

Observation and Risk Assessment in the context of Loss and Damage

Report on a Stakeholder Engagement Workshop 29 – 30 October 2019

Bonn, Germany



January 2020

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WORKSHOP SUMMARY¹

A workshop on observations and risk management in the context of loss and damage under the WIM was organized in collaboration with UNDRR and WMO, as part of the Plan of Action of the Technical Expert Group on Comprehensive Risk Management under the ExComm. The workshop facilitated stakeholder engagement on Comprehensive Risk Management (CRM) approaches. The following is a summary of main points raised, arranged by main themes of the workshop.:

Data and Climate Information and Monitoring Systems

- At the national level, systematic data collection, management and integration across ministries is important to support assessments.
- Strengthened national observation systems and open sharing of relevant data are essential to monitoring and assessment of adverse climate impacts, and for improving weather, climate modelling and forecasting.
- There is a scientific gap and need to improve the ability to document and unambiguously associate data on losses and damages with specific hydro-meteorological events. The workshop identified a gap in data analyses which discuss attribution (to the extent possible), include multiple hazards and impacts on systems (rapid onset on top of underlying slow onset events) and multiple types of losses (economic and non-economic).
- Facilitating risk-informed sustainable development requires robust data and statistics that are timely, accurate, disaggregated, people-centered and accessible, and data that enables the capture of progress and that can direct investments accordingly.
- Observational data is an important building block for loss and damage databases to the degree that such data is used by practitioners, scientists and policymakers.
- There are promising examples of systematic cataloguing of high-impact events, including the assignment of unique identifiers for each, to improve risk assessments, climate modelling and forecasting.
- Continuous and sustained observation and monitoring is essential to understanding the causal contributions of exposure and vulnerability to losses. The observation and monitoring systems of technical agencies are essential to the tracking of hazards, their trends, frequency, severity and distribution.

Multi-Hazard Early Warning Systems (MHEWs)

- Multi-hazard risk observation, assessment and systems are the foundation of CRM approaches and are effective at reducing loss and damage.
- Setting up impact-based early warning systems for all timescales can help identify vulnerable communities, supported by local knowledge.
- Existing, established, and highly effective MHEWSs currently in operation in developed countries can be similarly established in countries and regions where they are currently lacking, but this would require technical assistance and financing.

Capacity-Building and Technology

- Beyond equipment and technology for collecting a fuller range of climate impacts data, capacity for climate risk analysis and modeling is essential in developing countries.

¹ The views expressed in this report are those of the TEG-CRM expert group as an input to the work of The Executive Committee of the Warsaw International Mechanism for Loss and Damage. The findings will be considered by the Executive Committee in its future work.

- Integrated, harmonized and well-functioning early warning systems requires having the right people, competencies and entities to ensure effectiveness.
- Sustained investment in currently available capacity-building initiatives is needed.
- Securing sufficient resources to enable developing countries participate in global climate platforms can facilitate capacity-building for observation and risk assessment.

Communication

- Regulatory arrangements and open source data in partnership with relevant partners could enhance comprehensive risk management.
- Clear mandates and designation of responsibilities between climate services, disaster risk management, and adaptation planners at the country level can improve communication of climate and risk information.
- Hybrid coordination systems incorporating top-down and bottom-up approaches, harmonization of different national institutions and integration can facilitate CRM approaches.
- Communication, awareness and messaging on risk management can benefit from local contextual knowledge.
- There is a need to ensure that rapid and slow onset events are communicated to the public in a clear and understandable manner. That includes clear, understandable, actionable language which contributes to prevention of loss of life and property. The messaging needs to connect to the audience at local, national, regional and global levels.

Climate Risk and Loss and Damage

- Climate risk assessments should inform investments and national development planning.
- Climate risk builds on and accentuates our risks that countries face and must be considered in this broader context. Methodologies to support decision-making require further advancement and testing to be of practical use to policymakers in handling multiple risks and simultaneous climate shocks and events.
- Technical communities often use quantitative methods such as models to better “see” risk in the present or near future, and so the view of risk is inherently shaped by the tools used to describe it. Most models have been based on historical data and observations, assuming that the past is a reasonable guide to the present and the future. But this assumption may often no longer hold for climate change.

