

Crisis and Disaster Risk Finance (CDRF)

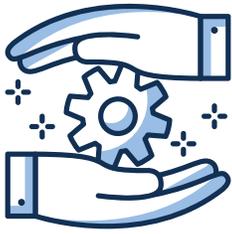
OUR SERVICES



WORLD BANK GROUP
Equitable Growth, Finance & Institutions

NOVEMBER 2019

Background



The **Crisis and Disaster Risk Finance** (CDRF) global team in the Equitable Growth, Finance and Institutions (EFI) Practice Group provides client countries with expertise on **financial risk management for disasters, climate shocks, and other crises**.

We offer a suite of **analytical and advisory, financial, and convening services** strategically designed to help vulnerable countries shift away from being crisis responders to become proactive risk managers. Through developing or strengthening **pre-arranged finance and systems**, we help countries take early action that can save lives, reduce costs and humanitarian needs, and protect development gains against disasters, climate shocks, and over time, a wider range of crises.

As part of the EFI Practice Group, the CDRF global team contributes to the common goal of policy and reform to enable equitable and sustainable growth and reduce poverty. This goal is met through finance and private sector solutions that safeguard development gains and growth against financial shocks from disasters, climate change, and other crises. Our aim is to **mainstream financial and fiscal risk management of disasters and crises in lending operations to support policy reforms** (macro-fiscal reforms and financial market development). CDRF's multidisciplinary team also contributes to the resilience global policy dialogue by transforming data into a set of analytical tools to help countries make risk-informed decisions on their **financial resilience** strategies.

Our Products

Disaster Risk Finance Diagnostics

We identify and assess:

- Contingent liabilities related to disasters and climate shocks
- Potential post-disaster funding gaps as the difference between countries' resources and their funding needs in both the short and longer terms
- Critical funding needs for countries' most vulnerable populations, businesses, assets, and regions

Disaster Risk Finance Strategy

Relying on a three-tiered risk layering approach that combines reserves, contingent credit, and risk transfer, we help countries:

- Develop comprehensive disaster risk finance strategies
- Undertake associated policy reforms to increase financial resilience for macro-fiscal risk management and climate and disaster risk management





Regional Catastrophe Risk Pools

We help develop regional multi-service platforms that allow countries to access a suite of products and services—financial, analytical and advisory, and knowledge—to strengthen financial resilience against disaster and climate shocks.



Sovereign Catastrophe Risk Transfer

We design and structure market-based catastrophe risk transfer programs to help countries access international capital and reinsurance markets on cost-effective terms.



Shock-Responsive Social Protection

We support sovereign and sub-sovereign governments in better planning for and implementing financial mechanisms that provide rapid access to funding money following disaster shocks.



Crisis Risk Finance

We help countries develop pre-arranged risk financing strategies against new and emerging crisis risks, such as health shocks and pandemics and risks of conflict, famine, and displacement and migration.



Agricultural Insurance

We develop sustainable, cost-effective markets and public-private partnerships in agricultural insurance for participants in the agribusiness chain to help countries to improve rural resilience.



Property Catastrophe Risk Insurance

We support policy reforms and instruments to help create and foster property catastrophe insurance markets and public-private partnerships that provide homeowners and enterprises with catastrophe risk insurance products.



Disaster Risk Finance Diagnostics

We help countries **identify and assess their contingent liabilities related to disasters and climate shocks**. We review their existing portfolio of (ex post and ex ante) financial response mechanisms. We identify potential **post-disaster funding gaps** as the difference between countries' resources and their funding needs in both the short and longer terms. We also help identify critical funding needs for countries' most vulnerable populations, businesses, assets and regions.

Myanmar

We conducted a countrywide diagnostic to map existing budgetary tools for rapid financing of disasters, assess post-disaster emergency financial needs, and identify a critical funding gap from flood risk that affects households. These diagnostic reviews the latest climate change-related trends to help anticipate future risks and disaster-related contingent liabilities.



