National Financial Instruments and Mechanisms to Manage Climate Risks and Impacts

Status quo, Challenges and Gaps in Climate Vulnerable Forum Countries in Dealing with Loss and Damage
**Brief Summary**

This study analyses existing and planned measures to address climate risks and impacts in countries of the Climate Vulnerable Forum (CVF). It assesses the scope, coverage, success factors, gaps, and challenges regarding the set-up and maintenance of financial instruments and mechanisms. The analysis provides a broad picture of country-led instruments and mechanisms on the national and regional level. It is based on information provided through a survey with CVF country decision makers and experts from the field of climate and disaster risk management and loss and damage as well as a comprehensive literature review. The study presents six key findings:

1. CVF countries are already taking action to manage climate risks and deal with concrete impacts by using financial instruments and mechanism. However, the scope of actions differs significantly between countries.
2. Major gaps exist in CVF countries regarding the coverage of slow-onset processes and related climate risks and impacts.
3. Major gaps exist in CVF countries regarding the coverage of non-economic loss and damage.
4. The inclusion of relevant stakeholders through inclusive partnerships and open dialogues is a key success factor for setting up and sustaining national financial instruments and mechanisms.
5. Research and data gaps hinder evidence-based decision making on financial instruments and mechanisms to manage climate risks and impacts ex-ante and ex-post.
6. There is a need for adequate financial support from the international community to set up and sustain financial instruments and mechanisms to address climate risks and impacts in CVF countries.

Based on these key findings, a set of conclusions on knowledge gaps and open research questions, the necessary support from the international community as well as strengthened cooperation through partnerships are presented.
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<tr>
<td>ARC</td>
<td>African Risk Capacity</td>
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<td>BCCSAP</td>
<td>Bangladesh Climate Change Strategy and Action Plan</td>
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<td>CBDR-RC</td>
<td>Common but differentiated responsibilities and respective capabilities</td>
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<td>CCA</td>
<td>Climate Change Adaptation</td>
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<td>CCRIF</td>
<td>Caribbean Catastrophe Risk Insurance Facility</td>
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<td>CDEMA-EAF</td>
<td>Caribbean Disaster Emergency Management Agency’s Emergency Assistance Fund</td>
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<td>CRM</td>
<td>Climate Risk Management</td>
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<td>CVF</td>
<td>Climate Vulnerable Forum</td>
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<td>DRM</td>
<td>Disaster Risk Management</td>
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<td>EWE</td>
<td>Extreme Weather Event</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>GoB</td>
<td>Government of Bangladesh</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>KLIP</td>
<td>Kenya Livestock Insurance Program</td>
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<td>L&amp;D</td>
<td>Loss &amp; Damage</td>
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<td>LDCs</td>
<td>Least Developed Countries</td>
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<td>MAP</td>
<td>Multi-Actor Partnership</td>
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<td>MCII</td>
<td>Munich Climate Insurance Initiative</td>
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<td>MoDMR</td>
<td>Ministry of Disaster Management and Relief</td>
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<td>MoEFCC</td>
<td>Ministry of Environment, Forests and Climate Change</td>
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<td>MSMEs</td>
<td>Micro, small and medium-sized enterprises</td>
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<td>NAP</td>
<td>National Adaptation Plan</td>
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<td>NDC</td>
<td>Nationally Determined Contribution</td>
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<td>NDEF</td>
<td>National Drought Emergency Fund (Kenya)</td>
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<td>ND-GAIN</td>
<td>Notre Dame Global Adaptation Initiative</td>
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<td>NEL</td>
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<td>NOAA</td>
<td>National Oceanic and Atmospheric Administration</td>
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<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>Acronym</td>
<td>Full Form</td>
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<td>PPP</td>
<td>Purchasing Power Parity</td>
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<td>SLR</td>
<td>Sea level rise</td>
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<td>SOP</td>
<td>Slow-onset processes</td>
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<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<td>UN-OCHA</td>
<td>United Nations Office for the Coordination of Humanitarian Affairs</td>
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<td>United Nations Environment Program</td>
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<td>United Nations Framework Convention on Climate Change</td>
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<td>UN-HABITAT</td>
<td>United Nations Human Settlements Programme</td>
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<td>V20</td>
<td>Vulnerable Twenty Group</td>
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<td>WMO</td>
<td>World Meteorological Organisation</td>
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1 Introduction

Climate change is already a reality. The year 2020 was the second warmest on record, with a global mean temperature increase of already about 1.2°C above pre-industrial levels, according to the World Meteorological Organization (WMO) (NOAA 2021). To reduce exposure and vulnerability and to enhance resilience to potential adverse impacts of climate change, financial instruments for disaster risk management, climate change adaptation and dealing with loss and damage (L&D) are needed. In order to manage the related risks and address concrete impacts, the IPCC calls for comprehensive risk management approaches, balancing measures to reduce risk, transfer risks and prepare for and manage impacts (IPCC 2012). For these comprehensive approaches “[n]ational systems are at the core of countries’ capacity to meet the challenges of observed and projected trends in exposure, vulnerability, and weather and climate extremes” (IPCC 2018).

A challenge for governments from developing countries in particular is the adequate financial response capacity to meet post-disaster financing needs in a timely, efficient and effective manner without compromising (sustainable) development goals, human rights, financial stability and well-being (United Nations General Assembly 2014; Bogati/Gautam 2020). Literature therefore reports a gap regarding measures to deal with climate change risks and impacts in vulnerable developing countries in general (Schanz 2020). This gap leads to those most vulnerable and exposed but least responsible to climate change bearing a major part of the costs for its impacts. A recent study has found for the case of Bangladesh in 2015 that measured by spending on disaster preparedness and response, “climate and disaster spending by rural households (…) forms the largest share of climate and disaster expenditure in the country” (Eskander/ Steele 2021).

While this gap is clear and often discussed, a comprehensive overview of the actual financial measures and mechanisms used by climate vulnerable developing countries to manage their climate risks and impacts is missing so far. This analysis wants to contribute to filling this gap with the overall objective to provide a sounder basis for discussing needs of countries in order to design, set up and sustain these national measures.

The study therefore analysed existing and planned national financial instruments and mechanisms to manage climate risks and impacts in countries of the Climate Vulnerable Forum (CVF). It assesses the scope, coverage, success factors as well as gaps and challenges regarding setting up and maintaining those financial instruments and mechanisms based on a survey conducted in early 2021. The analysis provides a broad picture of country-led instruments and mechanisms on the national and regional level. It is based on information provided by national decision makers and experts through a survey and a comprehensive literature review. It does not claim to be exhaustive, nor can it make any statements about the scope of financial coverage by the instruments described1.

The study presents six key findings:

1. CVF countries are already taking action to manage climate risks and deal with concrete impacts by using financial instruments and mechanism. However, the scope of actions differs significantly between countries.

2. Major gaps exist in CVF countries regarding the coverage of slow-onset processes and related climate risks and impacts.

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1 For more information see chapter 3.1.
3. Major gaps exist in CVF countries regarding the coverage of non-economic loss and damage.
4. The inclusion of relevant stakeholders through inclusive partnerships and open dialogues is a key success factor for setting up and sustaining national financial instruments and mechanisms.
5. Research and data gaps hinder evidence-based decision making on financial instruments and mechanisms to manage climate risks and impacts ex-ante and ex-post.
6. There is a need for adequate financial support from the international community to set up and sustain financial instruments and mechanisms to manage climate risks and impacts in CVF countries.