Coherence, policy planning and coordination

- Close collaboration between national meteorological and hydrological services and national disaster management offices is needed to establish interoperable datasets about the adverse impacts of climate change for tracking losses and damages associated with the events.
- Centralized coordination mechanisms among DRR, CCA and development planning can strengthen the link between the different communities in order to address the continuum of risk and contribute towards effective achievement of SDGs and Sendai Framework targets.
- Effective governance should consider multiple risks and clarify accountability and responsibility on the part of individual and institutional decision makers.

I. INTRODUCTION

a. Relevant mandates and linkages

Existing examples of CRM practices and systems around the world can amplify efforts and demonstrate their contribution to achieving significant reductions in loss and damage. The key challenge is to scaling-up of systems and practices in countries and regions where they are still lacking. The stakeholder engagement workshop on Observation and Risk Assessment in the context of Loss and Damage was convened in response to the strategic work plan (c) of the five-year rolling workplan of the Executive Committee of the Warsaw International Mechanisms for Loss and Damage associated Climate Change Impacts (WIM Excom).

The workshop supported the implementation of the actions identified in the Technical Expert Group on Comprehensive Risk Management (TEG-CRM) Plan of Action and contributing towards catalyzing partnership for activities under the strategic workstream (c) of the five-year rolling workplan. Activity 4 of the workplan and the TEG-CRM plan of action aims to facilitate stakeholder engagement and capacity-building on CRM approaches by coordinating with regional and global research programmes and organizations, as appropriate, such as the World Meteorological Organization (WMO) for enhanced observation and risk assessment in the context of loss and damage.

The workplan invited relevant organizations and agencies to discuss how national and regional capacities could be enhanced to address loss and damage, including for risk management approaches for capacity-building of regional, national, subnational and local governments to address loss and damage. By sharing their expertise, experience and relevant practices, participants at the workshop identified and discussed ways to facilitate capacity-building for observation and risk assessment. The workshop was organized jointly by the UN Office for Disaster Risk Reduction (UNDRR) and the WMO.

b. Workshop objectives

The key objective of the collaborative stakeholder engagement workshop was to identify ways to enhance the capacity for observation and risk assessment in the context of loss and damage. More specifically the workshop aimed:

1. To share experiences of good practice and lessons learnt from regional, national, subnational and local governments to address climate risks.
2. To identify ways to address capacity gaps related to climate risk observations and assessment at the global level as well as learn from national experiences with a view to enhance national and regional capacities.

c. Summary of Proceedings

The two-day workshop took place on 29 and 30 October 2019 in Bonn, Germany and convened almost 35 experts, practitioners, policymakers involved in the observation and risk assessment in the context of loss and damage, including experts involved in the development of climate change adaptation initiatives and provision of metrological, early warnings, disaster risk reduction services. Participants of the stakeholder engagement workshop comprised of UNFCCC constituted bodies, government representatives, the UN, NGOs, development agencies, research organizations and members of the TEG-CRM.

The workshop was opened by Member of the WIM Excom and TEG-CRM Champion and UNDRR Bonn Office. Participants were informed that the workshop aimed at sharing experiences and best practices and identifying ways to cooperate on facilitating CRM approaches to the most vulnerable countries and populations.

The workshop was organized in six parts over two days, featuring panels, presentations and interactive discussions among experts and practitioners (see Annex 1 for workshop agenda). The first session on day one focused on science on climate risks, multi-hazard early warning systems and climate information systems. Session one unpacked the different elements of risks that can be a source of the adverse consequences for human or ecological systems. The plenary discussion drew attention to the non-climate factors that can be a source of risk and which are pertinent to observation and assessments.

Unpacking different elements of risk is key to risk assessment (for instance, the size of the cities exposed, number and characteristics of inhabitants, strengthen social networks).

