GRiF Annual Report

GLOBAL RISK FINANCING FACILITY (GRIF) – ANNUAL REPORT JULY 1, 2020 – JUNE 30, 2021

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CONTENTS

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ABBREVIATIONS AND ACRONYMS

AI	artificial intelligence
ARC	African Risk Capacity
ASEAN	Association of Southeast Asian Nations
BCEAO	Central Bank of West African States
BMZ	Federal Ministry for Economic Cooperation and Development (Germany)
CAT bond	catastrophe bond
CERC	contingency emergency response component
CCRIF	Caribbean Catastrophe Risk Insurance Facility
COP 23	23rd session of the Conference of the Parties
CRFA	Crisis Risk Finance Analytics (GRiF-funded program)
DFID	Department for International Development (United Kingdom)
DRFI	disaster risk financing and insurance
DRFIP	Disaster Risk Financing and Insurance Program (World Bank)
FCDO	Foreign, Commonwealth & Development Office (UK)
FCI	Finance, Competitiveness, and Innovation Global Practice (World Bank)
FCV	fragility, conflict, and violence
FY21	fiscal year 2021
G20	Group of Twenty
GDP	gross domestic product
GFDRR	Global Facility for Disaster Reduction and Recovery (World Bank)
GPURL	Urban, Resilience, and Land Global Practice (World Bank)
GRiF	Global Risk Financing Facility
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IDF	Insurance Development Forum
MSMEs	micro, small, and medium enterprises
NaCSA	National Commission for Social Action (Sierra Leone)
NADP	National Agriculture Development Program (Democratic Republic of Congo)
NGDI	Next Generation Drought Index
ODI	Overseas Development Institute
PCRIC	Pacific Catastrophe Risk Insurance Company
PPCG	partial portfolio credit guarantee
SeCNSA	Senegalese Food Security Council
SCTP	Social Cash Transfer Program (Malawi)
SEADRIF	Southeast Asia Disaster Risk Insurance Facility
UK	United Kingdom
USAID	United States Agency for International Development
V20	Vulnerable Twenty Group of Ministers of Finance of the Climate Vulnerable Forum

All dollar amounts are US dollars unless otherwise indicated

Executive summary

GRIF'S PROGRESS IN FY21

The portfolio

The Global Risk Financing Facility (GRiF) is implementing a full pipeline of projects. At the end of the fiscal year, $238.1 million was received in the Trust Fund, $203.7 million of which was allocated to projects. Of the allocated amount, $154.4 million has been programmed to support fully developed project proposals and $3.5 million to support project scoping activities.

Thirteen projects have received full grants; eleven grants are supporting the development of financial solutions to mitigate climate and disaster risks at the country or regional level. Two full grants support Innovation Investments that enhance developing countries' access to cutting-edge climate and disaster risk data and analysis. Seven projects deal with risks arising in fragile, conflict-affected, or violent situations.

GRiF's full-project grants co-finance nearly $2.2 billion in planned or active World Bank-financed projects. The co-financing supports pre-arranged financing instruments and technical assistance for World Bank projects that tackle climate shocks, disasters, and other crises, further increasing the resilience of the people who benefit from World Bank projects. GRiF full-project grants help governments, businesses, and households prepare for and respond to shocks by:

/ **Mobilizing private capital to complement limited public resources for climate change.** In Jamaica, a $16.4 million grant from GRiF supported the launch of the first catastrophe (CAT) bond, a market-based instrument that will provide the country with additional financial protection of up to $185 million against hurricanes.

/ **Bolstering "shock-responsive" social safety nets and emergency cash transfers to citizens.** In Sierra Leone, a $2.5 million grant is strengthening necessary delivery systems to scale up a social safety net through which $4 million in International Development Association (IDA) support will flow as cash transfers, reaching 29,000 vulnerable households in five major cities. In Malawi, a $21 million GRiF grant is also strengthening the platform for safety nets as well as supporting the design of a parametric insurance instrument that will provide additional protection in the event of severe drought.

/ **Backstopping lending to micro, small, and medium enterprises (MSMEs) to encourage more private lending and keep economies afloat**. In Burkina Faso, a $12 million grant capitalizes a partial portfolio credit guarantee as part of a $100 million financial inclusion project, giving a lifeline to 2,000 MSMEs during COVID-19.

/ **Supporting small farmers and climate-smart agriculture to enhance food security**. In the Democratic Republic of Congo, a $23 million grant covers technical assistance and premium subsidies for a risk transfer solution that backstops a $500 million World Bank investment in farmers and climate-smart agriculture.

/ **Leveraging regional cooperation through risk pools.** In Indonesia**,** a $14 million grant covers start-up and operating costs, systems building, and technical assistance for a new pooling fund that is the cornerstone of a $500 million World Bank lending operation, a key instrument in the country's disaster risk financing strategy. GRiF funds also support the expansion of the state asset insurance program, and coverage now extends to more than 3,300 buildings and 28 ministries.

GRiF continues its response to COVID-19 shocks and compound risks. GRiF's third year in operation coincided with a period of global uncertainty amid the ongoing COVID-19 pandemic. GRiF grants continued to help countries assess and respond to COVID-19 shocks and any resulting compound risks, as well as climate shocks and disasters. Among the projects that were active or in the scoping stage this fiscal year, nine considered or directly responded to COVID-19 risks.

Innovation Investments connect cutting-edge technology with data and analytical gaps. Through its Innovation Investments, GRiF has awarded $3.6 million to support the development of climate risk assessment and forecasting tools that are tailored to address the complex needs of World Bank client countries. For example, this fiscal year, decision-makers in Morocco, Mozambique, and Senegal have gained clearer understanding of their drought-related risks and will be able to use advanced modeling to estimate six months in advance which populations will be food insecure during the lean season.

Supporting the global disaster risk financing ecosystem

GRiF strengthens disaster and climate risk financing strategies and systems in developing countries. GRiF grants encourage systemic change at the national and regional levels. Of the projects active in FY21 and working in these key areas, 91 percent further promoted policy dialogue around risk finance, 71 percent made progress in strengthening public financial management, and 80 percent did more to strengthen delivery systems.

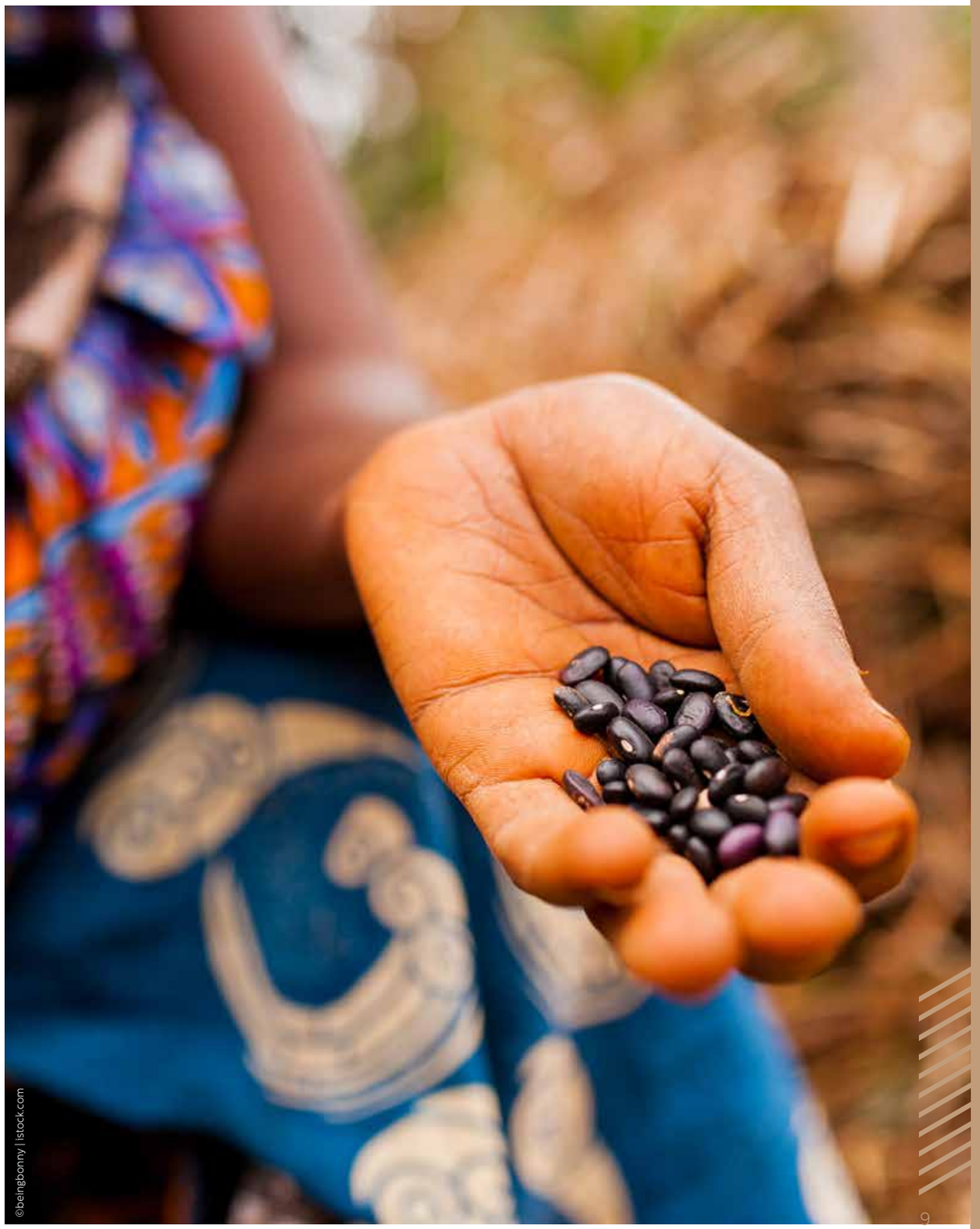
Reducing fragmentation and duplication of global climate and disaster risk financing efforts is a core part of GRiF's mission. GRiF's work complements that of other global partners working on climate and disaster risk financing, including the InsuResilience Global Partnership. GRiF contributes to the Partnership's Vision 2025, which lays out an ambitious agenda for expanding disaster risk finance and insurance solutions in poor and vulnerable countries. In FY21, GRiF started aligning its beneficiary calculation metrics with those of InsuResilience

and further supported ongoing research and technical assistance work programs.

Creating a monitoring, evaluation, and learning feedback loop

Rolling evaluations monitor progress and leverage lessons learned from projects. In FY21, GriF commissioned two evaluations: one showing that GRiF is starting to influence the risk financing agenda within the World Bank, and another recommending ways GRiF might enhance the effectiveness of its operations and governance structures. A "rapid review" looked at the extent to which gender has been considered in the World Bank's disaster risk financing strategy and operations, particularly where GRiF funds are involved.

A new communications strategy yields results. By the end of the fiscal year, GRiF's updated website had received over 1,000 new users and over 3,000 page views. GRiF's bi-monthly newsletters are sent to more than 10,000 subscribers. New monthly multimedia webinars, Technical Talks, showcase lessons learned from GRiF's global portfolio of projects. From government ministries and donors to development project team leads working in other sectors, the webinars connect stakeholders who want to deepen their understanding of disaster risk financing.



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ABOUT THIS REPORT

The Global Risk Financing Facility (GRiF) was created in the spirit of innovation, as a way to test and scale up financial solutions in developing countries that are struggling to overcome the financial impacts that climate change, disasters, and other crises have on their economies and the well-being of their people. Such crises generate significant fiscal risk and create considerable budget volatility. With GRiF's help, disaster-vulnerable countries can increase their resilience by securing access to post-disaster financing even before an event strikes.

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In its first two years, GRiF focused on selecting the proposals that were most likely to successfully develop and implement pre-arranged financing solutions in poor and vulnerable countries, thereby increasing their financial resilience in the face of the next crisis. Care went into developing the pipeline. Did the countries have sufficient institutional capacity to manage complex financial instruments? What was the best structure for the financial instrument, and were there solid data and analysis underpinning its design? Where were there gaps in financing or policy, and how could GRiF help fill them? Over the life of GRiF, 34 percent of scoping grants have been awarded full grants. Now in its third year, GRiF has a pipeline of 38 projects valued at nearly $207 million; 24 of those projects are currently under implementation and showing progress. This progress has been achieved despite the ongoing and unprecedented challenges presented by the COVID-19 pandemic.

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The first section of this report provides an overview of GRiF's operations, including how GRiF supports the broader disaster risk financing ecosystem to increase political will, funding, and technical capacity at all levels. Staying connected to others who are working in the field is crucial to making a long-term impact, since disaster risk financing as a concept is continuously evolving to respond to the growing challenges of climate change. A multi-donor trust fund, GRiF is funded by both Germany and the United Kingdom and is housed within the World Bank. These two countries hold the current and upcoming G7 presidencies, and GRiF plays a crucial role in delivering on the climate change and development agendas that are central to their presidencies. Likewise, GRiF's work supports current World Bank priorities, including its new Climate Change and Action Plan, which has a sharper focus on resilience and adaptation; and the IDA20 replenishment process, which includes crisis preparedness as a cross-cutting issue and ambitious policy commitments. GRiF's partnerships with other globally minded initiatives, such as InsuResilience, continue to ensure a more coordinated and collaborative approach to disaster risk financing efforts around the world.

The second section of the report provides an overview of the GRiF portfolio, including areas of focus, geographic spread, and allocations. With a fully programmed pipeline, GRiF is working through World Bank-financed operations, now across seven

sectors, supporting dozens of countries and millions of people across all regions. With more projects receiving full grants, GRiF delivers financial solutions at the local, country, and regional levels in the most difficult contexts. To complement this, GRiF continues to make investments in innovative instruments, tapping into the latest data and technologies with which to enhance solutions for countries.

The third section of the report highlights the progress made across GRiF's portfolio of country and regional projects. GRiF's grants to these projects are now demonstrating the benefit of embedding disaster risk financing in World Bank operations that already are designed to support governments, businesses, and households. As financial instruments are designed and placed, and as technical assistance boosts institutional capacity and strengthens systems, partner countries are increasing their resilience to deal with climate shocks, disasters, and other crises. Private capital is being mobilized, helping to fill a critical financing gap. Shock-responsive social protection systems are being bolstered so that emergency funds can flow faster to the people who need it most. Lending to MSMEs is being backstopped, keeping a major component of developing economies strong. Farmers are receiving support, reducing food insecurity in fragile and conflict situations. And finally, regional cooperation is being leveraged through risk pools so that neighboring countries can spread their risks and reduce the cost of securing disaster risk financing. With the onset of the pandemic in 2020, GRiF was also able to pivot quickly, shifting its pipeline to respond to shocks caused by COVID-19.

