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Integrating Disaster Risk Finance into National Adaptation Plans

SUPPLEMENTARY GUIDELINES

Integrating Disaster Risk Finance into National Adaptation Plans Supplementary Guidelines

Commissioned by the UNDP Insurance & Risk Finance Facility (IRFF)
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Abbreviations and acronyms

ACLiFF	Asia-Pacific Climate Finance Fund
ADB	Asian Development Bank
ADCOM	Adaptation Communication
ADRiFi	Africa Disaster Risk Financing Programme
AF	Adaptation Fund
AfDB	African Development Bank
APEC	Asia Pacific Economic Cooperation
ARC	African Risk Capacity
BMZ	German Federal Ministry of Economic Cooperation and Development
BTR	Biennial Transparency Report
CAIF	Climate Adaptation Investment Framework
CAWASA	Caribbean Water and Sewerage Association
CBT	Climate Budget Tagging
CDRFI	Climate and Disaster Risk Finance and Insurance
CCA	Climate change adaptation
CCRIF SPC	Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company
CDP	Centre for Disaster Protection
CERF	Central Emergency Response Fund
CIF	Climate Investment Fund
CRM	Comprehensive risk management
COP	Conference of Parties of the United Nations Framework Convention on Climate Change
CPEIR	Climate Public Expenditure and Institutional Review
CPP	Climate Prosperity Plan
CWUIC	Caribbean Water Utility Insurance Company
CWWA	Caribbean Water and Wastewater Association
DRF	Disaster risk finance
DRM	Disaster risk management
DRR	Disaster risk reduction
ECA	Economics of Climate Adaptation
EE	Executing Entity
ESG	Environmental, social and governance
GAIN	Global Actuarial Initiative
GEF	Global Environment Facility
GIS	Geographic information systems
GCF	Green Climate Fund
GDP	Gross domestic product
GRAF	Global Risk Assessment Framework
GSFF	Global Shield Financing Facility
IDB	Inter-American Development Bank
IDF	Insurance Development Forum
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	International financial institution
IFRC-DREF	International Federation of Red Cross and Red Crescent Societies Disaster Response Emergency Fund
IGP	InsuResilience Global Partnership
IIF	InsuResilience Investment Fund
ILO	International Labour Organization
IMF	International Monetary Fund
INFF	Integrated National Financing Frameworks

IPCC	Intergovernmental Panel on Climate Change
IRFF	Insurance and Risk Finance Facility
ISF	InsuResilience Solutions Fund
LDC	Least developed country
LEG	Least Developed Country Expert Group
MCII	Munich Climate Insurance Initiative
MDB	Multilateral development bank
M&E	Monitoring and evalution
MEL	Monitoring, evaluation and learning
MSME	Micro-, small and medium-sized enterprises
NAP	National Adaptation Plan
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NDF	Natural Disaster Fund
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PCRIC	Pacific Catastrophe Risk Insurance Company
PFM	Public financial management
PIK	Potsdam Institute for Climate Impact Research
PPP	Public-private partnership
RCP	Representative Concentration Pathway
SDGs	Sustainable Development Goals
SEADRIF	Southeast Asia Disaster Risk Insurance Facility
SIF	Sustainable Insurance Facility
TEG CRM	Technical Expert Group on Comprehensive Risk Management
UNDP	United Nations Development Programme
UNCDF	United Nations Capital Development Fund
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNU	United Nations University
WFP	World Food Programme
WIM	Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts
V20	Vulnerable 20 Group

I. Executive summary

This guidance note offers actionable advice to help integrate Climate and Disaster Risk Finance and Insurance (CDRFI) into National Adaptation Plans (NAPs).

This guide aims to help stakeholders make sure that NAPs effectively handle climate change risks and that CDRFI is used as a key part of adaptation and development. It promotes integrating CDRFI into NAPs alongside other strategies like disaster risk finance (DRF) and disaster risk management (DRM), with involvement from finance ministries and other CDRFI stakeholders. The guide also focuses on creating clear and usable financing and implementation plans, monitoring and evaluating CDRFI's role in NAPs and maximizing the contributions of the private sector to NAPs and CDRFI in general.
The document outlines steps for integrating comprehensive risk management and CDRFI into the different phases of the NAP process:

A. **Laying the groundwork and addressing gaps:** This initial phase focuses on establishing institutional frameworks, securing legal mandates, conducting CDRFI stocktakes and accessing funding. Key steps include setting up inclusive institutional arrangements, securing legal mandates, conducting CDRFI stocktakes and gap analysis and accessing Green Climate Fund NAP support.
B. **Preparatory elements – developing and finalizing the NAP:** This phase involves conducting risk assessments, identifying tolerable risks, quantifying costs and benefits, developing business cases for adaptation, integrating CDRFI into sectoral priorities and prioritizing macroeconomic stability, sovereign solutions, financial inclusion and resilience for vulnerable groups. It emphasizes a data-driven approach, stakeholder engagement and the integration of adaptation strategies across sectors.
C. **Implementation strategies:** This phase focuses on building CDRFI into implementation, identifying stakeholders, addressing finance gaps, exploring funding opportunities, preparing project pipelines, mainstreaming adaptation and strengthening collaboration with the private sector. It involves translating plans into action, mobilizing finance and aligning with national policies.
D. **Reporting, monitoring and review:** This phase centres on developing monitoring, evaluation and learning frameworks, establishing CDRFI indicators and reviewing and updating the NAP. It emphasizes assessing effectiveness, incorporating lessons learned and ensuring continuous improvement.
E. **Cross-cutting actions:** These actions, including strengthening the enabling CDRFI environment, building capacity and engaging diverse stakeholders, should be implemented across all phases to ensure effective integration of CDRFI into NAPs.

In addition, the guidance note underscores the importance of aligning NAPs with Nationally Determined Contributions (NDCs) to ensure cohesive climate action and prevent redundancy. It highlights that NDCs, which are countries' climate action plans under the Paris Agreement, often include adaptation measures, making their alignment with NAPs crucial.

II. Introduction and rationale

This guidance note aims to help technical personnel involved in the National Adaptation Plan (NAP) process to integrate Climate and Disaster Risk Finance and Insurance (CDRFI) throughout the different phases of the adaptation plan. It is primarily targeted at institutions providing technical assistance, such as UNDP and government technical staff, but it can also offer insights to anyone interested in the interlinkage of CDRFI and adaptation planning.

The decisions taken at the COP28 UN Climate Change Conference in 2023 made it more urgent for countries to develop and implement NAPs, creating an immediate need for actionable guidance on a range of topics. The decision on the first Global Stocktake calls on Parties that have not yet done so to put in place their National Adaptation Plans, policies and planning processes by 2025, and to make progress on implementing them by 2030. By 2030, all Parties are expected to have in place country-driven, gender-responsive, participatory and fully transparent NAPs that include up-to-date risk assessments, multi-hazard early warning systems and comprehensive implementation strategies, and that have been mainstreamed into relevant strategies and plans. Equally, by 2030, all Parties are expected to have begun implementation and to be monitoring progress through an operationalized monitoring, evaluation and learning (MEL) system. To achieve these ambitious goals, all stakeholders need to increase speed and efficiency and overcome significant obstacles relating, among others, to the lack of adaptation finance and capacity. This guidance note offers actionable advice to help reach these objectives through integrating CDRFI into NAPs.

The goals of this guidance note are to ensure that:

- The NAP process enables countries to manage climate change risks comprehensively and effectively.
- CDRFI is valued not only as a risk management tool, but also as an essential element in adaptation and the achievement of broader developmental goals.
- CDRFI is integrated into the NAP as a priority, functioning within the broader context of other strategies and plans, rather than as a stand-alone instrument. Strategies such as the NAP, the Disaster Risk Finance (DRF) Strategy, the Disaster Risk Management (DRM) or Disaster Risk Reduction (DRR) Strategy and other development plans and project proposals should all work in synergy to reinforce one another.
- The Ministry of Finance, DRM authorities and relevant CDRFI stakeholders are actively engaged in the NAP process, taking ownership of CDRFI components.
- Financing and implementation strategies are clearly defined and actionable.
- CDRFI components are monitored and evaluated, and contribute to the learning and revision of the NAP.
- Private sector contributions to NAPs and CDRFI, and their interlinkage, are fully enabled and maximized.

In the next chapter, this guidance note discusses the importance of NAPs in managing climate risks and the benefits of using a comprehensive risk management (CRM) approach. Chapter III outlines the contribution to adaptation planning of CDRFI, one important aspect of CRM. Chapter IV provides detailed steps for integrating comprehensive risk management and CDRFI into the different phases of the NAP Process: a) laying the groundwork and addressing gaps; b) preparatory elements; c) implementation strategies; and d) reporting, monitoring and review. It also offers steps for cross-cutting actions that can build general capacity and buy-in on CDRFI and should be applied across all phases. Each group of steps begins with a series of questions that can help practitioners to take stock of where they are, and ends with a compilation of relevant actors, outputs and relevant materials. Finally, Chapter V links the guidance note to Nationally Determined Contributions (NDCs) and outlines UNDP's potential entry points on integrating CDFRI into NAPs. This guidance note builds upon UNDP's analytical report, "Climate and Disaster Risk Finance and Insurance in National Adaptation Plans and Nationally Determined Contributions" (2025).

III. A comprehensive risk management approach through NAPs

The NAP process was established in 2010 as part of the Cancun Adaptation Framework of the United Nations Framework Convention on Climate Change (UNFCCC). It aims to enable developing countries, particularly least developed countries (LDCs), to identify their medium- and long-term adaptation needs and to develop and implement strategies and programmes to address these needs. Since COP28 in 2023, all Parties are required to produce National Adaptation Plans, policy instruments and planning processes and/or strategies. The process should be continuous, progressive and country-driven and should seek to align with national priorities and sustainable development objectives (UNFCCC, 2024).

Box 1: Objectives of the NAP process

THE OBJECTIVES OF THE NAP PROCESS ARE:

A. to reduce vulnerability to the impacts of climate change, by building adaptive capacity and resilience,

B. to facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate (UNFCCC/CP, 2012 - 5/CP.17, para. 1).

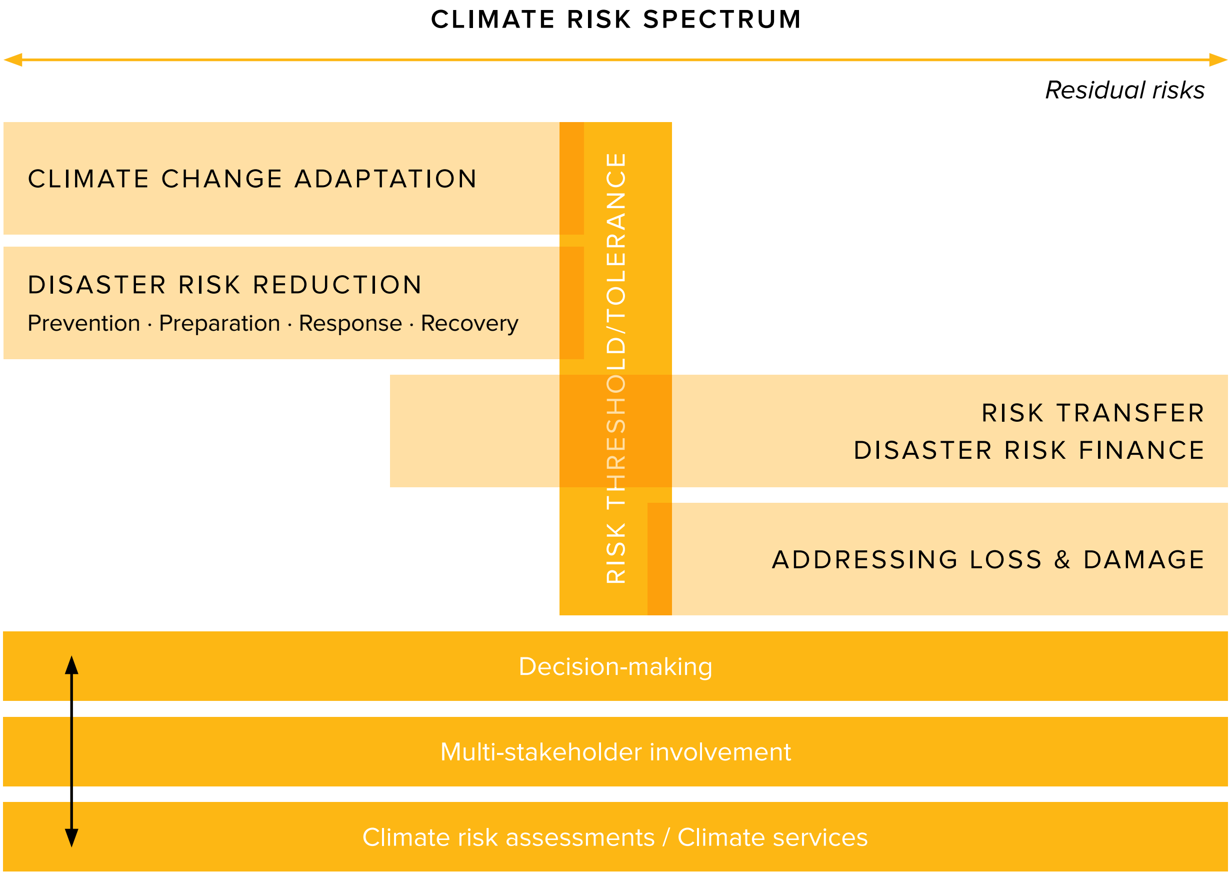
The technical guidelines for the NAP process (UNFCCC Secretariat, 2024), developed by the Least Developed Countries Expert Group (LEG), aim to assist countries in formulating and implementing NAPs, and were first introduced in 2012.[1] Supplementary materials have also been developed by various organizations (NAP Central, 2024); these tools offer in-depth coverage of selected topics or steps of the process to formulate and implement NAPs.

A comprehensive risk management approach

Previous work, including by the United Nations Office for Disaster Risk Reduction (UNDRR, 2021), has shown the importance of aligning disaster risk reduction and climate change adaptation (CCA) within the NAP, because both approaches aim to mitigate the impacts of natural and anthropogenic hazards and to reduce vulnerability, from slightly different vantage points.

1 The present guidance note was developed as the LEG was in the process of revising the NAP Technical Guidelines. The authors have tried to make this guide flexible enough to be applied alongside the current technical guidelines as well as the revised guidelines, when published.

Figure 1: Climate risk-related concepts and the role of disaster risk finance



Building on this evidence, this guidance recommends that NAPs continue to employ and strengthen the comprehensive risk management approach. CRM is a holistic approach to identifying, assessing, prioritizing and managing climate-related risks, which include both immediate extreme weather events and long-term slow-onset processes. Based on risk analyses, CRM integrates DRR, CCA, preparedness, risk finance and transformational approaches to manage the full spectrum of climate-related risks. CRM is also a useful approach in the context of the discussion and emerging landscape on addressing loss and damage.

Within CRM, CDRFI provides a structured approach to managing various layers of risk, from frequent, low-severity events to rare, high-severity disasters. CDRFI enables and secures investment in adaptation, and at the same time, provides the necessary finance to quickly respond to disaster impacts. A rapid response can significantly lower the overall costs of disaster, thus minimizing further loss and damage at the same time as it begins to address existing losses. Without a CRM approach that includes CDRFI, risk management in the NAP is likely to remain incomplete, putting adaptation efforts and their potential benefits and successes at risk. CDRFI features in 44 of 54 NAPs analysed for this guidance note.[2] Of these, it is given low consideration in 18 countries, medium consideration in 9 countries and high consideration in 17 countries.

2 An in-depth analysis of CDRFI integration in NAPs and NDCs can be found in UNDP's analytical report, "Climate and Disaster Risk Finance and Insurance in National Adaptation Plans and Nationally Determined Contributions" (2025).

