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GUIDANCE NOTE ON LEVERAGING INTEGRATED NATIONAL FINANCING FRAMEWORKS (INFF) FOR DISASTER RISK REDUCTION

JOINT UNDESA/UNDRR INPUT PAPER TO THE
G20 DRR WG – PRIORITY ISSUE 3

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Preamble

An Integrated National Financing Framework (INFF) that prominently reflects Disaster Risk Reduction (DRR) provides an opportunity to ensure that otherwise scattered resilience resources are directed to DRR and that new financial resources are secured, while also advancing financing policies that can help advance DRR objectives. As such, leveraging INFF for DRR should contribute to the priority issue number 3 highlighted by the G20 DRR Working (i.e., Stronger National Financing Frameworks for DRR). INFFs provide a framework for country authorities to assess the current gaps and identify opportunities to reorient financial flows in support of national objectives, including DRR-related ones. At the same time, a DRR-informed approach to INFF will highlight opportunities for the public and private sectors to de-risk investments.

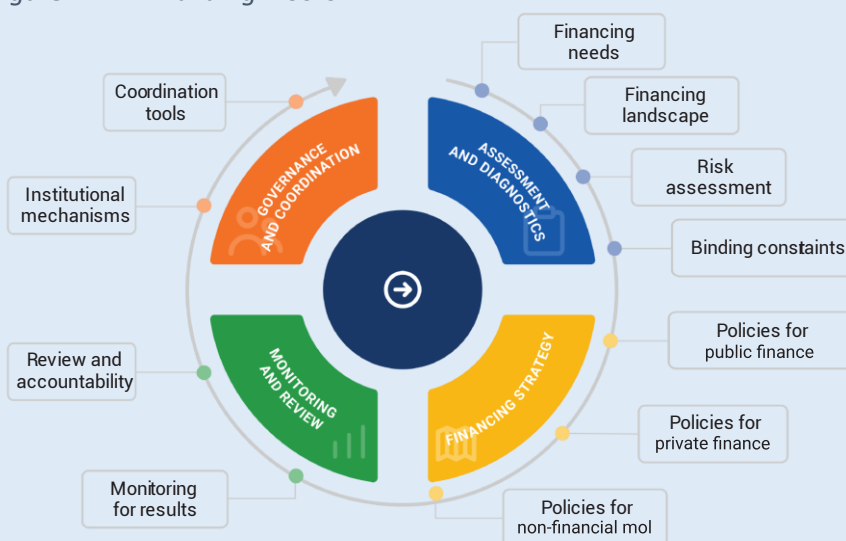
Box 1. What is an Integrated National Financing Framework (INFF)?

Integrated national financing frameworks (INFFs) help countries finance their national sustainable development objectives and the Sustainable Development Goals (SDGs).

Through INFFs, countries develop a strategy to mobilise and align financing with all dimensions of sustainability, broaden participation in the design, delivery and monitoring of financing policies, and manage risk.

INFFs are voluntary and country-led. They are embedded within plans and financing structures, enabling gradual improvements and driving innovation in policies, tools and instruments across domestic, international, public and private finance.

Figure 1: INFF Building Blocks



Four building blocks can support governments in putting this core approach into practice:

1. **Assessment and diagnostics** (to provide the basis for decision-making on financing – i.e., what are the needs, what financing is already available and how it is being used, what are the risks, and what are the underlying obstacles/binding constraints).
2. **Financing strategy** (to guide the design of integrated financing policies and reforms).
3. **Monitoring and review** (to bring together all relevant information, and facilitate transparency, accountability and learning on all things financing).
4. **Governance and coordination** (to ensure institutions and processes required to formulate and implement financing policies are in place and functional).

Note: Global guidance on each building block can be found at inff.org.

1. Introduction

An Integrated National Financing Framework (INFF) helps countries incorporate financing into national planning to achieve a country's sustainable development priorities (see Box 1). It can help governments mobilise additional financing, enhance coherence across different financing policies and match different types of financing to their most appropriate use.

In 2022, governments, through the ECOSOC Forum on Financing for Development, committed to supporting the implementation of INFF to align financing policies and strategies with national investment priorities, legal frameworks, and disaster risk and sustainable development strategies consistent with the 2030 Agenda, the Sendai Framework, and the Paris Agreement's long-term goals.¹

In this context, this note provides guidance on leveraging INFFs to align financing policies and strategies with Disaster Risk Reduction (DRR) goals as presented in the Sendai Framework. As such, it addresses the following questions:

1. How can INFFs help finance a country's DRR goals?
2. How can INFFs help enhance consistency and alignment of all financing in support of a country's DRR goals?
3. How can INFFs help bring together DRR, national development, and financing actors?

Disasters can wipe out development gains and significantly affect a country's ability to finance sustainable development outcomes. Preventing disasters is better than recovering from them. Although hazards are unavoidable, whether these hazards materialize into disasters depends greatly on how well a country is prepared and whether risks have been reduced through resilience-building investment and policies.

This draws attention to the importance of:

- **Properly assessing financial and non-financial risk being and using this assessment to inform finance-related decisions.** Bringing a DRR perspective to INFF is critical to ensure that a wide range of risks are properly considered (see Building Block 1 in Box 1 below). This requires building on disaster risk knowledge capacity and data on exposure to hazards, as well as information on loss from previous disasters.² It could also necessitate the assessment of the potential fiscal risk that can result from disaster-induced damages. Similarly, assessing financing needs would require properly accounting for the required investment for achieving disaster resilience.
- **Ensuring that financial policies and instruments contribute to reducing disaster risks.** As disaster risks are diverse and complex, multiple financial instruments and policies are needed to comprehensively finance DRR goals, making it essential to develop DRR financing approaches, either as a separate strategy or as explicit and prominent part of a broader financing strategy, that integrate diverse financing instruments and policies.³ Without a proper strategy in place, public and private financial flows might also go into potentially maladapted investments due to a lack of clarity on which actions improve resilience, making it even more pressing to align finance towards resilience goals.⁴

¹ [Economic and Social Council forum on financing for development follow-up, ECOSOC, 2022](#)

² Different data sources can be leveraged for this purpose, including [INFORM](#), [RiX](#), [ThinkHazard](#), [EM-DAT](#), [Global Resilience Index Initiative](#)

³ [Disaster Risk Financing: Main Concepts & Evidence from EU Member States. European Commission, 2021](#)

⁴ [Climate-Resilient Finance and Investment: Framing Paper: OECD Environment Working Papers No. 196, OECD, 2022](#)

The next section provides an overview of DRR financing, highlighting its challenges and opportunities, while Section 3 discusses implementing INFFs for DRR and Section 4 provides an overview of the financial mechanisms and policies that countries can use to finance DRR. Finally, Section 5 indicates the next steps forward.

2. Overview of DRR financing

Strengthening resilience is critical to long-term sustainable development as it protects development gains. However, resilient investments tend to be less visible than investing in other development goals. This often translates into underinvestment in DRR, despite its well-documented benefits in terms of lives saved, losses avoided, and sustainable development.

The Sendai Framework for Disaster Risk Reduction identifies investing in DRR as one of its four priority actions. A whole mindset shift is needed across the financial system moving from a short-term outlook, which under-prioritizes investment in DRR, to promoting a ‘Think Resilience’ approach in all public and private sector investments, as reflected in the Bali Action Agenda.⁵

DRR is also essential to achieve the Paris Agreement adaptation goal of “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change”.⁶ Directing financial flows towards risk reductions would contribute towards the goals of the Sendai Framework for Disaster Risk Reduction, the Paris Agreement, and towards achieving the Sustainable Development Goals more broadly.

