



10 October 2024

Co-Facilitators of the Outcome Document  
Fourth International Conference on Financing for Development

**Subject: 2<sup>nd</sup> Preparatory Committee Meeting for the Fourth International Conference on Financing for Development (FfD4), 3–6 December 2024, New York  
—Submission of the Element Paper on Financing Disaster Risk Reduction**

Dear Co-facilitators,

I am pleased to enclose the element paper on *Financing Disaster Risk Reduction* as ADB's input to pertinent technical discussions at the upcoming 2<sup>nd</sup> meeting of the Preparatory Committee for the Fourth International Conference on Financing for Development to be held in December.

The paper synthesizes major policy-level issues on financing disaster risk reduction (DRR) and highlights key reform actions that can potentially facilitate funding allocations for DRR initiatives, building on an earlier paper prepared by ADB for the G20 DRR working group on the broader topic of financing DRR, preparedness, relief, and early recovery and reconstruction.

We look forward to a fruitful engagement on this important endeavor and remain available for questions and follow-up.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'B. Carrasco'.

**Bruno Carrasco**  
Director General  
Climate Change and Sustainable Development Department

## Financing Disaster Risk Reduction

### Input paper for Elements Paper on Financing for Development Fourth International Conference on Financing for Development, June-July 2025

10 October 2024

#### I. A global financing framework: Achieving resilience for all<sup>1</sup>

Between 2004 and 2023, disasters triggered by extreme weather events and geophysical hazards affected 3.4 billion people globally and resulted in 1.3 million fatalities. Disasters also led to a reported \$4.2 trillion in economic losses (in constant 2015 prices), compared to \$2.0 trillion over the previous 20 years.<sup>2</sup> Small Island developing states face particularly high disaster risk, with annual expected losses equivalent to around 2–3% of gross domestic product as a consequence of disasters.<sup>3</sup>

The growth in economic losses has been driven by a complexity of factors including economic and demographic growth placing greater number of assets at potential risk, unplanned urbanization, risk-insensitive building designs, short-term planning cycles, and increasing concentrations of people in hazard-prone locations such as coastal areas and floodplains. Climate change has also played a significant role, already resulting in observed increases in the frequency and intensity of extreme weather events.<sup>4</sup>

Moreover, disasters have wide-reaching economic and social consequences stretching well beyond the direct damage that they incur. Poverty and vulnerability to natural hazards are inextricably linked. Disasters also have significant macroeconomic impacts. They intensify fiscal pressures on government both via increased spending needs and reduced tax revenue, increase levels of indebtedness and force deteriorations in the balance of payments. While post-disaster reconstruction booms can help maintain overall levels of productivity in the first year or so following major events, disasters can result in longer-term declines in economic activity.

However, here is nothing inevitable about existing levels of loss or future rises. Huge strides have been already made in reducing loss of human life over the past 50–60 years, in particular through investments in early warning. As well as further safeguarding human lives, much could be done to reduce economic and social impacts.

Yet, despite a global commitment under the Sendai Framework for Disaster Risk Reduction, 2015–2030, to reduce disaster risk, the recent mid-term review of the Sendai agreement found that since the

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<sup>1</sup> This paper draws in part on a paper prepared by the Asian Development Bank in 2023 for the G20. See ADB. 2023. [Financing Disaster Risk Reduction, Preparedness, Relief, Early Recovery and Reconstruction](#). Chapeau paper for G20 Disaster Risk Reduction Working Group.

<sup>2</sup> Centre for Research on the Epidemiology of Disasters, Université Catholique de Louvain. [EM-DAT: The International Disaster Database](#). Accessed 24 September 2024. The figure on people affected includes multiple counting of people affected by multiple disasters.

<sup>3</sup> World Bank. 2023. [Building a Resilient Future in the Pacific](#). Results Briefs..

<sup>4</sup> IPCC. 2022. [Climate Change 2022: Impacts, Adaptation and Vulnerability. Summary for Policymakers](#). Intergovernmental Panel on Climate Change.

agreement was signed in 2015 investments in disaster risk reduction have been insufficient to prevent a continuing increase in the direct and indirect costs of disasters'.<sup>5</sup>

The challenge in attracting financing both for integrating risk reduction measures into project design and for investments with the primary purpose of building resilience is partly that overall financing is tight, particularly in the wake of the coronavirus disease pandemic. Nevertheless, the underspend on disaster risk reduction may be particularly acute. The Sendai mid-term review confirms this, reporting that 'most Member States have ... identified that public-sector budget allocations and expenditures towards DRR (disaster risk reduction) have been significantly lower than for other national development priorities'.<sup>6</sup> This bias likely reflects political pressure on governments to demonstrate results, as well as insufficient awareness of disaster risk and its implications. Governments typically prefer to use limited public resources for projects that address short-term development priorities, yield assured near-term benefits and generate positive streams of direct or indirect income. In contrast, investments in resilience avert losses at indeterminate dates in the future. Their additional benefits in improving the investment climate in geographical areas exposed to natural hazards are often overlooked.

