SUMMARY BRIEF

STRENGTHENING DISASTER RISK MANAGEMENT IN CLIMATE RESILIENCE ACTION:

A Learning Review of CIF-Supported Project

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KNOWLEDGE FOR RESILIENCE SERIES //

CIF Programs: PPCR, TAF

TOPICS

- Disaster Risk Management
- Climate Resilience Action
- Nature-based Solutions
- Integrated Solutions

CONTEXT

This learning review draws upon the experience of the Climate Investment Funds' (CIF) USD1.2 billion Pilot Program for Climate Resilience (PPCR) and COVID-19 Technical Assistance (TA) Response Initiative. The latter, through the CIF Technical Assistance Facility (TAF), is helping countries build green and resilient recoveries to the social, economic, and health crises brought about by COVID-19. The study investigates how, over the past 14 years, CIF has been contributing to crucially important disaster risk management (DRM) through climate resilience action across an extensive portfolio of 28 projects in 16 countries and three regions.

The CIF experiences are structured around the four Sendai Framework for Disaster Risk Reduction 2015–2030 Priorities for Action: (a) understanding disaster risk; (b) strengthening disaster risk governance to manage disaster risk; (c) investing in disaster risk reduction for resilience; and (d) enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation, and reconstruction. In addition, capacity-building support and gender are important across these different priorities, hence they are included as cross-cutting themes. **By analyzing the connections between the CIF portfolio and the Sendai Framework, the study highlights opportunities and entry points for advancing the DRM agenda through climate resilience action, and makes the case for integrated approaches to address interconnected challenges.**

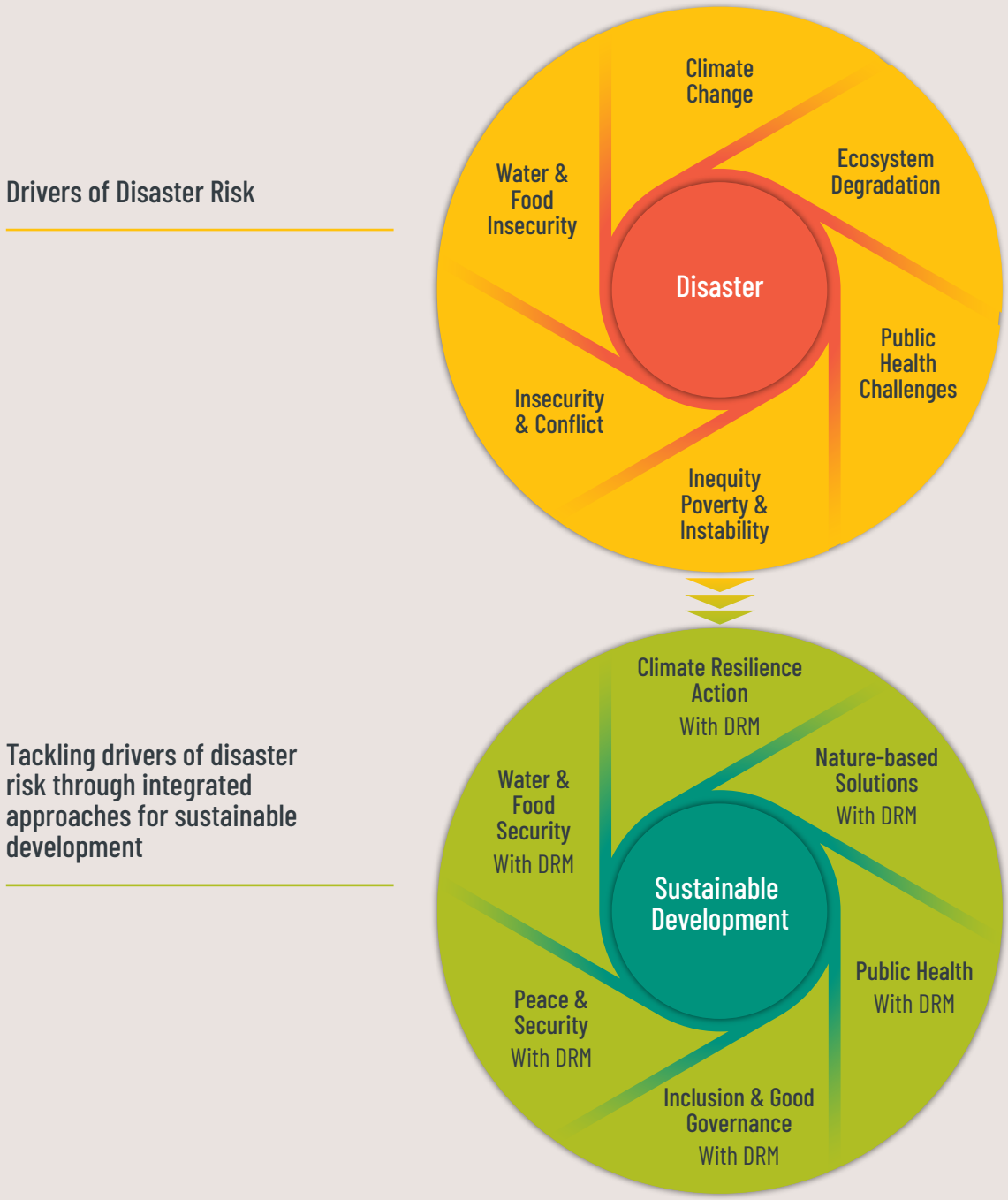
As a starting point and overarching perspective, the study recognizes that climate change, public health crises, ecosystem degradation, insecurity and conflict, social inequities and poverty, and other important factors, are inextricably linked with one another and with disaster events (see Figure 1). Furthermore, the study acknowledges the complexity of disaster risk and how disasters compound, co-occur, and cascade on one another. **Climate change and biodiversity loss trends are particularly threatening as forces of vulnerability and destabilization that lead to disastrous outcomes.** The poor and marginalized, commonly due to factors such as gender and social inequality, are disproportionately impacted for the worse.