Based on these key findings, a set of conclusions on knowledge gaps and open research questions, the necessary support from the international community as well as strengthened cooperation through partnerships are presented.
2 Climate vulnerability and the protection gap in CVF countries

The analysis focuses on the member countries of the Climate Vulnerable Forum (CVF). The CVF currently consists of 48 countries from the African, Asian-Pacific and Latin American and Caribbean region facing severe threats due to climate impacts. The CVF countries are engaging in supporting solutions and tackling the challenge. The country group was founded in 2009 by the Maldives and is currently chaired by Bangladesh (2020–22). The CVF describes itself as “an international partnership of countries highly vulnerable to a warming planet. The Forum serves as a South-South cooperation platform for participating governments to act together to deal with global climate change” (CVF 2021). In order to strengthen economic and financial responses to climate change, the CVF created the Vulnerable Twenty (V20) Group of Ministers of Finance in 2015. The V20 is a “dedicated cooperation initiative of economies systemically vulnerable to climate change” (V20 2021), working through dialogue and action to tackle global climate change.

Figure 1: Map of CVF countries

Source: CVF 2021.

2.1 Climate risks and vulnerability of CVF countries

Multi-dimensional vulnerability

The CVF member countries are defined by very different characteristics and circumstances and belong to various geographical regions. However, they are united by their high vulnerability to climate risks and impacts and their suffering from L&D. The “Climate Vulnerability Monitor” by the

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2 No data for Palestine, Sudan and South Sudan counted as one.
CVF and DARA foundation shows with regard to CVF countries that the vast majority (78%) is facing an acute or severe\(^4\) multi-dimensional vulnerability\(^3\) towards climate impacts. The urgency to act becomes even more obvious as in nearly 90% of the CVF countries the vulnerability is increasing with ongoing climate change. At the same time, the multi-dimensional capacity, understood as the adaptive capacity, of about 60% of CVF countries is highly restricted or restricted\(^5\) (CVF/DARA 2012), indicating that countries are unable to react to this development adequately.

The 2018 edition of the Notre Dame Global Adaptation Initiative (ND-GAIN) Index summarises “a country’s vulnerability to climate change and other global challenges in combination with its readiness to improve resilience” (with rank 1 indicating the most resilient country). The Index underlines the aforementioned results: CVF countries are placed between rank 41 (Grenada) and rank 177 (DR Congo) of 181 countries, with none of the CVF countries belonging to the top 40 most resilient countries\(^6\).

Most of the CVF countries (70%) belong to the low and lower-middle income groups, 21% belong to the upper-middle and 2% to the upper-income country groups\(^7\). Their economies deriving the biggest parts of their GDP from natural resources (like agriculture) and/or related natural services (incl. tourism) (Scherer/Tänzler 2018). Increasing extreme weather events and shifting weather patterns affect “the availability, access and distribution of natural resources. It may lead to greater resource scarcity or an abundance of a specific resource” (ibid.).

**Climate change risks and loss and damage**

A cross-country analysis from Scherer and Tänzler (2018) found that for CVF countries, despite their largely varying climate zones and differing ecosystems, three climate change related risks stand out which may in the future “jeopardize the socio-economic development and relative stability” of these countries:

- extreme weather events & disasters;
- sea-level rise & costal degeneration;
- livelihood insecurity & migration.

However, climate change impacts can already be observed today (IPCC 2018) and human populations are already being forced to adapt to these impacts, but there are limits to their capacity to do so (Warner/van der Geest 2013). Therefore, L&D due to climate change impacts is already a reality, not only but most existentially for vulnerable developing countries and communities around the world. They are more vulnerable to the damaging effects of hazards (as e.g. their livelihood depends on fewer assets, their consumption is closer to subsistence levels and their health and education are at greater risk) but have a lower coping capacity (as they e.g. cannot rely on savings to buffer the impacts and may need more time to rebuild and recover).

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\(^3\) Scale: Acute, Severe, High, Moderate, Low.

\(^4\) “Climate vulnerability, or vulnerability to climate change, is taken to mean the degree to which a community experiences harm as a result of a change in climate. These communities may be regional, sub-regional, national, sub-national, or other. Vulnerability encapsulates socioeconomic concerns, such as income levels, access to information, education, social safety nets and other meaningful determinants of the resilience of a given community. It also encapsulates environmental or so-called “bio-physical” factors, such as geographic location, topography, natural resource supplies, vegetation and otherwise …” (CVF/DARA 2012).

\(^5\) Scale: Extensive, Intermediary, Restricted, Highly Restricted.

\(^6\) See: https://gain.nd.edu/our-work/country-index/rankings/ [15.06. 2021].

Regarding the already observed exposure and vulnerability of the CVF countries, the Climate Risk Index\(^8\) shows that annually (2019) as well as over the past 20 years (2000–2019) 4 of the 10 most affected countries were CVF countries: In 2019, those were: Malawi, Islamic Republic of Afghanistan, South Sudan and Niger. Summing up to around 588 fatalities and USD 1,307 million economic losses (in PPP) in those four most affected CVF countries. In the long-term Climate Risk Index, covering the years 2000 and 2019, those were: Haiti, Philippines and Nepal. Summing up to an annual average of around 1922 fatalities and losses of USD 5,665 million (in PPP) in those four most affected CVF countries (Eckstein et al 2021).

The Climate Vulnerability Monitor estimates the additional economic costs for countries for the year 2030, indicating annual averages\(^9\). It comes to the statement that overall additional economic costs (covering cost due to drought, floods, storms, sea level rise, loss of biodiversity, and desertification) in the CVF countries\(^10\) will sum up to a yearly average of USD 119,975 million\(^11\) (in PPP) by 2030. With the vast amount falling on countries from the Asia-Pacific region (USD 90,756 million) and nearly similar amounts to the African region (USD 12,890 million) and the Latin-American & Caribbean region (USD 16,329 million). It is striking to see that only 10.8% (USD 12,960 million) fall on cost related to extreme weather events (drought, floods, storms), whereas 89.2% (USD 107,015 million) are costs related to slow-onset processes (sea level rise, loss of biodiversity and desertification\(^12\)). The highest costs to be incurred in connection with sea level rise (USD 87,790 million) (calculated based on CVF/DARA 2012).

The CVF countries’ vulnerability to climate change also exacerbates the tense financial situation of many CVF countries regarding indebtedness and cost of capital. A recent study\(^13\) estimates the cost for CVF countries in higher interest rate payments related to their climate vulnerability to sum up to about USD 62 billion over the last decade across public and private sectors (USD 40 billion for government debt alone). These additional costs are expected to increase to USD 146–168 billion over the coming 10 years\(^14\) (Buhr/Volz 2018). Similar to the climate crisis, the Covid-19 crisis aggravates the risk of indebtedness of vulnerable countries\(^15\). It has put additional pressure on developing countries budgets as disaster management systems are often overburdened and the already scarce emergency funds have been exhausted. The World Bank estimates that the Covid-19 crisis could plunge up to an additional 115 million people into extreme poverty in 2020 – and this number could rise to 150 million in 2021 (World Bank 2020).

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8 The CRI focuses on extreme weather events such as storms, floods and heatwaves but does not take into account important slow-onset processes such as rising sea levels, glacier melting or ocean warming and acidification. It is based on past data and should not be used as a basis for a linear projection of future climate impacts.

