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Financing Disaster Risk Reduction: Fundamentals and Practices

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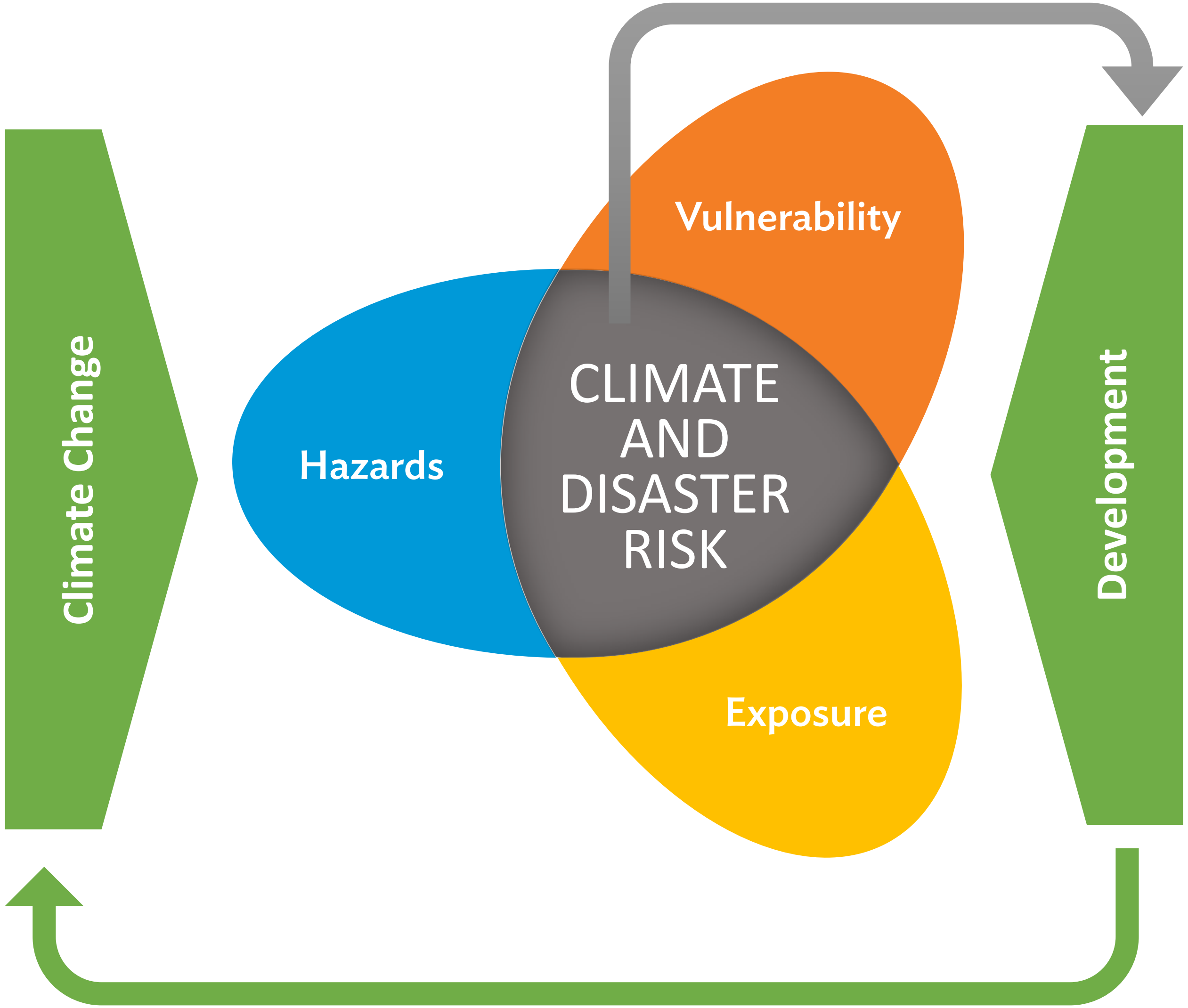
United Nations | Department of Economic and Social Affairs · cifal Jeju · unitar United Nations Institute for Training and Research · UNDRR UN Office for Disaster Risk Reduction · MCR 2030 Making Cities Resilient