LESSONS LEARNED

The study found that CIF is advancing DRM in many spheres across the full breadth of the Sendai Framework (see Table 5 in the main study) while simultaneously tackling aspects of the climate emergency and promoting the Sustainable Development Goals (SDGs). Among the many diverse experiences captured, this study has identified especially salient areas where climate resilience action and DRM are intertwined. The learning suggests five key areas that could inform ongoing climate and DRM efforts or require further action:

1. **Iterative multi-hazard understanding of risk**
2. **Integrated governance structures and processes for collaboration and cooperation at all levels and across all sectors**
3. **Nature-based solutions (NbS) within structural and non-structural investments for resilience**
4. **Flexible emergency funding and planning**
5. **Sustained, context-appropriate, and innovative approaches to capacity building**

FIGURE 1. An Integrated Disaster Risk Management Approach to Sustainable Development

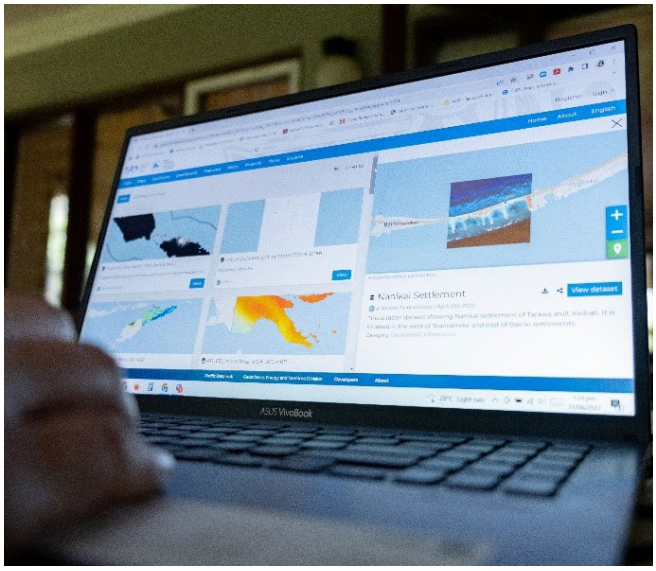


Source: Developed by Dr. Paul Venton (lead author of the study)

Disasters, as shown in the top part of this Figure, can be slow-onset or rapid-onset and can be triggered by different hazard events. They can be isolated events in specific locations or much more complex with cascading impacts. Additionally, disasters of different types can co-occur.