In the second and third sessions of day one, co-facilitated by WMO, relevant country and other experts, discussed multi-hazard early warning systems (MHEWSs), climate information and monitoring systems. The sessions highlighted that observation data is an important building block for loss and damage and in addition to current attention on extreme weather events, there is a need for strengthened weather and climate observations and to expand the focus to slow onset events. Capacity-building gaps and needs relating to observations, monitoring and forecasting were identified through plenary discussions, which included a mix of setting up impact-based MHEWSs, developing the analytical capacity of data use, investment in weather, climate and water observation and monitoring systems and institutionalising communication methodologies and channels. While several data needs and institutional processes were identified, better communication using latest IT technologies was key to informing potential impacted communities

Sessions four and five on day two of the workshop built on day one discussions by focusing on how climate information can be considered in comprehensive risk assessments and how risk information can guide risk management. The presentations, plenary sessions and group breakout discussions were co-facilitated by UNDRR and members of TEG-CRM. The sessions underlined the importance of considering multiple risks and strengthening risk management capability to manage impacts associated with loss and damage.

The workshop concluded with a discussion on ways to continually identify and address capacity gaps in countries to enhance capacity-building for CRM approaches in the context of loss and damage. Here representatives from the UNFCCC

constituted bodies, namely the WIM Excom and the LEG, and UNDRR discussed ways to promote a coherent approach to preempting and reducing risk, engaging in risk-based planning, and formulating and implementing appropriate contingency measures.

II. KEY HIGHLIGHTS OF THE WORKSHOP

a. Comprehensive risk management in the context of climate science

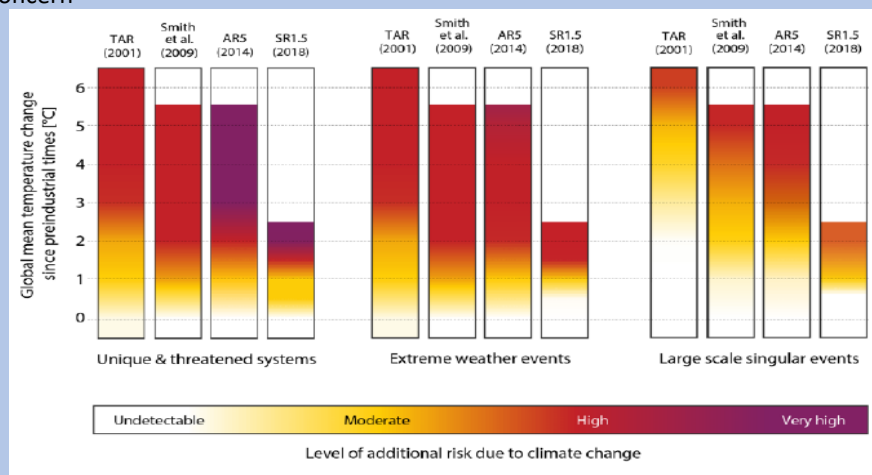
The workshop unpacked the scientific understanding of risk in the context of CRM approaches to address loss and damage associated with the adverse effects of climate change. The Intergovernmental Panel on Climate Change (IPCC) defines risk as *“the potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain.”* In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard, or of adaptation or mitigation responses to such a hazard, on lives, livelihoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure. Risk results from the interaction of vulnerability (of the affected system), its exposure over time (to the hazard), as well as the (climate-related) hazard and the likelihood of its occurrence.

Across the IPCC reports, temperature thresholds for high risk have decreased with each subsequent analysis (see figure 1).

Anticipating future climate risks is a critical step in helping communities in averting, minimizing and addressing loss and damage.

Figure 1

Change overtime of the science-based risk assessment of the IPCC’s Reasons of concern



Source: *United in Science report, WMO et al, 2019*

The level of risk posed by climate change also depends on socio-economic pathways that can alter the nature of CRM approaches. The 2019 IPCC Special Report on Climate Change and Land (SRCCCL)² and 2019 Special Report on the Oceans and Cryosphere in a Changing Climate (SROCC)³ explore how non-climate factors, including factors such as population growth, technology development and