Private sector investment in risk reduction has been low too. The mid-term review of the Sendai Framework found that 'despite some progress on collaboration and knowledge-sharing, private funding has largely failed to adequately invest in DRR (disaster risk reduction) or effectively incorporate disaster risks'.<sup>7</sup> Low private sector investment in disaster risk reduction is partly a consequence of limited bankable opportunities – that is, opportunities to generate streams of income. The agricultural sector offers relatively greater opportunity for direct investment in disaster risk reduction, but investors and banks have shown little interest in a sector associated with high climate, price, and counterparty risks and market failures, despite non-cyclical demand, steady income and low correlation with the performance of other asset classes.

There has been significant focus, particularly since the mid-2010s, on enhancing disaster risk financing arrangements<sup>8</sup> for post-disaster response and recovery through pre-arranged financing. These financing arrangements are intended to provide rapid post-disaster liquidity, ameliorating the economic and social impact of disasters by enabling more timely response and recovery. They also strengthen fiscal resilience by providing predictable financing, spreading the costs of disasters over time and helping avoid significant post-disaster budget re-allocations, which can knock priority development plans off course.

However, pre-arranged financing resources still only cover a relatively small fraction of total post-disaster needs in many countries, not least because of associated opportunity costs in tight fiscal environments as well as issues regarding the availability of suitable disaster risk financing instruments, understanding of these instruments and trust in them. Over the period 2017 to 2021, pre-arranged financing resources, were estimated to cover just 2.2% of total crisis financing, defined as activities and flows to organisations whose primary purpose is to deliver prevention, preparedness and response to crises, including support for conflicts and pandemics.<sup>9</sup> As such, there is still very limited immediate post-disaster liquidity to help deliver timely and effective response.

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<sup>5</sup> UNDRR. 2023. [The Report of the Midterm Review of the Implementation of the Sendai Framework for Disaster Risk Reduction, 2015-2030](#). United Nations Office for Disaster Risk Reduction.

<sup>6</sup> Ibid. Page 51.

<sup>7</sup> Ibid. Page 56.

<sup>8</sup> The term disaster risk financing is used in this paper to refer to financing for post-disaster response, early recovery, and reconstruction. It covers both risk transfer and risk retention solutions.

<sup>9</sup> Plichta, M. and Poole, L. (2023). [The state of pre-arranged financing for disasters 2023](#). Centre for Disaster Protection.

Major investments in resilience, accompanying public policy and regulatory improvements and more pre-arranged financing for post-disaster relief, early recovery and reconstruction are now urgently required. Without them, growing disaster risk will result in increasing setbacks in development, including in poverty reduction, and counter efforts to address significant infrastructure needs in many countries. Growth in higher-risk areas will also lag advancements elsewhere as investors become increasingly reluctant to invest in these areas.

## **II. Action areas for disaster risk reduction financing:**

### **a. Domestic public resources**

Over the past 20 or 30 years there has been an emphasis in the context of disaster risk reduction on absorbing or mainstreaming disaster resilience costs within broader investments.. This approach entails the incorporation of risk reduction measures into project design – for instance, incorporating slope stabilization works, larger drains, and steeper road cambers into road projects to reduce the risk of flash flooding. The approach is based on sound logic– namely, that there are often significant net benefits stemming from risk reduction design features and that it is more cost-efficient and effective to integrate such measures into investments from the outset than it is to retrofit them respectively. However, in the face of huge public investment needs and related pressures to stretch government budgets as far as possible, minimizing unit costs, mainstreaming disaster risk reduction has lost out. Simply put, the mainstreaming approach has failed to deliver sufficient public investment in resilience or thus to stem rising disaster risk.

This failure is in part a result of a misperception that delivering resilient investment is necessarily more costly. While it can incur additional costs, early consideration of disaster risk can result in alternative projects designs and choices of materials that address disaster risk relatively cheaply – and can sometimes even lower overall project costs.