It is the drivers of disaster risk that create and sustain conditions of vulnerability and exposure to different hazard events. The drivers of disaster risk are most responsible for disaster event occurrence. Examples of these drivers of disaster risk are shown in the top part of the Figure.

The bottom half of the Figure shows how each of the respective drivers of disaster risk are countered. Incorporating disaster risk management in an integrated approach to address these interconnected challenges reduces the risk of disaster and supports a context of sustainable development.



1. ITERATIVE MULTI-HAZARD UNDERSTANDING OF RISK

CIF projects actively support disaster risk assessments and frequently guide the design of infrastructure projects for the agriculture, tourism, health, and water sectors, among others. Several projects seek to improve the understanding of risks at the community level, while others take a holistic approach and consider risks across landscapes, such as watersheds and coastal zones. CIF projects also support the generation of knowledge products to analyze disaster risks, as well as the dissemination of disaster risk information. In countries such as Bangladesh, and the Caribbean and Pacific regions, sophisticated products such as climate modelling and downscaling, light detection and ranging (LiDAR) mapping, and geographic information systems (GIS) are deployed to better understand disaster risks.

Learning

To a very large extent, understanding disaster risk has proven to be and will remain dependent on climate information. This requires the iterative blending of scientific and Indigenous knowledge through insightful and equitable processes of engagement among critical stakeholders, such as women, Indigenous communities, and youths at the forefront of managing risks in their communities.

For example, in **Samoa**, the *Enhancing the Climate Resilience of Coastal Resources and Communities Project* aims to support coastal communities in becoming more resilient to climate variability and change. The project looks to assess vulnerabilities and solutions on a ridge-to-reef basis, in recognition of the fundamental link between processes occurring in different parts of the catchment. The recent decision by the government, encouraged by the PPCR Phase I, to change the focus of the coastal infrastructure management (CIM) plans to more integrated community planning has made the CIM approach more innovative in a country whose governance and decision-making are embedded within traditional community structures.[1] Providing opportunities for strong participation among stakeholder groups, including local communities, to embed climate risks within planning that utilizes high-resolution satellite imagery and digital elevation models (DEM), derived from LiDAR technology, helps in the formulation of solutions that are best suited to local conditions with the greatest chance of transformative and sustainable outcomes.

1 During the project's first restructuring, the definition of CIM was changed to "Community Integrated Management Plan," with the same acronym maintained.

2. INTEGRATED GOVERNANCE STRUCTURES AND PROCESSES FOR COLLABORATION AND COOPERATION AT ALL LEVELS AND ACROSS ALL SECTORS

CIF projects actively support regional, national, and local governance structures and collaborative mechanisms to manage disaster risks. These include hydrological and meteorological (hydromet) data and information sharing, as well as processes that better link national with district and local governance pertaining to risk. CIF also supports the mainstreaming of DRM in policies, planning, and regulations, and through budgetary arrangements and allocation processes. A few noteworthy examples include the establishment and strengthening of local community groups in Bangladesh; improved transboundary flood and drought risk management in Southeast Asia; policy development of key sectors in Saint Lucia and the Pacific region; and the bolstering of technical capacity for disaster risk-informed decision-making in many settings.

Learning

Practical governance arrangements and the necessary funding need to be strengthened at interconnected local, national, and regional levels to ensure that the critical and often transboundary risks and challenges due to climate change, disasters, public health, and biodiversity losses can be met with transformational integrated solutions.

For example, in **Cambodia**, the *Enhancement of Flood and Drought Management in the Pursat Province* project aims to support the Royal Government of Cambodia (RGC) to undertake structural and non-structural measures to prepare for and manage disaster risks linked to floods and droughts. Regional collaboration on transboundary flood management has been promoted between Cambodia and Vietnam through the organization of coordination workshops, support for the development of a joint action plan, and engagement within the context of the Mekong River Commission (MRC) structures and mechanisms. Flood and drought forecasting has been transmitted to the MRC Regional Flood Management and Mitigation Center and on a web portal, as well as to the National Committee on Disaster Management (NCDM). At the local level, communities have established village disaster management groups (VDMGs), which have prepared 50 gender-sensitive safer village plans that incorporate disaster risk reduction (DRR) measures. It was recognized that the two-year period to develop the full flood management and early warning systems (EWS) was too short, and was, therefore, extended by 20 months. Establishing and strengthening effective EWS that produce beneficial outcomes for end-users, particularly the poor and the most vulnerable, takes considerable effort based on processes of collaboration and co-design. Nevertheless, this is critical to achieve positive outcomes.