9 Estimates of CVF/DARA are based on 2012 numbers, but more recent data in the level of detail could not be found.

10 Based on 46 CVF countries. There were no data for Palestine, Sudan and South Sudan were taken together.


12 In general it is to be noted, that there are significant data gaps in the concerning especially the vulnerability of countries towards loss of biodiversity and desertification.

13 Focus on physical climate risks in CVF countries (Buhr/Volz 2018).

14 “To date, no downgrade by a major credit rating agency has been attributed to climate risks. As the major rating agencies do not generally itemize climate risks in their published country assessments, sovereign credit ratings are likely to be incorporating these risks in their assessments, but capturing them in other areas. At the sovereign level, climate change is an asymmetrical, downside risk. If climate-related rating actions are taken in the future, as the agencies themselves have indicated is likely, these actions will almost certainly be negative.” (Buhr/Volz 2018:3).

15 AOSIS raised awareness for the difficult situation SIDS: “Small Island Developing States are sinking, not just from climate-induced sea level rise and other impacts, we are sinking in debt” (see http://test.aosis.org/blog/wp-content/uploads/2020/09/AOSIS-Media-Briefing-Press-Release.pdf [15.06. 2021]).
2.2 Responsibilities and gaps in addressing climate risks and impacts

As described in chapter 2.1, climate risks may jeopardise socio-economic development and relative stability in CVF countries. However, also climate impacts are already becoming visible. In order to manage the related risks and address concrete impacts, the IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX) calls for comprehensive risk management approaches, balancing measures to reduce risk, transfer risks and prepare for and manage impacts (IPCC 2012). As IPCC (2018) summarizes, “[n]ational systems are at the core of countries’ capacity to meet the challenges of observed and projected trends in exposure, vulnerability, and weather and climate extremes”. As part of their obligation to respect, protect and fulfil the human rights of their citizens and all inhabitants within their territory, states have a responsibility to protect their populations in the event of disasters or humanitarian crises (IASC 2011). In this regard, countries need to take precautionary risk reduction measures to avert climate impacts or minimise their risks, addressing underlying vulnerabilities as drivers of disasters. However, as not all risks can be averted or minimised, countries also need to take measures to address climate risks and impacts. They include financial risk management instruments and measures (incl. risk transfer and risk retention), preparing for an eventual impact (e.g. early warning systems, contingency and evacuation plans), as well as measures for recovery and rehabilitation after an event (Le Quesne et al. 2017). All measures listed above should be part of a comprehensive climate risk management approach.

While it is the responsibility of states to protect their population in the event of a disaster, it is the responsibility of the international community to support climate vulnerable developing countries when capacity limits are reached. This is based on the principles of common but differentiated responsibility (UNFCCC 2012), the polluter pays principle (Rio Declaration 1992) and the no-harm rule (Rio Declaration 1992).

Due to very limited financial response capacities, governments of developing countries particularly facing the challenge to meet post-disaster financing needs without compromising (sustainable) development goals, human rights, financial stability and well-being (United Nations General Assembly 2014; Bogati/Gautam 2020). National level measures to deal with climate change risks and impacts are lacking in vulnerable developing countries (Schanz 2020, Alcayna 2020), including CVF countries (Ahmed 2021). This gap is particularly well studied for insurance. Vulnerable developing countries have a 97.8 % (lower-middle income countries) to 99.3% (low income countries) natural catastrophe insurance protection gap (Schanz 2020). This leads to those most vulnerable and exposed but least responsible for climate change bearing a major part of the costs for its impacts. A recent study by Eskander & Steele (2021) has found for the case of the CVF country Bangladesh in 2015 that rural households spend just under USD 2 billion on climate and disaster management – more than double the government’s spending and over 12 times more than multilateral international climate financing for Bangladesh. They conclude that, measured by spending on disaster preparedness and response, “climate and disaster spending by rural households (…) forms the largest share of climate and disaster expenditure in the country” (ibid.).

This analysis wants to complement the debate on gaps regarding national instruments and mechanism to manage climate risks and impacts by giving more detailed information on the status.

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16 Compared to a 48.1% gap for high-income countries (Schanz 2020).
quo in CVF countries and provide a sounder basis for discussing needs of countries in order to design, set up and maintain these measures.

While this gap is clear and often discussed (i.a. Alcayna 2020) a comprehensive overview of the actual measures and mechanisms used by climate vulnerable developing countries to manage their climate risks and impacts is missing so far. This analysis wants to contribute to filling this gap with the overall objective to provide a sounder basis for discussing needs of countries in order to design, set up and maintain these national measures.
3 Methodology and definitions

3.1 Method for data collection

The data collection was organized in a two-step approach consisting of an online survey and complementary desktop research:

As the first step, a survey including 18 questions with pre-defined response options as well as open questions with the objective to take stock of and analyse existing and planned country-led financial instruments and mechanisms to manage climate risks and impacts on the national level was conducted. It also aimed to assess the scope, coverage, success factors as well as gaps and challenges regarding those financial instruments and mechanisms in climate vulnerable countries. National decision makers and experts on climate risks and impacts from all CVF member countries, UNFCCC focal points and relevant experts from the field of climate risk management were asked to respond to the questions.

Overall, country representatives or experts of more than 80% of the CVF countries (39) responded to the survey.

In a second step, a desktop literature research complemented the survey and helped to gain an even more comprehensive overview of existing national-level instruments and mechanisms to manage climate risks and impacts. The comprehensive literature review covered national-level policy documents, laws and regulations, journals, grey literature, and briefing papers.

In a third step, three country studies were conducted in Bangladesh, Senegal and Kiribati. The studies provided an overview of related initiatives and relevant actors on the national level. They are based on a desktop literature analysis of relevant national and local level policy documents as well as semi-structured interviews with key stakeholders from respective governments, civil society, academia and the private sector.

The country studies were conducted by:

- Bangladesh – Erin Roberts (Climate Leadership Initiative)
- Senegal – Iheza Grace (Greenfighter Rwanda)
- Kiribati – Robert Oakes and Kees van der Geest (United Nations University)

3.2 Definitions

The study uses the following definitions.

1. Financial instruments and mechanisms to manage climate risks and impacts

Meaningful financial instruments and mechanisms to manage climate risks are such that aim to:

- manage climate risks and or climate impacts with financial instruments and measures. The focus of this study lies on financial instruments and mechanisms that address residual risks and impacts beyond preventative action through adaptation and disaster risk reduction measures.
- build resilience against climate change risk by increasing governments’ financial response capacity to be able to meet post-disaster funding needs for response (relief), recovery, and
reconstruction without compromising development objectives, fiscal stability, and wellbeing (Ghesquiere & Mahul 2010).

Instruments and mechanisms to manage climate risks and impacts can be distinguished at the time of their planning and use. Ex-ante instruments require proactive planning and allow for quick disbursement after a disaster, while ex-post instruments are not prepared before a disaster, can take some time to mobilise and are therefore more uncertain. In this study, we focused on ex-ante instruments and mechanisms, including:

- **funds**: calamity, reserve, disaster funds, other national funds covering climate risks and impacts;
- **risk transfer**: climate risk insurance schemes, insurance pools;
- **comprehensive financial mechanisms**: disaster risk financing mechanism or national loss and damage mechanisms and others with the aim to comprehensively manage the financial risks and impacts.

2. **Loss & Damage (L&D)**

Loss and damage can be defined as the “adverse impacts of human-induced climate change that cannot be avoided by mitigation or adaptation, [that have not been] or that will not be avoided in the future by adaptation due to insufficient resources, and that must be addressed at the international level under the climate regime due to the equities involved” (adjusted definition based on Mace/Verheyen 2016).