² Available: <https://www.ipcc.ch/srccl/>

³ Available: <https://www.ipcc.ch/srocc/>

adaptation measures, impact risk. For example, Figure SPM.2 of SRCCL, shows that for a given level of future warming, risks are lower in certain socio-economic scenarios than in other (SSP1 vs SSP3). For example, low population growth, high income and reduced inequalities, effective land-use regulation, less resource intensive consumption, including food produced in low-GHG emission systems and lower food waste, freer trade and environmentally-friendly technologies and lifestyles result in lower risk. **Unpacking these different non-climate factors of risks is key to effective risk assessment.**

Going forward, there is a great need to link global assessments to the local level including indigenous knowledge. In more vulnerable locations, especially in developing countries, there is untapped potential with regards to understanding of risk information through indigenous knowledge of vulnerability and exposure at the local level. **Risk assessment, reduction and transfer are opportunities for collecting locally and contextual information on loss and damage.**

b. Capacity gaps and needs related to observations and risk assessment

As it is the mission of National Meteorological Services to collect weather and other met data, they rely on other partners for impact data. They must rely on someone else for this information.

The number of gaps, needs, challenges and opportunities that was discussed regarding observation, climate information systems, risk assessment and management in the context of CRM approaches by the workshop participants was extensive. The gaps, challenges and needs identified for loss and damage, were found to be common to the DRR and humanitarian communities. These needs and gaps are not exclusive to any sub-sector groups and there are significant overlaps with risk management needs, with the opportunity to work cross-sectorially. This report provides insight into some of the respective gaps, needs, challenges and opportunities, noting that it does not reflect the full range of perspectives, organizations, and regions of the world working on comprehensive risk management, observation and risk assessment.

Gaps, needs, and opportunities for multi-hazard early warning systems, climate information and monitoring systems

The workshop drew attention to capacity gaps and needs for developing multi-hazard early warning systems (MHEWSs) and developing climate information and monitoring systems for extreme and slow-onset events. Presentations on country (Austria, Argentina and Mozambique) and regional experiences (WMO CREWS) on the state of MHEWSs (global, regional and national levels) discussed how to build MHEWSs capable of providing systematic risk information to decision-makers and the loss and damage data needs (see figure 2).

In developing countries, **a lack of dedicated repository for historical impact data as well as utilization of impact data in future climate forecasts (from various scenarios)** is a challenge to developing forecasting systems. For example, in **Argentina**, official information on impacts is scarce, heterogeneous and not systematized. Impact related information is also not uniform in time and space and can be different across jurisdictions (local, provincial, regional). Furthermore, **for monitoring and forecasting of extreme weather events such as cyclones, windstorms and floods, dense ground meteorological observation stations and training of the local communities are required.** In Mozambique this is one of the key constraints where the climatic observation network is poorly manned and

spatially not well distributed. Presentation by the National Institute of Meteorology Mozambique highlighted the needs and requirements of early warnings and early actions in the most vulnerable regions: installation of multi-hazard EWS; technical recovery of affected flood and cyclone early warning systems; updating of the multi-hazard risk maps and scenarios; and assessing new exposure and vulnerabilities caused by catastrophic events.

Figure 2
Climate information and monitoring systems needs and opportunities



Experts stressed the need to review the effectiveness of early warning systems. Sometimes other factors like poverty pose obstacles as much as receiving the warnings.

About 80% of Nationally Determined Contributions (NDCs) from developing countries define EWS as a priority for adaptation. Investment in MHEWSs avert loss of life and assets and facilitate timely efforts to minimize additional potential negative effects of climate stressors. The Climate Risk and Early Warning Systems (CREWS) is a mechanism that funds Least Developed Countries (LDCs) and Small Island Developing States (SIDS) for risk informed early warning services. Using a global to local integration approach, the CREWS **strengthens systems and capacity to measure system effectiveness and prioritize investments, building on a body of knowledge showing cost-return of investments in ESWs**. Specific needs for facilitating observation and risk assessment capacity in LDCs and SIDS discussed by CREWS is provided in Box 1.

Given the multiple sources of information, **dedicated national platforms can facilitate trusted channels of communication for people to obtain climate risk information**. For example, in Austria, a national platform has been vital to engage 25 organizations (different government ministries and institutions concerned with rescue operations, environmental institutions). Emergency plans were discussed by

different stakeholders and early warning systems were tailored to the needs of end users. The development of warnings over time has evolved from simple climate-specific thresholds to impact-based, with a focus on vulnerability. A key gap in Austria is obtaining non-economic loss and damage data. This is time consuming given the many different sources of information (financial and non-financial) and varying definition of the concept.