Agenda

- Key considerations on risk and resilience
- Risk analytics for risk informed decision making
- Enabling finance for disaster risk reduction
- Instruments for disaster risk reduction finance with case studies
- Steps towards enhanced disaster risk reduction finance

Key Considerations

Disaster risk is a function of three dynamic factors



Comprehensive Approach to Resilience

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ECOLOGICAL RESILIENCE

Conservation, restoration, and rehabilitation of ecosystems (e.g. mangroves); use of biodiversity and ecosystem services as part of an overall strategy of building resilience

PHYSICAL RESILIENCE

Climate and disaster risk-informed infrastructure planning and development (e.g. elevated roads, cyclone shelters)

FINANCIAL RESILIENCE

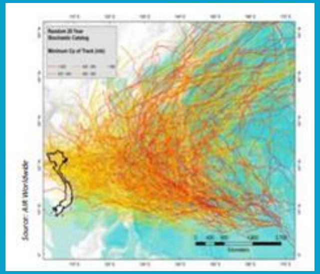
Support for enhancing financial preparedness in a changing climate and disaster risk context (e.g., crop insurance, contingent financing)

SOCIAL & INSTITUTIONAL RESILIENCE

Pro-poor and pro-vulnerable investments (e.g. adaptive social protection, community driven development);