3. **Vulnerability**

According to IPCC (2018) the vulnerability of e.g. a country is defined by the “propensity or predisposition to be adversely affected” and encompasses different elements, including “sensitivity or susceptibility to harm and lack of capacity to cope and adapt”. The risk to be adversely hit by an impact results from the interaction of vulnerability, its exposure over time, the hazard and the likelihood of its occurrence (IPCC 2018). Therefore, those elements are also striking regarding the question of affectedness.
4 Findings

4.1 Existence of and plans for national and regional financial instruments and mechanisms to manage climate risks and impacts

4.1.1 Existence of national financial instruments and mechanisms

In 81% of the CVF countries, at least one national financial mechanism or instrument to deal with climate risks and impacts exists. These include Contingency Funds, Disaster Management Funds or national Insurance Schemes like the Kenyan National Drought Emergency Fund (NDEF), the Kenya Livestock Insurance Program (KLIP) (agricultural insurance), the Philippines National Disaster Risk Reduction and Management Fund (NDRRM Fund), the Nepalese disaster fund for emergency relief or the Costa Rican National Emergency Fund among others. This number shows that most countries are already taking action to protect themselves and their population against climate risks and deal with concrete impacts (Fig. 2). The amount, however, says nothing about the quality and scope of the instruments. Countries that have several instruments in place like Fiji, Vietnam or Bangladesh are counted in the below graph as well as countries that have only established a small number of instruments so far. Most countries without a national instrument/mechanism are part of a regional mechanism (see below).

Figure 2: Existence of or plans to set up national financial instruments and mechanisms

Source: Authors.

4.1.2 Plans for national financial instruments and mechanisms

Some CVF countries like the Maldives, Haiti and the Democratic Republic of Congo indicated in the survey that they are in the process of planning to set up (additional) L&D mechanisms or mechanisms to deal with climate risks and impacts. In their Nationally Determined Contribution (NDC), Sri Lanka, for example, mentions that “in order to address issues related to losses and damages resulting from extreme weather events, a local mechanism will be developed in accordance with the Warsaw International Mechanism for Loss and Damage” (Ministry of Mahaweli Development and Environment Sri Lanka 2016).

Since 2012, the idea of a National Mechanism on L&D has been discussed in Bangladesh. While pushing for a global financial mechanism to address L&D under the UNFCCC, the country proposed the establishment of a national mechanism to address L&D, which would have oversight on L&D in Bangladesh. So far, the mechanism was not established due to political challenges. Recently, the Government of Bangladesh has taken the initiative to set up the national mechanism on loss & damage through a two-year pilot project (Farbin / Huq 2021).

4.1.3 Existence of regional financial instruments and mechanisms

In addition to national-level financial instruments, regional approaches are also implemented in the CVF countries. Those are specified to the hazards most common in the related regions and have the advantage to pool the risks of different countries and establish a system of mutual support. Regional approaches are often set up as regional risk pools like the African Risk Capacity (ARC), the Caribbean Catastrophe Risk Insurance Facility (CCRIF) or the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI).

50% of CVF countries are engaged or member to a regional financial instrument (Fig. 3). The Gambia and Senegal, among other African countries, are part of the African Risk Capacity (ARC), a regional insurance scheme. ARC was established by the African Union (AU) in 2012. To benefit from the scheme, parties must enter into contracts for insurance and join the ARC Risk Pool. It covers the issues of financial risk management through risk pooling and transfer. Payouts are based on predefined contingency plans. Another example of regional risk pools is the Caribbean Catastrophe Risk Insurance Facility (CCRIF). Countries like Guatemala, Haiti or St. Lucia are part of this multi-country pooled risk transfer scheme, which uses a parametric insurance mechanism. It allows members to choose from a variety of hazards, from storm damage to earthquakes. Apart from insurance schemes also funds like the Caribbean Disaster Emergency Management Agency’s (CDEMA) Emergency Assistance Fund (EAF), with member countries like Grenada, are implemented on the regional level. Most of those countries that are not part of a regional instrument or mechanism have a national mechanism established.

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19 Membership defined by currently holding an active policy/being part of the current risk pool, not only having signed the MoU.
Beyond the regional level, CVF wide mechanisms gain relevance for member countries. Just recently, the V20 (group of ministers of finance of the CVF) launched their V20-led Sustainable Insurance Facility (SIF) which will now be operationalized over the coming months (MCII 2021). The SIF is envisaged as a “Project Pipeline Development Facility which will assist the members of the V20 in scoping the financial protection needs of micro, small and medium-sized enterprises (MSMEs) in the context of climate change, and in facilitating concept and proposal development for submission to risk financing vehicles. As such, the SIF aims to mobilize international financial and technical assistance, with the objective of stimulating climate-smart insurance offerings by domestic and regional insurers to protect MSMEs and the people that rely on them” (V20 2021).

Figure 3: Regional financial instruments and mechanisms

<table>
<thead>
<tr>
<th>Membership in regional financial instruments and mechanisms to manage climate risks and impacts (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>90</td>
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<td>80</td>
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<td>70</td>
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<tr>
<td>20</td>
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<tr>
<td>10</td>
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<td>0</td>
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</tbody>
</table>

Source: Authors.

Key finding 1: CVF countries are already taking action to manage climate risks and deal with concrete impacts by using financial instruments and mechanisms. However, scope of actions differs significantly between countries.

As pointed out above, the vast majority of CVF countries have instruments and mechanisms to cover at least some of the cost incurring by climate impacts or are part of a regional system. Other countries plan to implement (additional) instruments and mechanisms to support and protect their populations. The following list intends to illustrate the range of existing instruments and does not claim to be exhaustive.

Risk-retention through funds:

1. National level
   - Contingency funds (e.g. Comoros, Kenya, Fiji, Vietnam, Senegal)
   - Disaster risk reduction (and management) funds (e.g. Bangladesh, Philippines, The Gambia, Colombia);
   - Disaster Management Funds/Disaster response funds (e.g. Ghana, Morocco, Rwanda),
   - Disaster Preparedness Funds (e.g. Bhutan);
   - Emergency funds (e.g. Nepal, Marshall Islands, Samoa, Vanuatu, Costa Rica);
• Disaster relief (and rehabilitation) funds (e.g. Lebanon, Bhutan, Papua New Guinea, Niger, Afghanistan, Fiji, Nepal, Philippines, Tuvalu);
• Solidarity fund against catastrophic events (e.g. Morocco, Senegal);
• Compensation funds for extreme weather events (e.g. Tunisia);
• Specific funds e.g. funds for flood and storm protection (e.g. Vietnam);
• Disaster Relief Loan Schemes (e.g. Maldives, Sri Lanka, etc.)

2. Regional level:
• CDEMA’s Emergency Assistance Fund (e.g. in Barbados, Grenada, Haiti, St. Lucia)

Risk transfer:

1. National level:
• (Index based) weather/climate risk/agricultural or livestock insurance programs (e.g. Burkina Faso, Ethiopia, Kenya, Malawi, Morocco, Sudan, Tanzania, Mongolia, Nepal, Philippines, Sri Lanka),
• Flood insurance schemes (e.g. Bangladesh);
• National insurance pools/insurance schemes/trust funds (primarily for the agriculture sector e.g. Ghana, Rwanda, Sri Lanka),
• Agricultural Disaster Risk Reduction and Insurance Fund (e.g. Palestine)

2. Regional level:
• Insurance pools like ARC, CCRIF, PCRAFI
• Comprehensive Financial mechanisms: Plans to set up a national L&D mechanism in Bangladesh and Sri Lanka (for the latter, only mentioned in its NDC).