DRR aims at preventing new and reducing existing disaster risks and managing residual risk. In this way, DRR contributes to strengthening resilience and achieving sustainable development.⁷ Reducing disaster risk is particularly relevant as current trends indicate an increase of 40 per cent in the number of disasters from 2015 to 2030, even before considering how climate change is accelerating the pace and severity of hazard events.⁸ The increase in disasters has translated in economic terms in more than doubling the average annual direct economic losses from disasters over the past three decades.⁹

Yet, underinvestment in disaster risk reduction prevails worldwide, among other things, because of insufficient long-term focus within financial planning.¹⁰ More than 90% of disaster-related ODA is focused on emergency response while only 4.1% is allocated to DRR.¹¹ This shows the need to shift towards a preventive mindset in the international development financial flows. Currently, the challenge of financing DRR falls heavily on national governments and domestic finances.

The Global Commission on Adaptation and the UNEP Finance Initiative identified 12 barriers to scaling up investment in adaptation and resilience by the financial system (see Table 1). These barriers are grouped into five broad categories: 1) inadequate support or incentives to act, 2) weak policies and conventions in the financial industry, 3) market barriers, 4) operational gaps at the institution level,

⁵ [Co-Chairs’ Summary: Bali Agenda for Resilience: From risk to resilience: Towards sustainable development for all in a COVID-19 transformed world, UNDRR, 2022](#)

⁶ [Paris Agreement, Art. 7, UNFCCC, 2015](#)

⁷ [Terminology, UNDRR](#)

⁸ [Global Assessment Report on Disaster Risk Reduction 2022: Our World at Risk: Transforming Governance for a Resilient Future, UNDRR, 2022](#)

⁹ *ibid*

¹⁰ [Building Disaster Resilience.: Think Resilience: Lessons from the Analysis of Shocks and Lending Streams. Economist Impact, UNDRR, 2022](#)

¹¹ [International Cooperation in Disaster Risk Reduction, UNDRR, 2021](#)

and 5) low technical capacity for climate risk management.¹² While these barriers focus on the financial system and private investment, they provide an indication of the wide range of barriers to DRR financing.

Table 1. Barriers to scaling up financing for adaptation and resilience by the financial system.¹³

| Barrier Categories | Barriers |
|--|--|
| Inadequate Support for Action on Adaptation/Resilient Investment | <ol style="list-style-type: none"> 1. Insufficient public financial support 2. Insufficient incentives for private finance to act 3. Moral hazard surrounding physical climate risks |
| Policy and Practices in the Financial Industry | <ol style="list-style-type: none"> 4. Weak legal/regulatory frameworks and guidance 5. Lack of meaningful disclosure of climate risks 6. Absence of harmonized and robust metrics and standards |
| Market Barriers | <ol style="list-style-type: none"> 7. Perceived lack of profitable investments 8. Perceived low commercial readiness of adaptation and resilient solutions |
| Nascent Application of Climate Risk Management Practices | <ol style="list-style-type: none"> 9. Weak management of physical climate risks 10. Insufficient availability and adoption of climate risks data/tools |
| Low Capacity of Climate Risk Management | <ol style="list-style-type: none"> 11. Low capacity within financial system governance bodies 12. Low capacity within financial actors |

These, and other barriers that impede public investment and budget allocation, lead to significant underinvestment in DRR. The finance gap for climate adaptation in developing countries is estimated to be five to ten times greater than current international public adaptation flows.¹⁴ Alarming, this financial gap widens as adaptation costs and financial needs increase, but funding flows remain stable or decrease.¹⁵

Investments in DRR make sense because beyond saving lives, it also saves resources and future-proofs development gains.¹⁶ DRR provides three types of benefits, the so-called triple dividend of resilience:

1. First, DRR provides benefits because of avoided losses. Even a 24 hrs warning of a coming storm or heatwave can cut 30% of the ensuing damage, with early warning systems saving lives and assets worth at least ten times their cost.¹⁷
2. Second, DRR induces economic and development benefits. Research indicates that investments in resilient infrastructure in low- and middle-income countries, particularly in assets exposed to hazards, provide benefits four times their cost once climate change is considered.¹⁸

¹² [Driving Finance Today for the Climate Resilient Society of Tomorrow, Global Commission on Adaptation, UNEP Finance Initiative, 2019](#)

¹³ Taken from [Driving Finance Today for the Climate Resilient Society of Tomorrow, Global Commission on Adaptation, UNEP Finance Initiative, 2019](#)

¹⁴ [Adaptation Gap Report 2021: The Gathering Storm - Adapting to Climate Change in a Post-Pandemic World, UNEP, 2021.](#)

¹⁵ *ibid*

¹⁶ [Business case for DRR, UNDRR](#)

¹⁷ [Adapt now: a global call for leadership on climate resilience, Global Center on Adaptation, 2019](#)

¹⁸ [Publication: Lifelines: The Resilient Infrastructure Opportunity, World Bank, 2019](#)

3. Third, DRR benefits also provide social and environmental benefits. Besides the \$80 billion per year in avoided losses from coastal flooding, mangrove forests contribute as much as \$40-50 billion annually in non-market benefits associated with fisheries, forestry, and recreation.¹⁹

The INFF approach could leverage financing policies and instruments to unlock these benefits.

3. Implementing INFF for DRR

To implement the inception phase and the four INFF building blocks (see Box 1), there are some important issues that need to be considered, including:

Understand absorptive capacity and ensure knowledge transfer: A core feature of the INFF is that it is country-led. Ideally, this would mean both the prioritization and dedication of resources, especially personnel, to engage and be involved actively in the process.

Ensure effective development cooperation: Development partner fragmentation and lack of coordination are enduring issues for many developing countries. It is important that governments and implementing agencies ensure that all relevant partners are engaged to avoid duplication and explore synergies with other partner initiatives.

Be pragmatic: Focusing on a few priorities and/or fostering a phased approach to implementing an INFF can prevent overwhelming government capacity. This would be particularly necessary for LDCs and post-conflict countries. Building on capacities where they can be sustained and not attempting too much can also ensure country ownership.

Implementing INFFs in the DRRs context should, thus, benefit from (i) building on existing systems; (ii) considering a phased approach; and (iii) prioritization.

Build on existing systems and knowledge

An INFF is based on the premise that countries do not start from scratch – all countries have policies and institutional financing arrangements in place. Many of the parts of the INFF would likely be done by some officials at some point in their own processes, albeit not in a systematic, cohesive, and integrated way, which is what the INFF aims to do. The key is identifying which part of the existing system would be the best to build on (see [INFF Governance and Coordination Building Block](#)) and avoiding creating a parallel process. This can be done in the Inception Phase of the INFF (see [INFF Inception Phase](#)).

At the institutional level: In most cases, ministries responsible for national planning and/or the national budget will play central roles in INFF implementation, especially if the focus is on the broad application of INFF or towards a specific financing strategy. To ensure that disaster risk is fully integrated into an INFF, ministries overseeing this area, such as national disaster management authorities, should be involved in these discussions, along stakeholders overseeing other relevant areas linked to DRR, such as climate actors and infrastructure-related ministries. This will allow DRR issues to be properly reflected in financing-related decisions and in the design of main financing policies, which may otherwise overlook DRR-related issues. Table 2 provides an indicative list of relevant stakeholders for developing INFFs that mainstream DRR goals. Strengthening institutional mechanisms can also be a co-benefit of developing INFFs.