The failure also reflects relatively limited evidence on the value for money of investments in resilience, a more meaningful metric than cost alone. The net benefits are obviously case specific but often substantial. Analysis published by the World Bank in 2019, for instance, suggested that the net benefit of investing in resilient infrastructure in the power, water and sanitation, and transport sectors in low- and middle-income countries would be US\$4.2 trillion over the lifetime of new infrastructure, with \$4 in benefit for each \$1 invested.<sup>10</sup>

A more pro-active approach is clearly required to drive increasing investment in resilience, underpinned by high-quality disaster risk reduction and preparedness plans based on quantitative disaster risk data and qualitative analysis of social vulnerability. These plans should identify required investments in resilience initiatives from community through to national levels – for instance, in physical structures and nature-based solutions to reduce risks of flooding, seismic retrofitting programmes and early warning systems. The plans should include goals to ensure that all infrastructure meets agreed resilience standards. These standards should cover social, environmental and financial aspects of resilience as well as physical resilience.

These disaster risk reduction and preparedness plans should then be costed to determine the scale of funding required for their successful implementation. Dedicated financing is required to meet these costs and to ensure that all public investments incorporate adequate measures to meet set standards of resilience. This financing needs to be made available at all levels of government from local to national levels and across all relevant line agencies. It could be provided in the form of dedicated

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<sup>10</sup> Hallegatte, S; Rentschler, J and Rozenberg, J. 2019. [\*Lifelines: The Resilient Infrastructure Opportunity. Sustainable Infrastructure.\*](#) World Bank.

budget lines. Conditional, matching or special grants could also be established to incentivize allocations of line agency, local government, and private sector resources for disaster risk reduction and preparedness. Some governments could choose to legislate fixed annual budget allocations for disaster risk reduction, determining appropriate levels in accordance with individual country disaster risk and fiscal contexts. Disaster risk should also be included as a variable in the formula for distributing national government resources to lower levels of government, particularly in countries where significant responsibility for disaster risk reduction, preparedness and/or post-disaster purposes rests at these lower levels.

In addition, governments should require disaster risk assessments at an early stage of project preparation to identify potential disaster risks, incorporate resilience as a core design principle and determine associated costs. Governments should recognise that operations and maintenance budget lines are often the first port of call for line agencies seeking to undertake rapid temporary repairs after a disaster and establish mechanisms to replenish these budget lines accordingly, so keeping routine maintenance schedules in non-affected areas on schedule. More generally, basic principles of good fiscal housekeeping should also be upheld including by ensuring that for each approved capital investment there is a counterpart alignment under the recurrent expenditure budget as regular maintenance is essential in maintaining levels of resilience.

Beyond risk reduction, governments need to quantify their public contingent liability as a basis for developing robust disaster risk financing strategies and including disaster scenarios in fiscal sustainability analyses and macroeconomic forecasting. Progress in disaster risk modelling capabilities have facilitated significant innovation in insurance and insurance-linked securities, driven by international partner and industry ambition to increase the uptake of risk transfer instruments. More governments are also securing contingent disaster financing loans and grants, particularly from multilateral development banks (MDBs), ahead of events and establishing their own contingency funds and reserves. However, much more should be done to increase the uptake of pre-arranged financing instruments, including by building government understanding and awareness of these instruments and their benefits. To help ensure the most cost-efficient selection of available instruments for different layers of disaster risk, governments should prepare and implement national disaster risk financing strategies. They should also establish simple, fast-tracked processes and clear related guidelines for the approval, disbursement and monitoring of post-disaster expenditure to ensure rapid and effective use of available resources. Countries with comprehensive social protection systems should use them to target post-disaster support to disaster-affected households, scaling up benefits both vertically and horizontally through shock-responsive mechanisms to those in need.

#### **b. Domestic and international private business and finance**

A three-stranded approach is required to boost private sector engagement in disaster risk reduction, seeking to increase private investment in resilience, build the disaster resilience of businesses and draw on private sector expertise and know-how to deliver more resilient products and technologies.

Resilience impact bonds could offer a mechanism for drawing private financing into investments in resilience, operating along similar lines to social impact bonds. Resilience bonds linking catastrophe bonds with capital investments in resilience projects present another opportunity.<sup>11</sup>

Businesses ranging from micro, small and medium enterprises to large-scale multinationals should assess their own disaster risk and contingent liabilities, take necessary action to boost their resilience and establish business continuity plans. Credit providers should also institute disaster risk assessments

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<sup>11</sup> Re:Focus Partners. 2017. [A Guide for Public-Sector Resilience Bond Sponsorship](#).

for all clients, both for their own and their clients' benefit, and offer related training and support to build resilience and manage shocks.