GRiF's grants to these projects are now demonstrating the benefit of embedding disaster risk financing in World Bank operations that already are designed to support governments, businesses, and households.

The fourth section covers GRiF's Innovation Investments (formerly known as Global Public Goods), which target the data and analytical gaps in low-income countries. Innovation Investments connect innovative analytics with individual countries' needs. Cutting-edge solutions that use satellite data and artificial intelligence were piloted in a selected number of countries and are now being adapted to meet the needs of additional countries.

The final section details GRiF's progress in creating a feedback loop of monitoring, evaluation, and learning. Since GRiF invests in projects across a wide array of different geographic, economic, and political contexts, creating such a feedback loop is essential to its long-term impact. Through its Monitoring, Evaluation, and Learning Framework, GRiF funnels lessons learned into its own portfolio and shares them with the wider disaster risk financing community. GRiF is already exerting some influence on the World Bank's disaster risk financing agenda, as well as starting to cull lessons learned from projects that are being implemented.

As year three closes, GRiF's solutions are being put to the test and showing that, with the right support, the hardships of crisis can also be an opportunity to build financial resilience.

1 About GRiF

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ABOUT GRIF

The Global Risk Financing Facility (GRiF) is a multi-donor trust fund established to strengthen the financial resilience of vulnerable countries around the world. GRiF is currently supported with over $260 million in pledges and contributions from the governments of Germany and the United Kingdom (UK).

GRiF provides finance and technical expertise to develop and expand pre-arranged financing instruments. These financial tools and systems help countries and their people prepare for—and recover more quickly from—the impacts of climate shocks, disasters, and other crises. To maximize the impact of grants, financial solutions are designed as part of World Bank projects. Because every sector, every project, and every country can be negatively affected by climate and disaster shocks, GRiF co-finances projects from across the development spectrum.

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The program contributes to the InsuResilience Global Partnership's Vision 2025. GRiF also maintains strategic partnerships with other members of the InsuResilience Program Alliance, including the InsuResilience Secretariat and the Centre for Disaster Protection.

THE NEED FOR GRIF

The broad sweep of climate change and disasters is erasing development gains. World Bank research estimates that, by 2030, an additional 132 million people could be pushed into extreme poverty by climate change and 216 million people could be driven to migrate within their own country by 2050.[1] Compound risks—multiple risks that occur simultaneously or one after another—further threaten lives, assets, and livelihoods with impacts that affect the poor first and most severely. The unprecedented nature of the COVID-19 pandemic has only intensified the threats presented by compound risks. A difficult lesson emanating from the most recent crises is that countries need a greater understanding of the risks they face and better financial planning to address them. Sound financial planning contributes to the long-term resilience of developing economies and, most importantly, protects the well-being of their citizens.

[1] World Bank. 2021. "Climate Change Overview." Last updated October 8, 2021. https://www.worldbank.org/en/topic/climatechange/overview#1.

HOW GRIF WORKS

GRiF project grants provide finance and technical expertise to develop and implement pre-arranged financing instruments. Project grants reduce financial and technical barriers by covering costs associated with start-up, operation, capitalization, implementation, technical assistance, and systems building related to these instruments. Pre-arranged financing is an essential tool for increasing the financial resilience of countries. Pre-arranged financing cannot mitigate all future climate or disaster risks, but it does provide governments with a path toward financial resilience by giving them immediate access to predictable and cost-effective funding when a disaster strikes.

GRiF tests and scales up financial solutions as part of broader risk management and resilience-building investments by co-financing larger World Bank projects—that is, GRiF grants are embedded in World Bank development investments. In this way, GRiF leverages development funding from multilateral institutions as well as national governments to scale up the use of financial instruments. This can safeguard development gains that would otherwise be lost because of the delay in securing the necessary financing to recover from crises. Financing from GRiF complements financing sources available for longer-term investment needs by lowering the financial hurdles that countries face in implementing innovative financial solutions for long-term risk management. As such, GRiF is designed to provide large grants that bundle financing for technical work with co-financing for financial mechanisms.

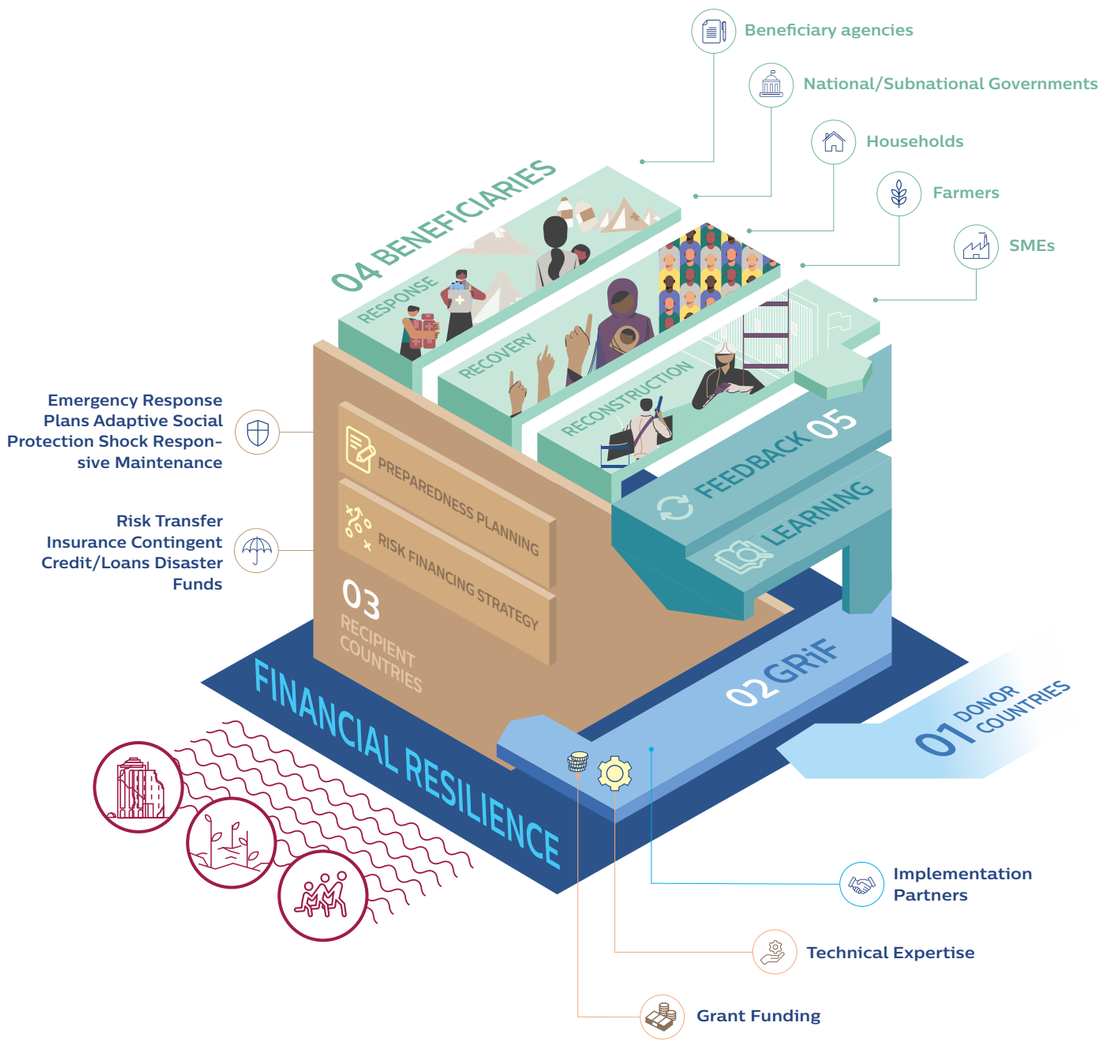
...GRiF leverages development funding from multilateral institutions as well as national governments to scale up the use of financial instruments.

GRiF grants allow countries to access and benefit from financial instruments that might otherwise be too costly to consider or that require more institutional capacity to implement than is currently available to them. When countries have a wider range of financial instruments to choose from, they are better positioned to address risks in a faster and more cost-effective way. Among

the range of financial instruments that can be deployed, GRiF project grants cover both risk retention and risk transfer instruments. ***Risk retention instruments*** are used to address low-severity disaster scenarios that the country can manage using its own budget. ***Risk transfer instruments***, by contrast, are used to address the high-severity disasters that would financially overburden a country were it to pay for relief and recovery solely from its own budget. Risk transfer instruments, therefore, shift the risk from the country to the financial markets.

In addition, GRiF awards Innovation Investments that fund research and analysis related to crisis risk financing. Through Innovation Investments that target gaps in data and analysis, GRiF aims to increase the number of proven risk financing solutions that can be adapted to systematically address the growing spectrum of climate and disaster risks. Convergence around best practices will then lead to increased demand for and use of concessional support for risk financing in a broader range of countries and sectors.

How GRiF works



What GRiF project grants do

GRiF grants fund analytical work, technical support, and start-up costs that support the development and implementation of risk retention instruments, including:

Contingency funds: Financial reserves set aside and earmarked for emergency use.

GRiF grants also support the development and placement of risk transfer instruments, including:

Sovereign insurance: Insurance policies taken out by governments that pay out when disasters strike;

Domestic insurance: Products offered by in-country insurance providers to groups such as farmers, herders, MSMEs, and households;

Risk pools: Mechanisms that allow multiple parties to aggregate their risks of climate shocks, disasters, or other crises; and

Partial portfolio credit guarantee schemes: Schemes that provide access to finance and, in the case of GRiF, access to finance for MSMEs for response and recovery following COVID-19 and disaster shocks.

GRIF grants support the design and implementation of *shock-responsive safety nets linked to contingent cash transfers*. Shock-responsive safety nets can expand to deliver emergency funds to more beneficiaries and/or provide additional resources to existing beneficiaries. They can be financed through budgets, aid, or risk transfer instruments such as insurance.

HOW GRIF DEVELOPS ITS WORK PROGRAM

GRiF benefits from collaborative decision-making. As a multi-donor trust fund, representatives from its two current donors—Germany, through its Federal Ministry of Economic Cooperation and Development (BMZ), and the United Kingdom (UK), through its Foreign, Commonwealth & Development Office (FCDO)—play key decision-making roles within GRiF.

The World Bank, Germany, and the United Kingdom form the *GRiF Steering Committee*. This serves as the primary governing body, providing all guidance and strategic advice for GRiF's program priorities.

The *GRiF Secretariat* leads work planning and reporting. It also coordinates dialogue with donors. The Secretariat is jointly formed by the World Bank's Disaster Risk Financing and Insurance Program (DRFIP) in the Finance, Competitiveness, and Innovation Global Practice (FCI), and the Global Facility for Disaster Reduction and Recovery (GFDRR) in the Urban, Resilience, and Land Global Practice (GPURL).

The Secretariat is supported by a multidisciplinary *Technical Committee* comprised of senior World Bank staff and donor representatives. In its first two years, the Technical Committee was instrumental in supporting GRiF in building its pipeline and getting projects off the ground. With available funds largely programmed, its role was slightly modified during this fiscal year. The main functions of the committee now include the voluntary technical review of GRiF proposals after approval and participation in GRiF Technical Committee Learning Workshops that showcase GRiF projects.

Grants prioritize need and innovation. Since its establishment in 2018, GRiF's grant portfolio has evolved to reflect the changing nature of risks facing developing countries. The concept of disaster risk financing, which originally intended to mitigate the fallout from natural hazards, is evolving to consider a wider range of crises that include the effects of climate change. GRiF is structured to target the multiple and compounded risks that are today's reality. In selecting which project proposals to support, GRiF has developed funding principles that encourage flexibility and innovation in developing crisis risk financing solutions. Priority is given to the poorest and most vulnerable countries. A first set of criteria focuses on the capacity of a country's processes and systems to support the financial instrument and a second set of criteria assesses the instrument itself and the data and models that underpin it.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HOW GRIF SUPPORTS THE GLOBAL RISK FINANCING ECOSYSTEM

Disaster risk financing would benefit from a more supportive enabling environment to increase political will, funding, and technical capacity at all levels and in all countries. The more stakeholders can systematically align their individual efforts with others working in the same areas, the easier it is to identify and close protection gaps and ensure that what limited financing is available is spent on effective solutions. To this end, GRiF programming is connected to the World Bank and an array of global partners.

GRiF is an important component of the World Bank's disaster risk financing agenda. GRiF fits strategically within the World Bank's toolkit for providing disaster risk financing support to countries. The program is a strong partnership between the climate, disaster risk management, and finance teams within the World Bank, with the Trust Fund administered by GFDRR and the technical program implemented by DRFIP in the FCI Global Practice Group. By focusing on financing solutions that implement pre-arranged risk financing instruments, GRiF complements and leverages other existing donor-supported risk financing programs that focus on upstream technical assistance that create the enabling environment for these instruments. During the past fiscal year, the World Bank has emphasized funding both for crisis preparedness in IDA countries, and for resilience and adaptation in its updated Climate Change Action Plan. As the disaster risk financing agenda becomes increasingly relevant to the World Bank's response to rapidly changing circumstances, GRiF will continue to collaborate closely with World Bank counterparts.

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GRiF builds connections through global partnerships. GRiF's objectives and activities are contributing to global agendas for scaling up implementation of climate and disaster risk financing. Strategic partnerships allow GRiF and the World Bank to share lessons learned and collaborate with a wide range of partners, including governments, development partners, private sector organizations, and nongovernmental partners. In 2016, for example, the World Bank, the United Nations, and the insurance industry launched the Insurance Development Forum (IDF), a public-private partnership geared toward extending climate risk insurance coverage to vulnerable populations and countries. The World Bank is currently sharing with IDF its experience working with the Philippines and Indonesia to develop public asset insurance programs and is also providing operational guidance on developing market-based solutions in developing countries.

