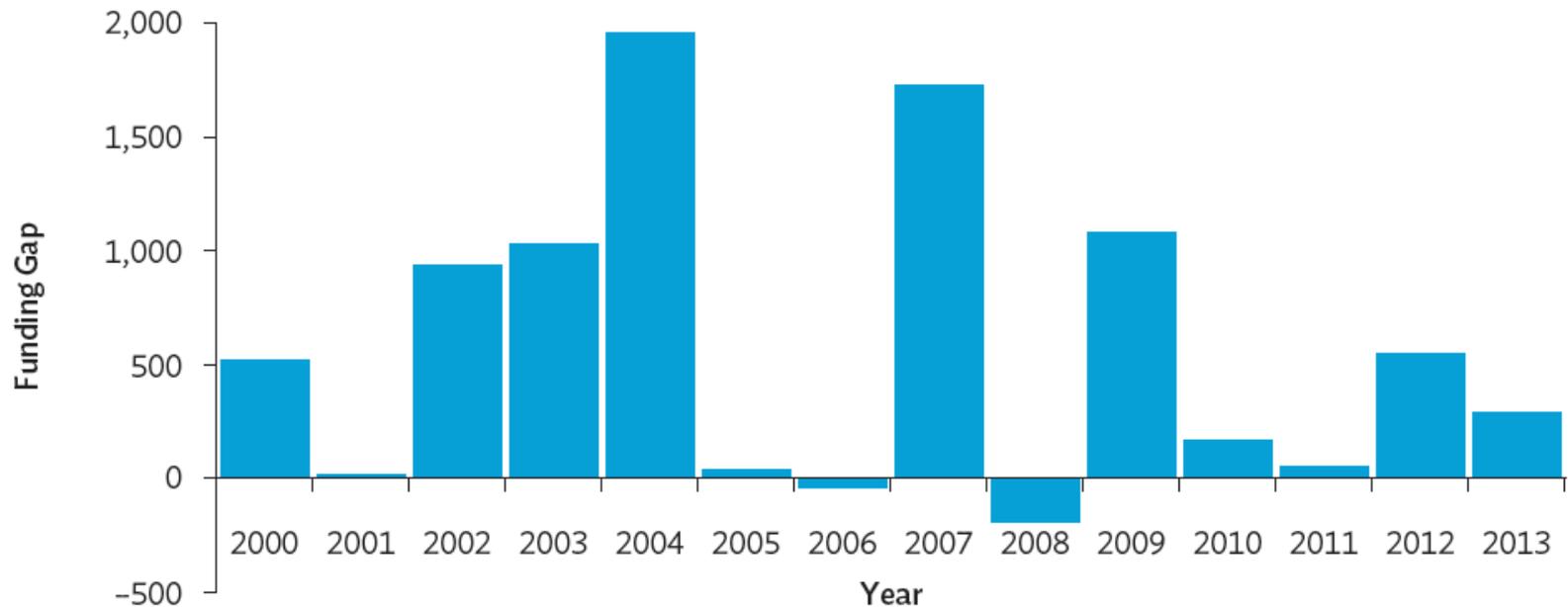
- Analysis of demand and supply constraints to the development of enhanced DRF arrangements (Fiji, Myanmar, Nepal, Pakistan, Sri Lanka)

Supply	Demand
Data limitations Legal and regulatory gaps Capital requirement deficiencies	Affordability Trust Financial literacy

- Assessments of disaster risk, associated fiscal burden and funding gaps (Bangladesh, Pakistan)
- Development of comprehensive national DRF strategies (Myanmar, Pakistan)
- Strengthening technical knowledge and understanding (cities in Indonesia, Philippines, Viet Nam)
- Leveraging funding to support innovation (e.g., Asia Climate Finance Facility)
- Developing diagnostics materials and other knowledge products

Bangladesh DRF Gap

Figure 7: Funding Gap of Catastrophes in Bangladesh, 2000–2013
(\$ million)



Source: ADB. 2015. *Capacity Building for Disaster Risk Finance in Bangladesh*. Consultant's report. Manila (TA 8144-BAN).