At the policy level: Policy mechanisms that mobilize all types of finance and align both public and private finance are needed. Most governments usually have in place processes for policy design,

¹⁹ [Adapt now: a global call for leadership on climate resilience, Global Center on Adaptation, 2019](#)

implementation and review related to financing. The public financial management (PFM) process is central to this architecture. As part of the PFM process, policies (e.g., on revenue, expenditure, investment, trade, and private sector development) are designed mainly with macroeconomic goals in mind (economic growth, employment, inflation). During the Inception Phase, it would be important to link the objectives of the INFF focus area (in this case DRR) with the PFM process and the broader national sustainable development goals, as well as national disaster risk reduction strategies and climate change adaptation plans. This will help embed the INFF approach in country processes and enable coherence checks between different national objectives. For example, applying an INFF approach to DRR would mean checking whether this approach is consistent with debt sustainability targets (macro check), aligned with other sustainable development goals (coherence check), and to what extent all type of risks, such as natural hazards and other disaster risks, are considered (risk check).

At the partnership level: DRR financing is, in many cases, heavily dependent on ODA, particularly in LDCs or SIDS. The major partners on financing for development include major bilateral partners on relevant initiatives, multilateral institutions (IMF, World Bank), regional development banks (ADB, AfDB, IADB, CDB) and UN agencies. It will be important to build on these existing partnerships for INFF implementation for DRRs, including on related capacity-building initiatives. In most cases, the INFF focus areas will relate to ongoing initiatives, so it would be good to leverage these partnerships and ongoing initiatives. Some of these key players to support DRR financing are also shown in the following table.

Table 2. Indicative list of relevant actors for DRR

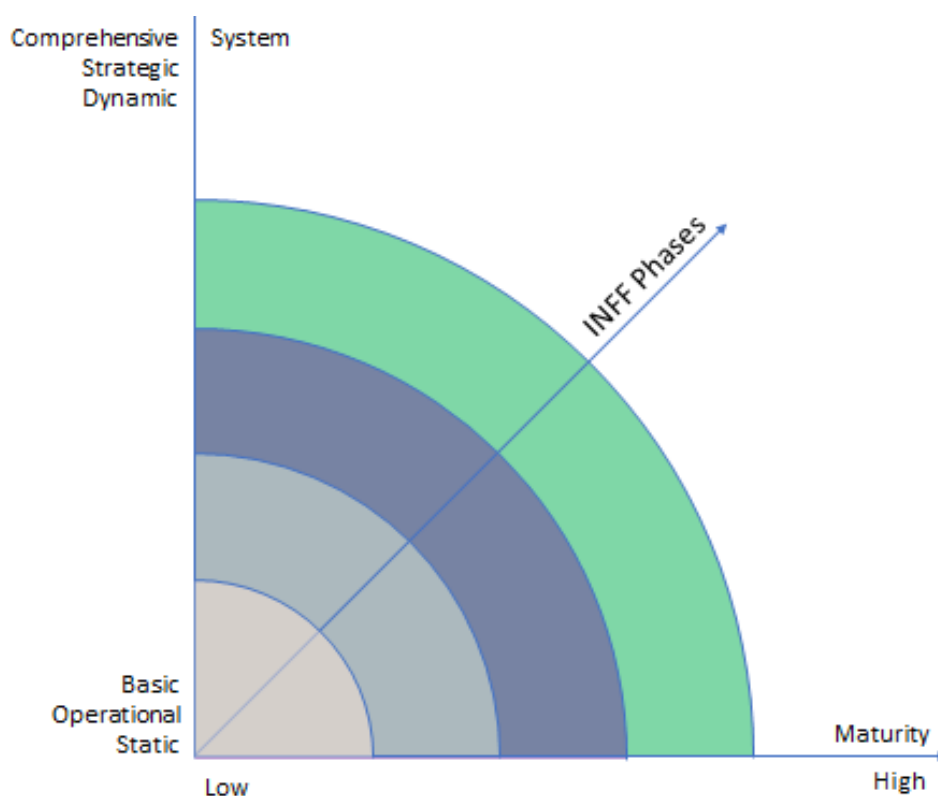
| Actor | Potential role/contributions |
|--|--|
| <i>Government</i> | |
| Head of State | Set national DRR, vision, priorities and strategy; ensures political buy-in for DRR; provides high-level political leadership |
| Parliament | Approve DRR budgets and disaster-related sovereign insurance and credit lines. Support the creation of suitable contingency funds |
| Ministry of Finance | Involved in policy and regulatory interventions to create an enabling environment to mobilize DRR financing; coordinate the process and efforts to channel resources into DRR |
| Relevant Infrastructure-related ministries | Develop and implement DRR regulations in their sector according to the national DRR strategy |
| Central Bank | Incorporate disaster-related consideration in their monetary policies to enhance financial resilience |
| Banking regulatory agencies | Assess risk exposure of the financial sector; encourage or mandate disaster-related disclosures; set disaster criteria standards for finance/lending by regulated banks |
| National Public Development Bank(s) | Incorporate DRR provisions in their infrastructure investments; Invest in DRR projects |
| Subnational governments | Identify, raise awareness, act and coordinate other stakeholders as necessary to address local disaster risks; set and enforce local DRR regulations. |
| National Disaster Risk Management Authorities / National Sendai Framework Focal Points | Articulate, coordinate and champion a national DRR strategy within the different levels and entities of the government; Ensure the INFF and related financing policies are risk-informed from a multi-hazard perspective |

| <i>Non-government</i> | |
|---|--|
| Development Finance Institutions / Multilateral Development Banks | Provide resources, including technical assistance; help catalyse private investment in DRR-related actions; include DRR consideration in their investments |
| Private Sector | Contribute to domestic resources mobilization and investment; encouraged to share non-financial risk information to promote risk-informed investments. |
| (Re)insurance Sector | Develop and offer insurance products to distribute risks in the private and public sectors. |
| Stock exchanges | Enable the circulation of disaster-related debt-based instruments such as resilience, climate and sustainability-linked bonds. |

Proceed with a phased approach

Implementing an INFF in a phased approach can help better manage capacity constraints, especially the immediate demands of officials. It can also help INFF implementation through cycles of political instability and conflict. Implementing an INFF through phases could also better match resources/capacity with INFF objectives, cultivate a risk-appraisal culture and ensure knowledge transfer. A phased approach can help countries make incremental changes to move from an operational to a strategic focus, from static to dynamic processes and from basic to comprehensive systems. How these phases are structured depends on the maturity of current systems and will require careful sequencing (Figure 2). For example, countries with systems of low maturity (e.g., poor PFM capacity) may need to focus on building these foundations first before tackling more complex and expanded undertakings (e.g., medium-term revenue strategies).

Figure 2. INFF phased approach



Source: DESA

Prioritize

As resources for DRR are limited and stretched over many important and competing areas, at the Inception Phase, it would be important to prioritize the following:

The INFF focus area: In identifying the focus area, consideration should be given to the timeline of expected INFF implementation and whether it will be a new undertaking or part of the ongoing initiative(s). The complexity of the undertaking, the number of staff/ministries/agencies that would need to be involved, and the engagement of partners should also be assessed against existing priorities and capacity. The aim would be to focus on a strategic/key area that could be advanced through the INFF within the identified timeframe without overloading capacity. This could build political commitment for INFF expansion/deeper application, if successful.