GRiF and World Bank leadership participate in global events to support and advocate for the climate and disaster risk finance and insurance agenda at the highest levels. In FY21, the GRiF team provided advisory support to the 2021 UK G7 Presidency, with the G7 soon after announcing further commitments to expand climate and disaster risk finance.

World Bank and GRiF contributions to the InsuResilience Global Partnership

High-Level Consultative Group: The World Bank is represented by Juergen Voegele, Vice President for Sustainable Development. Work undertaken through GRiF, for example on premium finance, will continue to inform the work of the G7, the G20, and the V20.

Program Alliance: A founding member of the Program Alliance, the GRiF Secretariat shares its work program and coordinates with all other members. With its membership expanding to include additional multi-lateral organizations, the Program Alliance will continue growing in relevance. The GRiF Secretariat will continue to provide work updates and present on special themes (such as the World Bank's report on infrastructure services), further shaping the Program Alliance.

Annual Forum: The World Bank provides inputs to the Annual Forum, including as speakers and through organizing sessions such as the 2021 session that explored disaster risk finance and gender. As GRiF collects lessons learned through its Monitoring, Evaluation, and Learning Framework, these can inform the agenda of future Annual Forums.

Work on beneficiaries: The GRiF Secretariat and the InsuResilience Secretariat jointly developed a note that details the methodology for estimating beneficiaries for each type of instrument that GRiF funds. The note targets all partners contributing to Vision 2025, including World Bank task teams.

Work on gender: The World Bank has been supporting the InsuResilience Global Partnership's work on gender, including the Declaration on Gender and a regional report on gender issues for Pacific Island countries. In addition, the GRiF Secretariat has reached out to the Center of Gender Excellence as a potential partner for training and communications activities that GRiF is rolling out through its Gender Action Plan. The Secretariat is also keen to engage with any of the Center's experts who can assist in incorporating gender considerations in the design and implementation of GRiF-financed projects.

Working Groups: The World Bank has contributed to the working groups on program impact and gender. As the groups move toward establishing roadmaps, GRiF lessons learned can feed into those efforts.

GRiF supports the InsuResilience Global Partnership. Launched in 2017 at the 23rd session of the Conference of the Parties (COP 23) to the UN Convention on Climate Change, InsuResilience Global Partnership is the leading international political initiative on climate and disaster risk finance and insurance. Led by countries of the Group of Twenty (G20) and the Vulnerable Twenty (V20) Group of Ministers of Finance, it engages over 100 members from government, civil society, international organizations, the private sector, and academia. GRiF is fully committed to supporting the InsuResilience Global Partnership and its Vision 2025. The World Bank supports all its key mechanisms, namely the High-Level Consultative Group, the Program Alliance, the Partnership's Annual Forum, and several working groups. The World Bank and the Partnership have established close modes of working across these mechanisms through regular meetings.

GRiF is committed to the Partnership's Vision 2025, which lays out the Partnership's ambition for expanding disaster risk finance and insurance solutions until 2025, including: (1) increasing the number of people protected, (2) increasing implementation of disaster risk finance strategies, (3) supporting countries adopting climate and disaster risk finance and insurance (DRFI) solutions integrated within comprehensive risk management systems, (4) supporting and monitoring development/human impact of DRFI solutions, and (5) contributing to the DRFI evidence base. The GRiF Secretariat closely collaborates with the InsuResilience Secretariat to report progress toward Vision 2025 and to share lessons learned with the Partnership's members. In order to establish a methodology for estimating beneficiaries across different financial instruments, the GRiF Secretariat and the InsuResilience Secretariat started collaborating during the FY21. The methodology will be finalized in the beginning of the upcoming fiscal year.

GRiF enables frontline humanitarian aid organizations to get ahead of predictable crises. International humanitarian funding delivers billions of dollars of aid to crisis-affected people around the world each year. Yet gaps in the current system cause funding for disaster and crisis relief to become unpredictable and slow.

To help address some of these issues, GRiF is directly investing in efforts to strengthen collaboration and knowledge sharing with humanitarian nongovernmental organizations. Through a global Innovation Investment grant, GRiF is enhancing forecasting and data to help humanitarian actors decide where and when early action funding should be deployed. This year, GRiF helped the Red Cross Red Crescent Climate Centre and Kartoza, a South African open-source provider of geospatial data, develop the first-ever impact-based forecasting tool for floods in Indonesia. Other humanitarian agencies are now also exploring how the new platform could be used to enhance their work. Donors have emphasized that working with humanitarian partners is fundamental to their ability to apply risk finance solutions in fragile and conflict-affected situations.

2 The portfolio

Delivering results, demonstrating impact, and supporting development outcomes

Three years into its implementation, GRiF is delivering a fully programmed portfolio of projects. Working through World Bank–financed operations across seven sectors, GRiF is supporting dozens of countries and millions of people across the globe. GRiF's full-project grants co-finance nearly $2.2 billion in planned or active World Bank–financed projects.

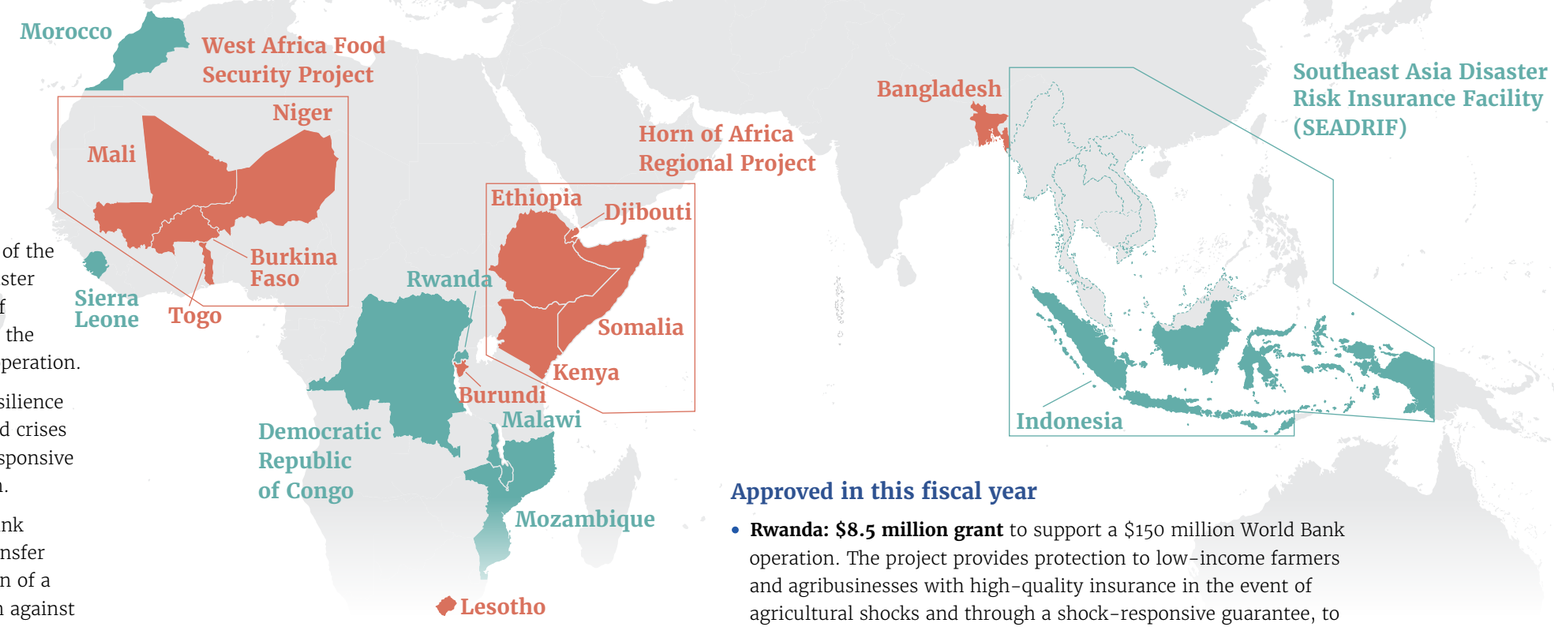
At the end of FY 2021, thirteen projects have received full grants, including new awards in Burkina Faso, the Democratic Republic of Congo, Indonesia, Morocco, and Rwanda; eleven grants are supporting the development of financial solutions to mitigate climate and disaster risks at the country or regional level. Additionally, recognizing the role that data play in enhancing disaster risk finance analytics, GRiF has provided two full grants to support Innovation Investments that leverage big data and Earth observation satellite technologies to enhance developing countries' access to cutting-edge climate and disaster risk data and analysis. During the year, GRiF continued to expand the application of risk financing concepts to countries experiencing fragility, conflict, and violence (FCV). Seven projects are now in countries affected by FCV in the Africa and Asia regions.

At the end of the fiscal year, $238.1 million was received in the Trust Fund, $203.7 million of which was allocated to projects. Of the allocated amount, $154.4 million has been programmed to support fully developed project proposals and $3.5 million to support project scoping activities.

GRIF AT WORK AROUND THE GLOBE

Country Grants*

- **Jamaica: $16.4 million grant** to support a $70 million World Bank operation. This project finances premium payments for a risk transfer instrument that will expand the country's suite of financial preparedness instruments to protect its budget from climate shocks.
- **Morocco: $5 million grant** to support a $200 million World Bank operation to issue a catastrophe bond that will provide a sustainable, public funding mechanism to protect vulnerable households during catastrophes. The project also supports improvements to climate risk modeling and awareness-raising of drought risks.
- **Mozambique: $8.0 million grant** to strengthen the capacity of the government of Mozambique to access and manage post-disaster financing including the co-financing of three years' worth of insurance premiums for sovereign risk transfer solutions for the government. The grant supports a $90 million World Bank operation.
- **Sierra Leone: $2.5 million grant** to increase the financial resilience of extremely poor households in Sierra Leone to disasters and crises by supporting the establishment and scale-up of a shock-responsive social safety net. The grant is part of a $30 million operation.
- **Malawi: $21 million grant** is part of a $125 million World Bank operation. This project enables the country's Social Cash Transfer Program to scale up during emergencies and funds the design of a parametric insurance instrument that will provide protection against more severe events.
- **Democratic Republic of Congo: $21.5 million grant** to design risk transfer solutions that protects smallholder farmers' investments in climate resilience and supports agriculture and food security interventions. The grant is part of a $500 million World Bank project.
- **Indonesia: $14 million grant** will help the government improve its response to disasters and thus protect its population and public finances, specifically by supporting timely implementation of the National Disaster Risk Financing and Insurance Strategy. The grant supports a larger $500 million World Bank operation.
- **Southeast Asia: $10.5 million grant** to support the development of the SEADRIF ecosystem. The project will enable SEADRIF to become a regional risk financing platform for all Association of Southeast Asian Nations (ASEAN) countries.



Approved in this fiscal year

- **Rwanda: $8.5 million grant** to support a $150 million World Bank operation. The project provides protection to low-income farmers and agribusinesses with high-quality insurance in the event of agricultural shocks and through a shock-responsive guarantee, to protect banks and MSMEs from climatic shocks such as drought and compound shocks
- **Burkina Faso: $12m grant** to establish a crisis window in an existing Partial Portfolio Credit Guarantee and a linked loan restructuring facility in order to protect banks and microfinance institutions from compound risk of drought. The grant is part of a $100 million World Bank operation.

Full Projects in Implementation Countries in Advanced Scoping

*This map shows select projects in GRiF's portfolio including those which have received full grants and are in implementation and those in advanced scoping.

3 Progress on country and regional grants

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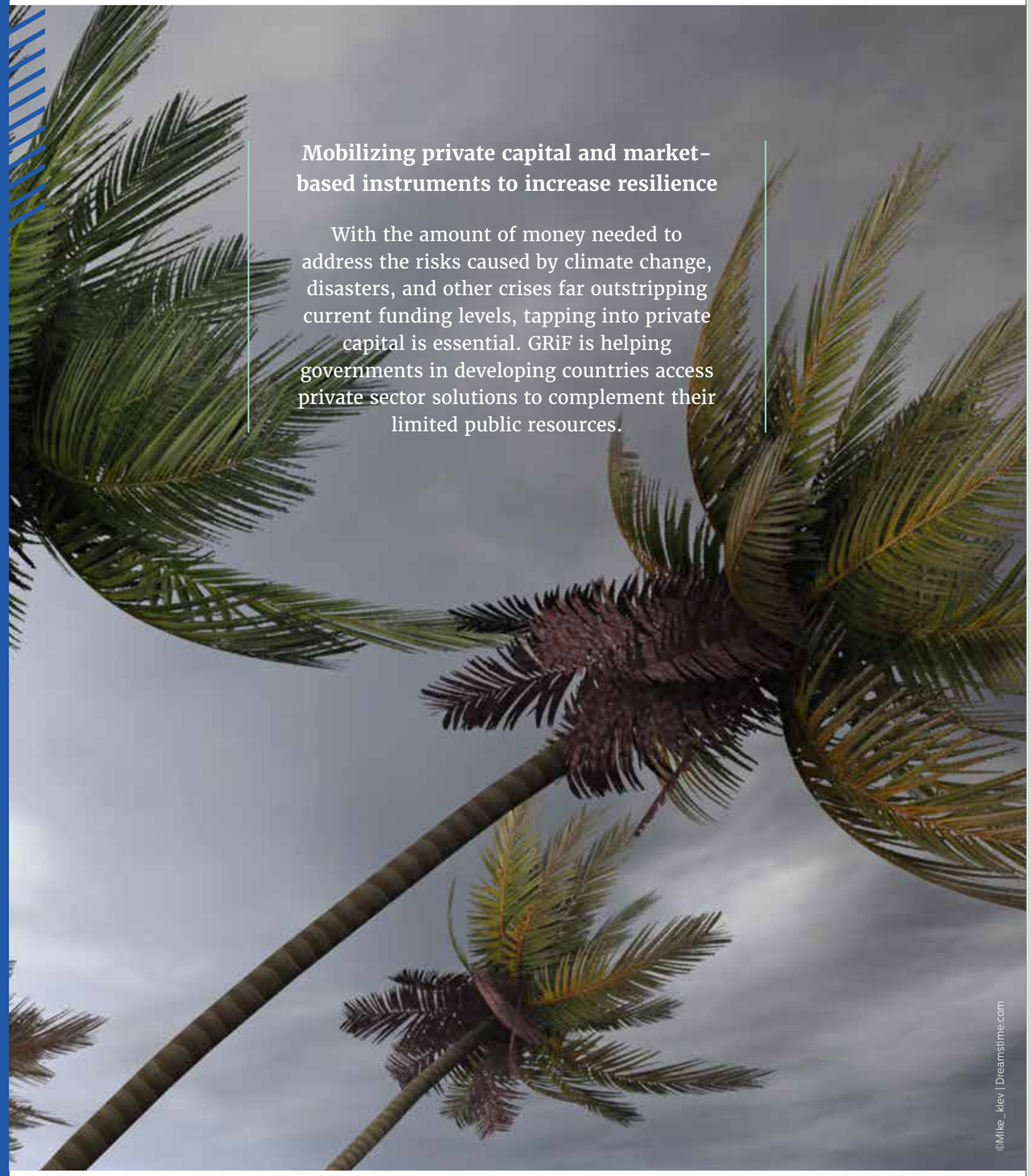
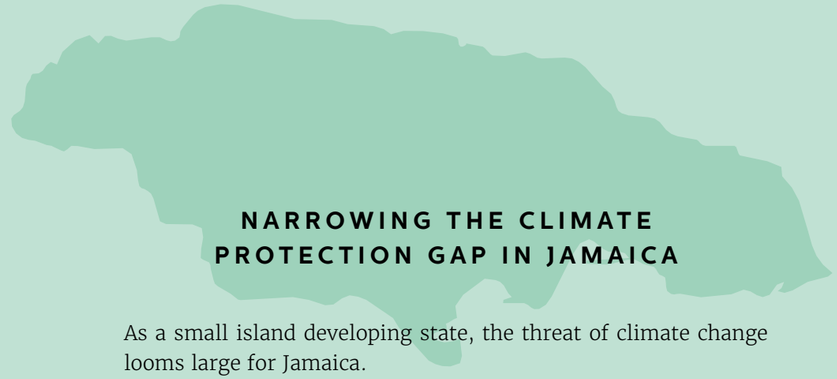
Delivering help to those who need it the most