Senegal

We developed a financial review of a pilot adaptive social protection mechanism that covers the most vulnerable households in the event of a severe drought. This review is helping the government understand its contingent liability associated with this mechanism and is supporting the design of a financial strategy to meet budgetary constraints and resilience development objectives.



Disaster Risk Finance Strategy

Relying on a **three-tiered risk layering approach** (combining reserves, contingent credit, and risk transfer), we help countries develop comprehensive disaster risk finance strategies and undertake associated **policy reforms to increase financial resilience** for macro-fiscal risk management and climate and disaster risk management.

Colombia

In 2013, with technical assistance from the CDRF team, Colombia became the **first country in the world to develop a dedicated national disaster risk finance strategy**. In 2014, we supported the government in analyzing the functions and mandates of different government entities to improve collaboration and coordination for implementation of the national strategy. We also supported the implementation of the strategy through a mix of financial instruments, including Development Policy Financing (DPF) with a Catastrophe Deferred Draw Down Option (CAT DDO) and a CAT Bond (jointly issued with Chile, Mexico and Peru under the Pacific Alliance).



The Philippines

We support the US \$450 million DPF Improving Fiscal Management, which includes a pillar on **Strengthening Fiscal Risk Management of Public Assets**. We also support the US \$400 million DPF Promoting Competitiveness and Enhancing Resilience to Natural Disasters, which includes a pillar on **Enhancing Financial Resilience to Disasters and Climate Change**; this pillar specifically supports public asset management and insurance, strengthens the comprehensive risk layering program, and improves catastrophe risk insurance market regulation to increase domestic catastrophe risk insurance. Finally, we support the series of DPFs with a CAT DDO. The first and second CAT DDOs were approved in 2012 and 2015 respectively, and the third is under preparation. Each provides US \$500 million in stand-by funding for major natural disasters.



Morocco

We support the US \$200 million Program for Results on Integrated Disaster Risk Management and Resilience and the US \$100 million DPF with CAT DDO. We provide the Ministry of Finance and national insurance supervisor with advisory services for the **implementation of a new law on catastrophe insurance**. This law builds on a dual scheme that promotes **market-based catastrophe risk insurance** and establishes a **solidarity fund** to compensate non-insured households affected by disasters. This includes financial risk analysis work, structuring of an insurance/reinsurance program, portfolio exposure management, strategy advice on financial protection, and design of a claims management process.



Disaster Funds

We analyze **budget allocations, processes for reallocation, off-budget accounts, and contingency funds**. We develop standard operating procedures (SOPs) for disaster funds, with special attention to **transparency and accountability** to the rules governing allocation of, control of, and access to disaster funds; and to the procedures and circumstances leading to disbursement.

Mozambique

We support the US \$96 million Program for Results on Disaster Risk Management and Resilience. We provide the Ministry of Economy and Finance with advisory services to **operationalize a disaster fund** and enable the design and placement of **sovereign catastrophe risk insurance**. The support includes advice on preparing the fund's operational manual, with special attention to transparency and accountability, financial risk analysis, catastrophe modeling, and financial product structuring.



Pakistan

We support the development of **standard operating procedures** to ensure that disbursement of disaster funds is timely and follows established budget execution procedures and acquittal processes. This involves alignment of SOPs to the public financial management acts and disaster management acts to ensure both that policies adhere to the legal requirements and that expenditures can be tracked; the goal is to enable better-informed budgeting for disasters from improved understanding of expenditures.



Regional Catastrophe Risk Pools

We help countries establish regional risk pools as **regional multi-service platforms** that allow access to a suite of products and services - financial, analytical and advisory, and knowledge to strengthen financial resilience against disaster and climate shocks. Regional risk pools allow countries to pool their risks in a diversified portfolio, retain some risk through joint reserves/capital and transfer excess risk to the reinsurance and capital markets. Such vehicles increase the value of risk information and create incentives to invest in risk reduction. We have supported the establishment of the **Caribbean Catastrophe Risk Insurance Facility** (CCRIF) and the **Pacific Catastrophe Risk Insurance Company** (PCRIC); and we have provided targeted technical assistance to the African Risk Capacity. We also lead the establishment of the **Southeast Asia Disaster Risk Insurance Facility** (SEADRIF).