At the same time, the situation is very diverse in the CVF countries. Various instruments are established, with some countries having several/multiple instruments in place and relying on a comprehensive risk management strategy, while the situation in other countries is more fragmented. Comprehensive financial mechanisms are so far only planned e.g. by Bangladesh and part of Sri Lanka’s NDC.

The exact amount of coverage was not part of the analysis. As outlined above, a gap regarding measures to deal with climate risks and impacts exists, in terms of insurance cover, it lies in the range of about 98-99% (Schanz 2020). However, literature notes that funds allocated are often too small in the context of potential loss and damage and rules of accessing are unclear, as e.g. found for the case of Senegal by the World Bank (2012). Moreover, the contingency funds can often be “accessed for multiple purposes and may be already depleted in case of an event” (ibid).

Without proper instruments and mechanisms to manage climate risks and impacts, the most vulnerable households often resort to a variety of coping strategies in case of a disaster that might, applied on their own, impede sustainable development and trap people in cycles of poverty (Schäfer/Waters 2016). Such strategies may include erosive coping measures like reducing expenditures on food, education and health or selling productive assets, such as livestock, seeds and land (Carter et al. 2014), which provide relief in the short term but weaken their resilience in the long run. At the macro level, governments can also face challenges in effectively managing their risks:

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20 The study focused on risk retention through funds and risk transfer through insurance as well as comprehensive financial mechanisms.
due to limited tax bases, high indebtedness, and low or no insurance cover, many highly exposed
developing countries often cannot fully recover from disaster shocks by simply relying on limited
external donor aid. On average, a country can expect international assistance to cover only about
9% of direct disaster losses (Andersen et al. 2011). In 2018 only USD 1.3 billion (4.16%) of the total
volume of international humanitarian assistance (USD 31.2 billion) was provided for activities with
Disaster Risk Reduction as a primary focus (Development Initiatives 2020). Additionally,
humanitarian assistance is very limited as only 44.6% of humanitarian appeals could be met in 2020
(UN-OCHA 2020). In turn, external investors are wary of the risk of catastrophic infrastructure losses,
and small firms and farmers cannot receive the credit necessary for investing in higher-return,
higher-risk activities (Schäfer/Waters 2016). In general, there seems to be a downward trend in the
provision of international humanitarian assistance, which dropped in 2019 by USD 1.6 billion, to USD
29.6 billion, from USD 31.2 billion in 2018 (Development Initiatives 2020).

4.2 Coverage of extreme weather events and
slow-onset processes

The effects of climate change can be divided into two categories according to the temporal scale
over which they occur and the differing speed of manifestation of their impacts. There are rapid-
onset events, typically referred to as extreme weather events in the climate context, e.g. extreme
storms, flooding, heavy rainfall or droughts. Meanwhile, there are slow-onset processes (SOPs)
unfolding slowly and gradually over years, decades, or centuries, e.g. ocean acidification, glacial
retreat, salinisation, desertification, loss of biodiversity, land and forest degradation and sea level
rise (e.g. UNFCCC 2012, IPCC 2019a, IPCC 2019b). Both types of events substantially impact people’s
lives, cause loss and damage, hinder the enjoyment of human rights, and drive human mobility
(Schäfer et al. 2021 a.). Financial mechanisms to manage climate risks and impacts need to cover
both extreme-weather events and slow-onset processes, for effective financial protection.

**Key finding 2: Major gaps exist in CVF countries regarding the coverage of slow-onset
processes and related climate risks and impacts.**

Coverage of extreme weather events by the national or regional level instruments is quite
comprehensive: About 85% of all CVF countries have instruments in place, which are equipped to
react to flooding. Extreme storms (~80%), droughts (~77%) and heavy rainfall (~72%) are also
covered largely.

However, we find a big gap regarding the coverage of slow-onset processes and related risks and
impacts.

The survey and the related research clearly showed that national instruments and mechanisms so
far only poorly address slow-onset processes like SLR, ocean acidification or desertification. Only 7
countries out of 48 (18%) indicated the existence of mechanisms addressing SLR, most of them
being islands in the Pacific Sea or Caribbean Sea. A relatively small number compared to the
expectable cost due to sea level rise (see 2.1. The instruments existing even less cover other slow-
onset processes, like land- and forest degradation (13%), loss of biodiversity (13%), desertification
(10%), salinisation (8%) and glacial retreat (3%). None of the countries’ instruments covers ocean
acidification (Fig. 4).
One reason for the gap in coverage of slow-onset processes is the lack of adequate tools and approaches to manage the related financial risk of L&D due to slow-onset processes (Schäfer et al. 2021b). Additionally, impacts due to slow-onset process (like sea level rise) are not well covered by existing international climate finance channels21 (Schäfer/Künzel 2019). An analysis by Schäfer et al. (2021b) also found the following additional challenges with regard to adequately addressing slow-onset processes on the national level. Those include a) Lack of institutional frameworks, responsibility, and fragmented responses leading to an “early warning late response behavior”; b) Lack of and/or insufficient data and knowledge on slow-onset processes; c) Adequate reactions are also hindered by slow-onset processes often not being well integrated into climate risk management at the national level. This is also due to conceptual gaps in the climate risk management cycle’s concept.

This finding is concerning as estimates show that it can be assumed that SOP related impacts lead to much higher economic costs for affected countries than impacts by extreme weather events (CVF/DARA 2012). The gap in coverage of SOPs also reiterates the need for more comprehensive instruments.

### 4.3 Coverage of different losses and damages

Disasters, either slow- or sudden-onset, can lead to losses and damages, especially if coping and adaptation options and financial resources are limited. These losses and damages can be of economic or non-economic nature. Economic losses are related to resources, goods and services that are traded in markets. In contrast, non-economic losses (NEL) can be understood as the

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21 Analysis based on UNFCCC 2019.
remaining items without a market price and can result from slow-onset processes (e.g. the loss of territory to sea level rise) as well as from extreme events (e.g. loss of life in a cyclone) (UNFCCC 2013).

**Key finding 3: Major gaps exist in CVF countries regarding the coverage of non-economic loss and damage.**

The results\(^{22}\) show that the instruments and mechanisms established in CVF countries mainly cover economic losses and damages, with about 60% (24) of the responding CVF countries having instruments in place that cover damage/loss of infrastructure or property as well as the loss of income (23). However, non-economic losses like loss of health (35%), displacement/relocation (32,5%), loss of life (25%), loss of fresh water (22,5%), loss of land area (10%), damage to ecosystem services (5%), loss of cultural heritage/identity (2,5%) are much less and some even barely covered by the countries’ instruments (Fig. 5).

**Figure 5: Coverage of L&D by national and regional financial instruments and mechanisms**

![Graph showing coverage of losses and damages by existing national financial instruments and mechanisms in CVF countries (%)](image)

Source: Authors.