GRiF's portfolio of country and regional projects is now demonstrating the broader impact of embedding disaster risk financing in World Bank operations. As GRiF-supported financial instruments are designed and placed, and as technical assistance boosts institutional capacity and strengthens systems, these instruments are supporting key development outcomes. GRiF grants are helping partner countries mobilize more private capital, bolster shock-responsive social protection systems, increase lending to micro, small, and medium enterprises (MSMEs), reduce food insecurity, and support regional initiatives such as risk pools. GRiF was also able to quickly pivot during the onset of the pandemic, shifting its pipeline to respond to shocks caused by COVID-19. Here is how GRiF-funded active projects are delivering results in these five areas, and how some projects in the scoping phase are gearing up to provide additional support.



Mobilizing private capital and market-based instruments to increase resilience

With the amount of money needed to address the risks caused by climate change, disasters, and other crises far outstripping current funding levels, tapping into private capital is essential. GRiF is helping governments in developing countries access private sector solutions to complement their limited public resources.



NARROWING THE CLIMATE PROTECTION GAP IN JAMAICA

As a small island developing state, the threat of climate change looms large for Jamaica.

In the coming years, the country is likely to experience more frequent and intense floods, droughts, storm surges, and other extreme weather events. The International Monetary Fund estimates that if the country were to face a disaster of a magnitude similar to 2004's Hurricane Ivan, Jamaica's real growth would drop by 2.5 percentage points in the year of the disaster and 0.5 percentage points in the following year.

Despite being an upper-middle-income country with a national disaster risk financing strategy, the heightened climate and disaster risks Jamaica faces means the country still has financing gaps that leave it vulnerable. Prior to GRiF's engagement with Jamaica, the country already had some pre-arranged financing instruments in place, including a contingency fund, a line of contingent credit, and catastrophe insurance that had been secured through the Caribbean Catastrophe Risk Insurance Facility to cover hurricanes, excess rainfall, and earthquakes. Having begun ambitious economic and fiscal reforms in 2013, the government was keen to find a solution that would offer it additional protection without increasing its sovereign debt or jeopardizing the progress made to date.

GRiF's co-financed solution that offers Jamaica more protection without more debt

Following more than two years of close engagement and preparation, in mid-2021 the World Bank issued a catastrophe bond (CAT bond) to capital market investors that provides Jamaica with $185 million insurance against hurricanes for three seasons. A $16.4 million grant from GRiF, funds from the United States Agency for International Development (USAID), and a

matching contribution from Jamaica covered transaction costs and premiums. Jamaica is the first small island developing state and first country in the Caribbean to sponsor its own CAT bond.

Jamaica is the first small island developing state and first country in the Caribbean to sponsor its own CAT bond.

Integrating disaster risk financing across projects funded by multilateral banks

The CAT bond complements the World Bank's other programs that support Jamaica's disaster risk management efforts. Earlier World Bank support to develop social safety net systems established, among other things, distribution channels that will be scaled up in an emergency so that that proceeds from the CAT bond and other financial instruments reach those with the greatest need first. Technical assistance provided in advance of placing the CAT bond strengthened Jamaica's disaster risk financing and insurance framework. These steps will also facilitate ongoing preparation for a $70 million economic resilience development policy loan, part of which specifically focuses on strengthening financial resilience against natural disaster risks. Coordination with other multilateral donors working in the region ensured that the CAT bond dovetailed with other ongoing initiatives.

Toward a self-sufficient model of disaster risk management

With more of its disaster and climate risks covered, the CAT bond gives Jamaica time to reduce its debt, making it easier for the country to pay for the renewal itself at the end of the 2023 hurricane season. A leading credit agency reported that the CAT bond significantly strengthens Jamaica's risk-finance strategy,[2] creating a more attractive business environment. GRiF expects its targeted grant may serve as a model for integrating disaster and climate risk financial planning in other small island states. Jamaica plans to create a reserve fund by the end of 2021 into which it will allocate resources from its disaster risk financing instruments. In addition, the country is now leading efforts to develop a regional CAT bond.

[2] FitchRatings. 2021. "Catastrophe Bond Gives Jamaica New Layer of Protection against Hurricanes." Fitch Ratings: Credit Ratings and Analysis for Financial Markets, September 15, 2021. https://www.fitchratings.com/research/sovereigns/catastrophe-bond-gives-jamaica-new-layer-of-protection-against-hurricanes-15-09-2021.

FULL GRANT AWARDED IN FY21: PREPARING A $100 MILLION CAT BOND TO PROTECT AGAINST FLOODING IN MOROCCO

GRiF is also supporting the placement of a CAT bond in Morocco. Future climate trends for the country include a faster rate of warming in the interior, reduced snowpack in the Atlas Mountains, increased incidence of drought conditions, and rising sea levels. Climate change will increase demand on groundwater for irrigation, which already consumes 90 percent of available water, and reduce the quality of surface water due to pollutants. Extreme events are expected to increase in frequency and severity. More than 30 percent of Moroccans and 33 percent of the country's gross domestic product (GDP) are threatened by two or more natural disaster risks at any given time.

To address its fiscal exposure to natural catastrophes, Morocco is spearheading a disaster risk financing agenda that institutionalizes a catastrophe risk insurance program at the national level. The centerpiece of this program is the Solidarity Fund for Catastrophic Events, a sustainable public funding mechanism with the legal mandate to provide coverage to uninsured, vulnerable households, and which offers partial compensation to those affected by catastrophic events.

How GRiF provides support

Grant funds will be used to support a $100 million parametric flood bond and improve awareness and modeling of drought risks in the context of climate change.

A $5 million grant will expand the coverage of the solidarity fund. Grant funds will be used to support a $100 million parametric flood bond and improve awareness and modeling of drought risks in the context of climate change. More analysis will be done to evaluate compounding effects, including those from additional external shocks such as future pandemics, cyberattacks, and locust plagues. These shocks are not covered under the country's existing legal framework. The work carried out under the grant is expected to feed directly into the Morocco's National Disaster

Risk Finance Strategy, which currently includes only risk transfer instruments that cover earthquakes.

Progress in FY21

COVID-19 has contributed to project delays during FY21. The project team was able to use the delays as an opportunity to better anticipate possible future procurement and governance issues, and to adjust the procurement and partnership plans accordingly. The project is expected to be implemented in FY22.

GRANT UPDATE

A NEW DISASTER RISK FINANCING STRATEGY AND SOVEREIGN RISK TRANSFER SOLUTION IN MOZAMBIQUE

In 2019, Mozambique made international headlines when it was struck by two consecutive cyclones, Idai and Kenneth. Over 2 million people were affected, and the cyclones led to $3 billion in losses that included critical physical infrastructure and the previous season's agricultural harvest. While damage from the cyclones was still being cleared, another disaster began to unfold: the second consecutive year of drought, preventing planting at a time when there were no remaining food stocks.

While the 2019 disasters were extreme, Mozambique is no stranger to natural hazards and had planned accordingly. Over the past 20 years, the government has been strengthening its policy and institutional framework to better prevent, mitigate, and respond to disasters. Its initial focus was primarily on disaster risk management, but, over the last eight years, the government has worked with the World Bank to increase financial protection against disasters by designing and implementing a disaster risk financing strategy.

The government had created its first disaster risk management fund prior to the onset of the 2019 cyclones, but the fund now regularly falls short of meeting actual needs. The fund receives allocations of at least 0.1 percent of the annual state budget, an amount currently equal to around $5 million. Mozambique's needs have exceeded initial budget allocations, and the government allocated $7.7 million to the fund in 2019 and $15 million in 2020.

How GRiF provides support

An $8 million grant is improving Mozambique's access to and management of post-disaster financing. The GRiF grant co-finances three years' worth of insurance premiums for sovereign risk transfer solutions for the government. It also provides technical assistance to strengthen multiple areas: policy dialogue on financial protection; public financial management of disaster response spending; the government's ability to assess, develop, and pay for sovereign risk transfer; and risk models and information. Technical assistance is also supporting the government in developing a National Disaster Risk Finance Strategy, a draft of which will be shared with the World Bank team in the second quarter of FY22.

Progress in FY21

During this fiscal year, a firm completed the necessary CAT modeling for the sovereign risk transfer solution, which will facilitate its possible placement next year. The government will hire a broker to assist with structuring the financial product and placing it with markets. Mozambique continues to strengthen the mechanisms for its disaster fund, which is also supported by World Bank funding and through which any potential future payouts would be channeled. Mozambique and the African Risk Capacity (ARC) regional risk pool continue to discuss possible collaboration.

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Shock-responsive social protection for timely and effective crisis response

When a disaster strikes, it is the most vulnerable people who feel the impact first. Even if emergency funds are available, getting them into the hands of those who need it the most can be challenging. Through grants that support shock-responsive social protection programs, GRiF helps disaster funds flow from the government to its people. GRiF funds not only support the financing of such programs, but they also ensure that the requisite systems for channeling the funds are strengthened.

GRANT UPDATE

SCALING UP CASH TRANSFER DELIVERY SYSTEMS IN SIERRA LEONE

Through its National Commission for Social Action (NaCSA), Sierra Leone has had a social safety net program since 2014. This program was used effectively as a vehicle to transfer emergency cash to citizens during the Ebola outbreak in 2015 and following a catastrophic flood in 2017. As COVID-19 spread in the first quarter of 2020, Sierra Leone identified a need to expand its social protection program to target informal sector workers, as they were the most likely to be impacted by travel restrictions and temporary lockdowns.

However, Sierra Leone lacked any obvious data sets that could inform such targeting, since most informal workers are not documented by employers or by tax authorities. Sierra Leone's pre-existing social safety net scheme was focused in rural areas where poverty rates had tended to be higher; little pre-existing safety net delivery infrastructure was in place in the urban centers that the government now needed to target.

How GRiF provides support

GRiF is providing a grant of $2.5 million to help strengthen the necessary social safety net delivery systems, enabling its scale-up and through which $4 million in IDA support would flow as cash transfers. This made Sierra Leone the first fragile and conflict-affected country supported by the World Bank to hold its IDA funds in contingency for safety net shock response. The flexibility built into the project subcomponent allowed the systems delivery mechanisms to be adapted to address the needs of the COVID-19 response. Success of the GRiF project will demonstrate proof of concept for the government's ability to systematically plan for emergencies through national budgeting processes.

Success of the GRiF project will demonstrate proof of concept for the government's ability to systematically plan for emergencies through national budgeting processes.

Progress in FY21

The grant has been instrumental in supporting the disbursement of World Bank contingency financing to vulnerable households affected by COVID-19 and is now supporting additional investments in the shock-responsive social protection system. Policy dialogue related to disaster risk financing continues. The grant is supporting the Ministry of Finance along the following workstreams:

/ *COVID-19 response.* GRIF resources have supported the creation of an Emergency Response Manual for the government. In accordance with the parameters of that manual, the contingency IDA funds were channeled through the emergency cash transfer instrument to reach 29,000 vulnerable households in five major cities. Following the pilot, additional financing was secured from the European Union to support the expansion of the emergency cash transfer program to an additional 38,000 households with vulnerable workers in informal sectors.

/ *Diagnostic and country risk profile.* The World Bank's Finance, Competitiveness, and Innovation Global Practice (FCI) team has developed a crisis and disaster risk finance diagnostic over the last year. The diagnostic includes a risk profile of the country, simulations of three potential risk financing strategies based on available historical data of post-disaster costs, and specific recommendations for enabling financial planning for shocks and crises in the country.

/ *Ongoing technical assistance for systems strengthening.* As the emergency cash transfer program is wrapping up, the engagement is now focusing on investments that strengthen government systems. Two firms with expertise in shock-responsive social protection, the World Bank, and the government are now looking into six thematic areas: (1) analyzing risk and vulnerability; (2) strengthening dialogue, collaboration, and coordination between NaCSA and key government and nongovernment partners involved in disaster

and crises response; (3) institutionalizing preparedness measures within NaCSA; (4) strengthening the shock-responsive mechanism of the social protection system; (5) defining "triggers" for response; and (6) long-term financial planning and links to safety nets.