SEADRIF

Building on its experience in establishing successful regional risk pools for small island states in the Caribbean and the Pacific, we support efforts by Cambodia, Lao PDR, and Myanmar to establish the first regional risk financing facility in Asia. With investments in the development of new satellite-based flood monitoring for insurance applications, we help countries use technology and financial innovation to provide rapid funds for managing response to floods.





Sovereign Catastrophe Risk Transfer

We help countries **design and structure market-based catastrophe risk transfer programs** to enable access to international capital and reinsurance markets on cost-effective terms.

Pacific Alliance

We helped design and structure **catastrophe bonds** that collectively provide US \$1.36 billion in earthquake coverage to **Chile, Colombia, Mexico, and Peru**. By structuring the transaction as a joint issuance, countries benefit from cost savings for legal and other fees.



Philippines

We helped design and structure the first subnational (parametric) catastrophe risk insurance program for 25 provinces in the Philippines. This program aims to provide provinces hit by severe tropical cyclones or earthquakes with immediate liquidity for rapid response and recovery.



Shock-Responsive Social Protection Programs

Rapid assistance during and after a crisis is essential to build the resilience and protect the welfare of poor and vulnerable households. We work with social protection experts to **embed shock-responsive financial components into social protection programs**. Such components are triggered in case of disasters and provide affected households with additional financial assistance.

Uganda

We helped develop and test a **disaster risk finance component** of the US \$130 million Northern Uganda Social Action Fund project. The component provides **additional post-disaster support to vulnerable households** by rapidly scaling up public works activities in response to shocks in order to build the financial resilience of beneficiary households. The component was initially piloted in Karamoja, where households are acutely vulnerable to drought. A similar program exists in Kenya to allow rapid cash transfers in case of drought.



Malawi

We support a **disaster risk finance component** of the US \$146 million Malawi Social Support for Resilient Livelihoods Project that enables the scale-up of the national social protection program and development of a risk financing system within the social protection sector. Moving away from the traditional ad hoc humanitarian support following disasters, we support the design of **triggers and decision-making mechanisms** that enable timely and evidence-based responses to shocks.



Crisis Risk Finance

We develop pre-arranged risk financing strategies against new and emerging crisis risks such as health shocks and pandemics, cyber risks, and risks of conflict, famine, and displacement and migration.

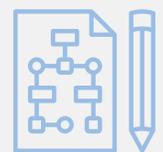
Afghanistan

We provide analytical support to **design a mix of financial instruments to secure cost-effective pre-arranged financing for drought**. This work involves identifying how much financial support to provide to the poor in the event of a severe drought and investigating forecast-based financing to facilitate early action.



Somalia

We support the design of new approaches to combining development and humanitarian planning for faster response at the early signs of an emerging food-insecurity crisis. This support includes developing preparedness plans and triggers and pre-arranging the funds for response.



Agricultural Insurance

We help countries improve rural resilience through the development of sustainable, cost-effective markets and public-private partnerships in agricultural insurance for participants in the agribusiness chain.

Mongolia

We designed and implemented the **first-ever index-based livestock insurance program** (IBLIP) **Mongolia**. The program aimed to reduce the impact of livestock mortality on herders' livelihoods through (i) developing and testing a pilot index-based livestock insurance program; and (ii) building the institutional capacity and legal and institutional framework for the prospective replication and scale-up of the pilot nationwide.



Kenya

We worked with local partners to provide the government of Kenya with technical assistance in the design of a livestock program. The **Kenya Livestock Insurance Program** (KLIP) protects vulnerable pastoral households just above the social safety net threshold and helps prevent households from accessing benefits from multiple programs. Since 2015, the program has insured about 20,000 pastoral households and made payouts six times.



India

We support the **Agriculture Risk Resilience and Insurance Access program** (ARRIA), a US \$400 million Program for Results. We provide government and the **national agricultural insurance program** (PMFBY) with technical assistance in the form of training on agricultural insurance for technical staff at federal and state levels; development and communication of analytical tools to understand risk exposure and insurance rating; and analysis and strategy advice on operational issues around the design and implementation of the PMFBY.