3. NATURE-BASED SOLUTIONS (NBS) WITHIN STRUCTURAL AND NON-STRUCTURAL INVESTMENTS FOR RESILIENCE

CIF projects actively support structural measures, such as coastal protection sea walls, riverbank protection, and engineering improvements in storm drainage and drought mitigation, designed to reduce disaster risks to the public. Resilient critical infrastructure, such as roads, bridges, water and sanitation, schools, health centers, and public buildings are also supported, along with hydromet observation infrastructure to strengthen monitoring, forecasting and service delivery, such as early warning. Non-structural disaster risk management measures include investments in resilient livelihoods depending on areas such as agriculture and fisheries, and improvements in public health.

Importantly, CIF has also invested in NbS that have wide-ranging benefits, including disaster resilience. TAF has invigorated NbS efforts in pursuit of green and resilient recovery from the pandemic. Examples of NbS include afforestation for coastal resilience and erosion control in Samoa and Bangladesh; urban green infrastructure for flood mitigation in Mozambique; coral restoration for coastal resilience in Samoa and Jamaica; sustainable forestry for soil water retention and flood, and landslide mitigation in Nepal. In all settings, NbS are simultaneously associated with improved job opportunities and incomes.

Learning

The prominent rise in NbS is increasingly recognized as being at the heart of efforts to achieve the combined aspirations of the SDGs, the Paris Agreement, and the Sendai Framework. NbS provide a practical and critically important field for investment in the form of conservation, restoration, and sustainable management of natural ecosystems. Indigenous people and local communities act as stewards to achieve the objectives of NbS. The COP15-adopted Kunming-Montreal Global Biodiversity Framework (GBF), aiming at halting and reversing biodiversity loss by 2030, includes specific targets of direct relevance. Within the context of the wider aspirations of the GBF and SDGs, NbS offer a mutually reinforcing way to support both DRM and climate resilience actions. Unlocking the opportunity to advance these agendas in an integrated way offers promise for a more resilient future.

For example, in **Bangladesh**, under the *Coastal Embankment Improvement Project Phase I,* the afforestation of 610 ha of the coastal area involved the planting of 1,525,200 seedlings. The completed polder rehabilitation and improvement works, including extensive structural measures, are protecting nearly 54,734 ha of land and 568,000 people from tidal flooding, storm surges, coastal erosion, and salinity intrusion. And in the Greater Mekong Subregion, the TAF *Green and Resilient Covid-19 Recovery in the Greater Mekong Subregion* project provides policy support for integrating NbS in COVID-19 response and recovery plans, demonstrating a critically significant trend towards a more holistic agenda to tackle causes of disaster and crisis.

4. FLEXIBLE EMERGENCY FUNDING AND PLANNING

CIF has established and strengthened various structures and mechanisms for financing DRM, such as setting up designated trust funds; improving the business plan of hydromet services (by helping ensure beneficial outcomes for users, which in turn help sustain demand and improve the case for investment); and promoting a programmatic approach that invites and relies upon collaboration amongst different funding sources. Through a contingency emergency response instrument, CIF and its partners are helping to reallocate project financing from various project components to allow for emergency response and recovery costs in the event of disasters.

Learning

Flexible approaches to respond to complex crises are needed. The COVID-19 public health crisis demonstrated the need to pivot emergency planning to address a new threat. TAF's contribution to the quick response that is helping forge a green and resilient recovery, provides important lessons on flexible and coherent approaches to DRM and reduction that can be applied to all contingency planning processes. Being prepared in the context of risk and uncertainty will remain relevant in a world of complex and cascading challenges.