/ *Ongoing investments for system strengthening.* NaCSA is utilizing the remaining GRiF resources to pre-register households in disaster-prone areas. Having piloted the initiative in the area hit by the 2017 landslide, pre-registering households in selected high-risk areas will allow the government to reach them more quickly in the event of flooding.

How the emergency cash transfer program kept one entrepreneur afloat during the pandemic

Isatu Kamara—a market trader in Freetown, the mother of five children, and her household's sole breadwinner—was one of the beneficiaries of the first emergency cash transfers. Her business had slowed because of the pandemic and she had used nearly all her savings on food, transportation, and medicine. An unforeseen medical bill for one of her children during the crisis exhausted what remained of her savings, leaving her reliant on gifts from friends and family. "This continued until the team from NaCSA visited the market to target beneficiaries," Isatu recounts. "I qualified to receive 1,309,000 leones ($135). This was the turning point of my life. Now I have enough to continue doing my business and even expand on it."

GRANT UPDATE

SUPPORTING RESILIENT LIVELIHOODS THROUGH SCALABLE SAFETY NETS IN MALAWI

An ongoing project in Malawi is also scaling up social safety nets. While developing Malawi's National Disaster Risk Finance Strategy, the government identified a major protection gap at the household level. Around 70 percent of Malawi's population live below the international poverty line of $1.90 per day,[3] but its core safety net programs cover only around 25 percent of those people. The main safety net system, the Social Cash Transfer Program (SCTP), covers less than 10 percent. Both droughts and localized flooding, which are common in Malawi, tend to disproportionately affect poor and rural households, widening the protection gap.

[3] World Bank. 2020. Poverty and Equity Brief: Malawi. April 2020. https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_MWI.pdf.

Over the past several years, the SCTP has been scaled up on an ad hoc basis to respond to lean-season food insecurity and other shocks identified by the Malawi Vulnerability Assessment Committee. After seeing how successful the safety net was in channeling emergency funds, the government included scalable social protection in its National Disaster Risk Finance Strategy. As a response to COVID-19, Malawi's government was able to reconfigure the cash transfer program to help its poorest citizens meet their financial needs.

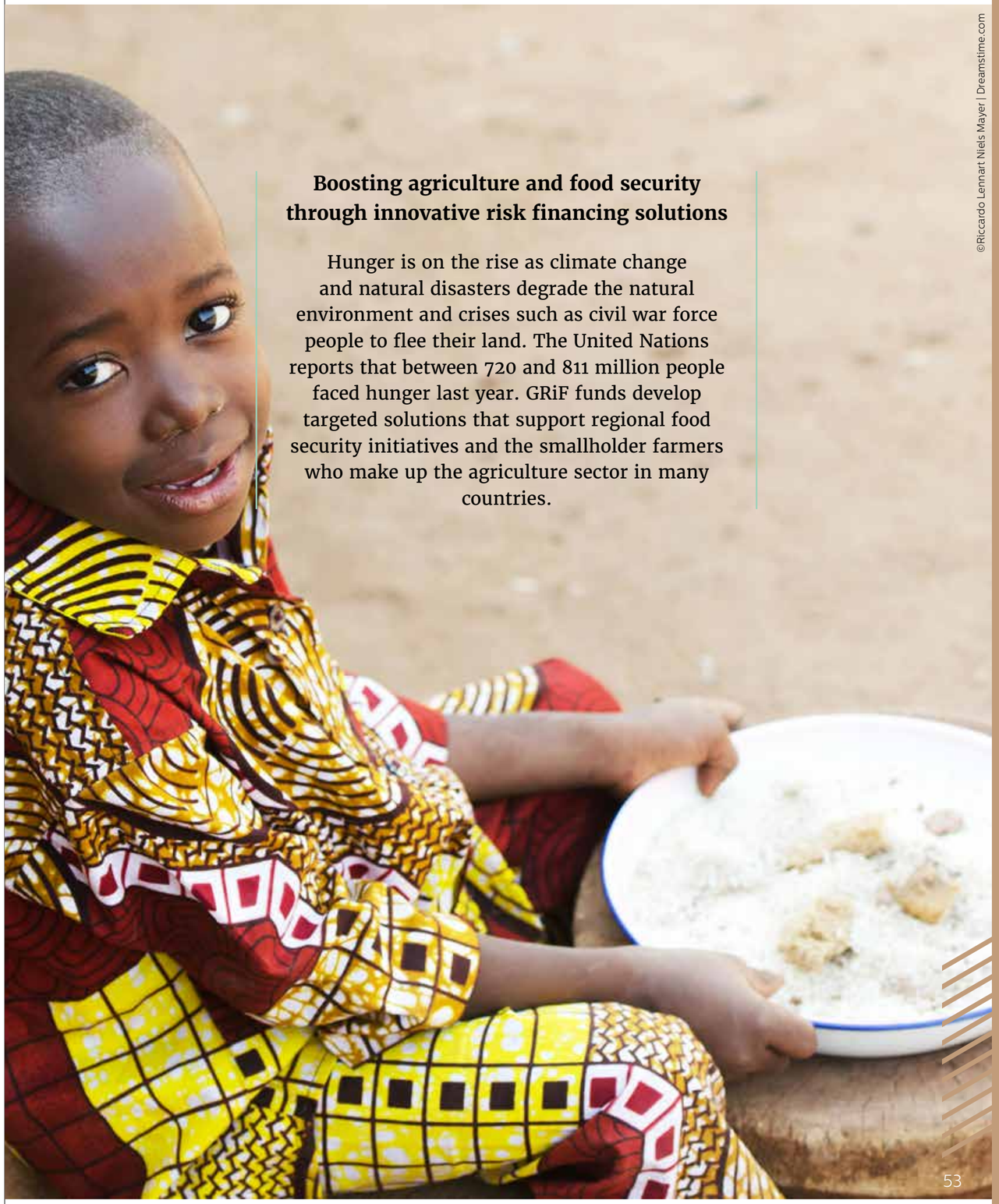
How GRiF provides support

A $21 million GRiF grant is further strengthening this national platform for safety nets, funding the design and setup of a disaster risk financing system to cover the costs of scaling up the SCTP to respond to shocks caused by drought.

A $21 million GRiF grant is further strengthening this national platform for safety nets, funding the design and setup of a disaster risk financing system to cover the costs of scaling up the SCTP to respond to shocks caused by drought. Malawi is taking a layered approach to financing. The first layer is a contingent financing instrument intended to fund small to medium-size scale-ups to the SCTP when there is less severe drought. This instrument is co-financed by Malawi using $10 million of its IDA allocation, demonstrating the government's strong commitment to the project. The second layer is a parametric insurance instrument funded by $10 million of the GRiF grant and will enable larger scale-ups to the SCTP in more severe drought years.

Progress in FY21

Progress has been made in introducing the risk transfer instrument. The primary and secondary trigger indexes for the instrument were selected after an in-depth review of available data sources and drought risk models for Malawi. The World Bank also conducted a costing analysis to help the government select the transfer amounts, household coverage, and duration of the SCTP. After pre-agreeing on the rules for the scalability mechanism, it was planned to be implemented for the first time during the 2021 rainfall season. The government has also started procuring a parametric risk transfer product to cover part of the costs of scale-up. The risk transfer product will be ready for the next rainfall season in 2022.



Boosting agriculture and food security through innovative risk financing solutions

Hunger is on the rise as climate change and natural disasters degrade the natural environment and crises such as civil war force people to flee their land. The United Nations reports that between 720 and 811 million people faced hunger last year. GRiF funds develop targeted solutions that support regional food security initiatives and the smallholder farmers who make up the agriculture sector in many countries.

THE DEMOCRATIC REPUBLIC OF CONGO: SOVEREIGN RISK TRANSFER SOLUTION BACKSTOPS $500 MILLION INVESTMENT IN FARMERS AND CLIMATE-SMART AGRICULTURE

As the largest country in Sub-Saharan Africa, the fertile lands and abundant freshwater sources in the Democratic Republic of Congo could potentially feed 1 billion people.[4] Yet access to food is a daily struggle for many Congolese who have had to contend with the rolling fallout of civil war, an increase in flooding and droughts, Ebola, and now the COVID-19 pandemic. Smallholder farmers, the urban poor, and women remain especially vulnerable, and in the past four years the number of food-insecure Congolese has more than doubled, from 7.7. million to 19.6 million.[5] As in countries all around the world, the economic slowdown caused by COVID-19 is expected to result in job losses and a drop in wage income, constraining the government's ability to finance fiscal policies and social safety nets that would mitigate the pandemic's impact.

Within this challenging context, the Democratic Republic of Congo and the World Bank are preparing the National Agriculture Development Program (NADP)—a series of projects to be implemented over 15 years and backed by $1.5 billion in IDA financing. The program will transition smallholder farmers from subsistence to commercial farming as well as promote private investment in commercial agriculture. The first $500 million phase, approved at the end of FY21, provides direct support to approximately 2 million smallholder farmers, encouraging them to adopt climate-smart agriculture technologies and practices. Climate-smart agriculture is an integrated and sustainable approach to managing cropland, livestock, forests, and fisheries that addresses both food security and climate change. These efforts will be complemented by investments to improve market access, including improving the network of rural roads and strengthening the capacity of relevant ministries.

[4] GRiF Concept Note: Risk Transfer Solutions for Enhanced Contingency Financing for Agriculture and Food Security in the Democratic Republic of Congo (DRC). Prepared for Q2 FY21 decision meeting.
[5] World Bank. 2021. National Agriculture Development Program (P169021) Project Information Document. April 11, 2021. https://documents1.worldbank.org/curated/en/526811620056994535/pdf/Project-Information-Document-National-Agriculture-Development-Program-P169021.pdf.

Launching the first-of-its-kind sovereign risk insurance in the Democratic Republic of Congo

To qualify for the direct support from the NADP that covers the costs of shifting to climate-smart agriculture technologies and practices, smallholder farmers agree to finance up to 30 percent of the total costs. The transition period can take between 6 and 18 months, during which time the farmers' investment could be lost as a result of extreme weather. Contingency financing is therefore crucial to protect their investments—and livelihoods. Accordingly, the NADP includes the World Bank's standard emergency response mechanism: a contingency emergency component within which up to $20 million of the project funds can be allocated to reimburse farmers for losses suffered from high-frequency, low-risk events or non-insurable risks such as poor plant or animal health. However, more risk layering would provide farmers further protection against a more severe weather crisis such as drought. This additional layer of protection is where GRiF's grants provide critical backstopping support, ultimately leading to the development of a parametric insurance mechanism that is the first of its kind in the Democratic Republic of Congo.

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GRiF funding provides a financial solution and enhances the Democratic Republic of Congo's overall insurance market

GRiF provided an initial $200,000 scoping grant to finance eight months of preliminary analysis and technical assistance to lay the groundwork for launching the financial instrument. The project team supported the Democratic Republic of Congo in designing and marketing the risk transfer solution as well as designing the related delivery mechanism that would rapidly disburse emergency funds to registered farmers. This was complemented by continued engagement with the government about how disaster risk financing can further improve the country's overall agriculture and food security. The scoping activities concluded in FY21, having identified the best agricultural data sources available and using this information for the preliminary design of the risk transfer instrument.

Based on the successful outcomes of the scoping grant, in October 2020 GRiF awarded a full grant of $23 million to cover the cost of finalizing the design of the parametric insurance instrument and to subsidize its premiums for five years. After the parametric insurance instrument is placed, the Democratic Republic of Congo could consider additional risk transfer solutions that cover other food security risks such as fluctuating food prices. Health-related risks such as Ebola and COVID-19 could also be covered. The full grant also includes additional technical assistance that builds further capacity for collecting critical weather and food security data; the data will be made publicly available. GRiF expects that the availability of quality data will encourage more private sector insurers to operate in the Democratic Republic of Congo, enhancing the overall insurance market in the country and promoting the practice of underwriting across the agriculture sector.

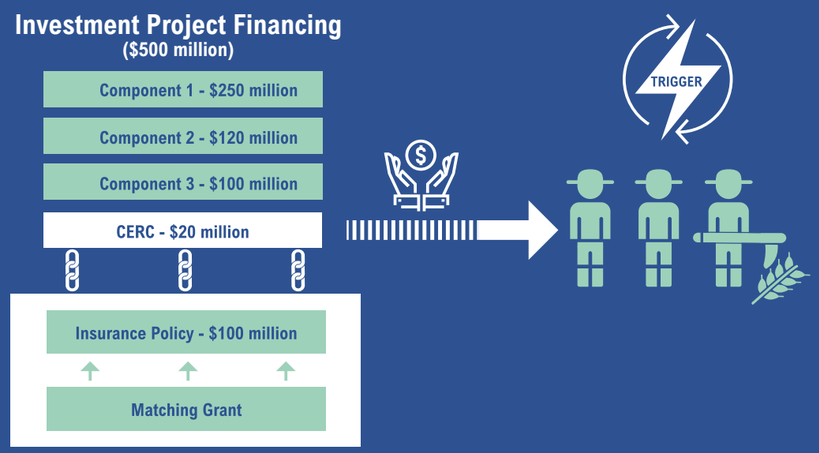
Catalyzing further support through partnerships

The ARC risk pool and other partners have expressed interest in supporting the Democratic Republic of Congo's risk financing efforts. Thus, GRiF has an opportunity to catalyze further support for the country. During the design phase of the risk transfer product, which will be a competitive process, ARC will be offered the same opportunity to participate as other potential risktakers. At the same time—and depending on the chosen placement structure and on whether a local insurer could be the fronting company—ARC could also be one of the reinsurers, either on a quota-share or an excess-of-loss reinsurance scheme.

Often pre-arranged financing projects are designed so that the government is the beneficiary of the funding, whereas in the Democratic Republic of Congo the intended beneficiary is the farmer, a project concept that provides the kind of targeted support that GRiF was set up to test.

How the Democratic Republic of Congo's new sovereign risk transfer solution backstops a $500 million World Bank investment

The World Bank has invested $500 million in the Democratic Republic of Congo's NADP. A $20 million contingency emergency response component (CERC) covers lower-severity or higher-frequency events, as well as non-insurable risks such as animal health, that threaten the program's success. A GRiF-funded risk transfer solution will backstop the CERC, covering extreme weather shocks. Any eventual payouts from the risk transfer solution will finance direct payments to farmers.