Property Catastrophe Risk Insurance Markets

We support policy reforms and instruments to help create and foster property catastrophe insurance markets and public-private partnerships that provide homeowners and enterprises with catastrophe risk insurance products.

Indonesia

We support the Ministry of Finance in developing a partnership with the country's insurance association to **transfer risk of key public assets** to a consortium of domestic insurers that reinsure the risk in international markets. This effort will help grow the domestic insurance industry while also ensuring continuity of public service after disasters and climate shocks.



Sri Lanka

We provide targeted assistance to the Ministry of Finance to improve the **National Natural Disaster Insurance Scheme** and to explore use of additional financial instruments to complement the scheme. This work seeks to improve the understanding of the exposure being insured in order to improve targeting of the scheme, ensure it meets the population's needs, and attain improved pricing from the reinsurance markets.



Knowledge Products

We have developed a series of knowledge management products to help build capacity in client countries. This work is essential to ensure that countries own and are driving the financial risk management agenda.

Disaster Risk Finance Executive Education Program

We bring together hand-picked World Bank Group task team leaders and targeted clients for a week-long immersive learning program on disaster risk financing. The Executive Education programs are run in collaboration with an academic partner. We delivered this program to a total of 70+ senior clients at University of Cambridge in 2018 and University of Stellenbosch in South Africa in 2019.



Online learning

We developed two courses—Fundamentals of Disaster Risk Finance and Disaster Risk Financing in the Pacific—that have been accessed by over 3,000 clients worldwide.



The Fundamentals of Disaster Risk Finance and Master the Disaster

We developed a simulated experience on risk financing that has been delivered face to face to over 2,000 clients from 50+ countries.



Disaster Risk Finance Community of Practice (CoP)

We initiated the fastest-growing COP within the World Bank Group. It currently has 2,500+ members from the World Bank Group, governments, civil society, private sector companies, development partners, and academia. The COP publishes a regular newsletter and conducts brown bag lunches and trainings every month.



Analytics

We developed a **suite of analytical tools** to help countries make risk-informed decisions on financial risk management of disasters and crises. These tools rely on state-of-the-art technology in **catastrophe risk modeling, near-real time risk information, and financial product structuring**. Risk analytics is essential for financial decisions: it underpins the understanding of financial exposure, the pricing of risk, the selection and calibration of financial instruments, and the development of earlier, reliable triggers. It also helps ensure value for money in risk financing solutions.

Flood Risk Platform

To support the regional catastrophe risk pool SEADRIF, we developed a **comprehensive flood risk platform** for Cambodia, Lao PDR, and Myanmar that helps identify, monitor, and quickly trigger response to flooding events in the region. The platform combines the latest hydromet models and data from satellite radar imagery to provide a robust, reliable view of population affected on the ground within a few days after the event. Beyond its risk monitoring capability (emergency response coordination, prioritization of vulnerable areas), the platform supports a parametric reinsurance mechanism that triggers insurance payouts in the aftermath of an extreme flood event.



Funding Gap Analysis

In Afghanistan, we helped conduct a **probabilistic risk assessment** to assist the country and humanitarian partners in **understanding the funding gap** between resources provided by existing financial mechanisms and the needs related to the risk of food insecurity—a risk the country is increasingly exposed to. The assessment aims to objectively quantify the wide range of potential scenarios (in terms of population and regions affected) for events varying in severity and likelihood; the goal is to equip the humanitarian community with information and tools to improve response to these crises.



Cost-Benefit Analysis

In Morocco, we provide the Ministry of Finance with advisory services for implementing the country's catastrophe risk insurance program. This includes financial risk analysis work, structuring of an insurance/reinsurance program, and portfolio exposure management. We conduct cost-benefit analysis to help benchmark financial instruments and to design a cost-effective risk layering strategy—one that saves over 30 percent in average annual costs compared to any single instrument used alone.