For example, in **Saint Lucia**, the PPCR-supported *Disaster Vulnerability Reduction Project* helped set up a contingent emergency response component (CERC), boosting the country's preparedness and emergency response capacity. In 2020, the government of Saint Lucia was able to tap into this emergency funding to support the health sector's response to the COVID-19 pandemic. The experience of Saint Lucia accessing emergency funding to help respond to and recover from the COVID-19 crisis draws attention to the wider need to ensure that challenges with widespread ramifications are not addressed in a fragmented way. It also highlights the opportunity presented by a disaster or a crisis to act as a catalyst for change, so that recovery processes can go beyond immediate needs and work towards mitigating future crises by deploying the principles of "Build Back Better."

5. SUSTAINED, CONTEXT-APPROPRIATE, AND INNOVATIVE APPROACHES TO CAPACITY BUILDING

Capacity building is a strong feature cutting across all CIF DRM and climate resilience action examples and covering the four priority areas of the Sendai Framework. Capacity building includes (a) specialized technical training and public capacity building in support of understanding disaster risk; (b) regional, national, and local capacity building to strengthen disaster risk-informed decision-making; (c) training on the technical expertise needed for investments in structural measures, such as the operation of hydromet equipment, water, and transport infrastructure; (d) capacity building in support of investments in non-structural measures, such as for resilient livelihoods; and (e) disaster preparedness, response and recovery training and capacity building, e.g., regarding the dissemination and communication for actionable early warning, mass casualty management, and community preparedness.

Learning

Creativity and innovation are essential for capacity building. For efforts that reduce both climate and disaster risks while striving toward sustainable development pathways, people and institutions need more than one-off technical training sessions. An enabling environment for integrated approaches to address the pressing climate and disaster challenges requires sustained administrative, technical, and financial capacity, based on principles of coherence across agendas. This calls for strong and innovative communication, as well as South-South learning founded on practical experiences.

For example, in **Jamaica**, the *Improving Climate Data and Information Management Project* media campaign focused on delivering the messages that Jamaicans must work together to prepare for extreme weather conditions caused by climate change, and reduce their impacts by learning, sharing knowledge, and taking action that can preserve lives and livelihoods now and into the future. The project's information-

sharing campaign was implemented under the tagline, “Smart and Steady, Get Climate Ready.” Barry the Barometer, a well-known Jamaican cartoon character was the face of the campaign. Furthermore, the transmission of information, education, and communication on climate change was enhanced by using targeted materials and innovative public engagement events, including concerts that were broadcast live on the radio. In addition, government and private sector organizations joined community-based groups at community expos to showcase their climate and disaster resilience solutions. An estimated 44 million people tuned into the four radio stations and 8.3 million read the three newspapers during the campaign, which enabled the project to educate the public on the link between the impact of climate events on specific livelihoods and adaptation. It also created awareness of the government’s action to address climate change and provided visibility for international and local partners.

MOVING FORWARD

Reflections distilled from analyzing experiences reviewed in this study may be of great value to specific countries and regions, especially those that are participating in CIF’s programs, and to CIF in terms of ongoing and new programs, such as the Nature, People and Climate (NPC) Investment Program. They may also be useful for other climate funds, multilateral development banks (MDBs), and development practitioners designing climate resilience and DRM interventions. Overall, experiences and lessons learned through the CIF portfolios to date shall contribute to the effective design and delivery of systemic and transformational solutions to the compounding challenges of our time.

THE CLIMATE INVESTMENT FUNDS

The Climate Investment Funds (CIF) is one of the largest multilateral climate funds in the world. It was established in 2008 to mobilize finance for low-carbon, climate-resilient development at scale in developing countries. 15 contributor countries have pledged over US$11 billion to the funds. To date CIF committed capital has mobilized more than $64 billion in additional financing, particularly from the private sector, over 70 countries. CIF’s large-scale, low-cost, long-term financing lowers the risk and cost of climate financing. It tests new business models, builds track records in unproven markets, and boosts investor confidence to unlock additional sources of finance. Recognizing the urgency of CIF’s mission, the G7 confirmed its commitment to provide up to $2 billion in additional resources for CIF in 2021.

CIF CLIMATE INVESTMENT FUNDS

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