The lack of comprehensive solutions to also address non-economic L&D can be well understood for the case of human mobility in Senegal as one of the main types of NELs (UNFCCC 2013). A key challenge in Senegal, underlined by a broad range of stakeholders repeatedly, is that the slow-onset climate-related processes – be it coastal erosion and SLR, drought and/or floods – lead to increased migration, relocation and displacement. The importance of supporting individuals, households and communities whose agency decreases and are increasingly forced to move – either temporarily or permanently – was stressed repeatedly. This also has implications for global policy as increasingly migrants are leaving Senegal in search of livelihood opportunities, sometimes risking their lives during perilous journeys. Projects have been implemented to support the planned relocation, including by UN-HABITAT. However, these projects did not always take into account the needs of the communities as they resettled often far from their coastal homes.

\(^{22}\) Based on information of about 80% of the CVF countries.
In some cases, livelihood opportunities were not available to support the relocated populations. There were also no provisions to address the non-economic implications of displacement and relocation, including a loss of community and a loss of identity – among others. More work – both research and pilot projects as well as more coherent policy responses and inclusive approaches – are needed to better support communities who are forced to relocate or displaced (Grace/Roberts 2021).

### 4.4 Success factors for setting up and maintaining national financial instruments and instruments

#### Setting up financial instruments and mechanisms

Regarding key success factors for setting up national instruments and mechanisms to manage climate risks and impacts, most of the countries\(^\text{23}\) (80%) perceived political buy-in/commitment as a precondition for success. Donor support (75%), the inclusion of relevant stakeholders (70%), and a high priority on the national agenda (65%) is also rated as important in descending order.

Figure 6: Success factors for setting up national financial instruments and mechanisms

<table>
<thead>
<tr>
<th>Success factors for setting up national financial instruments and mechanisms to manage climate risks and impacts (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political buy-in/commitment</td>
</tr>
<tr>
<td>Existing donor support</td>
</tr>
<tr>
<td>Inclusion of relevant stakeholders</td>
</tr>
<tr>
<td>High priority on the national agenda</td>
</tr>
<tr>
<td>Financial resources</td>
</tr>
<tr>
<td>Technical resources (e.g. data)</td>
</tr>
<tr>
<td>Capacity (e.g. knowledge)</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

Source: Authors.

\(^{23}\) Representatives from 13 CVF countries responded to the question. Thus, the analysis and interpretation is based on the statements of only ~27% of the CVF countries. The different success factors have not been ranked by the respondents. Those countries are Sri Lanka, Ethiopia, Kiribati, Costa Rica, Kenya, Madagascar, Vanuatu, Philippines, Grenada, Cambodia, Nepal, Barbados and Palestine.
Key finding 4: There is a need for inclusive partnerships and open dialogues – the Inclusion of relevant stakeholders in the process of setting up and sustaining national financial mechanisms is key.

The inclusion of relevant stakeholders was highlighted as a key success factor in setting up national instruments and mechanisms to manage climate risks by 70% of survey participants. Additional statements support this point, emphasising that communities, who are often the most vulnerable parts of the population and to climate impacts, needs to be included and enabled/empowered to participate. Many respondents indicated the need for more inclusive stakeholder cooperation. It was mentioned as a precondition to scale up instruments and mechanisms, and the call was made to include all the stakeholders to share experiences, good practices and promote innovation. Another important issue in this regards was the inclusion of people on the ground, e.g. through stakeholder consultations to understand the needs of vulnerable people on the local level and to grant access to financial mechanisms for vulnerable people. One survey participant noted: “We need strong collaboration, cooperation together with the flexibility of transboundary information sharing system.” Another mentioned that “climate change is impacting heavily on the poor. Partnerships for climate change adaptation, L&D and a UNFCCC financial mechanism is urgently required.”

Four points were highlighted in particular:

1. **Involvement of all stakeholders**: Current approaches to design, set up and scale up financial mechanisms should be adapted to include all relevant stakeholders. Stakeholder consultations were mentioned as one way to do so and to “help understand what is really going on, on the ground” (Survey). Participants also noted the need to find sustainable ways to “gather all the stakeholders together to share experiences, good practices and promote innovation” (Survey).

2. **The need for improved inclusion of most vulnerable groups** was highlighted by some survey participants and also in the country studies. It was mentioned that “[t]o realize the need of local and vulnerable people, to form mechanism that shall have direct access from vulnerable group, need have strong legal binding”.

3. **Better interministerial coordination**: The case of Bangladesh showed the need in particular for better coordination between the Climate Change Adaptation (CCA) and Disaster and Climate Risk Management (CRM). Increasing coordination and collaboration between the related MoDMR and MoEFCC is the first step needed to develop a holistic framework to avoid, reduce and address L&D, as well as with other relevant ministries, including the Ministry of Finance and the Ministry of Planning.

4. **Role of CSOs**: The potential to bridge between the most vulnerable communities and decision makers was highlighted in and the case of Bangladesh and the survey. In Bangladesh it can be built on already existing collaboration between CSOs and the government as well as the potential of well positioned and experienced civil society actors to cultivating better national cooperation on L&D. Building the capacity of CSOs will go a long way towards enhancing the efficacy of efforts to avoid, reduce and address L&D in Bangladesh in order to strive for developing and implementing comprehensive risk management frameworks.
Other success factors

Other success factors mentioned were financial resources (60%), technical resources (55%) and capacity (e.g. knowledge) (55%). Additional success factors were indicated by survey participants, most of them could be clustered under the above mentioned:

- Related to donor support the call was made for climate justice through L&D financing by historical emitters/industrialised countries to contribute to the national mechanisms.
- Associable with the inclusion of different stakeholders, the need for inclusive approaches has been pointed out, to ensure sensitisation, education and participation of local communities and their ownership as well as the need to tackle challenges that may differ between individuals and sectors.
- Another point named as a success factor was strong coordination e.g. through a mechanism or guiding disaster risk financing policies.

Besides the political buy-in as a precondition for a successful set-up of a financial mechanism, which is easy to understand, the need for donor support points to the tense financial situation countries are in (see chapter 2) and the responsibility for high emitting countries – rather than a question of solidarity.

Sustaining financial instruments and mechanisms

The question on success factors for sustaining already established national financial instruments and mechanisms to manage climate risks and impacts was structured around the same predefined categories of answers to enable the identification of the differences in success factors for sustaining an instrument vs setting it up.

Political buy-in/commitment (85%) is still the most important factor for the respondents. The inclusion of relevant stakeholders (80%) is perceived more important for sustaining than for setting up a national mechanism. Additional factors like the participation of public and civil society actors, the engagement of the private sector as well as the ownership on different levels (e.g. local) were named to support the importance of this point. Financial resources get up in the ranking but are only named by 60% of the respondents. Existing donor support (45%) appears to make the most significant difference to setting up a national mechanism (75%). The remaining success factors, capacity (45%) as well as technical resources and priority on the national agenda (55% both), were named by less countries (Fig. 7). Other success factors like affordability and flexibility of instruments and the need for awareness raising on risks and solutions were also mentioned.

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24 It is unclear how much those have already been addressed/included under donor support.
25 Answered by the same countries as the question on setting up national financial instruments or mechanisms to manage climate risks and impacts.
4.5 Gaps, challenges and needs for setting up and maintaining national financial instruments and mechanisms

Gaps, challenges and needs for setting up national financial instruments and mechanisms

Regarding **setting up** national instruments and mechanisms to manage climate risks and impacts key gaps and challenges have been indicated by the responding countries. Lack of financial resources was perceived as very important for most participants as 90% rated it high. It was specified from one respondent as the need to mobilise the necessary resources to start a process. Lack of capacity and lack of technical resources was rated high as well (75% both) which can be explained by the fact, that setting up a mechanism in the beginning needs good knowledge and the technical resources to do so. It was specified as the need for training and the establishment of national expertise to develop methodologies and tools to assess vulnerability and costs. As well as the need to improve the understanding of the tools required for such needs e.g. through training or bilateral exchange. Political challenges (50%) were rated by less countries as well as a lack of donor support (50%). The last point can also be interpreted as the need to mobilise the necessary resources.