Source: *Disaster Risk Financing in Bangladesh*. ADB South Asia Working Paper no. 46, Manila, September 2016.

Bangladesh DRF Instruments

Sovereign Options:

- Contingency credit (most frequent events)
- Parametric risk transfer (less frequent events)

Non-sovereign Options:

- Conventional insurance markets (property/catastrophe/agriculture) are not well developed
- Relative strong microfinance sector
- Weather index insurance

Sri Lanka Enabling Environment for DRF

Recommendations from Draft Action Plan (excerpts....)	Timing ¹ and references
Develop a disaster risk financing strategy following the risk layered approach. (government – Ministry of Disaster Management)	Immediate. Par. 8
Develop a comprehensive disaster risk model and mapping. (Insurance Association of Sri Lanka, Ministry of Disaster Management and government)	Immediate. Par. 9
Quantify government-owned infrastructure and assets exposure to disasters and decide on their level of protection. (government – Ministry of Public Administration)	Near term. Par. 10
Consider disaster contingent loans (Ministry of Finance)	Near term. Par. 11
Formulate a government policy on the use of risk transfer instruments for DRF. (government)	Immediate. Par. 15
Separate agricultural insurance and pension provision activities of the Agricultural and Agrarian Insurance Board (government)	Near term, Par. 18
Supervise the Agricultural and Agrarian Insurance Board insurance activities. (government, Insurance Board of Sri Lanka)	Near term, Par. 19
A coordinated approach to the crop insurance levy's accumulated fund and subsidies is recommended. (government)	Near term, Par. 20
Explore provision for insurance for smallholder tea growers. (government)	Near term, Par. 22
Expand the number of automated weather stations and the weather forecasting skill-sets. (government and Department of Meteorology)	Near term, Par. 23
List continues....	Near term. Par. 25

Source: *Action Plan to Strengthen the Enabling Environment for Disaster Risk Financing in Sri Lanka*. ADB draft, Manila, 2017



Sri Lanka ADB DRF Proposal (draft)

Outcome:

- Improved government financial preparedness for disaster relief, early recovery and reconstruction

Outputs:

- 1) Government's disaster risk financing guidelines developed
- 2) A stand-by disaster risk contingent credit facility established
- 3) Government's fiscal and budgetary management capacity for disaster responses improved

ADB DRF Activities 2/2



2. Development of individual products

- Contingent disaster loans: Cook Islands, Pacific regional contingent savings facility (scheduled for Dec 2017 approval), Palau (pipeline)
- Insurance pilots: Cambodia, Bangladesh, Pakistan (forthcoming Pakistan National Disaster Risk Management Fund)
- Establishing risk pools: Philippine city governments
- Microfinance-linked products

Lessons Learned from ADB Weather-Index Based Crop Insurance in Bangladesh 1/2

- WIBCI helps farmers protect their livelihood and reduce poverty risk
- WIBCI protects farmers against weather related loan default and facilitate access to micro-credit
- Subsidy on premiums has been instrumental to convince farmers for taking up the crop insurance
- Focus Group Discussion (FGD) and awareness programme were used to educate farmers
- NGOs-MFIs has been important distribution channel for reaching poor farmers

Lessons Learned from ADB Weather-Index Based Crop Insurance in Bangladesh 2/2

- Strong positive response and demands, especially from beneficiaries and stakeholders
- Availability and transparency of weather data is important for generating WIBCI products and even claims settlement
- Using mobile banking for premium collection and claims settlement would reduce both costs and time, and lessen the probability of fraud incidents
- Because of greater capacity and practicality, involving private insurance companies in piloting would help future scale up of WIBCI

DRF Challenges and Potentials

- Incomplete and uneven loss and damage data → Modelled data and probabilistic risk assessments
- Propriety risk models → Open data and free software
- Create demand for ex-ante DRF products → Client education to build knowledge, understanding and trust
- Legal and regulatory ambiguity → Research and harmonization across hazard zones
- Insufficient marketing and distribution channel → Develop microfinance institutions or other community networks
- Affordability for low income households → Enhance legal and reinsurance infrastructure

Thank You!