The intersection of adaptation and loss and damage

By using a CRM approach, policymakers and communities can craft strategies that effectively avert, minimize and address loss and damage, across the fields of prevention, adaptation and response. The UNFCCC Fund for Responding to Loss and Damage, a new funding arrangement to support developing countries that are particularly vulnerable to climate change impacts, offers support in areas such as developing national response plans, addressing insufficient climate data and promoting equitable human mobility (UNFCCC, 2024 - 1/CP.28; UNFCC, 2024 - 5/CMA.5). These challenges concern both adaptation planning and loss and damage.

Adaptation intersects with loss and damage in efforts to address residual risks – that is, risks that are not cost-effectively mitigated through adaptation and risk reduction. When disaster or slow-onset events turn residual risk into impacts, loss and damage occur. This overlap should be reflected in NAPs and in national response plans or systems to ensure coherence and mutual reinforcement.

CDRFI can act as a key link between adaptation and loss and damage, focusing on managing and financing residual risks. This connection is recognized under the UNFCCC, where risk transfer and insurance feature in decisions on both topics (see Annex I for an overview of CDRFI under the UNFCCC). Integrating CRM and CDRFI in NAPs aligns with the objectives of the UNFCCC Warsaw International Mechanism (WIM) Technical Expert Group on Comprehensive Risk Management (TEG CRM), established at ExCom 7 in 2018, whose workplans frequently refer to linking NAP with CRM and DRR and issues of loss and damage.

Risk layering in CDRFI and adaptation

CDRFI uses a risk layering approach that categorizes risks based on their frequency and severity, and then matches these categories with appropriate financial instruments. This method not only optimizes cost efficiency but also ensures funding sources are more reliable, thus improving overall disaster resilience and financial preparedness.

- **Risk reduction:** At the foundation of the risk layering approach is risk reduction, which includes proactive measures to mitigate the severity of potential disasters and slow-onset processes, whose impacts may be exacerbated during sudden-onset disasters. Risk reduction encompasses a wide range of structural measures and behavioural changes. These activities are crucial in reducing hazards, decreasing the vulnerability and exposure of communities and assets, and thereby reducing expected losses, especially from frequent, low-severity events.
- **Risk retention:** Governments and organizations typically retain risks that have a higher frequency but lower severity (often for events with return periods of up to about 1 in 3 years). They do this through financial reserves, contingency funds or budget reallocations. These mechanisms are designed to manage relatively minor, recurrent losses without the need for external financial support.
- **Contingent credit and insurance:** For intermediate risks (often events with return periods between 1 in 3 years and 1 in 12 years), contingent credit lines can provide an additional layer of financial security. Insurance products and risk pools are useful in covering more significant but less frequent events. These instruments offer liquidity by transferring a portion of the risk to the insurance market, thus protecting the financial stability of governments and organizations.
- **Catastrophe bonds and other risk transfer mechanisms:** The topmost layer deals with low-frequency, high-severity events (e.g., events with return periods exceeding 1 in 50

years). Catastrophe bonds and similar financial instruments are used to transfer catastrophic risks to the global financial markets. These instruments provide substantial financial support when the most extreme events occur, ensuring that recovery and reconstruction can proceed without undue financial strain.

A risk layering approach provides a structured method for managing financial risks associated with disasters. By aligning different layers of risk with suitable financial instruments, governments and organizations can ensure a more resilient and adaptive response to both current and future climate-related challenges.

IV. CDRFI's contribution to adaptation to climate change

CDRFI instruments can protect people and assets from climate impacts and encourage climate-friendly and resilient investments – the objectives of many climate policies. The following analysis is based on and expands on Denno Cissé (2021), European Commission (2018), Jarzabkowski et al. (2019) and Ahmed et al. (2021).

Figure 2: Potential benefits of CDRFI in the context of adaptation and climate policy

Financial liquidity and stability

- **Providing quick and reliable financial support:** CDRFI provides mechanisms to disburse funds quickly and reliably when disasters strike. This rapid access to financial resources is essential for emergency response as well as recovery and reconstruction efforts, and can help minimize disruption to lives and economies.
- **Promoting economic stability and reducing fiscal burdens:** CDRFI solutions can promote economic growth and provide fiscal stability by protecting public budgets from the financial impacts of disasters. This stability is crucial for maintaining government services and infrastructure before, during and after a disaster, ensuring that resources are available for necessary adaptation measures. Integrating CDRFI into climate policy frameworks can make policy measures more effective by reducing the fiscal burden on governments and taxpayers associated with climate-related disasters.

Mobilizing finance and securing investments

- **De-risking and enabling climate-friendly and resilient investments:** CDRFI secures climate finance investments, such as in infrastructure, by encouraging climate-resilient design of infrastructure investments and providing the resources needed to recover from disasters and quickly return to intended functions. This ensures the longevity and resilience of these investments, enhances creditworthiness and enables long-term planning, which can attract investors and facilitate public-private partnerships. By providing financial protection, CDRFI frees up resources, including at the individual and meso-level, for more resilient and climate-friendly practices and investments.
- **Supporting financial strategy:** Although most CDRFI instruments are risk finance tools that require funding themselves, they act as a key component in a country's disaster risk finance strategy and complement a climate finance strategy by protecting existing investments and unlocking new investments for climate change adaptation efforts.

Better climate and disaster risk management

- **Establishing a cost-efficient risk management strategy:** Using CDRFI implies having a concrete strategy to optimize choices and develop financial protection strategies for residual climate risks. An effective CDRFI scheme considers long-term costs and benefits, integrating a broad range of risk management tools such as prevention, protection and early warning systems.
- **Incentivizing disaster risk reduction and adaptation:** Depending on instrument choices, risk-reflective pricing can set incentives for risk reduction and investment in climate-resilient infrastructures. Risk assessment and pricing, in aggregate, serve to determine the cost of inaction and set a strong signal toward reducing greenhouse gas emissions.
- **Promoting risk awareness and reduction:** Implementing minimum building standards, "build back better" requirements and other resilience measures as part of insurance policies can further promote risk awareness and reduction. These measures ensure that rebuilt structures are more resilient to future extreme weather events.

Bringing different stakeholder groups together

- **Fostering collaboration between public and private sectors:** By leveraging private sector contributions, governments can optimize resource allocation and implement climate policy more efficiently, including protecting the most vulnerable from climate change.
- **Establishing institutional synergies:** Institutional arrangements needed to develop CDRFI naturally need to link adaptation, DRM and finance. This integrated approach can lead to synergies and more comprehensive and effective adaptation strategies.

Improved data and capacities

- **Improving data and analytics:** A major benefit of integrating CDRFI in adaptation planning is that CDRFI risk models, assessments and data can be used to define resilience baselines and evaluate investment risks. This approach supports informed, cost-effective adaptation strategies, closes protection gaps and captures the true value of investments. Better data generation, management and analysis can support continuous improvement and monitoring of adaptation strategies and measures.
- **Developing capacity:** Investing in capacity development is crucial to realizing the potential of CDRFI. This includes training government actors to understand and implement CDRFI solutions and supporting providers to develop context-appropriate products and services.

- **Conducting scenario planning and stress testing:** CDRFI-related tools enable countries to carry out scenario planning and stress testing, helping to anticipate the impacts of various climate scenarios on their climate action goals. This fosters the development of resilient and adaptive strategies.

Supporting those who need it most

- **Stimulating market development:** Developing insurance markets as part of a CDRFI strategy can improve access to financial protection against other risks, by making available, for example, inclusive health, life and casualty insurance.
- **Fostering solidarity and risk distribution:** Insurance schemes based on solidarity aim for maximum coverage to distribute risk evenly across a population. This approach helps ensure that all members of a community are protected against climate-related risks, building collective resilience.
- **Supporting agriculture and vulnerable sectors:** Insurance schemes can also be tailored to support specific sectors, such as agriculture. Multi-risk insurance products, premium subsidies and requirements for comprehensive coverage help protect farmers and their livelihoods from climate-related risks.

Figure 3: Road map for integrating CDRFI into NAPs

A. Lay the groundwork and address gaps

- **STEP A.1** Set up inclusive institutional arrangements for the NAP development
- **STEP A.2** Secure legal mandate for adaptation planning
- **STEP A.3** Conduct CDRFI Stock Take and Gap Analysis
- **STEP A.4** Access GCF NAP Support from Readiness Funding

B. Preparatory Elements

- **STEP B.1** Conduct inclusive risk assessments and probabilistic analyses
- **STEP B.2** Identify tolerable risks and long-list adaptation
- **STEP B.3** Quantify costs and benefits, analyze protection gap, and apply risk layering
- **STEP B.4** Develop a business case for adaptation
- **STEP B.5** Integrate CDRFI into sectoral priorities and framing
- **STEP B.6** Include a priority on macroeconomic stability and sovereign solutions
- **STEP B.7** Include a priority on financial inclusion and resilience for vulnerable groups

C. Implementation Strategies

- **STEP C.1** Build CDRFI into implementation, even where the NAP doesn't include it
- **STEP C.2** Identify activities and potential stakeholders for CDRFI initiatives
- **STEP C.3** Identify the finance gap for CDRFI initiatives
- **STEP C.4** Explore additional funding opportunities from external sources
- **STEP C.5** Prepare CDRFI project pipeline to submit to co-financers
- **STEP C.6** Mainstream NAP and CDRFI elements into sectoral / development plans and pipelines
- **STEP C.7** Strengthen collaboration with the private sector

D. Reporting, Monitoring & Review

- **STEP D.1** Develop MEL framework and CDRFI indicators
- **STEP D.2** Review and update the NAP

CROSS-CUTTING

- **STEP 0.1:** Strengthen the enabling CDRFI environment
- **STEP 0.2:** Build CDRFI capacity across and within sectors and institutions
- **STEP 0.3:** Consult and engage diverse stakeholders

V. Steps for integrating CDRFI into NAPs

This chapter outlines actionable guidance on integrating comprehensive risk management and CDRFI into the different phases of the NAP process: a) laying the groundwork and addressing gaps; b) preparatory elements; c) implementation strategies; and d) reporting, monitoring and review. The steps described in 0) cross-cutting actions can build general capacity and buy-in on CDRFI and should be applied across all phases. Each step begins with a series of questions to help practitioners take stock of where they are and ends with a collection of relevant actors, outputs and materials. Figure 3 provides a graphical summary of the steps.

A. Lay the groundwork and address gaps

The first phase of the NAP process involves launching the process, stocktaking to identify climate change impacts and adaptation data, addressing capacity weaknesses and iteratively evaluating development needs and climate vulnerabilities to strengthen response strategies.
Please also review steps 0.1–0.3: Cross-cutting actions.

Step A.1: Set up inclusive institutional arrangements for NAP development

In this step, comprehensive institutional and legal frameworks should be established to ensure coordinated, government-wide climate adaptation planning, including through setting up inclusive oversight and technical committees.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the institutional set-up of the NAP?

- Which ministries and public agencies are involved in the NAP process (e.g., finance, planning, agriculture, health, environment ministries)?
- Have specific roles or responsibilities been assigned to each governmental body in the context of the NAP?
- Are CDRFI-relevant ministries and agencies included in the NAP process (such as the finance ministry, disaster management authority, insurance supervisory authorities, central bank)?
- If not already established, is an institutional set-up planned in the context of NAP formulation or implementation?

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

How are ministries coordinating?

- What is the coordination mechanism between the ministries?
- Which ministry is leading the process?

In what ways are external stakeholders involved in the NAP process?

- Has an NAP Task Force been established, including civil society organizations, academic institutions or community representatives?
- Are private sector organizations, especially insurance associations, involved in the process?
- How is the outreach to stakeholders structured, and with what frequency?

Is there a high-level advisory body overseeing climate change efforts?

- Has a climate change committee or similar high-level advisory body been established?
- If so, what is the mandate and composition of this advisory body?
- How often does this body meet and what are its reporting mechanisms?

- **Establish institutional arrangements:** Form oversight and technical committees with expertise in CDRFI. Create a high-level body, such as a climate change committee, with representatives from various ministries to ensure cross-sectoral coordination. Involve key stakeholders, including the Ministry of Finance, Ministry of Planning, disaster management agencies, the central bank and the insurance supervisor, to align NAP goals with CDRFI mechanisms and vice versa.
- **Foster ownership of the process:** Promote shared responsibility across ministries by involving the Ministry of Finance early to support integrated adaptation financing strategies. Conduct targeted awareness and capacity-building activities for entities including the Ministry of Finance, the central bank and insurance supervisors to clarify their roles in addressing climate risks within the NAP process.
- **Establish an NAP Task Force:** Create a dedicated task force with clear roles and responsibilities to lead adaptation planning. Include experts in disaster risk finance, social protection, macroeconomic risks and disaster risk reduction to strengthen financial strategies for managing climate-related disaster impacts. Include private sector representatives, such as the chamber of commerce, to incorporate their perspectives.
- **Raise awareness among members of the NAP Task Force:** Educate the NAP Task Force on the critical role the private sector plays in building climate resilience and implementing the NAP. Highlight the importance of multisectoral involvement, particularly in areas related to disaster risk finance.
- **Enhance intra-organizational exchange:** Build capacity and facilitate knowledge-sharing within organizations to ensure CDRFI expertise is effectively used across departments.
- **Communicate the NAP process and entry points to the private sector:** Actively communicate the NAP process to private sector stakeholders, including through industry events and direct engagement with the insurance industry and CDRFI providers. Design and communicate clear entry points for private sector engagement in the NAP process, such as opportunities for input into the NAP Task Force, participation in public-private dialogues and involvement in stakeholder consultations and document reviews.
- **Review and refine processes:** Implement regular reviews to adapt institutional arrangements to evolving needs and improve capacities for effective adaptation planning and implementation.

Step A.2: Secure a legal mandate for adaptation planning

This step involves securing the necessary legal mandates, setting a budget and defining a clear road map for government action.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:
What is the current legal mandate or environment for the NAP?
• Is the NAP mandated by a specific law or policy? • Are there any legal barriers or gaps that need to be addressed?
What are the important adaptation-related laws, policies and regulations in the country?
• Is there a climate change law? • Are sectoral or subnational adaptation strategies in place? • Is there a climate or adaptation finance strategy? • How do these laws and policies interact with each other and with the NAP? • Do mechanisms exist for enforcing these laws and policies? • Is there a reference to laws and regulations related to financial protection, such as financial consumer protection?

- **Strengthen the legal framework:** Ensure a robust legal foundation for climate adaptation by securing mandates for transparency and accountability in planning and implementation. Advocate for legislation that empowers relevant bodies to oversee and enforce adaptation processes.
- **Allocate budgets:** Advocate for ministries and agencies to be required to prioritize climate adaptation in their budget planning, with oversight by the finance or planning ministry to align expenditures with NAP objectives.
- **Promote integration:** Adopt a government-wide approach to adaptation, mandating cross-sectoral support. Address potential regulatory changes and ensure coordinated action among ministries to effectively implement CDRFI instruments.
- **Develop a road map:** Create a clear road map outlining legislative and executive actions needed for NAP implementation, specifying responsibilities, timelines and tasks to enable efficient government action.

Step A.3: Conduct a CDRFI stocktake and gap analysis

This step involves taking stock of the current CDRFI situation in the country. The stocktake and gap analysis will enable stakeholders to feed this information into the NAP process, build on existing initiatives and avoid duplication, map relevant stakeholders for implementation and identify capacity gaps.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

Does a country diagnostic for CDRFI or its components already exist?

- For example, has a disaster risk finance diagnostic been developed by UNDP, the World Bank or another development bank or organization?
- If such a diagnostic exists, what are its key findings?
- Is a country CDRFI or Disaster Risk Finance Strategy in place?
- If so, when was the strategy developed and what is its level of implementation?
- What are the key goals and objectives of the CDRFI strategy?
- Does the CDRFI strategy mention adaptation? If so, in what way?
- How does the CDRFI strategy align with the NAP?

What other strategies and plans exist that are relevant for CDRFI?

- Are there relevant disaster management plans, climate resilience strategies, disaster risk reduction policies, social protection policies, insurance regulation policies or a Climate Prosperity Plan?
- Do these strategies and plans mention CDRFI or its components (as determinable through a keyword search)?
- How do social protection programmes currently consider climate and disaster risk?