The building blocks: The INFF building blocks are not meant to be sequential or prescriptive. It can and should be tailored to the country's context. For example, some aspects of the assessment and diagnostics building block can be data-intensive, and data needed may not be available or readily accessible. The alternative option to using modelled data may also not be feasible for low-capacity contexts. Authorities should then assess what the value added of having the data/analysis/costing exercise would be to INFF implementation and whether they should apply it or not. It may also be the case that governance and coordination issues are important to address first.

4. Policy Options for DRR Financing

DRR is cross-cutting by nature. It involves many sectors and can be integrated and streamlined into existing financing policies. The INFF guidance on [Building Block 2](#) can help strengthen the development and integration of DRR into INFF, which will bring together public finance, private finance, and macroeconomic/systemic conditions in support of DRR.

Applying a DRR-lens to INFF helps connect the disaster risk profile and assessment of the country with suitable funding mechanisms, policy and regulations. It integrates multiple financial sources and mechanisms to achieve the DRR financial goals and defines responsibilities to achieve them. For example, an INFF can help a government better consider DRR when reviewing public finance policies and deciding on budget allocation.

Similarly, the INFF should guide a government in its interaction with key finance stakeholders, such as businesses, financial market participants, insurance companies, and development partners. For example, DRR elements could be embedded through an INFF process in policies that regulate how the private sector and financial markets operate. It could also help identify ways for further engaging the insurance sector in support of national development objectives. In the same vein, the integration of DRR into INFF should inform discussions between a government and its development partners, while enabling synergies and maximizing development impacts.

The table below summarizes a variety of possible legal or regulatory measures, financing instruments, and processes that can support achieving identified DRR objectives, while linking these policy options with their targeted audience. These policy options are then further detailed in the rest of this section and structured around the chapter of the Addis Ababa Action Areas, which provides the global framework in terms of financing for development.

Table 3. Indicative list of DRR-related financing policies by targeted audience

| | Government | Businesses | Financial Sector | Insurance Companies | International Community |
|--|--|--|---|--|--|
| DRR-RELATED FINANCING POLICIES AND INSTRUMENTS | Assign a minimum share of budgetary resources to DRR activities | Build regulatory frameworks that enhance resilience | Develop taxonomies for DRR investment | Reduce the protection gaps through better insurance coverage | Embed DRR in development partners' projects |
| | Create a budget tagging and tracking system for DRR-related expenditures | Use financial incentives for leveraging private investment into DRR | Issue resilience bonds and call for credit enhancement mechanisms | Shift the insurance's mindset from protection to prevention | Ring-fencing funds for DRR-related activities |
| | Mainstream DRR in infrastructure services planning and delivery | Review "Force Majeure" clauses in public-private partnerships | Introduce disaster-related clauses in sovereign debt instruments | Support innovative risk transfer solutions for DRR | Pursue reforms of IMF, World Bank and other DFIs in relation to DRR |
| | Add DRR criteria to public procurement selection | Request corporate disclosure on risk exposure and management | Conduct disaster scenarios/stress testing to assess the country's financial stability | | Take into account country vulnerabilities for concessional finance eligibility |
| | Use national reserve (or contingency) fund for building back better | Address vulnerabilities from global value chains (concentration, overdependency, etc.) | Require commercial banks to include disaster risk assessment in credit allocation | | Create international pooling mechanisms to diversify risks |
| | Connect anticipatory finance with social protection systems | Scale up the use of debt swaps for resilience investment | | | Ensure sufficient access to emergency liquidity |
| | | | | | Advocate for lengthening the time horizon of Credit Rating Agencies |
| | | | | | |

A. Domestic public resources

Public resources are the main source of financing for DRR activities since resilience investments often do not generate a revenue stream, although they avoid losses. Governments can consider the following options to increase the impact of domestic resources on DRR objectives.

Assign a minimum share of budgetary resources to DRR activities

Although risk reduction activities provide net economic benefits in the long term, policymakers may be tempted to direct scarce public resources to more immediate and visible priorities. To ensure enough resources are allocated to DRR activities appropriate to each sector, governments can decide to safeguard a certain percentage of their budget for this purpose.

Pros: This ensures that DRR activities are prioritized and that available resources are not diverted for other purposes.

Cons: Assigning budget resources to DRR interventions at all levels and in all sectors implies a trade-off with using these resources for other public objectives. Defining the exact percentage needed for DRR is challenging and creates rigidities in the budget.

Example: The government of India assigns 20% of its disaster-related budget to DRR activities, leaving the rest for disaster response (40%), recovery and reconstruction (30%), and preparedness and capacity building (10%).²⁰

Create a budget tagging and tracking system for DRR-related expenditures

Budget tagging and tracking systems help governments identify, quantify and monitor public expenditures and budgetary commitments to different national priorities, for example by assigning budget codes for specific socio-economic objectives. While progress has been made in advancing climate or 'green' budget tagging and tracking, these approaches have not captured the whole range of DRR-related activities beyond those related to climate change adaptation (CCA). Short of proper budget tagging and tracking, countries have done DRR-specific public expenditure reviews or budget circulars in which the Finance Ministry requests a report on expenditures related to a given theme (such as climate change adaptation).²¹

Pros: A tagging and tracking system ensures the mainstreaming and institutionalizing of CCA and DRR in government processes. It helps uncover funding gaps by checking the adequacy of spending vis-à-vis country policy ambitions, improve spending effectiveness by monitoring performance, and facilitate prioritization of spending allocation.

Cons: To implement a budget tagging, policymakers need a taxonomy describing 'eligible' disaster-related activities. However, it can be challenging to precisely defined what are these activities. For example, some activities include disaster considerations, such as building infrastructure with resilience in mind, despite not being primarily about DRR. The complexity of the system could create an administrative burden challenging to overcome for some developing countries.

Corrective actions: A way to reduce the administrative burden and increase the system sustainability is to build on the existing public financial management framework rather than creating a separate system.

Example: UNDRR has developed a methodology, and taxonomy for conducting integrated DRR and CCA budget tagging and tracking systems, which include a review of country experiences with these systems.²²

Mainstream DRR in infrastructure services planning and delivery

Many DRR interventions are embedded in public infrastructure either by considering disaster resilience in their design or by building infrastructure specifically to reduce disaster risk (e.g., flood protection walls). Policy and institutional framework can ensure that infrastructure systems consider DRR in their planning, design and operation.

Pros: Incorporating DRR considerations into infrastructure provides a resilient dividend in the form of reduced lifecycle cost of infrastructure.

²⁰ [Recovery and Reconstruction Guidelines. National Disaster Management Authority, Government of India. 2022.](#)

²¹ DRR Financing in Asia and Pacific, Scoping Study for the Sendai Framework Mid-term Review, UNDRR, 2023

²² See UNDRR and IIED publication on "[Tracking the money for climate adaptation and disaster risk reduction](#)"

Cons: Mainstreaming DRR into infrastructure development requires significant coordination efforts and internal capacity.

Example: UNDRR has developed the Principles for Resilient Infrastructure,²³ which can form the basis of planning and implementation of infrastructure projects with resilience as a core value, communicate the desired outcomes of national infrastructure systems to establish resilience of critical services, and assist in making risk-informed policy and investment decisions.

Add DRR criteria to public procurement selection

In addition to streamline DRR in the planning of public procurement, it is possible to revise procurement law to mandate risk prevention and disaster resilience in the criteria for selecting bidders. For example, public procurement rules could ask that suppliers demonstrate how their services will remain operational during a disaster and what measures they take to reduce disaster risks.