Who we work with

Borderless CDRF Team

The CDRF global team relies on **strong partnerships with other Global Practices** to mainstream financial resilience into World Bank Group operations. The team continues to strengthen its existing partnerships, such as the long-term partnership on disaster risk management (DRM) with Urban, DRM, Resilience and Land (GPURL); on adaptive social protection with Social Protection and Jobs (SP&J); on agricultural insurance with Agriculture; and on catastrophe risk insurance market development with Finance, Competitiveness and Innovation (FCI). It also develops new partnerships, such as on macro-fiscal protection with Macroeconomics, Trade and Investment (MTI); on resilient infrastructure with the

... the team leads the preparation of market-based transactions and the Treasury leads the market intermediation and placement.

Infrastructure Vice Presidency; and on crisis risk finance with Fragility, Conflict and Violence (FCV). The team collaborates with the World Bank Treasury in the development of sovereign market-based risk transfer solutions, where the team leads the preparation of market-based transactions and the Treasury leads the market intermediation and placement. The team is also strengthening its collaboration with the International Finance Corporation (IFC) to develop specific financial solutions for small and medium enterprises.

Data-Driven CDRF Team

The CDRF team has developed a set of analytical tools to help countries make risk-informed decisions on their financial resilience strategies against climate and disaster shocks. These include methodologies and tools for portfolio risk management, cost-benefit analysis, product and trigger design, pricing and structuring, remote sensing, catastrophe risk modeling, and insurance production systems.

Cooperative CDRF Team

Global interest in risk finance is increasing, for example in **high-level policy forums** such as G20, APEC, and ASEAN in climate negotiations, and through the InsuResilience Global Partnership. We support such engagements where there is a direct link to improve in-country outcomes for vulnerable people. We work with **regional organizations** such as the Pacific Island Forum Secretariat, the Commonwealth Secretariat, the African Union, and ASEAN Secretariat, which are playing an increasing role in the financial risk management of disasters and crises. We closely collaborate with the **private sector** and with private sector-led initiatives, such as the Insurance Development Forum, for the provision of public goods.

...methodologies and tools for portfolio risk management, cost-benefit analysis, product and trigger design, pricing and structuring, remote sensing, catastrophe risk modeling, and insurance production systems.

...where there is a direct link to improve in-country outcomes for vulnerable people.

Our Team



The CDRF team is a group of experts located in [Washington DC; London, UK and Singapore](#). The team's work is supported by donor-funded global and regional programs that aim to protect people against climate shocks, disasters, and other crises.

The CDRF team, through its [Disaster Risk Financing and Insurance Program \(DRFIP\)](#), manages and implements a series of global trust funds: [Global Risk Financing Facility \(GRiF\)](#) co-managed with the Global Facility for Disaster Reduction and Recovery (GFDRR); [Disaster Protection Program and its London Disaster Risk Financing hub](#); [DRFIP for Middle-Income Countries](#); [Agricultural Insurance Development Program](#); and [GFDRR Financial Protection Program](#). The DRFIP also manages, in close partnership with the regional World Bank teams, regional initiatives and associated trust funds such as the [Pacific Catastrophe Risk Assessment and Financing Initiative \(PCRAFI\)](#) and the [Southeast Asia Disaster Risk Insurance Facility \(SEADRIF\)](#).

The CDRF team jointly manages with IFC the [Global Index Insurance Facility \(GIIF\)](#), a program that facilitates access to finance for small holder farmers, micro-entrepreneurs, and microfinance institutions by providing agricultural risk transfer solutions and index-based insurance in developing countries.

**Disaster Risk Financing
& Insurance Program**



**Global Index
Insurance Facility**





The Disaster Risk Finance Community of Practice is a global community of practitioners coming together to curate knowledge and share best practices in Disaster Risk Finance across the World Bank Group, and among governments, civil society, private sector companies, development partners and academia.

Join the Disaster Risk Finance Community of Practice by scanning the QR code
To learn more about DRFIP, please visit our Portal at
www.financialprotectionforum.org/publications

For more information visit **www.worldbank.org** or contact **omahul@worldbank.org**