SCOPING GRANT AWARDED IN FY21

DEVELOPING A REGIONAL FINANCING INSTRUMENT TO IMPROVE FOOD SECURITY IN WEST AFRICA

GRiF funding is also supporting regional food security in West Africa. The region as a whole is experiencing a decline in food security, primarily because of the ways in which climate change, population growth, an eroding natural resource base, and conflict interconnect. More than 27.1 million people were expected to be at risk during the 2021 lean season.[6] Although there are regional risk management initiatives in place, a fully reliable financial instrument for responding to food security shocks that also meets the needs of all the participating countries does not yet exist. African leaders and multilateral organizations met in 2019 to outline a vision for Africa's food system, an initiative that will be strengthened by the World Bank's West Africa Food System Resilience Program.

How GRiF provides support

GRiF awarded a $200,000 scoping grant this fiscal year to assess the feasibility of developing a regional financing instrument to improve food security as part of the World Bank's planned West Africa Food System Resilience Program. Specifically, the grant will determine the potential scope, feasibility, and institutional structure for this instrument.

Progress in FY21

GRiF funding facilitated the analysis of agricultural production risks and risk financing mechanisms in six West African countries. In addition to providing inputs for a proposal for $24 million in GRiF financing under the West Africa Food System Resilience Program, the assessment report forms part of a comprehensive body of analytical work on risks to food crop production in 15 West African countries, the resulting price transmission that would affect these countries, and food security impacts in a selected subset of countries. The report will further inform the regional policy dialogue on agricultural risk management and risk financing. The full project proposal for GRiF's consideration has been prepared.

[6] The Food Crisis Prevention Network. 2021. Summary of Conclusions for the RPCA Restricted Meeting, April 8–9, 2021. https://www.food-security.net/wp-content/uploads/2021/04/RPCA2021_RELEVE-CONCLUSIONS_EN.pdf.

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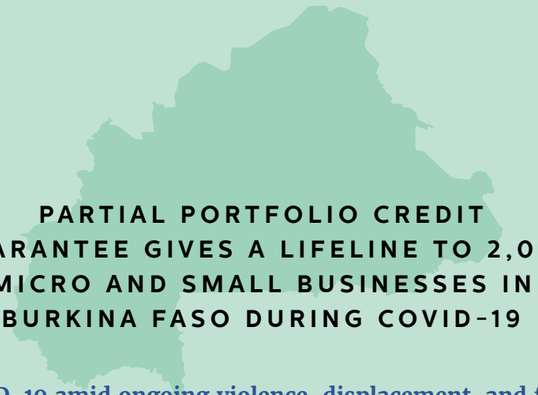
Enhancing the financial resilience of micro, small, and medium enterprises

Micro, small, and medium enterprises (MSMEs) account for a significant share of GDP and employment in developing economies. Because of their size, they are especially vulnerable to disasters or other shocks, and they face risks that are commercially uninsurable. By supporting financing instruments such as partial portfolio guarantees that encourage banks to provide more lending, GRiF is ensuring that smaller businesses have better access to credit and can keep contributing to the economy.



PARTIAL PORTFOLIO CREDIT GUARANTEE GIVES A LIFELINE TO 2,000 MICRO AND SMALL BUSINESSES IN BURKINA FASO DURING COVID-19

COVID-19 amid ongoing violence, displacement, and food insecurity worsened by the changing climate

In the midst of a growing number of development challenges, Burkina Faso's micro, small, and medium enterprises (MSMEs) are the fragile backbone of its economy. The country has 65,000 formal MSMEs and an additional 1.4 million informal ones.[7] Terrorist attacks have displaced more than 1 million Burkinabe, most of whom are small-scale farmers who have had to abandon their land and source of food.[8] Food security has become more tenuous as drought, exacerbated by climate change, degrades the country's already-dry land. Access to basic social services such as schools and health care is also increasingly limited.

Burkina Faso's Emergency Response and Recovery Plan includes a social safety net system, national funds set aside for emergency use, and insurance to provide cotton farmers with small-scale coverage against drought. The plan will help the country meet some of its disaster risk financing needs, though it does have financing gaps, particularly for the economic recovery of the MSMEs that dominate its private sector.

When COVID-19 hit the country, the economic impact was predictably severe. Economic growth is expected to shrink to -2 percent. An April 2020 World Bank diagnostic assessing the pandemic's impact showed an overall decrease in revenues for 93 percent of economic actors, and three in four companies reported having financial problems. Thirty-four percent of firms reported not having enough cash to cover their expenses beyond three months.

[7] GRiF Concept Note: Burkina Faso: Protecting Small and Medium Enterprises (SMEs) from Compound Risk of Drought and Flooding during COVID-19. Prepared for December 10, 2020, decision meeting.
[8] World Food Program USA. 2021. "What You Should Know About What's Happening in the Sahel and Why It's Spinning Out of Control." May 18, 2021. https://www.wfpusa.org/articles/a-snapshot-of-life-in-the-african-sahel/.

Guarantee for $45 million in loans to businesses impacted by COVID-19

In response, the World Bank restructured its $100 million Financial Inclusion Support Project in Burkina Faso. Part of the project was originally designed to increase access to digital financial services, with $35 million earmarked as a partial portfolio credit guarantee (PPCG). PPCGs allow for credit risk sharing with third parties, encouraging private lenders to lend more, which in turns gives underserved borrowers greater access to financing. In Burkina Faso, the PPCG targeted key economic actors in the country: small and medium enterprises, farmers, and female entrepreneurs. In May 2021, the World Bank added a $20 million crisis response window to support small firms affected by the pandemic to cover loan restructuring and short-term working capital loans. As borrowers find it more difficult to repay their loans as a result of COVID-19, funds from the crisis response window will allow banks and microfinance institutions to favorably renegotiate lending terms or extend grace periods for repayment. A GRiF grant funded half of the crisis response window, with additional financing coming from unallocated or repurposed project funds. The $20 million crisis response window can guarantee $45 million in loans made by participating financial institutions. At the end of FY21, three banks had signed an agreement with the crisis response window and 2,000 MSMEs, 500 of which are female-owned, are projected to benefit. However, demand for the crisis window and its guarantee coverage has been high, and it currently covers only 20 percent of participating financial institutions.

The $20 million crisis response window can guarantee $45 million in loans made by participating financial institutions. At the end of FY21, three banks had signed an agreement with the crisis response window and 2,000 MSMEs, 500 of which are female-owned, are projected to benefit.

The Financial Inclusion Support Project and new crisis window complement five other ongoing World Bank programs targeting the agricultural sector, social protection initiatives, and climate resilience in Burkina Faso. They also dovetail with support measures being taken by the Central Bank of West African States (BCEAO) to provide liquidity, make concessional loans, and promote electronic payments.

Support for Burkina Faso's first comprehensive disaster risk financing strategy

As a final component of the restructured project, an additional $2 million grant from GRiF will bolster the government's disaster risk financing capacity, including technical assistance to develop the country's first disaster risk financing strategy. A comprehensive disaster risk financing strategy will identify the most suitable financial instruments and the requisite financing sources, helping the country sustain its development gains. The country has relied on external support to finance disaster relief and recovery for the past decade; a successful strategy can help set the country on a viable, self-sustaining path toward the future. GRiF will continue to evaluate the projects' progress, documenting lessons learned to inform disaster and climate risk financing in other countries dealing with the multiple challenges of COVID-19, climate change, and conflict.

[...] an additional $2 million grant from GRiF will bolster the government's disaster risk financing capacity, including technical assistance to develop the country's first disaster risk financing strategy.

FULL GRANT AWARDED IN FY21
BRIDGE LENDING WINDOW TO SUPPORT AN ESTIMATED 2,000 MSMES IN RWANDA

GRiF is also supporting MSMEs in Rwanda, where they represent 98 percent of businesses and contribute 55 percent of total GDP.[9] Although they are essential to the economy, one-third of Rwandan MSMEs stated in a 2019 World Bank survey that access to finance was their single biggest business constraint—a greater share than any other cited constraint. The credit crunch is particularly pronounced in agro-based businesses, where credit extended to the agriculture sector accounts for less than 2 percent of all lending.

How GRiF provides support

GRiF awarded a grant of $8.5 million so that banks could continue lending to MSMEs in the agricultural sector that were struggling to recover from drought or the COVID-19 pandemic. The grant capitalizes a bridge lending window, covers insurance premiums, and provides technical support to enhance disaster risk financing capacity in the government and private sector. The bridge lending window aims to reach 2,000 MSMEs, 60 percent of which will be owned by women.

Progress in FY21

This fiscal year, the project team supported the Development Bank of Rwanda in creating a project implementation unit that will coordinate the project over the next five years. Next steps include determining which MSMEs need short-term bridge loans, carrying out requisite due diligence, developing the insurance backstop product to protect the bridge lending window's capital from depletion, and collaborating with financial institutions that will use the bridge lending window to extend credit to MSMEs.

[9] Government of Rwanda. 2010. Small and Medium Enterprises (SMEs) Development Policy. Ministry of Trade and Industry. As referenced in GRiF Concept Note: Rwanda: MSME Shock Protection Using a Contingent Credit Window for Bridge Financing. Prepared for February 2021 decision meeting.

RESPONDING TO NEW RISKS: GRIF FINANCING HELPING WORLD BANK CLIENT COUNTRIES IMPACTED BY COVID-19

GRiF mobilized quickly to respond to COVID-19 during the pandemic's early months, restructuring its pipeline to provide short- and medium-term grants and adapting ongoing projects to address the additional shocks caused by the pandemic. GRiF faced a dual challenge in responding to COVID-19: the need to support specific interventions to provide immediate relief and the need to address longer-term economic recovery or preparedness. To address the first challenge, GRiF decided to award small, short-term grants of up to $200,000 for relevant analytical work; to address the second challenge, GRiF set aside approximately $35 million to support three to five grants that would address rising risks from COVID-19. Both new project grants awarded in FY21 consider the additional risks and impact of COVID-19 in their project design. (The project grants support a bridge lending window for MSMEs in Rwanda and Morocco's public solidarity fund.) Among the country, regional, and Innovation Investments active in the fiscal year, 45 percent considered or directly responded to COVID-19 risks. The results of GRiF's First Evaluation—which looked at whether GRiF is influencing the overall risk financing agenda in the World Bank—gave an early indication that the flexible structure of GRiF's grants was especially beneficial in rapidly responding to COVID-19.

Laying the groundwork to increase liquidity for water service providers around the world

Water is an essential but limited public good, even under normal circumstances. During the COVID-19 pandemic, as handwashing and hygiene became an important measure to prevent the spread of the virus, water service providers faced an increase in demand that coincided with lower revenues and increased costs. Data collected by the International Benchmarking Network for Water and Sanitation Utilities during the pandemic reveals that collection rates have fallen by 40 percentage points for the utilities monitored.[10]

To help address this need, a $200,000 grant from GRiF awarded last fiscal year is helping water service providers quantify the impact of COVID-19 on their operations and explore options for improving their financial resilience. In addition, the grant will assess the feasibility of a facility that can provide more liquidity at the regional, national, or global level, providing governments, water service providers, and ultimately citizens with necessary protection against future risks.

In FY21, funds were used to complete an analysis of six water utilities in Brazil and four components of water service in Colombia, all of which fed into a regional report by the World Bank's Water Global Practice. The 2021 report *Building Financial Resilience: Lessons Learned from the Early Impact of COVID-19 on Water and Sanitation Service Providers in Latin America* (http://hdl.handle.net/10986/36300) noted serious gaps in financial resilience. When the pandemic hit Latin America, none of the assessed service providers had any financial mechanisms in place to mitigate the impacts of unexpected shocks. They were able to continue service provision, but this may have compromised their medium- and long-term service sustainability, which would ultimately have the greatest impact on the poor. The report emphasized the role that financial mechanisms such as parametric insurance has in closing financial resilience gaps, and it laid the groundwork for developing such financial instruments in the region and that GRiF can support. As a result of the World Bank's engagement throughout the region, Mexico has requested its own preliminary analysis of its water sector financing system.

[10] World Bank. 2020. "Supporting Water Utilities During COVID-19," June 30, 2020. https://www.worldbank.org/en/news/feature/2020/06/30/supporting-water-utilities-during-covid-19.

GRiF funding is supporting similar work in Albania, where the government's reserve fund proved insufficient for responding to the financial strain of COVID-19. The government eventually had to increase reserves for the fund by almost eight times the original amount it had planned on. To address impacts on the water sector, this fiscal year a World Bank team conducted a financial and technical impact assessment of six water utilities in the country. The analysis identified financial gaps and provided a 12-month financial forecast. It also recommended policies that relevant authorities can take to contribute to the financial resilience of their water service providers. The results of the work in Albania will be applied directly to the World Bank's Modernization of National Water Supply and Sanitation Sector Program.

Understanding how COVID-19 contributes to compound shocks for MSMEs

COVID-19 is causing unprecedented impacts on the private sector in four ways: (1) a decline in demand, (2) a disruption to supply, (3) a tightening of credit conditions and a liquidity crunch, and (4) overall rising uncertainty. With the outbreak yet to be contained, these impacts on firms translate into impacts on the financial sector and employment. Furthermore, disaster-prone countries may experience compounded shocks from COVID-19 should any natural disasters occur during the pandemic. If a large-scale disaster happens, the compounding effects will further strain the productive and financial sectors.

To understand these trends, GRiF awarded a $200,000 grant to develop an analytical framework for assessing and quantifying the financial impacts of COVID-19 on MSMEs that will aid the design of future programs for World Bank client countries. In FY21, the project team developed a methodology note for Albania that proposed measures for targeting support to MSMEs. In Vietnam, analytical support to the local government in Da Nang led to the new Financial Protection Strategy Against Disaster and Pandemic Shocks. Additional analytical work related to private sector resilience in the Mekong Delta will inform the World Bank's operations in the region. The work under this project also contributes to the World Bank's first diagnostic report in Vietnam, which deals with climate change impacts on the financial and private sectors.