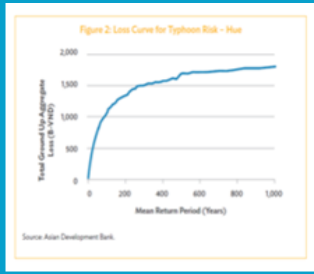
Assessing Risk

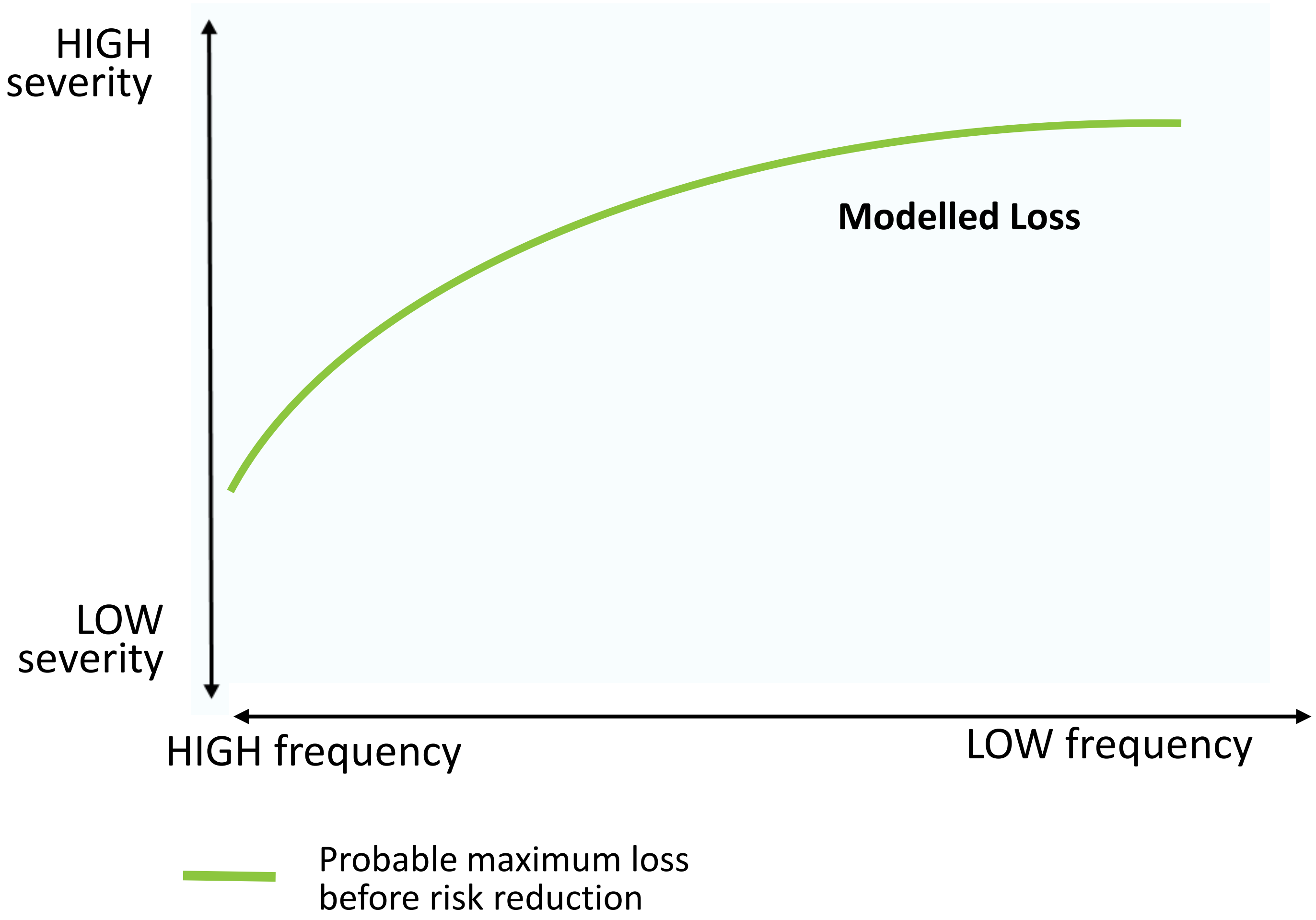
HAZARD ASSESSMENT



EXPOSURE ASSESSMENT

VULNERABILITY ASSESSMENT





Assessing Risk

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