Who are the stakeholders in CDRFI and what are their roles, capacities and relationships?

- Who are the key CDRFI actors in the country (e.g., in government, international organizations, private sectors, academia and civil society)?
- Can you identify CDRFI champions at different levels (e.g., political, technical, community level)?
- How is knowledge about best practices in CDRFI shared across different levels of government and with the public?

What is the status of CDRFI products and implementation?

- What CDRFI-related products, projects, pilots and initiatives are ongoing, planned or conducted in the country?
- Is a CDRFI product in place that can be replicated in other areas? (For example, an existing agricultural insurance scheme could be used as a benchmark to develop a framework for aquaculture insurance).

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the state of the enabling environment for CDRFI?

- What is the current market situation for insurance and other CDRFI instruments (including insurance penetration rates, policy renewal rates, loss ratios and the profitability of insurers offering these products)?
- How does the current economic and regulatory policy framework support or hinder the growth of disaster risk insurance and other CDRFI markets? (Consider specific regulations, policies, tax policies or fiscal measures that directly or indirectly impact the CDRFI market).
- Are general frameworks, policies or incentives in place to promote public-private collaboration in the CDRFI context? (Consider the availability of government subsidies or incentives for CDRFI products or initiatives).
- Is private sector innovation in disaster risk management and CDRFI specifically incentivized or supported by the government?
- Are mechanisms or subsidies in place to ensure the availability and affordability of insurance and other CDRFI instruments, especially for vulnerable populations? (Consider the effectiveness of targeted subsidy programmes for low-income households or high-risk communities).
- Are economic incentives or subsidies provided to encourage investments in disaster-resilient infrastructure or projects that incorporate CDRFI principles? (Consider relevant building codes, land-use regulations and how these investments are monitored and their impact evaluated).
- Are programmes in place to build local and national capacities on CDRFI and on financial literacy? How effective are they?

- **Map CDRFI stakeholders and initiatives:** Identify key CDRFI stakeholders, including those who are underrepresented, and assess their capacities. Take stock of existing CDRFI products and initiatives and identify gaps.
- **Assess data and risks:** Conduct a thorough review of existing data on CDRFI, climate risks and their environmental and socioeconomic impacts, such as laws, regulations, strategies and priorities related to financial resilience, including protection gaps, insurance markets, debt levels and macroeconomic risks. Once gaps are identified, address them through targeted research on protection gaps, insurance offerings, financing mechanisms and insurance market conditions. Invest in high-quality data for informed decision-making and NAP risk assessments.
- **Encourage cooperation:** Engage international organizations and stakeholders to share knowledge, resources and best practices. Leverage technical assistance programmes such as the Global Shield against Climate Risks or the UNDP Insurance and Risk Finance Facility and make use of existing assessments if available to avoid duplication of efforts.

Step A.4: Conduct a CDRFI stocktake and gap analysis

Countries that have not yet made use of NAP formulation support from the Green Climate Fund (GCF) can request it through the GCF Readiness Programme. This support is not time-bound and is allocated per country, with requests allowed any time between 2024 and 2027. Given its extensive experience in CDRFI across a diverse portfolio, UNDP is well positioned to provide CDRFI-related NAP support under the GCF framework.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the set-up for engagement with the GCF?

- Who is the National Designated Authority (NDA) for the GCF in the country? How is the NDA involved in the NAP and the CDRFI process?
- Has the country previously received GCF Readiness support for NAP formulation?

What are the options for GCF engagement?

- Has the country (i.e., the NDA) requested support from the 2024–2027 GCF Readiness Programme?
- Does the country meet the GCF's eligibility criteria for readiness activities and does it require additional GCF support on NAP implementation?

- **Use the GCF Readiness Programme:** Access GCF support for NAP formulation and implementation through the Readiness Programme. Ensure the proposal is country-driven, addresses specific national needs and includes a strong climate rationale. Collaborate closely with the National Designated Authority.
- **Adopt a country-driven approach:** Identify the country's priority areas for support, such as NAP formulation or implementation. Engage closely and continuously with the NDA to align climate-related support needs, showcase the benefits of CDRFI and determine whether CDRFI can be prioritized to achieve the country's climate goals. Through this approach, foster the early inclusion of CDRFI in the GCF Readiness proposal, supporting its effective integration into the NAP.

Steps A.1–A.4

RELEVANT ACTORS: Ministry of Finance, Ministry of Planning, disaster management agencies, central bank, insurance supervisors, climate change committee or council, private sector representatives (e.g., chamber of commerce), NAP Task Force, legal and regulatory bodies, GCF, UN agencies (such as UNDP), National Designated Authority (NDA).

Key output(s):

- A robust legal framework for CDRFI and an operationalized regulatory framework
- A CDRFI strategy and diverse CDRFI instruments, products and programmes
- Comprehensive institutional frameworks, including a high-level climate change committee or council
- Private sector engagement in NAP process
- The establishment of an NAP Task Force, with a legal mandate for adaptation planning
- A GCF NAP readiness proposal
- The development of a working paper on financial resilience and CDRFI.

Reference materials:

- Least Developed Country Expert Group (2012). National Adaptation Plans: Technical Guidelines for the National Adaptation Plan Process.
- Green Climate Fund (2025). Readiness and preparatory support.
- World Bank (n.d.). Country Climate and Development Reports.
- Climate Vulnerable Forum: Vulnerable 20 Group. Climate Prosperity Plans.

On the role of the private sector / insurers and adaptation:

- NAP Global Network and GIZ (2019). Engaging the Private Sector in National Adaptation Planning Processes.
- BCG (2023). An insurance risk framework for climate adaptation.
- European Commission (2018). Using insurance in adaptation to climate change.
- OECD (2023). Enhancing the insurance sector's contribution to climate adaptation.

B. Preparatory elements: developing and finalizing the NAP

NAPs aim to reduce vulnerability, build adaptive capacity and resilience, and facilitate the integration of climate change adaptation into relevant new and existing policies, programmes and activities. To achieve this, a robust, data-driven framework is needed for assessing climate risks and vulnerabilities, in order to enable targeted and effective adaptation planning across sectors. Grounded in the best available science, the NAP can serve as a nationwide mid- and long-term planning tool to address key climate risks and exploit opportunities arising from adaptation. This requires significant investments in data collection, advanced analytics and probabilistic risk modelling, along with stakeholder engagement, to inform decision-making and support better adaptation strategies.

Finalizing the NAP requires defining clear objectives, creating planning frameworks and integrating adaptation strategies across sectors, with a focus on ensuring macroeconomic stability and financial resilience. It should prioritize short-, medium- and long-term adaptation options while incorporating feedback from diverse stakeholders, including local governments, indigenous and local communities, civil society organizations and the private sector. Sectoral plans should address areas such as agriculture and health, while cross-sectoral priorities establish broader strategies. Box 2 illustrates the benefits of using a coherent methodology and framework for adaptation decision-making.

The NAP should outline target areas, beneficiaries, responsible entities, timelines and resources for each adaptation option. It should also address external financing needs, capacity gaps and strategies for technical assistance, ensuring alignment with existing policies. Depending on its level of detail, the plan may include an implementation strategy or action plan with a financing strategy, ideally quantifying associated losses and costs. This comprehensive approach ensures that adaptation efforts are systematic, inclusive and actionable, fostering resilience across sectors and communities.

Alongside its role in sectoral chapters, CDRFI is sometimes integrated into broader NAP elements, including the current situation analysis, partnerships, financing strategy (Step C) and monitoring and review mechanisms (Step D). Some NAPs outline clear roles and responsibilities for CDRFI-related actors, ensuring a cohesive and actionable approach to managing climate and disaster risks across sectors.

Box 2: The Economics of Climate Adaptation (ECA) methodology: Benefits for disaster risk finance and national adaptation planning

The Economics of Climate Adaptation (ECA) framework is a methodology that provides decision-makers with information about potential climate-related damage to their local environment, economies and societies (ECA Network, n.d.). The results allow a flexible identification of cost-effective climate adaptation measures for a variety of projects and sectors. Key benefits of applying the ECA methodology include:

Quantitative risk assessment:

ECA methodology facilitates a comprehensive analysis of climate-related risks by quantifying potential future damages. This quantitative approach allows planners to understand the scale of potential impacts and prioritize adaptation investments based on rigorous data analysis.

Cost-effective adaptation measures:

Through the ECA framework, stakeholders can identify, evaluate and prioritize the most cost-effective adaptation measures. This ensures that limited resources are allocated to interventions that offer the highest return on investment in terms of risk reduction and sustainability.

Integration of multi-hazard scenarios:

ECA supports a multi-hazard approach by considering a wide range of climate risks. This holistic view enables more comprehensive adaptation strategies that address a range of interlinked climate hazards, enhancing resilience across multiple sectors.

Support for decision-making:

The ECA methodology provides decision-makers with clear, actionable insights into the costs and benefits of different adaptation strategies. This supports informed policymaking and helps in the development of effective, integrated NAPs.

Stakeholder engagement and capacity-building:

Implementing ECA methodology involves engaging a broad range of stakeholders, including government agencies, local communities and private sector players. This inclusive approach makes adaptation strategies more relevant, generates buy-in and builds local capacity in climate risk assessment and adaptation planning.

Scalability and flexibility:

The ECA methodology is designed to be flexible and scalable, suitable for application at different administrative levels, from local to national. This versatility makes it an invaluable tool in the context of national adaptation planning, where interventions may need to be tailored to diverse local conditions.

Policy integration:

ECA facilitates the integration of climate risk considerations into broader development policies and financial planning, aligning disaster risk finance with long-term development goals and climate resilience objectives.

The ECA methodology offers a structured, data-driven approach to integrating disaster risk finance into national adaptation planning. By leveraging ECA, countries can enhance their resilience to climate impacts, optimize their adaptation investments and ensure sustainable development pathways in the face of increasing climate variability and change.

Step B.1: Conduct inclusive risk assessments and probabilistic analyses

The first step of developing the NAP is engaging stakeholders to prioritize key risks and assets and adopt systematic risk modelling. Relevant priorities from CDRFI strategies should be incorporated. Detailed risk profiles and damage estimates should be developed to inform adaptation measures, investments and insurance products, ensuring strategies align with national priorities and community needs.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the level of climate risk assessment?

- Which methods and (technological) tools have previously been used for risk assessment, modelling and adaptation option prioritization?

What risk modelling capacity is available, and what are the data needs and requirements?

- Does the country have capacity for probabilistic risk modelling and maps?
- Which data are available? Are there data gaps, and where are they? What data-sets are available, e.g. through aggregators such as Oasis Hub?

- **Identify key risks and asset classes:** Engage diverse stakeholders to select priority risks, key assets and sectors, and parameters such as Representative Concentration Pathways (RCPs), scenarios projecting climate change based on various factors including greenhouse gas emissions, air pollutants and land-use changes (IPCC, 2014). Use consultations to align with development plans and policies, ensuring decisions reflect community needs and values to build a tailored adaptation strategy. (Use Step 0.3: Consult and engage diverse stakeholders for CDRFI-specific advice).
- **Adopt systematic risk modelling:** Transition from retrospective assessments to probabilistic risk modelling. Analyse hazard, exposure and vulnerability interactions across sectors and asset classes, incorporating historical data and future projections. Ensure that an understanding of macroeconomic climate risks is incorporated, since these risks shape a country's capacity to adapt.
- **Develop risk profiles and damage estimates:** Create sector-specific risk profiles and estimate damages under various scenarios. Use these scenarios to assess potential damages, identify effective adaptation measures, calculate investment needs and evaluate the cost-benefit of adaptation strategies. These damage estimations can also be used to inform insurance product development and risk coverage.

Steps B.1

RELEVANT ACTORS: Ministry of Finance, DRM entities, DRF entities, chambers of commerce, private sector and insurance associations, consumer groups, local, national and international experts, local communities.

Key output(s):

- Risk profiles for various sectors and asset classes
- Expected damage estimations under different climate scenarios
- Stakeholder-informed selection of key assets, risks and Representative Concentration Pathways
- Development of a working paper on financial resilience and CDRFI.

Reference materials:

- ECA Network. Economics of Climate Adaptation (ECA) (methodology and outputs)
- Global Risk Modelling Alliance (GRMA) (technical assistance tools and reports)
- Oasis Hub
- World Bank Climate and Disaster Risk Screening Tools
- EIOPA: Open-source tools for the modelling and management of climate change risks.

Step B.2: Identify tolerable risks and long-list adaptation options

Based on the risk assessment, stakeholders should be engaged to define tolerable risks for each sector or asset class, a comprehensive list of adaptation actions should be collected and data should be gathered on financial resilience to feed into the process. Regional adaptation insights should be incorporated and collaboration supported to ensure effective, context-specific and scalable adaptation options for the NAP.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

Do processes exist that support a focus on key vulnerabilities and establish acceptable risk levels for different sectors?

- Do climate vulnerability assessments exist?
- Is stress-testing information available, for example on food security and climate shocks?
- Have previous assessments been conducted in an inclusive and representative manner?
- Do existing CDRFI strategies include assumptions on risk ownership? Do they detail climate risk-related public contingencies, and if so, on what basis?

- **Consult stakeholders on tolerable risks:** Engage key stakeholders to define acceptable risk levels for each sector and asset class. Tailor thresholds based on sectoral needs, such as a lower risk tolerance in agriculture due to food security concerns. (Use Step 0.3: Consult and engage diverse stakeholders for CDRFI-specific advice).
- **Conduct comprehensive adaptation stocktaking:** Gather existing, planned and innovative adaptation actions across sectors through stakeholder consultations. Identify measures addressing current and emerging climate risks that go beyond existing policies.
- **Collect and share CDRFI-specific information:** Based on step A.3, conduct a CDRFI stocktake and gap analysis and gather relevant CDRFI-related information and data. Foster collaboration among adaptation stakeholders, insurers and the private sector to integrate risk information into NAP processes.
- **Incorporate regional adaptation insights:** Explore adaptation options from neighbouring countries with similar risks and conditions. Leverage regional programmes and replicate successful initiatives to enhance cooperation, exchange best practices and optimize cost-effectiveness.

Step B.3: Quantify costs and benefits, analyse protection gap and apply risk layering

Analytics can also guide resource allocation and the design of adaptation options. After quantifying expected losses under different climate scenarios, evaluating the impacts and cost-effectiveness of adaptation options can enable countries to find the best mix of risk reduction, risk finance and risk retention strategies. A balanced mix of strategies incorporates co-benefits and sector-specific analyses for efficient, scalable solutions.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

How are public interventions prioritized at the national level, and what capacities exist to undertake cost-benefit analysis?

- Have consultations on the prioritization of public interventions been inclusive, and have they included CDRFI stakeholders (including the private sector, civil society and vulnerable groups)? How has input from these stakeholders been incorporated?
- How are cost-benefit analyses addressed under the public spending code? What is the current capacity within relevant government agencies to conduct these analyses, and are there plans for enhancing cost-benefit analysis for adaptation?
- If the NAP has already been completed, what criteria and methodologies were used to select and prioritize adaptation options?

Are decision-makers familiar with a risk layering approach, and has this approach been operationalized at country level?

- To what extent are decision-makers within relevant ministries and agencies familiar with the concept of risk layering in managing climate and disaster risks?
- Has a risk layering approach been applied in the context of national strategies? If so, how?
- How is the protection gap defined and measured in the country context? Is it being used to inform the selection of adaptation options, including financial instruments?
- Are specific risk transfer mechanisms (e.g., insurance, contingency funds) being considered or implemented as part of a risk layering approach?