Pros: Given the amount at stake, integrating DRR considerations into public procurement can have a significant impact in reducing risk and improving the resilience and longevity of the services procured.

Cons: Designing appropriate DRR-related selection criteria is complicated and those need to be balanced/weighted against other public objectives to lead to the best possible outcome.

Example: The government of Japan developed guidelines for risk allocation and contracting, and embedded DRM legislations in bidding documents and technical specifications to ensure the development of risk-informed infrastructure.²⁴ Detailed DRM specifications are included in bidding documents and contracts according to each project's characteristics and risks.

Use national reserve (or contingency) fund for building back better

Several countries have also set aside funds to be able to cover the costs of responding to a disaster. While these funds are created to enhance disaster response, they could be structured in a way to promote investment in future resilience by ensuring that part of these funds is used for building back better. In this context, UNDRR has been working on recommendations for scaling up DRR in humanitarian action.

Pros: Building up reserve funds gives countries resources to deal with post-disaster expenditures quickly, without putting national finances at risk, which is crucial for limiting the damages and long-term impact on development, especially if those funds are also used to prevent future crises. Reserve funds are particularly suited to deal with frequent but low-impact events.

Cons: Setting aside funds for future disasters has a cost, as governments cannot use those resources to fund other current activities. It is not trivial to estimate the size of the resources assigned to these funds, nor the share that should be devoted to future risk reduction. If a fund is too small, it won't be able to protect the economy from financial risk; if it is too large, the fund will prevent the government from using resources in other activities. As disasters become more frequent and intense, replenishing such funds may also become challenging.

Example: Tonga established a National Emergency Fund (NEF) set up to 1% of the GDP.²⁵ Funds can also be set up at a regional level to distribute the risk among a group of countries. An example is the

²³ [Principles for Resilience Infrastructure, UNDRR, 2022](#)

²⁴ [Publication: Resilient Infrastructure Public-Private Partnerships: Contracts and Procurement – The Case of Japan, World Bank, 2017](#)

²⁵ [Tonga Disaster Risk Financing Strategy, 2021-2025, Government of Tonga, 2021](#)

EU Solidarity Fund which provides aid upon request of the affected EU member in the event of a major natural disaster to cover costs for emergency and recovered operations incurred by public authorities.²⁶

Connect anticipatory finance with social protection systems

Anticipatory Finance uses forecast-based parametric triggers and pre-established financing to act earlier and at a larger scale (i.e. between when a disaster is forecasted and when it occurs). This allows the implementation of actions that reduce the disaster impact. Embedding anticipatory finance in social protection systems is a way to provide financial resources to individuals and communities when a disaster becomes imminent.

Pros: Integrating anticipatory finance into social protection systems can reduce disasters' overall economic and social impacts and promote resilience. The pre-arranged financial mechanisms can be quickly activated when a disaster is forecasted, reducing delays in providing assistance and increasing the effectiveness of the response.

Cons: Anticipatory finance mechanisms often depend on external funding, which could make them subject to fluctuations and lack of continuity. Designing and implementing effective anticipatory finance measures requires accurate and up-to-date data on disaster risks and vulnerabilities, and coordination between multiple stakeholders, both of which can be challenging.

Example: The Productive Safety Nets Programs (PSNP)²⁷, now in its 5th phase in Ethiopia provides cash and in-kind support to food insecure families living in drought-prone areas in exchange for participating in activities improving the communities' climate resilience.

B. Domestic and international private business and finance

The Sendai Framework acknowledges the need for businesses to integrate disaster risk into their management practices and calls for disaster risk-informed private investments. There are multiple ways in which the government can incentivize businesses, financial markets and insurance companies to further contribute to DRR objectives, which could be considered as part of an INFF process:

Build regulatory frameworks that enhance resilience

Private companies operate within the regulatory framework provided by public authorities, which could be designed to reduce the risk of disasters.

Pros: For example, policymakers can use land use procedures and building codes to ensure that real estate is not constructed in disaster-prone areas and meet appropriate design and construction standards. Similarly, health and safety laws, as well environmental laws, have a key role in reducing disaster risks linked to business activities.

Cons: Appropriate regulations and standards are necessary but not sufficient if not implemented nor properly enforced. For example, when building standards are set too high, it might be impossible for people to comply, hence the importance of reflecting local building practices and affordability into standards.

Use financial incentives for leveraging private investment into DRR

Governments can leverage private investments by offering subsidies to targeted, resilience-generating projects. They may also use price signals to encourage a more efficient use of scarce resources (e.g.,

²⁶ [Disaster Risk Financing: Main Concepts & Evidence from EU Member States. European Commission, 2021](#)

²⁷ [Microinsurance and Social Protection, Ethiopia Country Case Study, WFP, 2022](#)

pricing water for more efficient management of scarce resources). Including risk reduction requirements in public-private partnerships is another way to use private funds to embed DRR in infrastructure development.²⁸

Pros: Incentives and regulations, allow governments to align private investments with national resilient goals.

Cons: It is challenging to properly design incentives schemes that will maximize impact and limit cost for the public purse. Also, pricing mechanisms can have negative impacts on the most vulnerable population facing affordability constraints.

Example: North Macedonia increased the resilience of its energy infrastructure by reducing demand by offering performance base payments to fund investments by SMEs in renewable energy and energy efficiency through its Green Finance Facility.²⁹

Review “Force Majeure” clauses in public-private partnerships.

[To be drafted – the idea is that the private partner should not be completely exonerated from force majeure events to ensure that proper measures are taken to reduce risks and service interruptions]

Request corporate disclosure on risk exposure and management

Companies need to be transparent about the risk they are facing and the actions they intend to take to prevent risks from materializing, for example in their annual reporting. Recognizing the importance of enhanced disclosure by corporates, regulators in around 80 countries have taken close to 200 measures to improve corporate sustainability disclosure since 2015 (with 60% calling for mandatory disclosure).³⁰

Pros: Enhanced transparency forces companies to assess risks and put in place measures to mitigate them (what gets measured, gets managed). Meanwhile, investors can use this information to guide their investment decisions and allocate capital away from companies not managing risk properly.

Cons: Additional reporting has a cost for companies (e.g., collecting data), which can be prohibitive for smaller companies and those in less advanced economies.

Example: New Zealand was one of the first country to announce in 2020 mandatory reporting for companies based on the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD), before being followed quickly by several other countries. TCFD recommendations call for companies to be transparent on four themes: governance, strategy, risk management, and metrics and targets regarding the climate-related risks they are exposed to.

Develop taxonomies for DRR investment

Taxonomies have been instrumental to the green bond market’s exponential growth and define eligible activities that can be financed by this type of financial instrument. Developing a dedicated taxonomies for DRR investment, for example identifying eligible risk reduction activities, should allow

²⁸ Compilación y análisis de los instrumentos financieros para la gestión de riesgos de desastres disponibles en la región, incluyendo aquellos enfocados en la retención y transferencia de riesgos, acciones de reducción de riesgo, así como esquemas de donantes potenciales, UNDRR, 2022

²⁹ [North Macedonia’s Green Financing Facility selected among top ten SDG blended finance instruments in the world, to receive funding from the Joint SDG Fund, United Nations North Macedonia, 2022](#)

³⁰ [UN PRI Regulation Database](#) (as of September 2021)

capital market to play a greater role through the emergence of DRR-dedicated financial products (e.g., resilience bonds, funds targeting companies providing solutions to resilience challenges).