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Helping countries spread risk and strengthen systems through pooling

Pooling as a financial strategy combines the risks faced by a group into a single portfolio so that each contributor's share of the portfolio is less risky than its individual share. When neighboring countries establish regional risk pools, they also improve disaster risk planning for all participating countries by establishing institutional structures, planning for contingencies, investing in reliable risk data and models, and agreeing to structured monitoring and evaluation. GRiF grants encourage collaboration through pooling where possible, and the Secretariat regularly engages with existing risk pools such as the African Risk Capacity (ARC), the Caribbean Catastrophe Risk Insurance Facility (CCRIF), the Pacific Catastrophe Risk Insurance Company (PCRIC), and the Southeast Asia Disaster Risk Insurance Facility (SEADRIF).

INDONESIA: POOLING FUND BOOSTS TRANSPARENCY AND EFFECTIVENESS OF THE NATIONAL DISASTER RISK STRATEGY

As part of the so-called Pacific Ring of Fire, the islands of Indonesia are subject to more volcanic and earthquake activity than anywhere else on Earth. Managing disaster risks is especially critical along this path, where 90 percent of the world's earthquakes occur.[11] To address these risks, in 2018 the Indonesian government partnered with the World Bank to launch a disaster risk finance and insurance strategy. Until that time, the country had relied on its state budget to finance disaster recovery efforts. The strategy aims to bring more predictable financing to disaster preparedness and relief efforts and to reduce the likelihood that funds earmarked for programs such as health and education programs get reallocated in years where there are severe disasters or climate events.

Leveraging lessons learned from around the world to inform Indonesia's new pooling fund

Drawing from the experiences of countries such as Australia, Mexico, New Zealand, and the United Kingdom, Indonesia will establish a pooling fund as part of a $500 million World Bank lending operation. The overall lending operation supports Indonesia's efforts to strengthen its financial response to natural disasters, climate risks, and health-related shocks such as the COVID-19 pandemic. By setting up the Pooling Fund for Disasters (Pooling Fund *untuk Bencana*), the Indonesian government will have a centralized mechanism that improves planning and manages the flow of disaster-related funding among government agencies to disaster victims. The pooling fund not only increases efficiency, but it also promotes greater transparency about how funds are used. In the future, the pooling fund will leverage insurance and reinsurance markets to increase its financial capacity, as well as directly invest in research and development of other financial instruments.

[11] National Geographic Society Resource Library. "Ring of Fire." https://www.nationalgeographic.com/science/article/ring-of-fire.

GRiF provides critical seed funding

A $14 million GRiF grant will finance start-up and operating costs to establish the pooling fund as an institution. The grant further supports the technical groundwork needed to identify and develop appropriate risk transfer solutions that can backstop the pooling fund in years with severe disasters or climate events. This was a crucial lesson learned from Mexico's experience launching its own natural disaster fund, FONDEN, in the 1990s. The pooling fund is expected to be operational in 2022 and can become a model of risk financing expertise at both the regional and international levels. Work is underway to integrate Indonesia's efforts with another GRiF-supported initiative, SEADRIF, which is a platform for ASEAN (Association of Southeast Asian Nations) countries to access disaster risk financing solutions.

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As a final component, GRiF funding will help expand the 2019 pilot of the government's state asset insurance program. The program transfers public asset risk to a consortium of more than 50 local insurance and reinsurance companies, which is then reinsured in international markets. The insurance program proved its value last year during widespread flooding in Jakarta; coverage now extends to more than 3,300 buildings and 28 ministries. By the end of 2022, all government ministries should be covered by the program, and the program could later be scaled up to cover other infrastructure assets.

GRANT UPDATE

SEADRIF PREPARES FOR LAUNCH OF SECOND REGIONAL INSURANCE PRODUCT IN SOUTHEAST ASIA

As noted above, SEADRIF (www.seadrif.org) is a regional platform in Southeast Asia supporting vulnerable ASEAN countries to assist them to access cost-effective, pre-arranged financing through a regional insurance mechanism so as to minimize the economic and human costs of disasters. The first of its kind, SEADRIF was launched in October 2019. In addition to supporting the development of more efficient financial instruments, the GRIF grant will enable SEADRIF to work with participating countries to develop preparedness plans that ensure a timely, transparent, and efficient use of funds following shocks.

How GRiF provides support

A $10.5 million GRiF grant funded the start-up and operating costs for developing the SEADRIF ecosystem, as well as the cost of implementing pre-arranged financing within national delivery mechanisms. Several ASEAN countries are in the process of developing disaster risk financing instruments with World Bank support, and many have already invested their own budgets or IDA allocations in risk transfer solutions. If SEADRIF can help overcome market inefficiencies, develop new financial products, and support more efficient ways for these governments to access financial markets, it will unlock a self-sustaining premium flow from national budgets.

Progress in FY21

Last fiscal year, SEADRIF launched its first insurance product covering the Lao People's Democratic Republic: a parametric flood insurance product that includes a soft trigger component for other disasters. A product focused on public assets has been selected as the second product with high level sign from members and is currently under preparation. GRiF funding will be processed as additional finance to an existing World Bank project, and will support operational and start-up costs for further strengthening the capacity of the SEADRIF Insurance Company as well as offer support at the SEADRIF initiative level.

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4 Progress on Innovation Investments

Creating solutions through cutting-edge innovation

Low-income countries, especially those dealing with conflict, face numerous constraints accessing quality risk data. Data are scarce, risks are complex and interlinked, and information on trends does not stretch back nearly as far as it does in higher-income peers. Furthermore, the technical expertise has primarily focused on challenges in high- and middle-income countries instead of on developing analytic solutions that are relevant and appropriate for low-income ones. GRiF's global Innovation Investment grants target these gaps, connecting innovative analytics with the needs of World Bank client countries. Here is how GRiF's Innovation Investments are enhancing data and analytics for everyone's benefit.

GRANT UPDATE

CRISIS RISK FINANCE ANALYTICS PROGRAM: SHARING THE LATEST CLIMATE AND DISASTER RISK MODELING TECHNOLOGIES WITH DEVELOPING COUNTRIES

Big data and Earth observation satellite technologies play a significant role in enhancing disaster risk finance analytics by generating information that has unprecedented resolution and comprehensive coverage. Machine learning and artificial intelligence (AI) algorithms can help process vast amounts of data and provide near-real-time risk information, contributing to more accurate assessments. This kind of accurate and detailed information helps governments and policy makers improve the timeliness and efficiency of their financial response when disasters impact their communities, businesses, and industries.

How GRiF provides support

A $5.5 million grant was awarded to the Crisis Risk Finance Analytics (CRFA) program, which leverages technological advances to improve pre-arranged financing. Under this program, the World Bank has partnered with the European Space Agency to link the latest technology with on-the-ground operations, helping scale up climate and disaster risk financing in a sustainable, robust, and transparent manner. The program leverages Earth observation and big data as part of its efforts to improve crisis risk analytics methodologies and tools.

Progress in FY21

In FY21, the CRFA program advanced work in four key areas:

/ **Next Generation Drought Index**. The Next Generation Drought Index (NGDI) platform creates more robust drought indexes and models and has been applied in Senegal, Mozambique, and Morocco. What was once a complex process is now available in minutes via a single user interface. During FY21, both the Senegalese Food Security Council (SeCNSA) and the sovereign insurance risk pool African Risk Capacity (ARC) implemented the NGDI. This means that SeCNSA will be able to estimate six months in advance which populations will be food insecure during the lean season and therefore be better able to direct financial support to them.

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/ **Detailed financial exposure mapping**. Using satellite data and AI-based analysis, a new modeling framework allows countries to better estimate financial losses caused by floods and earthquakes. The framework relies on a catastrophe risk modeling engine that combines data on exposure, hazard, and vulnerability. During FY21, the framework was used in Tunisia and provided the country with a detailed annual average loss estimate, allowing the government to make smarter financial planning decisions. The estimate was able to drill down to an extraordinarily precise level, showing whether a building is residential, commercial, industrial, or governmental and identifying subcategories of occupants within those designations. The project will likely be scaled up next fiscal year to include three or four additional countries.

/ **Climate physical risk assessment.** This fiscal year, the CRFA program supported Morocco in setting up a near-real-time flood risk mapping platform that shows affected areas, severity, and financial losses. As a result, days after the onset of an event, decision-makers, insurance regulators, and insurance markets have access to state-of-the-art estimates of inundated areas, facilitating rapid mobilization of financial support on the ground. The program features extensive capacity-building support and technical assistance within the country, which enhances its long-term sustainability. Activities were led in close partnership with domestic institutions, including the Moroccan Met Office and the Moroccan Space Center.

/ **Compound risk assessment**. A compound risk assessment tool developed through the CRFA program models extreme climate events and additional shocks, such as pandemics, and shows their impact on the financial sector. In FY21, the modeling framework was piloted in Morocco, Vietnam, and the West African Economic and Monetary Union. Preliminary results show that compound impacts can be up to 50 percent greater than the sum of the individual shocks. Also, the indirect proportion of total economic costs can, in some cases, reach multiples of the direct economic costs generated by the event.

To read the Crisis Risk Finance Analytics intermediary report, see https://www.globalriskfinancing.org/publication/crisis-risk-finance-analytics-report.

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THE CHALLENGE FUND: CONNECTING GLOBAL INNOVATION WITH LOCAL NEEDS

An initiative of the Global Facility for Disaster Reduction and Recovery (GFDRR) and the United Kingdom's Department for International Development (DFID), the Challenge Fund connects global cutting-edge innovation with local climate and disaster risk needs. Through more than $1 million in financing, the Challenge Fund has provided seed funding to more than 15 pilot projects, tackling issues such as gender, language barriers, open data access, and gaps in risk communication. The two GRiF-funded projects were both completed in FY21 and have contributed to the analytical needs of developing countries.

1 / Challenge Fund: Applications of the Open Data Framework

New risk data library improves the open data framework for climate and disaster risks. A $650,000 GRiF grant funded a new Risk Data Library, expanding the application and use of an open, standardized data schema for hazard, exposure, vulnerability, and loss data. The project fills a gap first identified by a GFDRR and Foreign Commonwealth & Development Office (FCDO) report, *Solving the Puzzle: Innovating to Reduce Risk* (https://www.gfdrr.org/en/solving-puzzle-innovating-reduce-risk), which reveals that, in many developing countries, the dearth of risk data constrains the development of risk-reducing policies. The project concept was the result of an 18-month consultation with over 100 organizations that rely on disaster risk data and was developed in partnership with the Global Earthquake Model Foundation, the University College London EPICentre, and the British Geological Survey.

This fiscal year, the project attracted additional partnerships and secured funding to continue its development and integration with other risk data platforms. See https://riskdatalibrary.org/ for a general introduction to the Risk Data Library and details about the underlying resources used in its creation.

2 / Challenge Fund: Innovations in Risk Financing

Enhanced forecasting and data support countries and civil society organizations. This Challenge Fund focuses on three thematic areas that are known challenges for disaster risk financing: implementing early action, leveraging machine learning and big data, and mechanisms to manage food insecurity. A $650,000 GRiF Innovations Investment grant supported three winning proposals that enhance disaster risk forecasting and data.

The Red Cross Red Crescent Climate Centre and Kartoza developed the first impact-based forecasting tool for floods in Indonesia. The platform helps humanitarian agencies decide where and when early action funding should be deployed, and the platform is now being piloted in Granada. Other humanitarian agencies—including the Australian Red Cross, Médecins Sans Frontières Canada, and the World Food Programme GIS group—are also considering how the platform could be used.

The University of Pavia in Italy applied statistical machine learning to the problem of basis risk in parametric insurance. Although parametric insurance is structured to deliver rapid payouts, misclassification of qualifying events can occur and prevent payout. The project developed a new methodology for parametric insurance that has optimized payout triggers; it was tested for use following tropical cyclones, floods, and droughts that would impact the agricultural sector in the Dominican Republic.

Stichting VU, University of Amsterdam, developed an impact-based forecasting model using machine learning and assessed the cost-effectiveness of different cash transfer mechanisms in Ethiopia, Kenya, and Uganda. The team is exploring closer coordination with World Food Programme branches that are implementing forecast-based financing and index-based insurance products; the team is also adapting the model for use in other regions.

SCOPING GRANT UPDATE
CAPACITY STRENGTHENING FOR DISASTER RISK FINANCE

Capacity building and technical assistance aim to catalyze positive change in how governments, institutions, and organizations work. GRiF-financed solutions require a range of different expertise—such as legal, analytical, actuarial, policy, and financial skills, along with knowledge and experience—to be successfully delivered. Moreover, capacity building and technical assistance aimed at supporting GRiF will require a mixture of training, hands-on support, knowledge sharing, analysis, and research as well as policy advice.


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How GRiF provides support

In 2019, GRiF awarded a $200,000 scoping grant to explore the design of a capacity strengthening program that could facilitate implementation of GRiF-financed solutions. The project was designed to support countries in implementing and scaling up comprehensive disaster risk financing strategies, including implementation of instruments co-financed through GRiF, by embedding fellows in ministries of finance or other relevant ministries and departments in developing countries. The scoping grant finances exploratory conversations with relevant partners to understand the demand for such a program, review the experience of comparable initiatives, and propose an appropriate program design.

Progress in FY21

The second phase for the capacity strengthening program was completed this fiscal year. As contractor for the project, the Overseas Development Institute (ODI) provided options for how the larger capacity strengthening program could be rolled out. The World Bank team selected one option to pilot in Indonesia, which is currently implementing a GRiF grant to establish the national disaster risk finance pooling fund. The option that was selected for the pilot included the recruitment of a senior adviser (or an international mentor) to support the recruitment of a resident adviser and offer technical expertise to the government on setting up the pooling fund. As a result of the pilot, the ODI team is currently preparing templated terms of references and recruitment guidance, as well as other materials to support the implementation of the capacity strengthening program in developing countries. The pilot was expected to be completed by December 2021 and the team will submit a proposal for integrating the lessons from the scoping phase for a full capacity strengthening program.

5 Progress creating a monitoring, evaluation, and learning feedback loop

Learning through action

Projects in GRiF's portfolio have a wealth of information to be mined and shared. Since GRiF finances projects across an array of different geographic, economic, and political contexts, a robust mechanism for monitoring and evaluating progress against expected results is critical to long-term impact. Through its Monitoring, Evaluation, and Learning Framework, GRiF funnels lessons learned into its own portfolio and also shares them with the wider disaster risk financing community.