- **Assess the impacts of adaptation options:** Use modelling to evaluate how adaptation options affect hazards, vulnerabilities and exposures across asset categories. Assess avoided damages and identify co-benefits and blind spots to guide priorities and strategies effectively.
- **Evaluate cost-effectiveness:** Price adaptation options and compare their costs to expected benefits in terms of avoided damages. Include co-benefits such as improved well-being or income generation to highlight the advantages of economically viable, no-regret solutions like ecosystem-based approaches.
- **Determine the right mix of options:** Develop combinations of adaptation options that collectively bring risks within tolerable limits while ensuring cost-effectiveness and resource efficiency across sectors.
- **Analyse protection gaps:** Identify residual risks that persist despite adaptation efforts to reveal limits of adaptation and gaps in protection for specific assets or sectors.
- **Apply risk layering:** For residual risks where adaptation costs exceed expected benefits, transition to financial strategies such as risk transfer (e.g., insurance) or retention (e.g., contingency

finance). Combine these into a comprehensive risk layering strategy to ensure balanced risk management.

- **Conduct detailed analyses:** Perform detailed integrated analyses for specific sectors or subnational/local levels to refine adaptation strategies for the NAP or follow-up strategies.

Step B.4: Develop a business case for adaptation

Using data-driven analyses to build a business case for adaptation can help to engage stakeholders through public-private partnerships (PPPs) and blended finance, as well as to attract diverse investors. This can enable robust NAP investment planning and ensure the long-term sustainability of adaptation financing.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:
What are the in-country experiences of implementing private adaptation measures?
• Does the country have experiences with costed adaptation project proposals? • Does the country have experiences that could be drawn on of blended finance and PPPs?

- **Leverage data-driven analysis:** Conduct quantified analyses to generate critical data that underscores potential economic losses from inaction and the benefits of various adaptation measures, forming a compelling business case for adaptation.
- **Engage stakeholders for financing:** Use data to engage stakeholders, especially those at risk from hazards and those who would benefit from adaptation, to finance efforts through mechanisms like PPPs. Apply blended finance models, particularly for nature-based solutions, in which public entities mitigate risks that may deter private investment.
- **Diversify adaptation finance:** Attract a broad range of investors with a robust business case to expand adaptation financing sources. Though initially resource-intensive, this approach facilitates the development of concrete NAP investment plans and can sustain long-term financing.

Steps B.2–B.4

RELEVANT ACTORS: Government agencies (e.g., Ministry of Finance), DRM and DRF entities, private sector and insurance companies, regional and international stakeholders, local communities, adaptation planning experts and consultants.

Key output(s):

- Long list of adaptation options, priced
- A cost-effective mix of adaptation options
- Protection gap analyses
- Regional best practices.

Reference materials:

- ECA Network. Economics of Climate Adaptation (ECA)
- Global Risk Modelling Alliance (GRMA)
- World Bank Climate and Disaster Risk Screening Tools
- EIOPA: Open-source tools for the modelling and management of climate change risks
- Regional adaptation programmes and case studies.

Step B.5: Integrate CDRFI into sectoral priorities and framing

NAPs include sector-specific priorities and adaptation strategies that are tailored to unique risks in areas such as agriculture, water resources, infrastructure and health. These strategies should be guided by probabilistic risk analysis, loss quantification and cost-benefit assessments. Using these methods can help ensure the strategies manage risks through a balanced approach of risk reduction, transfer and retention, especially when cost-effective risk reduction is no longer feasible.

In developing or upscaling CDRFI products that address sector-specific needs and financial capacities as part of these strategies, collaboration among government agencies, industry stakeholders and insurance providers is crucial. NAPs should also address important enabling factors that need to be in place for the chosen strategies to succeed.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

Is there potential to integrate CDRFI into NAPs at the sectoral level?

- Are there relevant disaster risk finance interventions with other public policy objectives (e.g. area-yield insurance to stabilize farm income and support food security)?
- Are dialogue formats in place to bring together CDRFI actors, sectoral ministries and relevant stakeholders?

Table 1 shows examples of CDRFI instruments that have been identified in NAPs studied, which could be useful to consider for stakeholders planning to integrate CDRFI at the sectoral level.

Table 1: Instruments identified in NAPs, by sector

SECTOR	INSTRUMENTS
Agriculture, livestock, fisheries	Insurance schemes (such as crop, livestock and aquaculture insurance, index-based insurance, weather derivatives, livelihood protection policies, business interruption insurance), including subsidized insurance schemes for small-scale businesses; contingency funds
Forestry	Index-based insurance; catastrophe bonds
Infrastructure and water resources	Public asset insurance; index-based insurance; resilience bonds; catastrophe bonds; contingency funds
Health	Health insurance programmes; pandemic emergency financing facility; emergency health/contingency funds.
Coastal and marine areas	Reef insurance; blue bonds
Urban planning and housing	Property insurance, e.g. against floods or heatwaves; urban resilience funds
Energy	Insurance for energy assets
Tourism	Business interruption insurance
Vulnerable populations	Social safety nets linked with insurance schemes; affordable insurance schemes; takaful insurance

The following sub-steps describe potential interventions identified during the analysis of NAP documents. These examples are not prescriptive but offer inspiration for countries exploring suitable options. Final choices should be built on the steps in the guideline and tailored to the country's context.

- **Develop policies and regulations:** Develop supportive policies and legal frameworks that align CDRFI with national adaptation strategies, guided by a national CDRFI strategy. Adapt governance structures to manage evolving risks effectively.
- **Build institutional capacity:** Strengthen institutional capacity for CDRFI management.
- **Ensure coordination:** Coordinate across government entities, private sector associations and civil society.
- **Foster public-private dialogues and partnerships:** Facilitate ongoing dialogues between government bodies, private sector stakeholders and community representatives to align priorities, coordinate strategies and foster public-private partnerships. These efforts can help identify barriers, share risks, mobilize resources and leverage private sector innovation.
- **Support market creation:** Foster the development of new markets for resilience-focused financial products. This involves providing regulatory support for innovation, creating incentives for private sector investment (such as free access to data or tax breaks) and developing partnerships to create and sustain demand for financial tools that help vulnerable populations manage climate risks. Governments can also support market

creation by buying or subsidizing insurance for vulnerable populations as a way to increase social protection and safeguard food security.
- **Promote financial sustainability:** Secure co-financing for premiums for vulnerable groups through donors and engage the private sector in product co-development.
- **Invest in research and data:** Invest in research for advanced risk assessment tools and ensure data availability for accurate risk and impact evaluations.
- **Build capacity:** Provide training and awareness programmes and create knowledge-sharing platforms to improve CDRFI understanding and execution across stakeholder groups.

Step B.6: Include a priority on macroeconomic stability and sovereign solutions

Climate-related disasters threaten national economic stability by affecting gross domestic product (GDP), increasing debt, disrupting trade and straining labour markets. To address these challenges, NAPs should prioritize macroeconomic stability across sectors by explicitly considering the broader economic effects of climate change and adaptation, which are often overlooked. Unlike sector-specific disaster risk financing strategies, which address only localized impacts, sovereign risk transfer and risk retention instruments provide fiscal buffers on a national level, and can be further linked to broader social protection schemes (see UNDP's forthcoming policy note, "Social protection, risk finance and insurance").

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

To what extent is the country aware of the macroeconomic implications of climate change, and has this been factored into national adaptation planning?

- Is a macroeconomic risk assessment and/or stress test available in the country?
- Are macroeconomic considerations mentioned in the situational assessment of the NAP?
- Does the risk modelling and situational assessment include impacts of climate change on the macroeconomy?
- Has the country considered the transboundary and second order effects of climate impacts?

- **Establish fiscal buffers and risk management:** Implement sovereign risk transfer and risk retention instruments to create fiscal buffers, ensuring immediate liquidity during disasters. These mechanisms prevent funds from being diverted from essential services, mitigate fiscal shocks and enhance public and investor confidence, which could potentially improve credit ratings and attract funding for resilient infrastructure.
- **Integrate CDRFI instruments into NAPs:** Incorporate CDRFI instruments that align with a national CDRFI strategy. If no such strategy exists, prioritize its development within the NAP framework to ensure cohesive and effective disaster risk financing.

- **Link CDRFI to social protection:** Strategically connect sovereign risk instruments with social protection mechanisms to facilitate rapid deployment of financial resources during disasters. This approach can scale up direct support to vulnerable populations, reducing socioeconomic impacts. Ensure required conditions for implementation are met, leveraging detailed guidance such as UNDP's policy note on social protection, risk finance and insurance (UNDP, forthcoming).

Table 2 offers potential adaptation options for governments, including sovereign risk transfer and sovereign risk retention instruments.

Table 2: Possible sovereign risk transfer and retention instruments

INSTRUMENT	DESCRIPTION
SOVEREIGN RISK TRANSFER INSTRUMENTS	
Sovereign insurance pools	Regional insurance pools that share and reduce the cost of climate risks through collective risk pooling.
Catastrophe bonds	Bonds that raise funds specifically for disaster recovery, transferring risk to investors and providing governments with immediate liquidity post-disaster.
Insurance-linked securities	Securities that diversify the financial risk associated with disasters away from the public sector and into global financial markets.
Sovereign bonds with parametric triggers for disasters	Bonds that feature a clause allowing for the deferral of payment obligations under certain predefined conditions, aiming to reduce fiscal pressure following major disasters without transferring risk to bondholders.
Reserve funds	Allocated government funds set aside specifically for disaster recovery efforts.
Contingent credit	Financial arrangements that provide additional funds or expedite disbursements when a disaster strikes, based on predefined conditions.
Contingent budgets	Portions of national budgets designated for use in case of crises.
Sovereign wealth funds	State-owned investment funds that can allocate portions of their assets to disaster risk management.

The following sub-steps describe potential interventions identified during the analysis of NAP documents. These examples are not prescriptive but offer inspiration for countries exploring suitable options. Final choices should be built on the steps in the guideline and tailored to the country's context.

- **Create a comprehensive disaster risk finance strategy:** Develop a strategic framework to identify, quantify and manage financial disaster risks, integrating risk management into broader economic policies to support stability and resource efficiency.

- **Build adaptive social protection systems:** Integrate sovereign risk transfer mechanisms into social safety nets to ensure rapid, targeted support for vulnerable groups during disasters.
- **Integrate strategies into national budgeting and planning:** Embed financial strategies within national budgeting processes to enhance fiscal preparedness and resilience against climate impacts.
- **Ensure strong regulatory frameworks:** Implement clear regulations to support the development and use of complex financial instruments.
- **Support data availability and risk analysis:** Improve data collection, sharing and analysis to accurately assess and price climate risks, in collaboration with the private sector and international bodies.
- **Partner with the private sector:** Build insurance markets to enable risk transfer and provide reinsurance capacity.
- **Foster international cooperation:** Engage with international financial institutions and regional bodies to access broader markets, strengthen risk pools, increase the availability of reinsurance and share knowledge.

Step B.7: Include a priority on financial inclusion and resilience for vulnerable groups

Integrating financial inclusion and resilience as a distinct priority within the NAP ensures that all population segments, especially the most vulnerable, have access to essential financial tools to cope with and recover from climate-related disasters. This approach mitigates immediate economic impacts on individuals and communities and improves national economic resilience, with the aim of making adaptation measures comprehensive, inclusive and effectively tailored to those most at risk.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the potential for combining financial inclusion and NAP intervention?

- Is a financial inclusion strategy in place?
- What is the status of financial literacy in the country? Do financial literacy campaigns promote awareness of climate risks and their implications?
- Do relevant policies include the effects of remittances, including in the event of climate shocks?

- **Ensure equitable access to financial services:** Prioritize financial inclusion to provide equitable access to insurance, credit and other financial services. This can reduce socioeconomic disparities, enhance community preparedness, decrease reliance on emergency aid and support quicker, sustainable recovery.
- **Align financial inclusion with the Sustainable Development Goals (SDGs):** Integrate financial inclusion into the NAP to align with the SDGs, promoting inclusive economic growth as a cornerstone of long-term resilience to climate impacts.
- **Embed financial inclusion as a sub-priority:** If a single cross-sectoral priority is not feasible, incorporate financial inclusion and resilience as a sub-priority under broader goals such as ‘Supporting vulnerable groups’ or ‘Disaster risk management.’

Table 3 shows potential options for financial inclusion and resilience-building instruments.

Table 3: Possible financial inclusion adaptation options

INSTRUMENT	DESCRIPTION
SOVEREIGN RISK TRANSFER INSTRUMENTS	
Social safety nets	Strengthen adaptive social safety systems to provide immediate relief and support to vulnerable populations during and after climate-related disasters.
Pre-arranged/forecast-based finance	Implement systems that allocate financial resources in anticipation of forecasted climate events, ensuring funds are available to address immediate needs and mitigate impacts, thereby improving community preparedness and response capabilities.
Insurance products	Offer or encourage the development of affordable insurance, including parametric products, for climate risks in areas such as health, livestock, crop, property and business interruption. Risk transfer products should ideally contain an element that incentivizes risk reduction, e.g., through reduced premiums.
Conditional cash transfers	Support programmes that provide cash assistance to vulnerable populations conditional on certain resilience-enhancing behaviours, such as building safer housing or attending educational programmes on disaster preparedness.
Credit facilities	Offer or support low-interest loans specifically designed to help vulnerable populations invest in resilience measures.
Credit guarantees	Support schemes that back loans for climate resilience projects, reducing financial risk for lenders and encouraging investment in critical adaptation efforts.
Savings groups and cooperatives	Promote the formation of community-based savings groups and cooperatives to fund larger resilience projects or provide emergency funds during crises.
Localized adaptation funds	Establish local funds for communities to implement projects tailored to their climate risks and socioeconomic needs, empowering people to take ownership of resilience strategies.

The following sub-steps describe potential interventions identified during the analysis of NAP documents. These examples are not prescriptive but offer inspiration for countries exploring suitable options. Final choices should be built on the steps in the guideline and tailored to the country's context.

- **Encourage public-private dialogues:** Facilitate ongoing dialogues between government bodies, private sector stakeholders and community representatives to align priorities, coordinate strategies and mobilize resources effectively.
- **Create financial and risk literacy programmes:** Conduct campaigns to improve financial literacy, focusing on managing risks through savings, insurance and investment in resilience measures.
- **Build strong and inclusive policy frameworks:** Develop and revise policies to address the needs of vulnerable groups in disaster risk management and financial inclusion strategies.
- **Ensure adaptive social protection systems:** Integrate sovereign risk transfer mechanisms with social safety nets to ensure rapid and targeted support during disasters.
- **Support market creation:** Foster new markets for resilience-focused financial products by providing regulatory support, offering incentives for private sector investment and building partnerships.
- **Develop innovative technology solutions:** Leverage technology, such as mobile banking and fintech, to expand access to financial services, particularly for those in remote or marginalized communities.
- **Collect gender-disaggregated data:** Collect and use gender-disaggregated data to ensure that financial inclusion strategies effectively address the needs of all population segments.

Steps B.5–B.7

RELEVANT ACTORS: Government agencies, private sector, international development organizations.

Key output(s):

- Finalized NAP.

Reference materials:

- F. Lung (2020). Aligning with the bigger picture: Thinking strategically in disaster risk financing. Centre for Disaster Protection.
- P. Sirivunnabood and W. Alwarritzi (2020). Incorporating a disaster risk financing and insurance framework into country management and development strategies. ADB Institute.
- J. Denno-Cissé (2021). Climate and Disaster Risk Financing Instruments: An overview. UNU-EHS.
- World Bank and ADB (2017). Assessing Financial Protection against Disasters: A Guidance Note on Conducting a Disaster Risk Finance Diagnostic.
- R. Choularton and E. Montier (2023). Global mapping of humanitarian disaster risk finance.
- UNDP (2025). Social Protection, Risk Finance and Insurance. Policy note.

C. Implementation strategies

Turning NAPs into action requires significant financing. Successful implementation requires translating written plans into concrete project or programme proposals and mobilizing international climate finance from multilateral development banks (MDBs) and international financial institutions (IFIs). This section outlines how to establish a solid foundation for CDRFI activities, including identifying key stakeholders, defining modalities, aligning with national policies and filling the finance gap by developing strong investment proposals to attract external funding.