The private sector has a significant role to play in developing and delivering products that support enhanced resilience as well. These include opportunities in the development of technology and the provision of products for water conservation (e.g., recycling, rainwater harvesting and drip irrigation products) to increase resilience to droughts; disaster-resilient crop varieties; affordable, hazard-strengthened housing; off-grid backup energy solutions; and hazard modelling, monitoring and forecasting services. Guarantees, subsidies, tax incentives and blended finance solutions can be offered to encourage cutting-edge research in resilient technology. The private sector, including chambers of commerce, and universities can also collaborate both on research programmes and on studies to build and disseminate evidence on the costs and benefits of disaster risk reduction, preparedness and business continuity measures. Insurance services are important too, including the provision of microinsurance, agricultural insurance and sovereign insurance coverage. Insurance providers should work with businesses to provide risk reduction advice as well as asset and business continuity insurance coverage.

### **c. International development cooperation**

The international community provides significant support after major disasters but much less for risk reduction purposes. According to OECD Development Assistance Committee data, \$264 billion (in constant 2022 prices) was disbursed as official development assistance to developing countries for disaster-related purposes over the period 2013 to 2022 of which only 8.1% was provided for disaster risk reduction and preparedness (OECD DAC, 2024).<sup>12</sup> These figures admittedly under-report spending on disaster risk reduction and preparedness as they exclude spending on disaster resilience aspects of broader development projects. Nevertheless, the basic bias in international assistance remains.

Development partners should increase their commitment and related flows of support to disaster risk reduction. This support should be carefully aligned with national disaster risk reduction priorities. Multi-donor trust funds for disaster risk reduction can provide a mechanism for ensuring both this alignment and strong coordination of assistance. They can also provide a mechanism for incentivising further investment in resilience by offering matching grants.

Ring-fencing of international assistance for disaster risk reduction purposes could be considered. For example, the Asian Development Bank (ADB) purposefully earmarks additional grant resources for disaster risk reduction and climate change adaptation resources for its poorest and most vulnerable member countries. The use of climate change funds could also be extended to cover geophysical hazards where relevant, recognising that it is more cost-effective to manage geophysical and extreme weather risks together than separately and also that geophysical hazards, if not addressed, could impact the performance and sustainability of adaptation investments.

International partners should increase their support for pre-arranged financing solutions as well, recognising the importance of rapid post-disaster liquidity in stemming the consequences of disasters and contributing to fiscal and economic stability. MDBs should scale up contingent disaster financing, including – as ADB already does – through the provision of additional resources beyond annual country allocations for this purpose and by allowing postponed commitment of funding until the point of disbursement. In addition, the international community should continue to support the expansion of insurance coverage, including sovereign insurance and microinsurance. Donors no longer necessarily expect these products to become financially self-sustaining over the medium term as they help

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<sup>12</sup> Organisation for Economic Cooperation and Development. 2024. [OECD Data Explorer: Official Development Assistance](#). Visited 23 September 2024.

address the consequences of climate change. The establishment of the Global Shield against Climate Risks, a G7 initiative launched at COP27 in 2022, is a welcome development in this regard. The Global Shield seeks to provide and facilitate more and better pre-arranged protection against climate and disaster related risks for vulnerable people and countries.

**d. International trade as an engine for development**

*Not relevant to disaster risk reduction.*

**e. Debt and debt sustainability**

Disasters can result in significant increases in indebtedness. UN and NGO grant resources tend to focus on humanitarian needs while MDBs support the cost of rebuilding, for many countries through loans.

MDBs should explore the further provision of grants for recovery and reconstruction purposes, building on the examples of the World Bank and the ADB who already offer some such grants to non-grant eligible member countries. Climate finance funds could also provide more support for disaster insurance, including premium subsidies, to alleviate the need for post-disaster grants and loans.

**f. Addressing systemic issues**

With increasing globalisation, major disasters can have significant regional and even global consequences including via their impacts on supply chains, global prices (e.g., due to widespread crop failure) or, in the context of volcanic eruptions, regional airspace. They can also have systemic impacts at a more localised level, including through the cascading impacts of failure in one sector – for instance, typhoon related disruption of power lines – on other utilities, services, businesses and homes.

Greater supply chain flexibility and infrastructure redundancy is required to address the local, regional and global spillover impacts of disasters, simultaneously designing new infrastructure to higher standards of resilience to avoid generating further systemic risk.

**g. Science, technology, innovation and capacity building**

Over the last few decades, there have been huge advances in risk modelling, in turn aided by expanding computer capabilities, which has led to exponentially better risk data and, thus, opportunities for enhanced resilience. For instance, building on this progress the Climate Risk and Early Warnings Initiative, a global initiative implemented by the World Meteorological Organisation, UNDRR and World Bank Global Facility for Disaster Reduction and Recovery, is working directly with countries to increase the availability of and access to early warning systems, linking science and technology with early warning systems to reduce the human and economic impacts of disasters.