EVALUATIONS

In FY21, GRiF commissioned two evaluations: one to examine its impact on the broader risk financing agenda within the World Bank, and the other to review the effectiveness of its operations and governance structures. An additional "rapid review" evaluated how gender has been considered in the World Bank's disaster risk financing strategy and operations, particularly where GRiF funds are involved. Evaluations are performed on a rolling basis, driven by the needs of GRiF's stakeholders. They can include all types of research and evaluation activities—the key is linking the timing of any given activity to the needs and requirements of stakeholders.

First Evaluation: GRiF's influence on the risk financing agenda within the World Bank

Because GRiF is relatively new, it took a narrower and more qualitative approach to assessing its influence thus far on the World Bank's risk financing agenda. The First Evaluation therefore focused exclusively on the experience of World Bank staff and consultants who have worked directly with GRiF. Initial findings show that GRiF has in fact raised awareness, understanding, and interest in disaster risk financing across the World Bank. Findings also indicate a shift in how the World Bank is incorporating disaster risk financing into its projects, moving from considering such financing to be a standalone mechanism to seeing it as part of a group of solutions that are embedded in larger sectoral projects and are considered during policy dialogue with governments. Many respondents noted that GRiF provides governments with the funding needed to explore disaster risk financing solutions that they might not otherwise pursue because of budget constraints. The First Evaluation also noted that the flexibility of GRiF's grants allowed for quick restructuring to support COVID-19 relief efforts and indicating GRiF's further potential to apply risk financing concepts in new or unanticipated contexts.

Participants in the First Evaluation also highlighted areas of improvement that GRiF can consider, including revisiting GRiF's timeline for support. Some respondents noted that preparatory work for disaster risk financing efforts can take years, or even more when working in new sectors. Others recommended that GRiF should address more perils (such as pests or disease management) or expand into more sectors such as health or education. Given that GRiF has a full pipeline, it has yet to pursue these leads.

To read the First Evaluation (January 2021) in its entirety, see https://www.globalriskfinancing.org/publication/grif-first-evaluation.

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Second Evaluation: More clarity and transparency in operations and governance structures within GRiF

At the end of FY21, GRiF was also finalizing a Second Evaluation—another qualitative research study that looked more closely at GRiF's operations and governance structures. That study involved a short desk review and a series of interviews with primary GRiF stakeholders who have knowledge of the relevant operations and governance structures and systems. The findings are generally in line with the challenges inherent in the multi-donor trust fund structure, in which there are donors and as well as World Bank staff who work in different units. Recommendations were geared toward bringing greater transparency and clarity to GRiF's policies and operations, with an additional focus on enhancing monitoring, evaluation, and learning activities. A final recommendation called for developing a strategy to further engage with civil society and the private sector.

GRiF will release the Second Evaluation in the first quarter of fiscal 2022; see https://www.globalriskfinancing.org/publications.

Gender Rapid Review: Bolstering GRiF's Gender Action Plan

More work needs to be done to develop a better understanding of how risk financing solutions can be gender informed. Last fiscal year, the Secretariat began looking into how it can strengthen its capacity to support the efforts of its grantees to deliver gender-informed disaster risk finance solutions.

This fiscal year, GRiF commissioned a narrowly scoped rapid review of existing gender practices within a sample of World Bank disaster risk finance investments. The review's recommendations support those included in GRiF's Gender Action Plan. The rapid review specifically recommends that GRiF include gender-based metrics in its results framework, and that it include a similar section in the application template for scoping and concept notes. The review identified examples of grants that have successfully embedded gender dimensions, such as the one to Sierra Leone, which expanded the country's social protection program to reach those who lost jobs during the COVID-19 pandemic and specifically targeted women. Similarly, GRiF's grants that support lending to micro, small, and medium enterprises (MSMEs) in Burkina Faso and Rwanda set targets for the number of female-owned enterprises that can benefit.

Following recommendations from the rapid review, next fiscal year GRiF will launch a training program for World Bank finance specialists that will feature case studies to demonstrate how gender can be meaningfully included in the design and implementation of disaster risk finance investments.

To learn more about GRiF's Gender Action Plan, see: https://www.globalriskfinancing.org/publication/grif-gender-action-plan.

To learn more about GRiF's monitoring and evaluation efforts, see: https://www.globalriskfinancing.org/publication/grif-monitoring-evaluation-and-learning-framework.

Calculating beneficiaries

In FY21, the GRiF Secretariat and the InsuResilience Secretariat jointly developed a note that details the methodology for estimating beneficiaries by type of instrument that GRiF funds, including sovereign risk transfer, partial portfolio credit guarantees, shock-responsive social protection, and sovereign contingency funds. Beneficiaries are estimated by dividing the maximum payout, catastrophe bond (CAT bond) principal, or fund size by the average relief costs per person. As per the methodology, GRiF instruments will reach 16.7 million beneficiaries once fully in place. Fifty percent of these beneficiaries are estimated to be women, almost all of them are estimated to be poor and vulnerable people. (As per InsuResilience methodology, ***poor*** is defined as living on no more than $3.1 per day PPP, ***vulnerable*** as living on no more than $15 PPP per day.)

LESSONS LEARNED

GRiF grants support disaster risk financing solutions in an array of geographic, social, economic, and political contexts, and each project—from initial dialogue to design to implementation—offers valuable lessons for policy makers and practitioners. GRiF's three years of experience underscores several key takeaways.

Setting up pre-arranged financing linked to systems is the first step toward sustainable financial protection in countries. By covering upstream costs, GRiF has contributed to an enabling environment for pre-arranged financing. This includes developing robust financial risk models that use quality information; designing and putting into place a financial solution; and strengthening the underlying systems related to public financial management systems, delivery, and claims management. However, to achieve long-term, sustainable financial protection, a project timeline of three to five years may prove too challenging, particularly where these solutions are pioneering the concept of pre-arranged financing or are being implemented in fragile and conflict-affected contexts. Any proposed solutions need to create additional incentives for risk reduction and preparedness measures by ensuring that financing is directly linked to contingency planning.

Working with new partners to test innovative ideas can further standardize available financial solutions for everyone. GRiF has been focusing on residual risk at the macro level. However, GRiF can also work with sector-specific line ministries to de-risk sectors such as energy and transport, where risk financing can help address the residual financial risk. This risk can be mitigated by creating risk management structures, contingency plans, and risk transfer mechanisms, and by incentivizing precautionary measures to secure assets and investments in various sectors. Continued engagement with the private sector and humanitarian partners contributes to broader knowledge and impact.

Coordinating within the global risk financing ecosystem is key. An increase in both demand from governments and supply from development partners has led to the fragmentation of global risk financing efforts. Different development partners engaging with governments rarely offer standardized solutions, creating confusion for clients. Countries need a portfolio of layered risk finance solutions to address potential events of different frequencies and magnitudes. Building cooperation and collaboration among development partners will result in the best possible disaster risk financing solutions. Creating standards for subsidy support, creating a level playing field for different partners involved in the risk financing space, and incentivizing partners who can address the different layers of risk in a country's risk financing strategy would help resolve some of the fragmentation.

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FROM THE FIELD:
LESSONS LEARNED FROM JAMAICA'S EXPERIENCE PLACING A CAT BOND

The World Bank project team working in Jamaica shares lessons it learned from collaborating with the government to place the country's first catastrophe (CAT) bond. While the lessons below draw on Jamaica's experience, they are relevant for any country exploring parametric risk transfer solutions.

CAT bonds need to be integrated into the country's overall disaster risk finance strategy and act as a complement to the existing suite of financial instruments. Risk transfer instruments such as insurance and CAT bonds cannot solve all the challenges associated with a country's vulnerability to climate-related risk. It is important to design using a risk layering strategy, combining different financial instruments to cover events of different frequency and severity. In the case of Jamaica, the CAT bond forms a critical part of the government's risk layering strategy and complements the other existing instruments such as the Contingencies Fund for Natural Disasters, a contingent line of credit from the Inter-American Development Bank, and Caribbean Catastrophe Risk Insurance Facility (CCRIF) insurance policies.

Capacity building and technical support are important for successful implementation of a market-based risk transfer instrument. Everyone involved needs a sound understanding of the financial structure of the product to be sure the proposed financial instrument fully meets a government's needs. It is particularly helpful to have clear expectations about when a payout would be triggered and, more importantly, when it would not. This CAT bond benefitted from technical assistance from the United Kingdom's Foreign, Commonwealth & Development Office (FCDO), which included an analysis of Jamaica's existing financial instruments. The analysis demonstrated those

instances in which the CAT bond would be most cost-effective. The Jamaican government now also has a resident quantitative economist who will specifically support the ongoing assessment of the contingent liabilities caused by disaster and climate risks, and the implementation of risk transfer instruments such as CAT bonds.

The trigger used to determine payouts should be transparent, easily understood, and verifiable. The trigger design can build on structures developed by others and be refined over time. For example, Mexico has been refining its parametric trigger structure since its first CAT bond issuance in 2006 (from CAT-in-a-box to CAT-in-a-Grid to a refined CAT-in-a-Grid). Mexico's experience informed the design of a trigger that best fits Jamaica's needs.

FROM THE FIELD:
LESSONS LEARNED FROM MALAWI'S EXPERIENCE IMPLEMENTING A CASH TRANSFER PROGRAM DURING COVID-19

The experience of the World Bank team working with the Malawian government to use cash transfer programs to respond to COVID-19 offered valuable lessons on how these programs can be adapted to respond to other types of shocks in the future. In Malawi, these lessons influenced how the Social Cash Transfer Program (SCTP) was re-configured so that it could be scaled according to the severity of future droughts.

Relying on objective data sources builds trust within the community and among development partners. To identify program beneficiaries for the COVID-19 cash transfer program, the government used socioeconomic profiles from city councils that were then compared with other data sources. Most household beneficiaries indicated that they perceived the hotspot identification and household intake and registration processes to be transparent, inclusive, and correctly done, with little political influence from community leaders. This approach enabled a rapid response that avoided politicization, and that also increased buy-in from donor and humanitarian partners. In the case of climate-related shocks, such as drought, hotspots were identified using a combination of geographic and household characteristics.

When possible, data on potential beneficiaries should be collected pre-shock and complemented with post-shock rapid surveys to ensure the timeliness, quality, and accuracy of targeting. Malawi's Rapid Data Collection Tool for targeting beneficiaries was developed during the COVID-19 crisis, which impacted the quality of the data collected. About 10 percent of registered households were later found to be duplicate registrations or were ineligible because they were outside the targeted geographical areas. Based on this experience, the government is adapting the Rapid Data Collection Tool to better identify households that may be most severely impacted by drought. This should reduce the additional burden and delay of collecting household data in the aftermath of a shock. It will also help ensure that assistance following a drought reaches the poorest and most vulnerable in a timely manner.

Digital payment solutions are key to increasing transparency and accountability. Beneficiaries of the COVID-19 cash transfer preferred e-payments because they reduce the risk of theft and promote greater dignity. At the program management level, tracking expenditures made with e-payments proved much easier than cash-based transactions. The program did face challenges, including verifying users through their mobile phones and managing a liquidity shortage when beneficiaries cashed out. As a result, the government is now investing in improvements to the SCTP e-payment system and considering using multiple payment points such as banks or post offices to increase liquidity.

Pre-setting rules and coordination mechanisms improve response time. During COVID-19, the government had to design and implement its cash transfer program under a tight timeline and in a highly uncertain context, which contributed to delays in its response. A new handbook for government officials implementing the SCTP clearly outlines the guiding principles, operational framework, and institutional structures for the program to avoid similar issues in the future.

A concrete pre-shock financing strategy ensures that funds are readily available to support a rapid scale-up of social protection programs. Uncertainty about funding sources caused bottlenecks in Malawi's COVID-19 response. To resolve this problem in the SCTP, two complementary financing instruments will cover the expected costs of the program over the next three years. Malawi will transfer part of the financial risk to the international markets by purchasing a sovereign parametric insurance product. The government has secured $10 million to cover the cost of the insurance premium and has an additional $10 million for more flexible contingent financing.

COMMUNICATIONS

This fiscal year, GRiF published its communications strategy, which ensures that all its communication activities, products, and materials work together to achieve the facility's overall objective as an enabler of financial resilience. In addition, GRiF's newly updated website provides detailed information about its projects, background documents, the team, and how GRiF works to support vulnerable countries in strengthening their financial resilience. By the end of the fiscal year, the updated website had received over 1,000 new users and over 3,000 page views. GRiF's bi-monthly newsletters are sent to over 10,000 subscribers.

Pages from GRiF's Communication Strategy

Launched in May 2021, GRiF's new monthly webinar series targets a wide range of stakeholders, including government counterparts in ministries, donors, and those working in other areas of development who want to incorporate disaster risk financing into their programs. GRiF's network of experts has presented case studies from projects financed by GRiF and delved into broader issues surrounding disaster risk financing. Participants can engage virtually with experts and, in FY21, they gained a range of insights, including from a project team that had to rethink electronic payment systems in Sierra Leone during the onset of COVID-19 and from communications experts who advised disaster risk finance technical specialists about connecting with non-experts.

To provide a multimedia virtual learning experience, in addition to the webinar, all GRiF Technical Talks incorporate supplemental materials, including learning briefs that summarize lessons learned and available resources.

To learn more about GRiF's Communications Strategy, see https://www.globalriskfinancing.org/resource/grif-communications-strategy.

To watch recordings and download materials from the Technical Talks, visit https://www.globalriskfinancing.org/technical-talks.

6 GRiF's next steps

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Over the past three years, through its co-financing of larger World Bank projects, GRiF has been instrumental in testing and scaling up financial solutions. The GRiF portfolio includes projects across five regions and in a diverse range of International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA) countries, as well as in seven fragile and conflict-affected situations. The GRiF pipeline spans seven sectors and includes projects that finance the design and development of a range of different risk transfer and retention solutions.

Going forward, the program will continue to monitor the implementation of its operations on the ground with a view toward examining its impact and broadly communicating lessons learned. The Secretariat will also continue to roll out its evaluation program in line with the Monitoring, Evaluation, and Learning Framework, both to assess the progress made toward the facility's targets and to improve program design.

During the fiscal year, GRiF donors and the World Bank have continued their discussions about GRiF's future, focusing on how best to position the facility within the larger global climate and disaster risk financing architecture. The World Bank and GRiF donors will continue these efforts in the next fiscal year.

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