Box 3: Aligning NAPs with other climate policies and strategies

Existing climate policies and strategies can be interlinked with the country's NAP and can serve as a channel to elaborate on how the country will finance its adaptation activities, including CDRFI. These may include:

Adaptation finance strategy:

This nationally coordinated approach is aimed at identifying, mobilizing and scaling up financing for climate change adaptation priorities (Murphy and Parry, 2024). Adaptation finance strategies are developed at various levels (regional, national and sub-national) and tailored to specific sectors and development partners. More information can be found in UNDP's analytical report, "Climate and Disaster Risk Finance and Insurance in National Adaptation Plans and Nationally Determined Contributions" (2025).

Climate Adaptation Investment Framework (CAIF):

This framework supports implementation and strengthens domestic policies by addressing barriers to investment. It covers the policy areas that are particularly relevant for enabling investment in climate adaptation. The Climate Adaptation Investment Framework is designed to bring together the different policy strands that are relevant for adaptation to ensure policy coherence (OECD, 2024).

Climate Prosperity Plan (CPP):

This medium-to-long term national investment plan offers a structured, detailed and strategic approach to deliver SDGs and project pipelines to attract investment into economy-wide resilience and sustainable development. The CPP is made up of (i) a macroeconomic model; (ii) projects and programmes; and (iii) a green industrial policy (CVF-V20, 2024).

Step C.1: Build CDRFI into implementation, even where the NAP does not include it

Even when a country's NAP includes little or no reference to CDRFI, ex-post linkage is still possible. CDRFI can be holistically applied across multiple adaptation-relevant sectors. A programme integrating CDRFI, emphasizing its impact and co-benefits, can be designed to complement and strengthen other adaptation efforts. This integration should be grounded in risk assessments and cost-effectiveness analyses conducted during the NAP formulation phase, to ensure alignment with the plan's overarching objectives.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the status of NAP implementation?

- Is a follow-up engagement being conducted on the NAP, such as an implementation or financing plan or sectoral or subnational NAP development?
- Does the NAP outline activities that aim to strengthen financial climate resilience and livelihoods generally, to which CDRFI could potentially be added?
- Are there any sectoral entry points for CDRFI interventions following the implementation of the NAP?

- **Conduct or update the climate risk profile and review sectoral priorities:** Review the climate risk assessment used for developing the NAP, along with the prioritized risks, vulnerable groups or sectors. Revisit the risk assessment, if it is outdated. Integrate the findings into concept notes or funding proposals to demonstrate CDRFI's effectiveness in addressing the priority risks and sectors as established in the NAP.
- **Select effective CDRFI instruments that support NAP priorities:** Define the role and rationale of CDRFI instruments for NAP implementation. CDRFI instruments can be an important add-on for residual risks that remain after other adaptation and DRR efforts. For example, DRR priorities can be leveraged to introduce insurance or early warning systems, which can in turn support cost-effective insurance solutions that synergize with DRR efforts.

Step C.1

RELEVANT ACTORS: Government (focal point of NAP, focal point of CDRFI implementation), technical assistance providers (e.g. UNDP, GCF, World Bank).

Key output(s):

- Climate risk assessment with risk tolerance level of the country
- Specific climate risk or vulnerable sectors or communities whose climate risks can be mitigated by CDRFI
- Link between sectoral priority in NAP and CDRFI instrument.

Reference materials:

- F. Lung (2020). Aligning with the bigger picture: Thinking strategically in disaster risk financing. Centre for Disaster Protection.
- tP. Sirivunnabood and W. Alwarritzi (2020). Incorporating a disaster risk financing and insurance framework into country management and development strategies. ADB Institute.
- World Bank and ADB (2017). Assessing Financial Protection against Disasters: A Guidance Note on Conducting a Disaster Risk Finance Diagnostic.

Step C.2: Identify activities and potential stakeholders for CDRFI projects

A set of CDRFI implementation steps aligned with sectoral priorities and national policies should be developed. This step includes identifying the specific activities needed, engaging with potential stakeholders who can support these efforts and mapping out the necessary steps for implementation.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

See Cross-cutting actions Step 0.3: Consult and engage diverse stakeholders

- X

- **Develop a CDRFI portfolio:** Build a comprehensive portfolio of CDRFI instruments based on the risk profiles of communities and countries, as well as their risk thresholds. Identify the most suitable modalities – risk transfer, risk retention or risk sharing – aligned with the country's risk thresholds and capacities.
- **Align sectoral priorities:** Develop sector-specific strategies that integrate CDRFI instruments, addressing the challenges identified in the overall NAP. Use climate risk and impact analyses to prioritize sectors and risks where CDRFI can be most effectively applied.
- **Integrate CDRFI into national policies and budget:** Implementing NAPs requires substantial national resources. Incorporate CDRFI activities (such as product development and premiums, e.g., for risk pools, subsidies, etc.) into budget plans of relevant ministries. This integration can facilitate implementation and help to attract external funding, since it signals the country's commitment to country-driven climate projects and programmes, as well as alignment with its policies and budget. If CDRFI is not explicitly stated in the NAP or implementation strategy, this alignment can also serve as a foundation for developing concrete projects and attracting external funding.
- **Map activities across timelines:** Plan and categorize CDRFI activities into short-, medium- and long-term timelines (e.g., 1 year, 5 years and 10 years). This structured approach ensures realistic and strategic implementation aligned with the NAP and long-term national policies.
- **Identify capacity gaps:** Identify components of CDRFI activities that cannot be delivered due to capacity limitations. Seek support from external funders, technical assistance providers and climate entities to bridge these gaps.
- **Engage stakeholders:** Collaborate with national and international entities that offer implementation and technical and financial support. Consult with stakeholders such as ministries, insurance companies, agricultural cooperatives and development organizations like UNDP. Crucially, and in consultation with government bodies and external partners, decide on and select an Executing Entity (EE), an institution responsible for the execution of projects/programmes such as those funded by GCF and so for delivering the CDRFI solutions.

Step C.3: Identify the finance gap for CDRFI initiatives

After identifying activities and stakeholders and building actionable frameworks, the next step involves mobilizing finance to support CDRFI implementation. Given the significant financial requirements for adaptation activities, securing diverse funding sources is essential. In this stage, the country needs to invite cooperation from stakeholders who are interested in specific CDRFI activities, projects or programmes.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the finance gap for CDRFI activities?

- How much public spending is currently mobilized for CDRFI initiatives?
- How much additional national budget can be used to cover CDRFI-related costs?
- Cross-cutting: Which ministries are best placed to budget CDRFI activities? Who are CDRFI champions?

- **Assess national budget and resources:** Coordinate across ministries to identify and mobilize available domestic budgets and financial resource gaps for adaptation and CDRFI implementation, and secure approvals from the Ministry of Finance or relevant budget authority. Align budget planning with the country's legal frameworks and mandates established during the NAP formulation phase.
- **Define the investment portfolio:** Identify the estimated cost of CDRFI activities and begin planning how to present them in a proposal format. Develop a clear portfolio of projects for each implementation phase, including total cost estimates and selected financial modalities. Justify the choice of modalities and detail how financers will contribute.

Step C.4: Explore additional funding opportunities from external sources

Funding opportunities should be explored at the international, regional and national levels, beyond those identified during the NAP formulation phase. To support targeted projects/activities, funding windows related to the relevant sector can also be explored.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

How can the country maximize access to external funds for CDRFI activities?

- Has the country already secured any external support for CDRFI activities or NAP implementation?
- How much additional funding is needed from external sources?
- What international or regional initiatives and funds could finance CDRFI activities? What is the country's track record in accessing these funds?
- Is the country participating in a regional risk pool? Has it received dedicated funds from MDBs or other financers for CDRFI activities?
- Is the country participating in the Tripartite Agreement, or in the in-country process of the Global Shield against Climate Risks?
- Is the country planning a submission to the Fund for Responding to Loss and Damage?

- **Engage with (co-)financers:** Explore diverse funding opportunities at the national, regional and international levels, beyond those identified during NAP formulation. Engage new co-financers, including international organizations and private sector entities, to support NAP activities. Leverage CDRFI-specific funding sources, such as the Global Shield against Climate Risks and its funding vehicles, the V20 Sustainable Insurance Facility (SIF), the Natural Disaster Fund, the Asia-Pacific Climate Finance Fund (ACLiFF), MDBs, regional risk pools and other bilateral or multilateral funds. Proactively prepare to access emerging funds, such as the Fund for Responding to Loss and Damage, and to avail of technical assistance, such as through the UNFCCC's Santiago Network.
- **Expand and tailor (co-)financer scope:** Identify sector-specific and regional funding sources aligned with each project's specific goals, to ensure projects receive support not only from general climate funds but also from specialized sources linked to their sectoral focus. For instance, a project aimed at enhancing agricultural resilience through insurance in Africa could seek funding from various climate funds, while also targeting sector-specific sources like the International

Fund for Agricultural Development (IFAD) or the African Development Bank (AfDB) (see box 4, case study 1).

- **Leverage the GCF Readiness Programme for NAP implementation:** If the country meets the conditions, seek additional support from GCF. Countries can request additional support for NAP implementation if (i) the country requires additional support for implementing the NAP, beyond the allocated US$4 million for readiness activities and $3 million for NAP formulation support (for a total of $7 million); (ii) the country provides clear justification and demonstrable impact on adaptation actions. Support can include capacity-building, technical support and strengthening institutions to execute adaptation measures.

Step C.5: Prepare CDRFI project pipeline to submit to financers

In this step, concept notes and project proposals should be prepared to submit to various funds, bilateral partners and IFIs. The components of these proposals may vary, depending on the stage of development and the level of engagement with stakeholders. However, key components should include a financing plan and a procurement plan, which should outline the steps, resources and budget required to prepare and implement the planned adaptation measures.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the right institutional set-up for preparing and implementing a project pipeline?

- Which entity has a national track record and can lead the development of the proposal?
- Which entity has a national track record and can execute the proposal?
- What elements need to be included in the proposal, and which elements require external technical assistance and feasibility analysis?
- What is the national approval process?

- **Provide a rationale for financial instruments:** Clearly justify the chosen financial modality in the proposals, linking it to the engagement of the prospective (co-)financer. In CDRFI proposals, specify details such as grant amounts, percentage of subsidy provided to beneficiaries and calculation methods. Pursue grants when other financial modalities (e.g., concessional loans, equity) are less viable due to the project's low potential for profitability or revenue generation. This may be particularly relevant for adaptation finance, which often lacks direct revenue sources.
- **Demonstrate additionality of interventions:** In proposals submitted to IFIs, show the additionality of the projects and demonstrate that proposed interventions would be impossible without the requested funding. Highlight financial and non-financial barriers that currently prevent the project's implementation and explain why the proposed solution is the most effective. Since each IFI has different standards for assessing additionality, align the proposal with criteria such as innovation, scalability, sustainability and concessionality to improve the likelihood of securing funding. Demonstrate that the requested funding adds value beyond existing market solutions and does not displace private sector investments.
- **Ensure cost-effective CDRFI instruments:** Provide

a clear rationale and justify the selection of specific financial instruments based on risk analysis and the risk layering approach. Clearly identify the specific climate risks mitigated by the instrument, as well as the extent to which the instrument can mitigate the risks. Quantify the (financial) risk that the country cannot retain and hence needs to transfer out.

- **Develop a strong climate rationale with evidence:** Align proposals with IFI and MDB guidelines and provide a strong, evidence-based argument demonstrating the intervention's necessity and contribution to climate mitigation and/or adaptation, reinforcing the need for external funding.
- **Address environmental and social impacts:** To successfully mobilize external investment, ensure that proposals maximize socioeconomic impact while assessing, minimizing and addressing adverse impacts, particularly in vulnerable and fragile communities, as required by IFIs. See reference materials for helpful guidance on assessing and mitigating environmental and social risks.
- **Leverage international assistance:** Seek technical and financial support from international partners to strengthen proposals and improve approval chances. Closely coordinate with development partners, such as multilateral and private funds, to align with broader climate finance strategies and maximize funding opportunities. Engage with international funding and capacity-building programmes to support the development and implementation of CDRFI instruments. For example, GCF Readiness support can be leveraged to develop concept notes, full proposals and other necessary documentation.

Box 4: Case studies: CDRFI project proposals approved by IFIs

These case studies highlight projects approved by IFIs that incorporate CDRFI activities. The examples demonstrate the versatility of CDRFI solutions, showing that they can be effectively applied across diverse sectors such as water, agriculture and health. Implementation can be customized to align with each country's specific needs and the unique climate risks it faces.

CASE STUDY 1: PROJECT APPROVED BY GCF

- **Project title:** The Africa Integrated Climate Risk Management Programme: Building the resilience of smallholder farmers to climate change impacts in 7 Sahelian Countries of the Great Green Wall (GGW)
- **Sector:** Agriculture
- **Project summary:** The programme aims to enhance and scale up the resilience and adaptive capacities of smallholder farmers and rural communities across seven LDCs in the Sahel region. It is focused on building capacity and fostering institutional development to support integrated climate risk management. This includes bolstering resilience efforts by addressing barriers to accessing agricultural insurance for both governments and smallholder farmers, as well as strengthening climate and weather information services.
- **Entities:** IFAD (Accredited Entity); the Governments of Burkina Faso, Chad, the Gambia, Mali, Mauritania, Niger and Senegal; AfDB; African Risk Capacity (ARC); the World Food Programme (WFP)
- **Funding amount:** $143.3 million (incl. co-financing)
- **CDRFI instruments (or aspects):** National Disaster Risk Financing Strategies, insurance

Source: GCF (2021).

CASE STUDY 2: PROJECT APPROVED BY THE INTER-AMERICAN DEVELOPMENT BANK (IDB)

- **Project title:** Structuring of the Caribbean Water Utility Insurance Company (CWUIC SP) as a Segregated Portfolio within the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC)
- **Sector:** Water and sanitation
- **Project summary:** The project is aimed at supporting the design of specific features of a parametric hazard insurance product, which is to be issued by CWUIC SP in order to mitigate the effects of natural disasters in the water and sanitation sector in the Caribbean region.
- **Entities:** IDB; Caribbean Water and Wastewater Association (CWWA); Caribbean Water and Sewerage Association (CAWASA); K&M Advisors (consultancy)
- **Funding amount:** $3.7 million
- **CDRFI instruments (or aspects):** Parametric insurance

Source: IDB (2022).

CASE STUDY 3: PROJECT APPROVED BY THE WORLD BANK'S INTERNATIONAL DEVELOPMENT ASSOCIATION (IDA)

- **Project title:** The Gambia Essential Health Services Strengthening Project
- **Sector:** Health and population
- **Project summary:** The project aims to enhance the quality and utilization of essential health services and support the national public health preparedness system in the Gambia. It supports the completion of the ongoing construction of health facilities, the implementation of the national health insurance scheme and the interoperability of the electronic civil registration and vital statistics system with the information systems of other sectors.
- **Entities:** World Bank (through the IDA); the Gambia's Ministry of Health and Ministry of Finance and Economic Affairs; the Gambia National Health Insurance Authority; the Gambia Public Procurement Authority
- **Funding amount:** $130 million
- **CDRFI instruments (or aspects):** Health insurance development

Source: World Bank (2025).

Step C.6: Mainstream NAP and CDRFI elements into sectoral/development plans and pipelines

Adaptation priorities should be integrated from the NAP into the country's sectoral and development plans and project pipelines, thereby increasing the country's climate resilience.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

How effectively are CDRFI activities integrated into sectoral plans, budgets and stakeholder engagement processes?

- Are the CDRFI activities that have been identified aligned with the priorities and objectives of relevant sectoral plans?
- Have the CDRFI activities been effectively communicated to and understood by each relevant ministry and other key stakeholders?
- Are the CDRFI activities incorporated into the workplans and budgets of relevant sectoral ministries?
- What specific capacities do ministries lack with regard to the implementation of CDRFI activities?
- Is there an ongoing and effective dialogue between CDRFI actors, sectoral ministries and relevant stakeholders to ensure coordination and alignment?