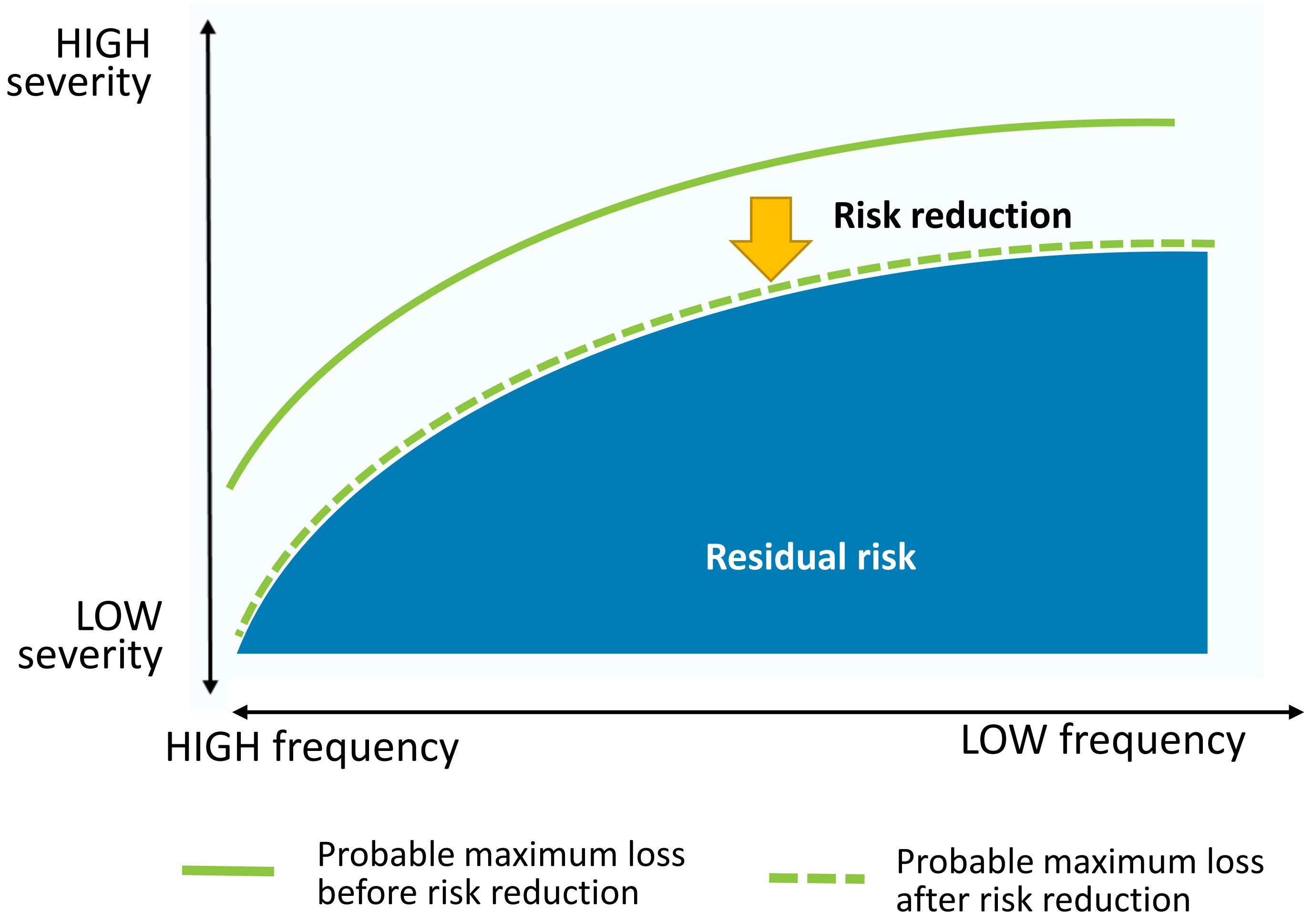
Disaster risk management begins with risk reduction, reducing risk to the point where it's no longer cost-efficient to reduce it any further…

…but disaster risk cannot be fully eliminated.