Pros: DRR taxonomies provide standards and norms for capital market investors, while they help ensure the credibility of investment products branded as contributing positively to DRR.

Cons: Taxonomies must balance detail with clarity to be rigorous in assessing what constitutes resilience without becoming overly complex. Contextual factors might affect the contribution to resilience of a given activity making it difficult to create strict rules about what is taxonomy compliant and what is not.

Example: UNDRR is working with the Climate Bond Initiative on a Resilience Classification Framework that should serve as a standard for capital markets in this area. Another example is the Adaptation Solutions (ASAP) Taxonomy allows the identification of small and medium enterprises (SMEs) that offer adaptation solutions in developing countries.³¹ Once these SMEs are identified, support programs targeted to these companies can be implemented.

Reduce the protection gaps through better insurance coverage

[To be drafted – the para will explain the role of the insurance sector in enhancing the resilience of societies through better coverage (e.g., bundling different natural hazards to a fire policy), while also highlighting policy measures that can be taken to reduce the protection gap (mandatory requirements for home insurance to cover most natural disasters) / to illustrate this section the example of [EIOPA's](#) approach could be used. However, disaster risk insurance alone is not sufficient and must be part of a larger disaster risk reduction strategy.]

Shift the insurance's mindset from protection to prevention

The insurance industry has been largely focused on protecting insurers against disaster risks. However, covering policyholders against potential damages does not reduce risk, but rather transfer it to an external party (i.e., the insurance company). Reducing risk requires implementing specific measures such as installing fire extinguishing appliances, sprinklers, and security cameras. The insurance industry can incentivize policyholders to make DRR-related investments, for example, by applying variable pricing and offering discounts to those implementing DRR measures. The International Cooperative and Mutual Insurance Federation (ICMIF) and UNDRR have produced a joint report on shifting the focus of the insurance industry from protection to prevention, which identifies seven practical mechanisms for how the cooperative and mutual insurance sector can help drive prevention and disaster risk reduction.³²

Pros: With the increasing frequency and severity of disasters, insurance could quickly become unaffordable. Preventing risks from happening can help mitigate future increases in insurance premium by reducing the number of claims and enhancing the financial sustainability of the industry.

Cons: Efforts to promote risk prevention should not result in excluding people from insurance protection by requiring difficult-to-meet DRR measures as prerequisites for insurance coverage.

Example: Climate Insurance Linked Resilient Infrastructure Financing (CILRIF)³³ is an insurance solution developed by UNCDF that offers 10-20 year climate insurance to cities with pre-arranged premiums

³¹ [Adaptation Solutions Taxonomy, Maria Margarita Cabrera \(editor\), 2020](#)

³² [From protection to prevention: The role of cooperative and mutual insurance in disaster risk reduction, ICMIF, UNDRR, 2021](#)

³³ [Climate Insurance-Linked Resilient Infrastructure Financing \(CILRIF\), Global Innovation Lab for Climate Finance, 2022](#)

that decrease as the city invests in climate resiliency. As the city manage its risk by implementing the adaptation measures agreed on the insurance policy, the insurance premium will decrease to reflect the updated risk.

C. International development cooperation

Disaster prevention and preparedness only account for a marginal fraction of international assistance despite its great benefits in terms of saving lives and reducing economic damages. Only 11% of Official Development Assistance (ODA) is related to disasters and the vast majority of this money flows to emergency response and reconstruction (96%). Yet, grants and other concessional financing are critical for mobilizing financial resources for DRR, including through blended instruments. Beneficiary countries and development partners could consider the following options to increase the role of international assistance for DRR as part of an INFF process.

Embed DRR in development partners' projects

Development banks are a large source of financing for many countries. They could leverage their lending to promote DRR, for example by strengthening the way they embed disaster risks (natural-hazard induced or human-induced) in their project assessment, design, and monitoring.

Pros: This would create more risk-informed programmes while incentivizing resilience-building activities. Over time, increasing resilience also contributes to improving a country's risk profile, which could facilitate its access to lower borrowing costs, creating a virtuous cycle.

Cons: Adding more elements to consider when deploying development finance can make the lending process heavier and possibly slower, although this does not need to be the case.

Example: The World Bank has created a Resilience Rating System to assess (i) the resilience of the project (i.e., whether the project has properly considered climate and disaster risks) and (ii) the resilience through the project (i.e., whether the project contributes to increasing climate resilience of the broader community). When launching the methodology in 2021, the Bank also announced that they were piloting it with 20 projects.³⁴

Call for ring-fencing funds for DRR-related activities

Ring-fencing funds for DRR could mean that, by default, a certain percentage of every loan/grant must be spent on risk prevention and resilience. Similarly, humanitarian activities need to ensure that part of 'disaster response' funds are allocated for the prevention of future risks in order to build back better and break the cycle of 'disaster-rebuild-repeat'.

Pros: Ring-fencing resources ensures that risk prevention is not overlooked and safeguarded, creating long-term benefits.

Cons: MDBs and other financial institutions that do not have an explicit DRR mandate might require internal reforms to mandate DRR in all their loans. Furthermore, the resources dedicated to DRR would reduce the available resources for other activities, so the need to increase the overall development assistance remains.

Example: The Global Environment Facility was the first global source of funds for climate adaptation and continues to play an important role through its Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF).

³⁴ [Publication: Resilience Rating System: A Methodology for Building and Tracking Resilience to Climate Change, World Bank, 2021](#)

Pursue reforms of IMF, World Bank and other DFIs in relation to DRR

Member States can further integrate DRR into IMF, World Bank and work and better use their balance sheets for this purpose.³⁵

Example: In 2022, the IMF established the Resilience and Sustainability Trust (RST) to help low-income and vulnerable middle-income countries build resilience to external shocks and provide them with longer-term affordable financing to address longer-term structural challenges, including climate change and pandemic preparedness. RST resources are to be mobilized based on voluntary contributions from IMF members with strong external positions, including those wishing to channel Special Drawing Rights (SDRs).³⁶

Take into account country vulnerabilities for concessional finance eligibility

To fully account for countries' vulnerability, donors and DFIs should move beyond using simple indicators such as Gross National Income (GNI) to allocate their support. Composite risk index (such as GRAF, INFORM, GFDRR Disaster-FCV Vulnerability Index etc.) and even ad hoc composite index can better capture complex, cascading and systemic risk.

Pros: Composite risk indexes can include multiple dimensions improving the assessment of a country's risk exposure.

Cons: Designing the adequate composite index is complex and the design choices can have significant impact on which countries will be eligible or not.

Example: The United Nations is working on the development – and implementation – of a Multidimensional Vulnerability Index (MVI).³⁷ Despite a relatively high GNI per capita, SIDS represent two thirds of the countries with the highest relative losses from natural disasters showing their vulnerability due to their reliance on the ocean for their economics.³⁸ Using the MVI could increase SIDS eligibility to receive financing in more competitive terms to address their unique vulnerabilities.

Support innovative risk transfer solutions for DRR

Digitalization and the growing availability of data is helping insurers better understand and price disaster risk, which has led to insurance products being offered in areas that were not covered before. Against this background, index insurance products and parametric insurance have emerged, which provide a pre-agreed sum in case specified parameters are met, such as drought. For example, these can be used to protect small-scale farmers against losses from extreme weather. Another risk transfer solution is catastrophe (cat) bonds, which allow the bond issuer to receive funding from capital market investors if certain conditions are met (e.g., hurricane) within the bond period (typically three to five years). In return, the issuer pays an interest rate to investors. Insurers have used cat bonds to lay off some of their risk through capital market instruments, thus freeing up capital for additional underwriting. A specific variation of catastrophe bonds includes a reduction in the coupon when pre-agreed risk-reducing actions are implemented.³⁹

³⁵ See for instance, the recommendations from G20 mandated report on "[Boosting MDBs' investing capacity: An Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks](#)".