- **Ensure mainstream adaptation across sectors:** Incorporate adaptation perspectives into all sectors and development programmes to ensure investments are climate-resilient and include adaptation components wherever feasible.
- **Assess climate risks in all projects:** Evaluate climate risks in all projects, even those not directly focused on adaptation, and integrate adaptation measures to enhance society's overall resilience to climate change.
- **Leverage non-climate finance for adaptation:** Use an integrated approach to mitigate risks and maximize adaptation benefits by aligning non-climate finance with adaptation objectives.
- **Build capacity for CDRFI in line ministries:** Strengthen the capacity of line ministries and agencies to integrate risk layering and CDRFI components into their strategies, plans and budgets.
- **Promote ownership of CDRFI integration:** Encourage line ministries and agencies to take ownership of incorporating CDRFI and adaptation elements into sectoral strategies for sustainable, climate-resilient development. This approach ensures that these elements are effectively incorporated into sectoral plans, making NAP activities more implementable.

Box 5: Case study

CASE STUDY: CO-BENEFITS OF MITIGATION AND ADAPTATION

Sectors primarily relevant to mitigation, such as renewable energy, can also support adaptation efforts, and conversely, adaptation work can have co-benefits for mitigation. As recommended by IRENA (2021), renewable energy can provide “greener infrastructure” to climate-vulnerable areas, opening pathways that simultaneously promote mitigation and enhance adaptation. Incorporating renewables into adaptation projects enables sustainable, win-win solutions, for example through powering energy-intensive adaptation measures like air conditioning, desalination and irrigation with net-zero emissions. Additionally, distributed renewable energy solutions create resilient energy systems, supporting vital adaptation measures for vulnerable communities.

Step C.2–C.6

RELEVANT ACTORS: Government (finance, planning, agriculture, health, environment ministries – with the Ministry of Environment typically serving as the UNFCCC Focal Point in most cases), national disaster management authorities, IFIs such as GCF, World Bank, International Monetary Fund (IMF), Global Environment Facility (GEF), Adaptation Fund (AF), Climate Investment Fund (CIF), consultancy (technical assistance provider), UN agencies, private sector (insurers, investors, climate data businesses), agricultural cooperatives.

Key output(s):

- Framework for CDRFI implementation
- Stakeholder mapping including (co-)financers
- Required funding amount from the national budget and external financers
- Concept notes or funding proposals for external financers (e.g. IFIs, MDBs, philanthropy organizations).

Reference materials:

- IFC (2012). Performance standards on environmental and social sustainability (ESS).
- UNDP (2021). Social and Environmental Standards.
- GCF (2022). Sectoral guides on how to target GCF investment.
- GCF (n.d.). Project Preparation Facility.
- GCF (2024). Readiness and preparatory support.
- Global Environment Facility (GEF) Guidelines, especially GEF (2020). Guidelines on the Project and Program Cycle Policy.
- UNDRR (2021). Promoting Synergy and Alignment: Between Climate Change Adaptation and Disaster Risk Reduction in the Context of National Adaptation Plans.

Step C.7: Strengthen collaboration with the private sector

This step involves facilitating ongoing public-private dialogues, capacity-building initiatives and the development of public-private partnerships to raise awareness, improve implementation and enhance the effectiveness of CDRFI.

Successful CDRFI implementation often relies on private sector involvement, particularly in ensuring long-term operations, access to high-quality data, stable execution of projects and products, and the development of robust infrastructure, such as geographic information systems (GIS) for climate data collection. This presents an opportunity for governments to institutionalize and strengthen collaboration with the private sector by establishing regular dialogue platforms at national, regional and international levels and fostering partnerships towards achieving shared objectives.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

What is the private sector's perspective on implementing adaptation actions?

- What is the national private sector's current level of awareness and understanding of climate risks and adaptation strategies?
- What knowledge gaps or misconceptions exist in the private sector about climate change and adaptation?

How can the private sector be integrated into ongoing CDRFI activities?

- What areas within the chosen CDRFI activities require private sector engagement (e.g. data management, GIS, executing insurance schemes)?
- How can the government or other stakeholders incentivize private sector investment in climate adaptation?
- What types of financial instruments (e.g., grants, subsidies, tax breaks) would be most effective?
- How can the government foster collaboration and partnerships for climate adaptation between the private sector, civil society and other stakeholders?

- **Facilitate public-private dialogues:** Regularly engage stakeholders, including investors, insurers, private sector representatives, technical experts, local communities, civil society, governments and beneficiaries, to share lessons learned. These dialogues can facilitate stable operations, improved CDRFI activities and alignment with long-term goals such as NAP implementation.
- **Address regulatory barriers:** Collaborate to identify and resolve challenges that hinder project development or implementation.
- **Establish PPPs:** Support the launch of PPPs to share the costs and benefits of adaptation, leveraging data on projected losses and averted costs to build a compelling business case for private sector involvement. Use these partnerships to improve access to insurance for vulnerable groups, ensuring that cost-effective and impactful CDRFI solutions reach those in need, while cooperating to minimize future losses.
- **Promote data-sharing and align with NAP communication strategy:** Develop mechanisms for open information exchange on the private sector's role in adaptation, ensuring collaboration to address obstacles and build a business case for adaptation. Integrate these efforts into a

NAP-linked communication strategy to highlight private sector contributions, foster partnerships and jointly overcome challenges.

- **Engage insurers:** Partner with insurers offering relevant products, such as agricultural insurance, to scale up and link these products to broader adaptation measures (e.g., using drought-resistant seeds). This can help to reduce premiums and enhance resilience.
- **Build capacity:** Enhance the capacity of relevant Executing Entities and CDRFI stakeholders through workshops, gender training and governance improvements to ensure sustainable delivery of CDRFI initiatives.

Box 6: The role of insurance companies: Insurers and investors

Insurance companies are key stakeholders in CDRFI initiatives. They can serve both as underwriters of insurance products and as significant investors in adaptation and mitigation activities.

As major institutional investors, insurance companies have a vested interest in projects that align with their business objectives and ESG (environmental, social and governance) strategies.

The synergy between investment and underwriting puts insurers in a unique position to lead in climate-resilience investments. CDRFI projects, which offer both climate and socioeconomic benefits, are especially attractive to insurers as they complement their sustainable investment goals and contribute to their broader environmental and social impact strategies.

Step C.7

RELEVANT ACTORS: Public sector (ministries, National Disaster Management Authority, regulatory body), international development partners, local communities, civil society organizations, technical experts (e.g. on risk modelling).

Key output(s):

- Increased awareness, knowledge-sharing
- Public-private partnership agreements
- Data-sharing platforms
- Recommendations on regulations and policy
- Monitoring and evaluation (M&E) framework
- Regular stakeholder conferences.

Reference materials:

- NAP Global Network and GIZ (2019). Engaging the Private Sector in National Adaptation Planning Processes.
- P. Jarzabkowski et al. (2019). Insurance for climate adaptation: Opportunities and limitations.
- European Commission (2024). Climate Resilience Dialogues.
- UNDP (2020). Mobilizing insurance investment in sustainable infrastructure.

D. Reporting, monitoring and review

In this stage, monitoring, evaluation and learning (MEL) is used to assess the status, implementation and effectiveness of the NAP, and to identify areas for improvement. The findings should inform NAP implementation processes as well as any revisions needed to improve the NAP. MEL also provides an opportunity to address CDRFI-related gaps, improve products and better integrate CDRFI, CRM and risk modelling into the next NAP iteration.

Step D.1: Develop MEL framework and CDRFI indicators

NAPs should outline objectives, components and responsible authorities for the MEL system, and may already include an initial framework for MEL. If a framework has not yet been defined, it should be developed at this stage to support continuous learning and the improvement of future revisions. The MEL framework must define scope, targets, timeframes and metrics to assess progress, effectiveness and gaps. Effective MEL requires early stakeholder engagement and clear responsibilities, alignment with existing data systems and allocation of resources for regular data collection and evaluation.

NAPs are key to achieving the Global Goal on Adaptation (GGA) and the framework that guides its achievement, the UAE Framework for Global Climate Resilience, agreed in 2023. As part of the UAE Framework process, a set of indicators for sector-specific and dimensional targets[3] is being developed. The MEL systems of NAPs should ideally reflect these targets and indicators.

Incorporating CDRFI strategy indicators into NAPs can improve reporting and reduce duplication across strategies. Nevertheless, systematic evaluation of CDRFI interventions is still in its infancy. Therefore, it is important to design CDRFI interventions in a transparent, accountable and flexible manner, and to allow periodic updates to project design and implementation. This aligns with the iterative nature of NAPs, and can, in the long term, accommodate any evolution in the systematic evaluation of CDRFI interventions.

CDRFI and related tools can actively contribute to MEL by:

- **Improving data and technology use:** CDRFI can improve data collection on climate and disasters, leveraging tools like big data analytics, remote sensing and GIS to support efficient monitoring and evaluation.
- **Providing financial and economic insights:** CDRFI tools can facilitate cost-effectiveness analyses of disaster and adaptation measures, crucial for assessing the impacts of interventions and strategies.
- **Establishing performance indicators:** CDRFI can assist in defining metrics for financial protection, recovery times, economic resilience and insurance penetration, providing robust measures for adaptation success.

3 Sectors: water supply and sanitation; food and agricultural production; health impacts and health services; ecosystems and biodiversity; infrastructure and human settlements; poverty eradication and livelihoods; cultural heritage and knowledge. Dimensional targets: impact, vulnerability and risk assessment; planning; MEL; and implementation.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:
What is the current state of monitoring, evaluation and learning (MEL)?
• Do existing CDRFI initiatives include MEL indicators? • Do CDRFI proposals include budgets for systemic reviews? • Is a national-level knowledge management system in place?

- **Develop CDRFI indicators and data collection systems:** Establish CDRFI-specific indicators with assigned responsibilities, data sources and collection intervals. Align with existing data and frameworks to streamline reporting and improve evaluation accuracy. The Centre for Disaster Protection (Scott, 2020) provides examples of CDRFI programme indicators (see table 4).
- **Conduct systematic evaluations:** Plan and budget for independent and transparent evaluations of CDRFI initiatives. Assess relevance, effectiveness, efficiency, sustainability and impact, using standardized criteria to ensure comparability and facilitate learning across programmes.
- **Integrate CDRFI with broader risk management:** Embed CDRFI within broader adaptation strategies outlined in NAPs. Regularly evaluate how well this integration improves climate resilience and overall adaptation outcomes.

Table 4: Examples of CDRFI indicators

LEVEL	INDICATOR IN USE	NOTES
Impact	• No./% of households with/keeping children in school • No./% of households maintaining livelihood/ standard of living • No./% of pastoralists maintaining size of herd • % change in infant nutrition levels	Normally indicators attempt to capture a change (often an improvement). With DRF, it may be more meaningful to measure whether circumstances are being maintained before, during and after a crisis.
Outcome	• No. of people covered by risk finance and insurance • Total insured value • % of average annual climate and disaster losses in vulnerable countries covered by pre-arranged risk finance • No. of days to get insured service back up and running • No. of days from triggering event to payout/first contact • No. of basis risk events	International best practice in development M&E is to disaggregate by gender. Disaggregating by poverty level would also help to focus and measure the quality of CDRFI – e.g. the number of people living below the poverty line that are covered by risk finance.

LEVEL	INDICATOR IN USE	NOTES
Output Infrastructure and water resources	• No. of sectoral adaptation plans and peer-reviewed contingency plans linked to finance • No. of comprehensive CDRFI strategies in place • No. of open source catastrophe risk models developed • Annual quality assessment of software shows fit for purpose • Accuracy of the model against reality/ground-truthing data	Ideally, indicators would measure quality rather than just quantity – e.g., the number of contingency plans passed first time by technical committee, rather than just the number of contingency plans written.

Source: Adapted from Scott (2020), p.7.

Step D.1

RELEVANT ACTORS: NAP Task Force and High-Level Committee, Ministry of Environment/ Climate Change, Ministry of Finance, CDRFI unit, local government authorities, indigenous and local community leaders, private sector representatives, NGOs, academic and research institutions, international development partners.

Key output(s):

- Comprehensive CDRFI-specific indicators, systematic evaluation reports, lessons learned documents

Reference materials:

Guidance notes:
- K. Miles and I. Hauler (2021). Step by step guidance: A gender-smart approach to monitoring and evaluation (M&E) of Climate and Disaster Risk Finance and Insurance (CDRFI) programmes. InsuResilience Global Partnership.
- Z. Scott (2020). Improving constantly: embedding scrutiny and learning in disaster risk financing. Centre for Disaster Protection.

Evaluations and reviews:
- Start Network (2020). Humanitarian sector-wide review of the development and use of methodologies and guidance for the monitoring and evaluation of forecast-based action.
- Oxford Policy Management (2024). Independent evaluation of the African Risk Capacity.

Step D.2: Review and update the NAP

The NAP should be regularly reviewed so that new data, emerging risks and lessons learned, including on CDRFI, can be incorporated into the next NAP iteration.

SITUATIONAL QUESTIONS TO ASK BEFORE THIS STEP:

Which steps of the guidance have not been followed in the prior NAP iteration and could be improved upon?

- What are key areas for improvement in establishing the groundwork for future NAP processes (A: *Laying the groundwork and addressing gaps*)?
- How can the analytical processes underpinning NAP development be strengthened to ensure more robust and effective future plans (B: *Preparatory elements*)?
- What aspects of NAP implementation strategies most need refinement to achieve greater impact in the future (C: *Implementation strategies*)?
- What are important areas for improvement in NAP reporting, monitoring and review that can enhance learning and demonstrate results (D: *Reporting, monitoring and review*)?

- **Facilitate CDRFI learning and experience sharing:** Document and share CDRFI lessons across regions and sectors to improve national and global practices. Develop feedback mechanisms to highlight evidence-based successes and challenges, compiling insights into working papers.
- **Revise financial strategies:** Periodically review and adjust financial and CDRFI strategies to address evolving climate risks and ensure alignment with national priorities.
- **Engage stakeholders in reviews:** Involve diverse stakeholders – such as local communities, private sector actors, NGOs and government agencies – in the review process. Collect lessons and ideas for improvement, particularly during public-private dialogues, to increase NAP relevance and effectiveness.
- **Evaluate the NAP development process:** Review the NAP formulation process, committee composition and stakeholder participation, including from a CDRFI perspective. Identify and recommend individuals and organizations to address gaps in expertise and participation.
- **Promote risk modelling and quantification:** Integrate risk modelling and potential loss and cost quantification into the NAP formulation process, particularly to prioritize adaptation options and to design effective finance and implementation strategies. Use these data to evaluate impacts and secure financial resources.
- **Update the NAP:** Regularly update the NAP using evaluation metrics, the latest science, knowledge from indigenous and local sources, and feedback from adaptation activities. Ensure alignment with national development and sectoral plans.

Step D.2

RELEVANT ACTORS: NAP Task Force and High-Level Committee, Ministry of Environment/ Climate Change, Ministry of Finance, CDRFI unit, local government authorities, indigenous and local community leaders, private sector representatives, NGOs, academic and research institutions, international development partners.

Key output(s):

- DRF-related lessons learned document/working paper
- Revised financial strategies and CDRFI mechanisms
- Feedback from stakeholder engagement and records from public-private dialogues
- Risk modelling and quantification framework
- Updated NAP document aligned with national development and sectoral plans.

Reference materials:

- NAP Technical Guidelines and NAP Central (2024). Supplementary materials.
- NAP document and previous NAP review reports
- DRF strategies and policy documents
- Stakeholder engagement guidelines
- Case studies and best practices from other countries' NAPs
- Risk modelling and quantification tools and reports
- Relevant scientific research and compilations of indigenous knowledge.

0. Cross-cutting actions across all phases

The steps in this section should be implemented throughout all NAP phases. The NAP provides a key platform to align CDRFI and adaptation efforts, even CDRFI and adaptation activities progress at different paces. But the success of integrating CDRFI into NAPs is likely to depend on the maturity of existing CDRFI discussions, policies and programmes. Therefore, experience of engagement in CDRFI initiatives, together with the existence of a conducive enabling environment, can facilitate the integration of CDRFI into the NAP. This means that CDRFI efforts can be pursued independently at any time, and the fact of their existence will serve to improve the NAP process. Meanwhile, frequent stakeholder consultation across a wide range of sectors, through an open, inclusive and participatory process, will raise awareness, improve the quality of the process, outputs and outcomes, and generate broad buy-in for implementation.