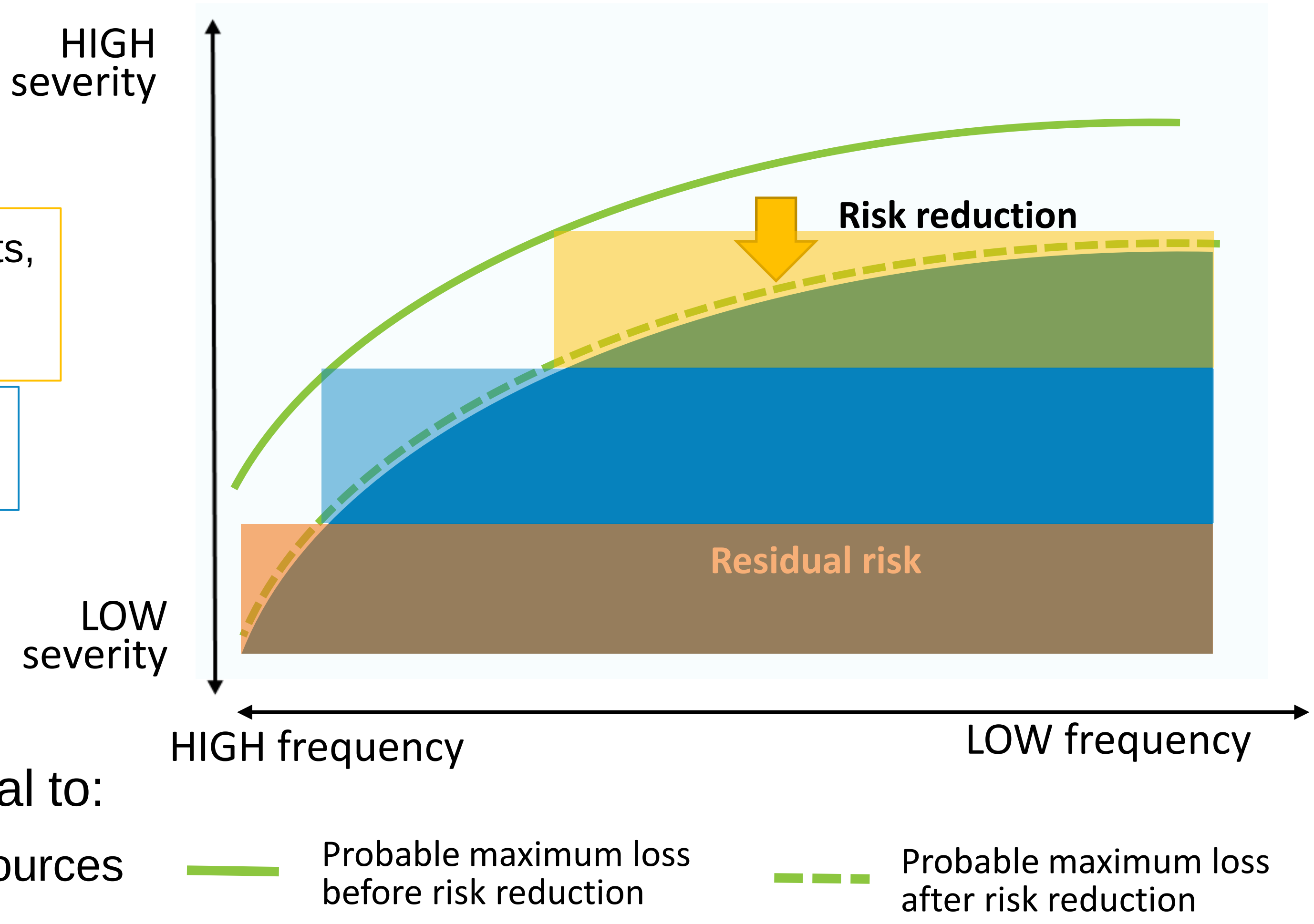


Risk Layered approach

International assistance: ex-post grants, loans and technical assistance from development partners

Risk transfer: ex-ante insurance, reinsurance, and insurance-linked securities

Risk retention: ex-ante annual contingency budget lines, reserves, contingent financing; and ex-post budget reallocations, borrowing, tax increases



For disaster risk reduction it is therefore crucial to:

- Maximize existing finance mechanisms and sources
- Unlock new finance mechanisms and sources

Understanding Disaster Risk Reduction

- First step of disaster risk management is risk reduction

Disaster Risk Reduction

- **Prevention**
- **Mitigation**

Structural (Physical) Measures

Non-structural (Operational and Policy) Measures

✓ Save lives
✓ Reduce the impacts from disasters
✓ Allow for more effective development and reconstruction

- Considering current and projected climate change impacts and their influence on the exposure and vulnerability of people and assets.

Why invest in disaster risk reduction?

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- There is a **positive cost-benefit ratio** for risk reduction measures.
- There is a **significant underinvestment** in disaster risk reduction:
  - From 1991 to 2010, only 13% of international disaster aid went to disaster risk reduction.
  - From 2011 to 2022, only $0.5 out of every $10 of development assistance went to disaster risk reduction.

Sources: ADB. 2013. Investing in Resilience. Ensuring a Disaster-Resistant Future. Manila.
UNDRR. 2019. Global Assessment Report on Disaster Risk Reduction. Geneva.