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26 Representatives/experts from 13 CVF countries responded. Thus, the analysis and interpretation is based on the statements of only ~27% of the CVF countries. The different gaps and challenges have not been ranked by the respondents.
as part of “financial resources” named by most responding countries. It was specified by two respondents referring to the necessity to mobilise several financial partners due to the low financial capacity of the country and the multiple needs in this area as well as the need for regional and multilateral cooperation.

Additional gaps and challenges named were the limited private sector engagement, the low level of awareness on risk and technical and financial solutions, lack of coordination and internal conflicts between actors of DRM and CC and the lack of affordability. These additional points further support the relevance of stakeholder inclusion to strengthen coordination, engage different actors and avoid conflicts. The constitution of databases was mentioned as another gap.

**Figure 8: Gaps and challenges in setting up national financial instruments and mechanisms**

![Gaps & challenges in setting up national financial instruments and mechanisms](chart)

Source: Authors.

**Key Finding 5: Research and data gaps hinder evidence-based decision making on financial instruments and mechanisms to manage climate risks and impacts ex-ante and ex-post.**

Climate change sciences are still relatively young, so it is natural that there are still research gaps in the field. Few studies specifically investigate the risk of and concrete L&D on the local level in climate vulnerable developing countries (Oakes/van der Geest 2021). The complexity within socio-environmental systems and the lack of longitudinal data means that the direct impacts of climate change events and processes are often difficult to ascertain (ibid). There is a need to define better the links between climate change, climate impacts and losses and damages and its monitoring and evaluation. This is true for both economic and non-economic L&D. In addition, to truly address L&D it is also important to consider vulnerabilities within countries.

The need for technical resources, including data in order to set up national mechanisms to deal with climate risks and impacts, was highlighted by 100% of the survey participants.
National-level research needs to be strengthened to close these research gaps and make evidence-based decisions on how to deal with climate risks and impacts. Research needs which were often named in the survey include:

- contextualised understanding of what the triggers are and the impacts are at the national level;
- locally fit for purpose and innovative financial solutions;
- better define the links between climate change, climate impacts and losses and damages and its monitoring and evaluation;
- needs vis-à-vis L&D to relevant global processes such as the Global Stocktake under the Paris Agreement;
- assessing L&D ex-ante;
- analysis of the financial costs of L&D at national and local level.

Initiatives aiming at closing these research gaps are already in progress, one example is the “Climate and development risk financing and insurance evidence roadmap” by the Munich Climate Insurance Initiative in the context of the InsuResilience Global Partnership.27

**Gaps, challenges and needs for sustaining national financial instruments and mechanisms**

The question on gaps and challenges for sustaining related instruments and mechanisms provided a nearly similar picture. The key difference compared to setting up is naturally a lower need of capacity and technical resources once installed. The additionally mentioned lack of commitment from stakeholders further strengthens the need for multi-stakeholder approaches.

**Figure 9: Gaps and challenges in sustaining national financial instruments and mechanisms**

<table>
<thead>
<tr>
<th>Gaps &amp; challenges in sustaining national financial instruments and mechanisms (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of donor support</td>
</tr>
<tr>
<td>Lack of technical resources (e.g. data)</td>
</tr>
<tr>
<td>Lack of capacity (e.g. knowledge)</td>
</tr>
<tr>
<td>Political challenges</td>
</tr>
<tr>
<td>Lack of financial resources</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

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Source: Authors.

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Key finding 6: There is a need for adequate financial support from the international community to set up and sustain financial instruments and mechanisms to address climate risks and impacts in CVF countries.

The need for increased – technical as well as financial – donor support was mentioned several times by different respondents, with the specification of grant funding in terms of financial support. There was a call for high-level leadership and donor support to focus on different recipient groups (e.g. women, youth). The issue of climate justice was raised repeatedly. E.g. regarding the financial support for existing mechanisms and instruments as a means of climate justice as well as the call for a permanent funding mechanism and the provision of appropriate compensations from the high GHG emitter countries and companies for the sake of the most vulnerable and specifically the urgent need for a financial mechanism under UNFCCC.

Acknowledgement to donors/development partners was also expressed for their support in setting up instruments and mechanisms to manage climate risks and impacts.

The international support for dealing with climate risks and impacts/L&D is already insufficient. In different financing channels, a funding gap can be identified:

- **Humanitarian assistance**: The system is already overwhelmed and funding available is not sufficient to deal with the needs. In 2020, only around 45% of humanitarian appeals by countries could be met according to UN-OCHA (2020).
- **International Climate Finance**: The commitment of industrialised countries to mobilise and provide USD 100 billion annually by 2020 to support developing countries mitigation and adaptation efforts has not yet been achieved. Additionally, funding is not distributed equally between adaptation (21%) and mitigation (79%) (OECD 2020) as agreed. Not even part of this commitment are those costs incurring for dealing with loss and damage.
- **The USD 100 billion commitment is not based on the actual needs of countries. The UNEP Adaptation Finance Gap Report estimated that even with a 2°C temperature increase, related adaptation costs for developing countries will amount to up to USD 300 billion²⁸ annually by 2030 and up to USD 500 billion²⁹ by 2050 (UNEP 2016). Costs for tackling L&D could even rise to between USD 290 billion and USD 580 billion in 2030 for developing countries (Markandya/González-Eguino 2018).**

First steps have been made on UNFCCC level at COP25 with officially bringing the Green Climate Fund (GCF) into a position to (further) finance activities relevant to averting, minimising and addressing loss and damage³⁰. The COP requested the ExCom to establish an expert group on action and support, incl. finance (set up in 2020), and established the Santiago Network for Loss and Damage³¹. Room for improvement is still huge. Even if the additional financial needs were acknowledged, no further commitments were made so far, and the Expert Groups mandate does not include a focus on additional finance. For the coming years it will be key to include L&D finance

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²⁸ USD 140 billion–USD 300 billion.
²⁹ USD 280 billion–USD 500 billion.
³⁰ “Invites the Board of the Green Climate Fund to continue providing financial resources for activities relevant to averting, minimizing and addressing loss and damage in developing country Parties, to the extent consistent with the existing investment, results framework and funding windows and structures of the Green Climate Fund, and to facilitate efficient access in this regard, and in this context to take into account the strategic workstreams of the five-year rolling workplan of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts” (FCCC/PA/CMA/2019/6/Add.1, Decision 6/CMA.2 Guidance to the Green Climate Fund para. 8).
³¹ https://unfccc.int/sites/default/files/resource/cma2_aup_6_WIM.pdf [15.06.2021].
in the new climate finance goal for 2025. Additionally, it is critical to ensure an effective set up of the Santiago Network for Loss and Damage, which provides reliable support for the most vulnerable countries and communities (including local, grassroots, subnational and national level initiatives).

The necessary support for countries affected by climate risks and impacts already today, with increasing needs in the future, needs to be scaled up, as a significant funding gap exists on the international level.