Step 0.1: Strengthen the enabling CDRFI environment

To ensure CDRFI can be effectively used to improve climate resilience, legal and regulatory frameworks and CDRFI strategies need to be established and strengthened, and a wide range of CDRFI products should be developed and implemented. Awareness-raising activities should be conducted to spread an understanding of the importance of CDRFI and technical capacity should be built, in close engagement with private sector stakeholders.

- **Develop a comprehensive legal framework:** Work on developing and/or improving environmental and disaster management laws, insurance acts and public financial management regulations. Establish clear guidelines for budget regulation, integrating external finance into the national budget and efficiently transferring finance between ministries.
- **Operationalize laws and statutory instruments through a regulatory framework:** Translate legal provisions into actionable ministry regulations. Ensure that policies and regulations support disaster risk financing mechanisms, including insurance risk transfer and contingency funding for greater financial resilience.
- **Formulate CDRFI policies and strategies:** Develop or refine a CDRFI strategy based on risk layering principles and informed by a review of existing products, laws and regulations. Conduct gap and needs analyses to set short-, medium- and long-term goals. Ensure alignment of these goals with climate adaptation and sustainable development objectives by engaging with experts from different fields such as climate change, disaster risk reduction and public financial management.
- **Develop diverse instruments, products and programmes:** Develop an accessible CDRFI portfolio aligned with legislative and policy priorities. Leverage existing financial protection mechanisms, regional risk pools, parametric insurance and technical assistance programmes such as the Global Shield against Climate Risks and UNDP Insurance and Risk Finance Facility to enhance actuarial capacity, develop road maps and implement programmes locally. Ensure these instruments are backed by appropriate legislation, such as an insurance act that facilitates parametric insurance.
- **Build institutional capacity:** Strengthen the capacity of national institutions and support CDRFI champions to design, implement and manage disaster risk financing strategies effectively.
- **Engage the private sector and drive innovation:** Encourage private sector involvement through incentives such as free meteorological data, financial support for product development and market uptake guarantees via subsidies or government-backed policies for vulnerable groups.
- **Raise public awareness and educate stakeholders:** Launch awareness campaigns and educational programmes to inform the public and stakeholders about disaster risks and the importance of financial preparedness.

Step 0.1

RELEVANT ACTORS: Ministry of Finance, private sector, international development organizations, regulatory authorities, parliament, central banks and other regulatory authorities, industry associations.

Key output(s):

- Collection of laws, regulations, and CDRFI strategy or related policies
- Detailed CDRFI instrument and project stocktake
- Protection gap analysis
- Market analysis
- CDRFI stakeholders mapping.

Step 0.1

Reference materials:

- *ADB (2020). Assessing the Enabling Environment for Disaster Risk Financing: A County Diagnostics Toolkit.*
- *World Bank and ADB (2017). Assessing Financial Protection against Disasters: A Guidance Note on Conducting a Disaster Risk Finance Diagnostic.*
- National legislation and policy documents, such as DRM strategies, CDRFI strategies, climate prosperity plans, insurance regulations, social protection policies.

Data and information on CDRFI:

- Global Shield against Climate Risks: Learnings and outputs, such as stocktake and gap analysis documents, country requests and information from the GS coordination hub.
- UNDP Insurance and Risk Finance Facility: Country diagnostics and other knowledge material.
- World Bank and GFDRR climate and disaster risk finance diagnostics.
- DRF diagnostics of regional development banks.
- R. Choularton and E. Montier (2023). Global mapping of humanitarian disaster risk finance.

Public financial management:

- World Bank (2022). Disaster resilient and responsive public financial management: An assessment tool.
- UNDP (2015). Climate Public Expenditure and Institutional Review (CPEIR) – Methodological Note.

Step 0.2: Build CDRFI capacity across and within sectors and institutions

Diverse stakeholders throughout society need to be equipped with awareness, skills and knowledge of CDRFI instruments and their adaptation benefits. Achieving this requires tailored capacity-building programmes and training for key stakeholders throughout the iterative adaptation cycle.

- **Train government stakeholders:** Deliver training and awareness programmes for working-level and senior officials in government bodies such as the finance ministry and disaster management authorities, as well as in line ministries managing sectoral strategies. Focus on comprehensive risk management, the benefits of quantified risk analyses and understanding the CDRFI landscape to enable informed climate risk management decisions.
- **Improve capacity in supporting institutions:** Conduct internal mapping and information-sharing sessions within international, regional and national development organizations. Strengthen internal communication to bridge gaps between teams and offices, reducing silos and fostering integrated climate risk management strategies.
- **Train private sector actors:** Provide specialized training on CDRFI solutions, including parametric insurance and technological applications, to enable the private sector to play a larger role in risk management and climate finance.
- **Support learning in NGOs and academia:** Strengthen the capacity of civil society and academic institutions to actively participate in CDRFI discussions. Enable these groups to advocate for vulnerable communities, contribute to innovation and evaluate adaptation measures and CDRFI approaches.

Step 0.2

RELEVANT ACTORS: Ministry of Finance, disaster management authority, Ministry of Environment/Climate Change, other line ministries, international development institutions, private sector, NGOs, academia.

Key output(s):

- Stakeholder-specific training courses and materials.

Reference materials:

- C. Meenan, J. Ward and R. Muir-Wood (2019). Disaster Risk Finance. A Toolkit. GIZ.
- K. Miles and I. Hauler (2021). Step by step guide: How to translate international commitments into action to achieve gender-smart Climate and Disaster Risk Finance and Insurance Solutions. InsuResilience Global Partnership.
- K. Miles (2022). Toolkit for Policymakers: A gender-responsive approach for Climate and Disaster Risk Finance and Insurance (CDRFI). InsuResilience Global Partnership.
- World Bank. Climate and Disaster Risk Finance Executive Education Program
- Risk pool capacity-building programmes, such as those offered by ARC and CCRIF SPC.
- Parametric insurance training, such that offered by the United Nations Capital Development Fund (UNCDF) and Lloyd's (see Lloyd's, 2024).
- Frankfurt School (2025). Climate risk insurance product development training.
- UNU/MCII eLearning: Foundations of CDRFI and impactful civil society engagement.

Step 0.3: Consult and engage diverse stakeholders

Inclusive and collaborative stakeholder engagement should be continuously prioritized in all adaptation cycle phases to develop comprehensive, actionable adaptation and CDRFI strategies aligned with national and community priorities. Diverse stakeholders should be engaged to ensure informed decision-making on key assets, risks and climate parameters. Close engagement with stakeholders can help to improve the collection of adaptation options, fostering deeper understanding and ownership, which can ease implementation and review, helping to transition from technical assessments to strategies that reflect true community needs and values.

- **Engage financial and risk management stakeholders:** Facilitate workshops and round tables involving diverse actors relevant to CDRFI. Engage key entities such as the Ministry of Finance and DRM institutions to align NAP priorities with ongoing programmes and CDRFI frameworks.
- **Integrate CDRFI into broader strategies:** Ensure that stakeholder consultations address the integration of CDRFI mechanisms within strategies for DRM, social protection and related areas so as to create cohesive and actionable plans.
- **Develop a working paper on CDRFI and financial resilience:** Compile research and insights from stakeholder consultations into a working paper focused on financial resilience and CDRFI. Use this document to inform and strengthen the NAP development process.
- **Co-create CDRFI products:** Design inclusive CDRFI products to prevent maladaptation and address the needs of disadvantaged groups, using the input of target groups and involving them in the implementation and delivery of the projects.
- **Share climate and risk data publicly:** Collect vulnerability and exposure data that consider gender and social factors. Provide open access to detailed climate and risk data to enable stakeholders to independently develop strategies and actions for adapting to climate risks.

Step 0.3

Relevant material:

- CARE (2020). Multi-actor partnership for pro-poor & gender-equitable climate risk financing in the context of the InsuResilience Global Partnership's 2025 Vision.
- NAP Global Network and GIZ (2019). Engaging the Private Sector in National Adaptation Planning Processes.
- European Commission (2024). Climate Resilience Dialogues.
- United Nations Global Compact (2022). What makes stakeholder engagement meaningful? 5 insights from practice.
- ICAT (2020). Stakeholder participation methodology.

LIST OF RELEVANT ACTORS IN THE NAP-CDRFI INTEGRATION PROCESS (not exhaustive):

Government

- Ministry of Finance
- Ministry of Environment/Climate Change
- Ministry of Planning
- Ministry of Agriculture Ministry of Health
- Other line ministries
- National disaster management authorities
- Central bank
- Insurance supervisors
- Legal and regulatory bodies
- Climate change committee or council
- NAP High-Level Committee
- NAP Task Force
- NAP Focal Point
- UNFCCC Focal Point
- National Designated Authority (NDA)
- CDRFI Focal Point
- Meteorological agencies
- Parliament
- Local government authorities

Private sector

- Insurance companies and associations
- Private sector representatives
- Chambers of commerce
- Industry associations
- Climate data businesses
- Agricultural cooperatives

International organizations

- Provider of technical assistance
- International development organizations
- UN agencies: Central Emergency Response Fund (CERF), UNCDF, UNDP, UNDRR, United Nations Environment Programme (UNEP), UNFCCC, UNICEF, United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), United Nations University (UNU) and WFP, among others
- World Bank
- IMF
- Bilateral and multilateral donors

Climate Funds

- Green Climate Fund (GCF)
- Global Environment Facility (GEF)
- Adaptation Fund (AF)
- Climate Investment Fund (CIF)
- Fund for Responding to Loss and Damage

Other

- Local, national and international experts and consultants
- Academic and research institutions
- Think tanks
- Civil society organizations
- Local communities
- Indigenous groups and leaders
- Consumer groups

DIRECTLY CDRFI-RELATED INSTITUTIONS

Step 0.3

- Global Shield against Climate Risks: Global Shield Financing Facility (GSFF), hosted at the World Bank; Global Shield Solutions Platform (GSSP), hosted at Frankfurt School; V20 Multi Donor Trust fund
- InsuResilience Global Partnership (IGP)
- Regional Risk Pools: African Risk Capacity (ARC), Pacific Catastrophe Risk Insurance Company (PCRIC), Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC), Southeast Asia Disaster Risk Insurance Facility (SEADRIF)
- Insurance Development Forum (IDF)
- Vulnerable 20 Group of Finance Ministers (V20): Sustainable Insurance Facility (SIF)
- Natural Disaster Fund (NDF)
- Frankfurt School: InsuResilience Solutions Fund (ISF) and InsuResilience Investment Fund
- UNDP Insurance and Risk Finance Facility (IRFF)
- Think tanks: Munich Climate Insurance Initiative (MCII), Centre for Disaster Protection (CDP), Overseas Development Institute (ODI) Global, Celsius Pro
- World Bank: IFC Global Index Insurance Facility; IMF: Resilience and Sustainability Trust, and Contingent Debt
- Regional programmes: AfDB: Africa Disaster Risk Financing Programme (ADRiFi); Asian Development Bank (ADB): Association of Southeast Asian Nations Disaster Risk Financing and Insurance (ASEAN DRFI), ASEAN+3 DRFI, ACLiFF; Asia Pacific Economic Cooperation (APEC) DRF; Organisation for Economic Co-operation and Development (OECD); Contingent credit lines (World Bank, ADB, IDB)
- UNFCCC: Warsaw International Mechanism (WIM), Santiago Network for Technical Assistance
- Humanitarian sector: Anticipation Hub, International Federation of Red Cross and Red Crescent Societies Disaster Response Emergency Fund (IFRC-DREF), Start Financing Facility
- Risk analysis: Economics of Climate Adaptation (ECA) Network, Global Risk Modelling Alliance, OASIS, Global Risk Assessment Framework (GRAF), Potsdam Institute for Climate Impact Research (PIK), Intergovernmental Panel on Climate Change (IPCC).

VI. Additional considerations

A. NDCs, NAPs and CDRFI

Under the Paris Agreement, countries are required to prepare and communicate Nationally Determined Contributions (NDCs). These NDCs are key instruments for outlining countries' climate actions. They often include adaptation components to show actions taken to improve resilience and reduce vulnerability to climate impacts. NDCs have a five-year revision cycle, providing an important opportunity to regularly adapt these documents and incorporate CDRFI measures, and the next round of NDCs (NDC 3.0) are scheduled to be submitted in 2025.

NDCs can be leveraged alongside NAPs to improve adaptation in a few ways:

- **Align NAPs and NDCs:** A coherent approach is essential to ensure that adaptation priorities from NAPs are integrated into NDCs, and so to prevent duplication and promote cohesive national climate policies. Recent decisions from the Global Stocktake and the Global Goal on Adaptation have heightened the importance of NAPs: all Parties encouraged to formulate and implement NAPs by 2030, which further underscores the need to align NAPs with NDCs.
- **Use NAPs as the basis for adaptation reporting:** There is a growing recognition that NAPs should serve as the basis for adaptation reporting under the Paris Agreement and other national communications, such as Adaptation Communications (ADCOMs), which are voluntary reports on adaptation activities, and Biennial Transparency Reports (BTRs), which are mandatory reports covering both mitigation and adaptation. This integration can streamline reporting processes and ensure that countries meet their international obligations efficiently. Notably, NDCs can function as official ADCOMs to report on adaptation actions under the UNFCCC framework.
- **Make use of supplementary materials:** Various NDC supplementary materials are available, but few focus on adaptation, and none specifically address CDRFI. While this guidance note is targeted at NAPs, it can also be applied to NDC development, especially in developing the adaptation component.

Box 7: UNDP's approach to NAPs and NDCs

NDP's Climate Promise initiative emphasizes integrating NAP-derived priorities into NDCs. By using NAPs as a foundation, countries can avoid reinventing processes in NDCs, thereby ensuring that adaptation strategies within NDCs are comprehensive and coherent. The next round of revised NDCs is due in February 2025, but few countries are on track to meeting this deadline. UNDP is completely or partially supporting over 60 countries with their NDC 3.0, and is also helping countries to access GCF Readiness funding dedicated to NDC enhancement. More countries have indicated that they need support for NDC 3.0 development and for the initial implementation of these new NDCs.

CDRFI can play an important role in ensuring NDCs meet their objectives. CDRFI can enable:

- **Integrating risk management in adaptation plans:** The adaptation component of NDCs should align with a comprehensive risk management and risk layering approach, ideally based on the NAP. This should include quantified risk assessments, cost-effective strategies for risk reduction, risk finance and risk retention. Incorporating CDRFI components in this way can ensure synergy and make NDCs more comprehensive.
- **De-risking and enabling climate-friendly investments:** CDRFI mechanisms reduce the financial risks of climate-related losses, improving creditworthiness and encouraging climate-resilient design of infrastructure investments. By offering financial protection and enabling long-term planning, CDRFI helps attract investors and facilitates public-private partnerships. By providing financial security, CDRFI frees up financial resources, including at the individual and meso-level, for more resilient and climate-friendly practices and investments.
- **Enhancing economic stability:** CDRFI strengthens economic stability by providing quick payouts after disasters. This minimizes disruptions to planned mitigation and adaptation actions and allows countries, communities and individuals to recover more effectively.
- **Promoting climate-smart agriculture:** Integrating CDRFI tools into climate-smart agriculture initiatives within NDCs supports sustainable practices and safeguards against the financial risks of crop failures caused by climate variability.
- **Improving scenario planning and stress testing:** CDRFI-related tools enable countries to conduct scenario planning and stress testing, helping to anticipate the impacts of various climate scenarios on NDC goals. This fosters the development of resilient and adaptive strategies.
- **Leveraging data and technology:** Technologies relevant for CDRFI, such as remote sensing and GIS, can help make NDC reporting more accurate and transparent. These tools enable real-time adjustments to strategies, improving their responsiveness to climate risks.
- **Addressing loss and damage:** An increasing number of countries incorporate loss and damage estimates and related actions in their NDCs. CDRFI can play a crucial role in managing residual risks by providing tools for risk quantification and effectively addressing impacts.