Enabling finance for disaster risk reduction

1. Institutionalizing disaster risk reduction

Assessing and understanding disaster risk for people, assets, and systems

Mainstreaming disaster risk reduction into planning and decision-making

Putting into practice disaster risk reduction policies and programs

Enabling finance for disaster risk reduction

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Case Study – Institutionalizing disaster risk reduction:
Philippines' National Disaster Risk Reduction and Management Framework

- Supports mainstreaming DRR priorities into development planning via a framework outlined by the National Economic and Development Authority.
- Standalone funding scheme supplemented by the Local Disaster Risk Reduction and Management Funds (LDRRMF).
- Provincial, city and municipal levels contribute to the NDRRMF through local DRRM plans and a minimum of 5% of local government income is earmarked for their LDRRMFs.
- Of this, 70% is reserved specifically for the mitigation fund for use against disaster prevention, mitigation, preparedness, response, rehabilitation, and recovery projects.
- The mitigation fund is aligned with the city’s local disaster risk reduction and management plan and integrated in its annual investment program.

Source: ADB. 2018. Philippine City Disaster Insurance Pool. Rationale and Design. Manila. For further references see publication ADB 2020.;Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Enabling finance for disaster risk reduction

1. Institutionalizing disaster risk reduction

Assessing and understanding disaster risk for people, assets, and systems

Mainstreaming disaster risk reduction into planning and decision-making

Putting into practice disaster risk reduction policies and programs

2. Strengthening public sector processes

Clear Inter-Governmental Relations

Effective Fiscal Management

Conducive Regulatory Framework

3. Considering different finance approaches

Stand-Alone Investment Projects

Cross-Sectoral Funds

Sector Department Budget Lines

Enabling finance for disaster risk reduction

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4. Better matching public and private actors

- Removing Market Entry Hindrances
- Improving Quantification Methods
- Recognizing Different Risk-Return Profiles
- Pricing Resilience Co-Benefits
- Increasing Financial Literacy
- Maturing Products and Services

5. Collaborating with international development organizations

Strategic Partnerships

For example:
- Country partnership strategies
- Intermediation between public and private sector
- Stakeholder engagement platforms

Financial Support

For example:
- Project finance
- Budgetary and program support
- Project preparation technical assistance
- Ad-hoc (crisis) resource allocation

Knowledge Support

For example:
- Training and capacity development
- Risk assessments and studies
- Knowledge capture and sharing events
- Policy advice

Enabling finance for disaster risk reduction

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Case Study – Better matching public and private actors:
DRR in Pakistan with a National Disaster Risk Management Fund

- Aligned with the National Disaster Management Plan 2012–2022 and the Draft National Flood Protection Plan IV 2016–2026, the NDRMF aims to reduce the socioeconomic and fiscal impacts of natural hazards and climate change by increasing institutional and physical capacities of
  - public sector entities (federal and provincial government departments; special authorities; public academia), and
  - non-public sector entities (UN, non-government organizations, civil society organizations; non-public academia).
- The Fund acts as a non-profit financial intermediary aiming to **prioritize and finance DRR investments**.
- The Fund initially started with a $200 million loan from ADB and is now supported by multiple donors.
- The NDRMF finances up to 70% of the cost of eligible projects and, additionally, is working to transfer residual risks through insurance arrangements.

Source: ADB. 2018. Pakistan National Disaster Risk Management Fund. https://www.adb.org/projects/50316-001/main. For further references see publication ADB 2020.Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Enabling finance for disaster risk reduction

Case Study – Collaborating with international development organizations

Strengthening Transboundary Flood Risk Management in the Greater Mekong Subregion

- The Integrated Disaster Risk Management (IDRM) Fund aimed to build capacity to develop resilient infrastructure to accommodate flood risks in key cities.
- The technical assistance led to three investment loans of $33 million to Cambodia, $100 million to Viet Nam, $137 million to Lao PDR to support measures including:
  (i) improved drainage and road systems,
  (ii) improved wastewater and stormwater systems, as well as solid waste management,
  (iii) improved flood management through land management, urban parks, and recreation spaces,
  (iv) riverbank stabilization works, and
  (v) community awareness campaigns on environmental sustainability and practices.
- Ultimately, the different grants resulting from the IDRM Fund support informed **resilient infrastructure design** and ensuing delivery, and knowledge-sharing among experts, communities and governments across the participating cities and countries.