³⁶ [Resilience and Sustainability Trust, IMF](#)

³⁷ [Multidimensional Vulnerability Index, United Nations](#)

³⁸ [Small Island Developing States – SIDS, OECD](#)

³⁹ [Resilience Bond for risk reduction, CPIC](#)

Pros: Index insurance products and cat bonds can be cheaper to operate as there is no need to estimate the actual loss and can lead to quick disbursement. They have also allowed the coverage of risks previously considered as uninsurable.

Cons: Setting the parameters correctly remains challenging and there are cases where policyholders are not covered during a catastrophic event because certain triggers are not activated. In addition, the products can be expensive and not well understood by consumers. As a result, their uptake has been slow, despite substantial public support.⁴⁰ There is also a risk that with the growing frequency of hazards, as well as greater forecasting precision, regions and sectors most at risk will be priced out of insurance markets, and only those with low or moderate risk will be able to find coverage.

Example: UNDP is collaborating with the insurance sector through the Insurance Development Forum (IDF), and with funding from BMZ, to support the development of a portfolio of new insurance solutions for sovereigns. The goal is to deliver technical assistance and risk financing tools to 20 climate-vulnerable countries, providing \$5bn of risk capacity between 2022 and 2025 (in line with the InsuResilience global partnership vision 2025). Another example is the Global Index Insurance Facility from the World Bank that facilitates catastrophic risk transfer solutions and index-based insurance to smallholder farmers, micro-entrepreneurs, and microfinance institutions in developing countries.

Create international pooling mechanisms to diversify risks

Risk pooling facilities mutualize disaster risks across locations and types of events, making use of diversification for risk management. Risk pooling facilities have been developed nationally, such as the Philippine Catastrophe Insurance Facility (PCIF),⁴¹ or at a regional scale, such as the African Risk Capacity (ARC).⁴²

Pros: Pooling risks might enhance the financial viability of insurance mechanisms due to diversification benefits and reduce premium paid by policyholders as a consequence.

Cons: Pooling risks from different countries is complex to structure.

Example: The Caribbean Catastrophe Risk Insurance Facility (CCRIF) was established in 2007 as a first multi-country risk pool that provides parametric insurance to Caribbean and Central American countries against natural hazard event (e.g., tropical cyclones, earthquakes, and excess rainfall). Since its inception, CCRIF has made 54 payouts totalling \$245 million to 16 countries (all within 14 days of the event).⁴³ The grants provided by international partners support participation fees from members, insurance payouts, and technical assistance.

D. International trade

[Section to be drafted, it could include addressing vulnerabilities from global value chains (concentrations, overdependency) as well as integrating DRR elements in international trade agreements]

⁴⁰ There have been approximately 150 donor-supported weather index insurance pilots alone, but there have not been many pilots maturing into sustainable programmes. [What Can Index Insurance Offer to Development?, World Bank, 10 November 2016.](#)

⁴¹ [Philippine Catastrophe Insurance Facility \(PCIF\) means less risk ceded to reinsurers \(to begin\), Artemis, 2021](#)

⁴² [African Risk Capacity, CPI](#)

⁴³ [The Caribbean Catastrophe Risk Insurance Facility \(CCRIF\)](#)

E. Debt and debt sustainability

Debt is often a binding constraint for developing countries to invest in resilience, often because they have reached debt sustainability limits and/or face high borrowing costs. This may force governments to postpone projects with significant long-term benefits. At the same time, disasters have often triggered debt crises due to their considerable economic impact. An INFF process will typically consider debt-related issues and should bring DRR elements into these discussions, such as:

Introduce disaster-related clauses in sovereign debt instruments

Disaster-related clauses help government free up cash flow in times of crisis by suspending debt repayment for a certain period (e.g., 1 or 2 years). The disaster-related clause must specify the type and magnitude of events that will trigger debt suspension (e.g., hurricane, pandemic).

Pros: Disaster-related clauses avoid that governments devote scarce public resources to repay debtors while they face a huge demand for relief and rebuilding purposes to protect their people. The clauses also reduce the risk of a costly sovereign default.

Cons: Disaster-related clauses do not provide ‘free’ resources for governments as they are currently designed as net present value (NPV) neutral. This means that the debt is simply deferred but will have to be repaid either during the remaining duration of the debt or through an extension of the debt maturity. It is also unclear whether governments may have to pay a premium for including a disaster-related clause in their debt instruments, for instance, due to the risk of a slightly delayed repayment schedule or lower liquidity of the debt instrument, although the NPV characteristic should provide comfort to investors and the clause could also be seen as improving the resilience of the borrowing country and reducing the risk of default following a disaster.

Example: Grenada and Barbados have pioneered disaster-related clauses, and Barbados also launched the first government bond with a pandemic clause. The Inter-American Development Bank (IDB) has also included a two-year debt suspension clause in its loans to Barbados in case of disasters triggered by natural hazards. Meanwhile, the international Capital Market Association (ICMA) published in 2022 a standardized term sheet for Climate Resilient Debt Clauses (CRDCs) to facilitate market adoption of these clauses. The UK Export Finance (UKEF) announced at COP27 that it will become the first export credit agency to incorporate CRDCs in its direct sovereign lending, allowing debt repayment to be deferred in case of climate change-related emergencies.⁴⁴

Issue resilience bonds and call for credit enhancement mechanisms

Resilience bonds are a sub-set of the fast-growing green bond market, for which the proceeds raised should be used to finance resilience-building projects and activities. While the green bond market has been able to rely on well-developed green taxonomies to identify eligible projects for financing, there is currently no direct equivalent in the resilience space, which is a gap the Climate Bond Initiative and UNDRR are currently working on to address (see section on taxonomies above).

Pros: By issuing this type of bond instrument, governments may be able to attract investors willing to align their investments with sustainable development objectives. Through this type of issuance, the country also signals its commitment to taking appropriate measures to reduce disaster risks. This should be perceived favourably by the market.

⁴⁴ <https://www.gov.uk/government/news/uk-export-finance-launches-new-debt-solution-to-help-developing-countries-with-climate-shocks>

Cons: This type of bond requires governments to provide information on the use of proceeds, which involves some administrative costs. It is also unclear whether governments could benefit from cheaper financing costs through the issuance of a resilience bond compared to traditional borrowing, beyond possibly a few basis points due to higher demand from investors. However, the pricing could become much cheaper if resilience bonds are combined with credit-enhancing mechanisms, for example from development partners willing to support governments in this area.