Additional needs from the international community

Additional needs formulated by the survey participants were:

1. **Respect country specificities (e.g. vulnerabilities) and contexts:** Countries indicated the need for solutions that fit the local contexts. This included the call for mechanisms based on a country-specific understanding of the vulnerabilities/impacts, also regarding triggers for support and the downscaling of support mechanism to country contexts rather than regional contexts. Additionally, it was called for supporting the national level efforts from the international level: “[…] international support should aim to complement and strengthen existing national mechanisms particularly in allowing these mechanisms to succeed and be sustainable.”

2. **Capacity building:** The need for capacity building was also raised many times: Improved technical capacity and technical support as well as joint research and development were named, improved institutional capacity, better/more climate education, and human resource development.

3. **International Cooperation:** The need to prioritise climate change adaptation and risk management in the development cooperation was mentioned as well as the need for more regional/global programs that address such risks/losses. Additionally, there was a focus laid on working in partnerships for climate change adaptation and loss and damage and a strong focus on technical cooperation rather than support.
5 Conclusions

The study resulted in the following key findings:

**Key finding 1:** CVF countries are already taking action to manage climate risks and deal with concrete impacts by using financial instruments and mechanism. However, the scope of actions differs significantly between countries.

**Key finding 2:** Major gaps exist in CVF countries regarding the coverage of slow-onset processes and related climate risks and impacts.

**Key finding 3:** Major gaps exist in CVF countries regarding the coverage of non-economic loss and damage.

**Key finding 4:** The inclusion of relevant stakeholders through inclusive partnerships and open dialogues is a key success factor for setting up and sustaining national financial instruments and mechanisms.

**Key finding 5:** Research and data gaps hinder evidence-based decision making on financial instruments and mechanisms to manage climate risks and impacts ex-ante and ex-post.

**Key finding 6:** There is a need for adequate financial support from the international community to set up and sustain financial instruments and mechanisms to address climate risks and impacts in CVF countries.

Based on these key findings, the following conclusions were drawn:

**Conclusion 1: The need to close knowledge and data gaps**

The study has identified several knowledge gaps and open questions in adequately managing climate risks and impacts. While improvements of existing approaches and additional finance are required to tackle extreme weather events and economic losses, additional research is particularly needed with regard to:

- **Adequate tools and financing to address slow-onset processes and related risks and impacts:** Existing climate and disaster risk management approaches primarily focus on managing risks and impacts of extreme weather events. However, those approaches do not effectively cover risks and impacts from slow-onset processes (e.g., Le Quesne et al. 2017). This problem can be observed in the context of the disaster risk management cycle, which is a key concept in disaster management. It applies phase logic with a linear disaster sequence with a clearly definable beginning and end (Staupe-Delgado 2019). This logic is difficult to apply towards slow-onset processes that gradually manifest, have ongoing effects, without a clear beginning and end. This gap can partially be explained by the concept of disasters often being equated with rapid onset events and defined by factors of acuteness, urgency, or vast destruction (Staupe-Delgado 2019). Initial steps in addressing the conceptual gap are taking place (see the example of the climate risk management cycle that considers rapid-onset events and slow-onset processes by NIDM and GIZ [2019]). These are a good start in addressing slow-onset processes with climate risk management. However, their applicability to different slow-onset processes still needs testing on the ground to find whether it can effectively support countries and communities. The
conceptual lack in adequately addressing slow-onset processes in CRM strategies leads to these processes often not being (well) integrated into CRM strategies at the national level.

- **Adequate tools to address non-economic losses:** The gap of coverage of non-economic losses is concerning, as it is important to note that even if the assessment is much more difficult, developing countries may face more challenges regarding non-economic losses than economic ones. They are expected to be more significant and partly irreversible, e.g., the loss of cultural items or territory. It should therefore be key to decision makers to recognize this kind of losses and address them (UNFCCC 2013). At the same time, measures to deal with non-economic losses are not covered by existing financing channels (Schäfer/Künzel 2019). A key challenge in tackling NELs under current concepts/approaches is their high context-dependence and incommensurability (the lack of a common unit of measurement). Measures to avoid risks linked to NELs can be supported by integrating them in CRM approaches. Measures to address/respond to unavoidable NELs require a deep understanding of lost values and the functions they fulfilled as well as alternative means of valuation (Serdeczny 2018). Therefore, it becomes challenging to find solutions when following the logic monetarisation in terms of assessing incurred or potential losses. An effective design of policies also needs to explore adequate scales and conditions for support and appropriate remedy (ibid.). The WIM ExCom Expert Group on NELs plays a key role in developing recommendations for the treatment of NELs. Research can support progress here, “However, which values will count and how they will be weighed in decision-making both at the national and international level will in the end always be one of judgment and as such require political debate and deliberation.” (Serdeczny 2018).

Moreover, the following general questions on national level instruments and mechanisms to manage climate risks and impacts evolve from the study:

- How effective are the national finance mechanisms?
- How can they be further upgraded in terms of conceptual approach and financial input?
- How great is the financing need?
- Where is the international responsibility (in USD), namely the discrepancy between national mechanisms and national needs?
- How can international funds for national mechanisms be generated?

**Conclusion 2: The need for adequate and reliable support from the international community for setting up and sustaining country-led financial instruments and mechanisms**

As highlighted above, a gap in international support exists regarding financial instruments and approaches. As it is not only a question of solidarity but also of climate justice, a political solution is needed to support poor and vulnerable people and their countries in dealing with unavoidable and unavoidable L&D.

This could include the following steps:

- taking stock of national financial needs to address climate risks and impacts/L&D and of related funding available in a “L&D finance gap report” (comparable to the Adaptation Gap Report);
- an analysis of potential financing approaches for L&D in order to increase the funding available, including innovative sources of finance that may generate additional resources;
• testing financing approaches and implementation methodologies against a human rights-based approach, including ensuring inclusive mechanisms and partnerships;
• an analysis of possibilities for a finance facility for L&D within existing institutions, like the Green Climate Fund, or the need for new institutions;
• an analysis of funding modalities – explore the role of national L&D mechanisms.

As could be found in the survey and research, a lot of vulnerable countries already addressing the problem of L&D/climate risks and impacts by setting up national financial mechanisms and funds. Additionally, there are even more comprehensive mechanisms planned, like in Bangladesh or Sri Lanka (as explained above). In complementing current efforts to set up the mechanism, Haque et al. (2018) suggest for the Bangladesh L&D mechanism to make use of a reserve fund of approximately USD 140 million accumulated by unspent finance from the Bangladesh Climate Change Trust Fund in order to deal with those climate-related impacts not tackled by conventional Disaster Risk Reduction (DRR) or Climate Change Adaptation (CCA) measures. This would also include ex-post compensation for losses and damages triggered by climate change induced slow-onset events, like salinity intrusion and increased intensity of cyclones.

It should be tested if this type of fund could be used as payout modality for the L&D finance facility. It would be interesting to test such an option as a first step in a couple of states (Schäfer/Künzel 2019).

**Conclusion 3: The need for Multi-Actor Partnerships**

One way to ensure that all relevant stakeholders are part of processes is the set-up of multi-actor partnerships or collaborations. Multi-stakeholder processes can also contribute to “break the silos” between different sectors, strengthen coordination and find comprehensive solutions for different stakeholders. The empowerment of all stakeholders can be supported by implementing a human rights-based approach that ensures access for all stakeholders like communities and civil society to decision making and includes their different perspectives and needs for robust solutions.
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### ANNEX

**ND Gain**

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Source: Extract based on https://gain.nd.edu/our-work/country-index/
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