Source: ADB. 2018. Pakistan National Disaster Risk Management Fund. https://www.adb.org/projects/50316-001/main. For further references see publication ADB 2020.Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Instruments for disaster risk reduction finance

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Own-Source Revenues	Grants and Transfers	Debt	Equity
Taxes, Fees, Tariffs, and Fines	Grants	Loans	Public-Private Partnerships
Land Value Capture	Cost- and Revenue-Sharing Programs	Bonds	Co-Investment Funds

Non-financial tools for disaster risk reduction

Planning and Development

- Incentivized zoning
- Conservation and height easements
- Development rights transfer
- Accelerated approvals

Contractual Obligations and Benefit Schemes

- Procurement regulations
- Public-private partnership (PPP) contracting
- Tax reductions, fee rebates, subsidies
- Competitive funds
- Awards and certifications

Information, Training, and Technology Access

- Data provision, Technology platforms
- Awareness campaigns
- Free technical standards and designs
- Capacity development

Disaster risk reduction finance in practice

Case Study – Grants and Transfers: Strengthening resilience by supporting grassroots, women-led solutions

- The Integrated Disaster Risk Reduction Management Fund supported Indonesia, the Philippines, and Viet Nam through the project “Closing the Gap: Empowering Women to Link Community Resilience Priorities to Decentralized Development”.
- The project aims to support resilience and reduce disaster risk by building the capacity of community-based women organizations in both rural and urban areas.
- By bringing together community-based women organizations with local authorities, the project helps accessing local development funds for disaster risk reduction needs.
- Where local governments have specific funds earmarked for disaster risk reduction, the underlying mechanism helps community-based organizations and women to assess disaster risk in a participatory manner. This, in turn, supports decentralized decision-making to ensure disaster risk reduction efforts were tailored to the local context, avoiding the pitfalls of prescriptive or ‘one-size fits all’ approaches.

Source: ADB. 2017. Integrated Disaster Risk Management Fund – Annual Report. Manila.

Disaster risk reduction finance in practice

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Case Study – Debt – Bonds:
Fiji as First Developing Country to Issue Green Bond

- Fiji comprises 300 low-lying volcanic islands and atolls which are at high risk from cyclones and flooding events. Further, nearly 20% of the population faces displacement due to climate change by 2050.
- Fiji incurred economic losses comparable to one-third of its annual GDP due to the impacts of Tropical Cyclone Winston in 2016.
- Following this, Fiji issued its first sovereign green bond to support climate change mitigation and adaptation in 2017, raising $50 million – with its first tranche oversubscribed by more than double the original amount.
- The bond funded projects with clear environmental and social benefits, including renewable energy investments, restoring native trees, building more resilient schools, and supporting the country to meet its commitment to the Paris Agreement.

Source: COP23. 2017. Fiji's Green Bond. https://cop23.com.fj/fiji-green-bond/#:~:text=In%20October%202017%2C%20Fiji%20became,climate%20change%20mitigation%20and%20adaption. For further references see publication ADB 2020.;Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Disaster risk reduction finance in practice

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Case Study – Equity:
Catalyzing Climate Finance with the Shandong Green Development Fund

- The objective of the Shandong Green Development Fund (SGDF) is to implement an innovative, replicable and scalable form of co-financing facility (public and private). SGDF does this by:
  (i) Ensuring that the fund addresses priority climate impacts and vulnerabilities in Shandong, People's Republic of China;
  (ii) Incorporating a project development facility to develop a pipeline of sustainable and replicable sub-projects that will support project sponsors to achieve high performance against Green Climate Fund (GCF) investment criteria; and
  (iii) Leveraging Private, Institutional, and Commercial (PIC) finance.
- SGDF uses a "cascade financing" approach leveraging private financing at the facility and project levels.
- The seed capital of $400 million from international financial institutions (including from ADB, French Development Agency AfD, German Development Bank KfW, and GCF), $360 million from public sources, and $740 million from private investors is expected to achieve a leverage ratio of 1:5 by co-financing about $7.5 billion of climate-positive investment.