Example: Although there is not yet an example of a resilience bond issued by a sovereign at the time of writing, the European Bank for Reconstruction and Development (EBRD) issued a resilience bond for \$700 million in 2019, providing a proof of concept.⁴⁵ Meanwhile, different initiatives have emerged to enhance the credit profile of green bonds, which could be extended to the resilience bond market to lower financing costs for countries. For example, the World Bank partially guaranteed the blue bond issued by Seychelles in 2019. A first credit loss tranche mechanism was also supported by multilateral development banks for the Amundi Planet Emerging Green One fund, which focuses on green bonds from emerging markets and includes a donor-funded Green Bond Technical Assistance Program. The Green Climate Fund also invested in the Green Guarantee Company, which is established to provide guarantees for climate bonds.⁴⁶

Scale up the use of debt swaps for resilience investment

[to be drafted the idea is to provide debt relief to vulnerable countries in return of their commitment to invest in resilience, for example by protecting biodiversity and building disaster-resilient infrastructure - see [IMF blog](#)]

F. Addressing systemic issues

Disasters have the potential to create systemic crises due to their far-reaching and cascading effects. For example, natural hazards can damage critical infrastructure, displace populations, and disrupt food supply, destabilizing the economy and leading to financial crises. Creating resilience at a systemic level is essential to avoid the effects from disasters extending to other sectors or countries. Disaster scenarios, stress testing, and other analyses to assess the cascading impacts of disasters are important to anticipate potential systemic risks. The financial system is one channel for spreading risk after a disaster, so embedding DRR in financial institutions helps contain the impact of disasters. The following options could help countries enhance their systemic resilience.

Ensure sufficient access to emergency liquidity

The economic loss associated with all disasters – geophysical, climate, and weather-related – has averaged approximately \$170 billion per year over the past decade on a global level,⁴⁷ creating significant financial challenges for countries hit by these disasters.

Pros: By securing access to emergency liquidity facilities, countries can quickly mobilize financial resources to respond to the urgent needs of their population, fast-track the rebuilding of their economy, and avoid costly defaults as well as a debt crisis. Countries should pre-emptively assess as part of an INFF process whether the size of facilities they have access to is likely to be sufficient to cope with the fallout of a disaster.

⁴⁵ [World's first dedicated climate resilience bond, for US\\$ 700m, is issued by EBRD, EBRD, 2019](#)

⁴⁶ [The Green Guarantee Company welcomes the Green Climate Fund as founding equity shareholder, Cardano Development, 2022](#)

⁴⁷ [Global Assessment Report on Disaster Risk Reduction 2022: Our World at Risk: Transforming Governance for a Resilient Future, UNDRR, 2022](#)

Cons: Emergency facility providers may require borrowers to implement certain reforms, which may be unpopular, the so-called conditionalities. In addition, the size of these facilities is often capped to a certain level, which may prove insufficient for countries to deal with a crisis. Countries may also be less inclined to take preventive measures if they know they have access to financing in times of crisis.

Example: IMF has established the Rapid Financing Instrument (RFI) and Rapid Credit Facility (RCF) to help countries address economic shocks, such as disasters caused by natural hazards. Compared to the RFI, the RCF is only available to low-income countries and has a lower interest rate and longer repayment period (10-25 years vs. 3-5 years) but includes policy conditionalities. The RCF provided, for example, over \$40 million to Haiti following hurricane Matthew (category 4), which hit the country in 2016.

Conduct disaster scenarios/stress testing to assess the country's financial stability

Disasters have significant economic consequences and can derail the financial stability of a country. Central banks and other financial regulators have an interest in better understanding the exposures of financial institutions to disaster risks. To this end, they can consider different disaster risk scenarios and assess their impact on the economy and financial systems. Such impact can have cascading effects and materialize through different transmission channels (e.g., property damages due to acute weather events, lower agriculture productivity due to slow onset events such as desertification, and stranded assets due to stricter regulations such as coal-fired power plants).

Pros: Scenarios are particularly important as historical losses are unlikely to be a good predictor of future losses in a changing environment and climate. Anticipating future losses allows the timely implementation of risk reduction actions.

Cons: Modelling the impact of disasters on financial institutions often rely on numerous assumptions and require data that might not be available in many countries. While central banks are starting to consider climate-related risks, they may ignore other types of hazards (e.g., technological and biological risks).

Example: The Network of Greening the Financial Systems (NGFS), gathering 100+ central banks and observers, develop climate scenarios to understand the range of plausible outcomes resulting from different climate policy choices (early action, delayed actions, actions in only some jurisdictions, etc.)

Require commercial banks to include disaster risk assessment in credit allocation

Financial regulators are responsible for ensuring financial stability and supervising domestic financial institutions. In line with their mandate, they could require banks to integrate disaster risk assessment into credit screening processes.

Pros: This type of regulation will force borrowers to evaluate existing and potential disaster risks to their projects, thereby prompting them to act to build resilience. In the same vein, countries could ask for international regulatory frameworks for banks, the so-called Basel norms, to penalize projects that do not properly mitigate disaster risks.

Advocate for lengthening the time horizon of Credit Rating Agencies

Credit Rating Agencies (CRAs) play an important role in capital markets. They inform investors about the creditworthiness of borrowers, including government entities. Their ratings are also used in many jurisdictions for regulatory purposes. CRAs typically base their assessment on financial and economic

forecasts up to three years, which may overemphasize short-term considerations and not appropriately capture investment in long-term economic resilience.⁴⁸

Pros: Lengthening the CRA time horizon beyond the traditional three-year timeframe and creating long-term ratings is necessary to better account for risks and properly reward investment in resilience. For example, a country's efforts to invest in climate adaptation should be viewed favourably in credit ratings as it should enhance a country's economic resilience and a government's ability to repay.

Cons: The opponents of long-term credit ratings typically argue that making predictions beyond the three-year timeframe is challenging and subjective, which can undermine the credibility of ratings.

Example: Revising CRA's practices would require government and national regulators to engage in discussion with them as well as large investors advocating for changes, for instance through meetings such as the High-Level Meeting on the Role of CRAs in the implementation of the 2030 Agenda for Sustainable Development organized by UNDESA in 2022. Engagement with CRAs can also help countries better understand how DRR investment can improve their ratings.

G. Science, technology, innovation and capacity building

[section to be drafted – to be noted: Governments in the AAAA “welcome ongoing work in relevant institutions to support efforts by least developed countries, landlocked developing countries and small island developing States to build their national capacity to respond to various kinds of shocks including financial crisis, natural disasters, and public health emergencies, including through funds and other tools”]

5. Moving Forward

Eighty-six countries are using INFFs to articulate ambitious financing agendas suited to their unique context and challenges, lay foundations for forward-looking policy-making, and exploit financing innovations. For example, among the G20 countries, Indonesia issued its INFF in September 2022, while Nigeria, one of the G20 invited countries this year, also launched an INFF in October 2022.⁴⁹

With accelerated progress needed to reach the Sendai Framework objectives by 2030, now is the time to strengthen partnerships and leverage finance policies and instruments in support of DRR in order to turn ambitions into a reality.

Development partners can build on the growing momentum around INFFs - including the endorsement by G20 leaders of the [G20 framework of voluntary support to INFFs](#), and the focus on INFFs in the UN Secretary General's [SDG Stimulus to Deliver Agenda 2030](#) - to channel their technical and financial assistance to contribute to the successful integration of DRR into INFF, and to support others in furthering their INFF journeys.

Countries interested in embarking on, or already implementing, INFFs can benefit from the technical guidance on leveraging INFFs for DRR co-authored by UNDESA and UNDRR, while the G20 could consider welcoming this technical guidance and encouraging relevant international organizations to build on this guidance to support countries in addressing DRR challenges.

⁴⁸ [Credit rating agencies and sovereign debt: Four proposals to support achievement of the SDGs \(Policy Brief No. 131\), UNDESA, 2022](#)

⁴⁹ [INDONESIA INTEGRATED NATIONAL FINANCING FRAMEWORK \(INFF\) | United Nations Development Programme \(undp.org\)](#)