However, continuing effort is required to enhance the availability and accessibility of disaster risk data at sufficient levels of granularity and in jargon-free, operationally-relevant formats. Widespread effort is also required to build capabilities at all levels of government and beyond to interpret the data and identify actions to reduce risk – and to understand the consequences of inaction. Area-wide disaster and climate risk assessments are also required to identify cascading risks, providing better understanding of chains of causality and interdependencies to inform the design of resilient systems and appropriate standards setting. In parallel, gaps in risk-sensitive building codes and land use zoning and their enforcement need to be addressed, taking into account traditional risk knowledge and resilient engineering solutions as well as the latest technological innovation.



### **III. Emerging issues**

Much greater public and private investment in disaster risk reduction is required to alleviate pressure on the world's poorest and most vulnerable countries and people and to help deliver sustained social and economic development. If not, disaster losses will continue to increase as climate change gathers pace, demanding ever greater resources for post-disaster purposes, potentially leaving the most vulnerable countries in a response loop with widening recovery gaps, and undoing global efforts to ensure adequate pre-arranged financing for this purpose. Properties in certain pockets of the world are already projected to be uninsurable in the relatively near term due either to the prohibitive cost of premiums or inability to find willing insurer providers to bear the risk. Without a marked increase in efforts to strengthen disaster resilience such situations will become ever more common as climate change further increases the frequency and severity of extreme weather events, forcing an economic decline in areas of very high risk as insurance becomes unattainable and investors move away.

Recent progress to improve pre-arranged financing for post-disaster purposes also needs to be stepped up as coverage is too low. The recent international interest and innovation in disaster insurance is extremely positive. At the same time, a more balanced focus is required, bringing global interest and resources to bear on action and innovation to reduce risk as well. Sustained efforts to reduce loss of life are critical too, including by taking full advantage of technological advances to continue improving early warning.

### **IV. Data, monitoring and follow-up**

The measurement of progress in building disaster resilience is challenging as ultimate success can only be gauged when disaster strikes. Regardless, progress can and should be monitored. All investments incorporating resilience measures should be tagged and tracked, drawing on learning and experience from countries that already have such systems in place. Governments should also introduce temporary budget tags following major disasters to monitor related expenditure and spending gaps and to help clarify levels of contingent liability faced by government, in turn informing future disaster risk management efforts.

Efforts to collate and analyse ex post evidence on the performance of risk reduction measures should be stepped up as well. Forensic analysis should be undertaken to examine the performance of individual resilience measures and collective community and national efforts, merging findings with projections of future disaster risks to draw lessons for the future. Governments should also strengthen post-disaster needs assessment methodologies and capabilities both as a basis for preparing post-event recovery plans and to inform future resilience and disaster risk financing policies and plans.

The introduction of the OECD CRS policy marker for tracking disaster risk reduction mainstreaming in development co-operation is a positive development. Between the introduction of the marker in 2018 and 2022, 1.8% of official development assistance commitments (in constant prices) from development assistance committee (DAC) members to developing countries was marked as targeting disaster risk reduction as a principal objective, 3.4% as targeting it as a significant objective, 60% as not targeting it and the remaining 34.8% as not screened in this regard.<sup>13</sup> However, belying these figures, there are some early teething issues with this new marker which need to be ironed out. Although not included in the indicative scope of activities and considerations eligible for the marker,

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<sup>13</sup> Ibid.



some 40% of aid tagged as targeting disaster risk reduction as a principal objective over the period 2018 to 2022 was for emergency support.

## **V. Overarching reflections**

Ultimately, resources are found for disaster-related spending – but often under duress and in a poorly planned manner to address the consequences of disasters, rather than to reduce ex ante risk. Rising disaster losses have clearly demonstrated that a mainstreaming approach is not sufficient to deliver resilient development. Dedicated financing is required to ensure that disaster risk can be routinely assessed and addressed as a standard consideration in project design and to finance specific disaster resilience needs, such as investments in water storage and floodways. Recent advances in pre-arranged financing need to be stepped up as well, not only to provide rapid post-disaster liquidity but also to help defray the costs of disasters and so, together with more investment in disaster risk reduction, to contribute to sustainable economic and social development.

Substantial improvements in risk assessment capabilities over the past 20 years have resulted in quantum improvements in risk information, providing the basis for the adoption of this far more proactive approach. Governments, businesses and the international community alike can now assess their disaster risks and liabilities and should do so, accepting their respective shares in disaster risk and acting responsibly to protect people, assets and livelihoods.