Source: ADB. 2019. Report and Recommendation of the President to the Board of Directors. Proposed Loan People' Republic of China: Shandong Green Development Fund Project (51194-001). Manila. For further references see publication ADB 2020.;Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Role of international development finance

- Global funds set up or including funding windows for climate adaptation and disaster risk reduction measures
- Trust funds focusing on topics around disaster risk reduction, climate change adaptation, and environmental resilience
- Specialist mechanisms and programs making available additional dedicated resources to disaster risk reduction activities in developing member countries
- Programmatic technical assistance-to-loan support uniting activities from disaster risk assessments and reduction through to post-disaster measures
- Green, resilience, and SDG bonds by multilateral development banks
- Disaster risk financing and insurance providing financing support for disaster response, recovery, and reconstruction

Role of international development finance

Case Study:

Asian Development Fund – Disaster Risk Reduction Financing Mechanism

- ADB’s Asian Development Fund (ADF) provides grants and concessional loans to ADB’s lower-income developing member countries (DMC). It supports development projects and programs for infrastructure, policy, and capacity development – including investments in disaster risk reduction.
- First DRR set-aside under ADF 12 of $195 million (2017-2020), additional set-aside under the ADF 13 (2021-2024) in form of a thematic pool of approximately $280 million for DRR
- Focuses on grants to incentivize disaster risk reduction activities in ADB's poorest and most vulnerable developing member countries.
- Eligible areas for support under the pool include grants for disaster risk reduction to incentivize government investment by providing concessional resources for resilience projects that would otherwise not take place, for incorporating resilience components into projects (ADB Group A countries), or to strengthen resilience of the poorest and most vulnerable population (ADB Group B countries).

Source: ADB. 2019. Supporting Disaster Risk Management: Disaster Risk Reduction Financing Mechanism and Disaster Response Facility. Asian Development Fund (ADF) ADF 12 Midterm Review Meeting: 27-28 February, Manila, Philippines. Manila. For further references see publication ADB 2020.;Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Role of international development finance

Case Study:
Urban Resilience Trust Fund's Programmatic Support to Cities

- URTF was launched at COP26 as a MDF funded by the UK Government ($ 100m), administered by ADB under the Urban Financing Partnership Facility
- URTF supports medium-sized, rapidly growing cities to better integrate resilience into the planning and design of their infrastructure, and it provides soft investments around institutional resilience capacity, and knowledge-sharing and support in monitoring and evaluation.
- From 2014 to 2015, Green City Action Plans were developed for three cities in Viet Nam to mainstream climate change into urban development and investment prioritization.
    - Vinh Yen: Including financing 66 kilometers of drainage control and 45 hectares of new public green space.
    - Hue: Including upgrading 22 kilometers of drainage pipelines
    - Ha Giang: Including protecting 6 kilometers of river embankments
- In addition, the URTF grant contributes to community-led projects in Hue and Vinh Yen, as well as a sanitation revolving fund in Vinh Yen.

Source: ADB. 2020. Urban Climate Change Resilience Trust Fund. https://www.livablecities.info/urban-resilience-fund. For further references see publication ADB 2020.;Financing Disaster Risk Reduction: A Guide to Policy-Makers Manila.

Steps towards enhanced DRR finance

Getting the Basics Right: Good governance and proper fiscal management.

Cross-Sectoral Endeavor: Mainstreaming resilience across sectors and government levels.

What Gets Measured Gets Managed: Programming structural and non-structural DRR measures based on improved data collection and risk assessments.

Standardized Terminology and Metrics: Developing and refining project appraisal methods to devise bankable investments with measurable resilience co-benefits.

Collaboration with Partners: Combining available public and private actors and resources to devise locally appropriate solutions.

Thank you!

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