B. UNDP's potential entry points for integrating CDRFI into NAPs

Integrating CDRFI mechanisms into NAPs is critical to enhancing resilience to climate risks. UNDP has significant experience through initiatives like the UNDP Climate Promise in supporting countries in their climate frameworks, including NAPs and NDCs, and has strong expertise in CDRFI through the UNDP Insurance and Risk Finance Facility (IRFF). This section explores UNDP's potential entry points for integrating CDRFI into NAPs through its technical expertise, established relationships with governments and insurers, and ongoing support for adaptation planning.

To successfully link the work on NAPs and CDRFI, UNDP climate and IRFF teams at the international and national level need to share expertise, identify entry points into their respective areas of work and pass on relevant information, revision requests and events.

Leveraging the UNDP Insurance and Risk Finance Facility to integrate CDRFI into NAPs

UNDP Insurance and Risk Finance Facility provides key resources for integrating CDRFI into NAPs by addressing systemic barriers, supporting capacity-building and facilitating implementation. UNDP can:

- **Develop comprehensive CDRFI strategies:** Create robust CDRFI strategies to guide integration into NAPs and other policies and establish long-term financial risk management frameworks.
- **Conduct protection gap analysis:** Perform stocktaking and research on policies, protection gaps and market conditions. Use resources like IRFF diagnostic reports (UNDP IRFF, n.d.a.) and initiatives such as the Global Shield to inform NAP Task Forces.
- **Promote regulatory reform:** Identify and address regulatory barriers that limit the adoption of innovative CDRFI products. Develop road maps for legislative and institutional reforms to enable effective CDRFI market creation.
- **Engage government stakeholders across the board:** Involve central banks, finance ministries and insurance regulators, raising their awareness of adaptation needs and potential contributions. Foster their active participation in NAP processes.
- **Enhance fiscal management:** Strengthen public financial management (PFM) systems to handle climate finance and payouts efficiently. Support long-term financial risk frameworks through initiatives like the LDC Engagement Initiative, which focuses on least developed countries (UNDP IRFF, n.d.e.).
- **Build capacity:** Address CDRFI expertise gaps by providing training for government officials, regulators and insurance professionals, such as that offered by the Africa Adaptation Initiative, and promote cross-ministerial collaboration through capacity-building efforts (AAI, 2022). Expand programmes such as the UNDP-Milliman Global Actuarial Initiative (GAIN; see UNDP IRFF, n.d.b.) and certifications such as the International Certification in Inclusive Insurance, which help to target underinsured and underserved communities (UNDP, 2023b).
- **Engage the private sector:** Collaborate with insurers to develop innovative products and include them in NAP stakeholder consultations. Facilitate public-private dialogues to enable the insurance sector to increase its contributions to achieving NAP objectives.

Box 8: Examples of UNDP IRFF's activities that could be applied to CDFRI integration in NAPs

TRANSFORMING THE INSURANCE LANDSCAPE IN TANZANIA

UNDP, the International Labour Organization (ILO) and the Africa College of Insurance and Social Protection (ACISP) have undertaken a joint initiative, aligned with the United Republic of Tanzania's Financial Sector Development Masterplan (2020–2030), with the aim of enhancing insurance coverage, driving economic growth and supporting the achievement of the SDGs in Tanzania. The programme focuses on increasing insurance penetration among underserved communities by fostering innovation, strategic partnerships and capacity-building. It includes comprehensive training to equip insurers with customer-centric skills for designing inclusive insurance solutions (UNDP, 2023b).

EXPANDING INSURANCE PROTECTION IN CLIMATE-EXPOSED COUNTRIES

The Tripartite Agreement brings together UNDP, the German Federal Ministry of Economic Cooperation and Development (BMZ) and 20 major global insurers under the framework of the IDF. It delivers risk finance solutions and technical assistance in 20 countries, integrating climate risk analysis, modelling and CDRFI solutions into governance frameworks such as national development plans, regional strategies, NDCs and NAPs. UNDP supports implementation through technical guidance and project management support, and leverages its Country Offices as active partners with governments to support these efforts (UNDP IRFF, n.d.g.).

Supporting NAP formulation

UNDP can provide substantial support in embedding CDRFI into NAP formulation across sectors and priorities, by helping countries to:

- **Integrate CDRFI into sectoral strategies:** Leverage IRFF's cross-sectoral expertise to incorporate CDRFI into sectoral adaptation strategies. Promote innovative products such as coral reef insurance (ORRAA, 2024), and make use of a knowledge management mechanism to share expertise across countries and sectors.
- **Strengthen agriculture sector strategies:** Apply insights such as those emerging from the IRFF's Financial Resilience in Agriculture Initiative consultation process to integrate CDRFI into agricultural strategies and investment plans (UNDP, 2024a). Address enabling environments, market foundations and innovation models to build resilience for smallholder farmers.
- **Enhance macro-level resilience:** Develop sovereign insurance solutions to safeguard macroeconomic stability. Use partnerships, such as the Tripartite Agreement, to support product development, data collection and collaboration at national and subnational levels (UNDP IRFF, n.d.g.).
- **Promote financial inclusion:** Focus on vulnerable and low-income households, micro-, small and medium-sized enterprises (MSMEs) and women in CDRFI and adaptation actions. Support innovative insurance solutions through initiatives such as the Insurance Innovation Challenges and share models and lessons learned (UNDP IRFF, n.d.d.). Advance culturally tailored products such as takaful insurance to reach underserved populations (UNDP IRFF, n.d.c.).
- **Scale CDRFI and adaptation projects regionally:** Replicate successful CDRFI and adaptation projects in countries with similar risks and socioeconomic profiles. Expand these projects into regional programmes to reduce administrative costs, leveraging UNDP's Country and Regional Offices.
- **Strengthen data and modelling:** Enhance risk assessment capabilities to support evidence-based decision-making, and build local capacity for probabilistic modelling and data analysis through partnerships like the GAIN partnership between UNDP and Milliman.
- **Facilitate MEL and knowledge-sharing:** Align M&E indicators and frameworks across projects and programmes. Foster dialogues with other organizations on aligning MEL frameworks across institutions to create a robust evidence base for CDRFI. Promote regional and global knowledge-sharing through exchanges, peer-to-peer learning, Communities of Practice (such as the Financial Resilience in Agriculture CoP; see UNDP IRFF, n.d.f.) and reviews of best practices.

Enhancing NAP implementation and CDRFI through UNDP's Climate Promise

UNDP's work through the NAP Global Support Programme has been instrumental in helping over 50 developing countries to formulate NAPs. This support has covered the entire process, from laying the groundwork and applying for GCF funding to selecting adaptation options, facilitating stakeholder engagement and drafting the NAP. Through the UNDP Climate Promise, UNDP is now assisting governments to scale up and realize their adaptation ambitions (UNDP, n.d.). By bridging this expertise into CDRFI project development and implementation, UNDP can provide targeted support that addresses emerging needs.

As countries move towards implementing their NAPs, it is crucial for UNDP to share its experience and continue collaborating with governments. Notably, many of these UNDP-supported NAPs already include CDRFI components. Local IRFF focal points should actively engage in discussions about the development process and key actors involved, with the goal of integrating and enhancing capacity. UNDP can help:

- **Deliver GCF Readiness support:** Leverage UNDP's considerable experience in supporting 37 countries with GCF-funded multi-year projects since 2017. Provide assistance in securing GCF funding, designing NAPs and ensuring inclusive community engagement. Box 9 showcases how CDRFI and disaster risk reduction strategies have been integrated into NAPs through this kind of support.
- **Develop subnational and sectoral plans:** Replicate the adaptation planning process at subnational levels and across sectors. For instance, in Ghana, UNDP can build on its experience working with municipalities and local governments investing in parametric insurance.
- **Support CDRFI proposal development and implementation:** Assist countries in developing tailored CDRFI projects and proposals aligned with sectoral priorities and climate risk profiles outlined in NAPs. Provide expertise and assistance in mobilizing finance and implementing CDRFI projects in the NAP implementation phase.
- **Increase access to climate finance:** Make use of UNDP's technical guidelines on accessing climate finance to support countries in project development (UNDP, 2024b). Link these broader approaches to planning CDRFI proposals for seamless integration.
- **Coordinate with insurers:** Facilitate connections with the IDF, leveraging its network of international insurers, as well as with national insurers. Support countries in engaging relevant co-financers and (new) investors for NAP priorities.
- **Establish cost adaptation measures and integrate budgets:** Employ UNDP's *Guidelines for Gender-Responsive and Socially Inclusive Climate Cost-Benefit Analysis* (UNDP, 2023a) to assess climate project impacts and facilitate factoring the guidelines into conventional project cost-benefit analyses. Share knowledge through the UNDP Sustainable Finance Hub, which supports costing of SDG and development plans and integrating SDGs into national and subnational budgets.
- **Leverage INFFs for integrated project development:** Use data from NAPs, CDRFI strategies, implementation plans and costing exercises to inform national Integrated National Financing Frameworks (INFFs), ensuring that adaptation finance needs are fully integrated in budget revisions.
- **Improve PFM and budget reviews:** Establish climate-sensitive budgeting and expenditure tracking systems to set a baseline of currently available adaptation finance, reveal reform needs and track expenditures. Use tools such as the Climate Public Expenditure and Institutional Review (CPEIR) (UNDP, 2015) and Climate Budget Tagging (CBT) (UNDP, 2019) to monitor and integrate climate policies across sectors and budgets. Draw from the UNDP *Global Climate Public Finance Review* (2022) to implement globally recognized reforms that integrate climate change into medium-term national budgets (see UNDP, 2021a).

- **Align NAPs with NDCs:** Through the Climate Promise, UNDP has supported over 100 countries in enhancing their NDCs, with many aligning their adaptation goals to NAP processes. Continue this work to foster policy coherence and help scale up adaptation ambition.

Box 9: GCF supports for NAPs with CDRFI-related content

Kyrgyzstan (Delivered by UNDP) This NAP formulation support aims to strengthen institutions and improves coordination for climate adaptation planning at national and subnational levels. It facilitates the integration of climate risks into sectoral planning and identifies priority adaptation investments. Disaster and emergency management is one key focus area for mainstreaming and future investments. The programme builds technical capacities in the National Statistics Committee and Hydrometeorological Agency, ensuring the adaptation plan incorporates disaster risk reduction and management strategies (GCF, 2020).
Antigua and Barbuda (Delivered by the Department of Environment) This grant supports NAP development, including national climate assessments and sector-specific plans. Key activities include establishing adaptation baselines through climate risk mapping, developing vulnerability assessments and adaptation plans for government, community and private sector stakeholders, and devising a sustainable financing strategy for NAP implementation. The project also involves providing training for the private sector and insurance companies on climate risk management, updating workforce training strategies and ensuring that adaptation data and plans are integrated into national and local planning processes. Additionally, it focuses on improving the track record of the national climate change fund and sharing lessons learned with other small island states (GCF, 2017).

By leveraging the IRFF and its established presence in over 30 countries, UNDP can support governments in addressing climate risks, strengthening resilience and achieving the SDGs. These efforts can help ensure that countries are equipped to handle the financial impacts of climate change and protect their most vulnerable people.

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Annexes

Annex I:
CDRFI in UNFCCC

Insurance has been an important element in the UNFCCC process since its inception. Integrating comprehensive risk management and CDRFI in NAPs aligns with the objectives of the UNFCCC Warsaw International Mechanism (WIM) Technical Expert Group on Comprehensive Risk Management (TEG CRM), established at ExCom 7 in 2018, whose workplans frequently refer to linking NAP with CRM and DRR and issues of loss and damage. The following is a selection of the most important decisions of COP and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) in the areas of adaptation and loss and damage related to CDRFI.

- **United Nations Framework Convention on Climate Change (UNFCCC, 1992):** In Article 4.8, included insurance as one action to consider to address the needs of developing countries.
- **Decision 1/CP.13 (Bali Action Plan, 2007):** Acknowledged the need for risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance to enhance action on adaptation.
- **Decision 1/CP.16 (Cancun Agreements, 2010):** Established the Cancun Adaptation Framework, emphasizing risk reduction and risk transfer mechanisms, including insurance.
- **Decision 3/CP.18 (Doha Climate Gateway, 2012):** Established a pathway towards concrete institutional arrangements to provide vulnerable populations with better protection against loss and damage, including through elements of risk transfer.
- **Decision 2/CP.19 (Warsaw International Mechanism for Loss and Damage, 2013):** Outlined the functions of the WIM, including enhancing understanding of and cooperation on risk transfer and insurance.
- **Decision 1/CP.21 (Paris Agreement, 2015):** In Article 8, acknowledges the importance of risk insurance facilities and other risk transfer mechanisms in addressing loss and damage associated with climate change impacts, and requests the WIM Executive Committee to establish a clearing house for risk transfer to facilitate the adoption of comprehensive risk management strategies.
- **Decision 2/CMA.2 (WIM Review, 2019):** Decides that the Technical Working Group on Comprehensive Risk Management (TEG CRM) shall develop an analysis and identification of enabling conditions for effective implementation of risk transfer facilities and social protection schemes in the context of comprehensive risk management.
- **Decision 2/CP.27 and Decision 1/CMA.4 (Sharm el-Sheikh Climate Change Conference, 2022):** Established a new loss and damage fund. The fund aims to assist developing countries that are particularly vulnerable to the adverse effects of climate change. It includes provisions for risk transfer mechanisms and insurance as part of the broader strategy to address loss and damage.
- **Decision 1/CP.28 and Decision 5/CMA.5 (UAE Consensus, 2023):** Operationalizes the Fund for Responding to Loss and Damage and includes insurance mechanisms and risk-sharing mechanisms in the range of possible financial instruments.

Annex II:
Search terms for CDRFI

The terms given below have proven useful in analysing a large number of documents on CDRFI inclusion. They manage to capture the majority of CDRFI-related content, while keeping unrelated hits to a manageable level. Note that * is used in literature management programs to substitute one or more characters, while ? is used as a wildcard for one character.

<table>
<tr><th>ENGLISH</th><th>SPANISH</th><th>FRENCH</th></tr>
<tr><td>risk*pool</td><td>seguro</td><td>assuranc*</td></tr>
<tr><td>parametri</td><td>param?tric</td><td>obligations catastrophes</td></tr>
<tr><td>contingen*credit</td><td>contingenc</td><td>protectio* sociale</td></tr>
<tr><td>contingen*fund</td><td>bon* catástrofe</td><td>conting*</td></tr>
<tr><td>cat*bond</td><td>transferencia de riesgo</td><td>pool</td></tr>
<tr><td>risk*sharing</td><td>protec* social</td><td>transfert* risques</td></tr>
<tr><td>insuranc</td><td>cr?di* condicional*</td><td>ARC</td></tr>
<tr><td>"social protection"</td><td>fondo de emergencia</td><td>CCRIF</td></tr>
<tr><td>"risk transfer"</td><td>fondo de contingencia</td><td>PRCIC</td></tr>
<tr><td>param*</td><td>param*</td><td>PCRAFI</td></tr>
<tr><td>ARC</td><td>ARC</td><td>"African Risk Capacity"</td></tr>
<tr><td>CCRIF</td><td>CCRIF</td><td>"Caribbean Catastrophe Risk Insurance Facility"</td></tr>
<tr><td>PRCIC</td><td>PRCIC</td><td>"Pacific Catastrophe Risk Insurance Company "</td></tr>
<tr><td>PCRAFI</td><td>PCRAFI</td><td>"Southeast Asia Disaster Risk Insurance Facility"</td></tr>
<tr><td>“African Risk Capacity”</td><td colspan="2">"African Risk Capacity"</td></tr>
<tr><td>“Caribbean Catastrophe Risk Insurance Facility”</td><td colspan="2">"Caribbean Catastrophe Risk Insurance Facility"</td></tr>
<tr><td>“Pacific Catastrophe Risk Insurance Company “</td><td colspan="2">"Pacific Catastrophe Risk Insurance Company "</td></tr>
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