Box 1

The key observation and risk assessment capacity needs identified by CREWS for LDCs and SIDS include:

- Focus on bridging the LDCs and SIDS hydromet capacity gap
- Systematic approach to assessing early warning gaps and needs
- Accelerate the shift towards impact-based, risk informed, gender-sensitive early warning systems
- Increase accountability on the effectiveness of early warning systems and the effectiveness of the related multi-lateral aid – measuring ourselves against existing global targets
- Develop a solutions agenda, compiling good practices.

Effective communication of early warning requires cultural awareness.

Presentations and plenary discussions also examined the role of climate information and monitoring systems in short- to long-term planning, the WMO Cataloguing of Hazardous Events, and linking losses and damages to hazards to improve recording and scalability to causal physical phenomena (local to regional and climate scales).

The need for consistent, comprehensive, and accurate climate observation data was emphasized as the basis for climate modelling, forecasting, and ultimately event attribution. The shift towards more comprehensive data collection, such as Global Climate Observing System's 201 actions, were described alongside more long-term, ideal measures, such as the potential of uniform '*unique identifiers*'.

Other on-going projects include efforts to categorize hazards more effectively and consistently, namely WMO's 2019 Congress resolution on categorizing hazardous events, High-Impact Weather Project (HIWeather) to improve forecasts of weather events that can cause high-impacts, and UNDRR's broader project to review hazard classification. Though many of these discussions are in their infancy, they offer the potential to provide conceptual clarity on provision of forecasts and warnings for high-impact weather events.

The **shift towards impact-based, gender-sensitive, and risk-informed early warning systems could be accelerated through:** understanding and adopting approaches that includes early consultation with relevant stakeholders —including the private sector and the civil society; attention to the specific context of each country; increased accountability on early warning systems; a focus on built-in sustainability components in projects targeting LDCs; and the increased participation of social scientists in the design of early warning systems. Effective communication of forecasts and warnings also requires cultural awareness.

The most notable theme emerging from the plenary and breakout group discussions was the **importance of communication in MHEWSs, climate information and monitoring systems**, especially between those responsible for disaster loss and damage projects and those responsible for climate change adaptation and

modelling. Participants discussed how new information sources and databases could inform practical measures to address adverse climate impacts including at the local level. The panel and participants also discussed the policy implications of the evolving conceptualization of risk in IPCC assessments (see section a). Numerous additional issues and opportunities – such as the possibility of adding non-economic losses to Sendai Framework Monitoring, developing methodology to assess the adverse impacts of climate change, cataloguing slow-onset events, and identifying measures for addressing these impacts in a comprehensive way – were discussed.

Other opportunities identified at the workshop include **developing ways to jointly analyze existing climate observations data in conjunction with climate impacts data**. Such datasets could provide additional insights to guide CRM approaches. Presenters and participants stressed the importance of strategic partnerships, coordinated approaches and communication to develop databases on loss and damage.

Gaps, needs, and opportunities for comprehensive risk assessment and management

EWS rely on weather forecast system for region, well-tested. Weather-forecast model requires testing, requires observation data, requires observation, requires investment, training and infrastructure.

The workshop explored how multiple risks can be considered in comprehensive risk assessments which take different scales into account (e.g. time, global, regional, national and local). Workshop participants highlighted capacity gaps and ways to facilitate capacity for comprehensive risk assessments and management. The major data and capacity gaps relating to risk assessment data include lack of fine resolution data particularly providing information at the scale of local communities (see figure 3). Data collection is however often fragmented, non-universal, and incommensurable. Many countries are unable to report adequately on progress in implementing the Sendai Framework and risk-informed SDGs. Others lack the capacity to analyze and use risk data, even if they have the means to collect it. Development actors, the private sector, and the academic and research community may have the capacity, but the true dividends of interoperable, convergent data and analytics often remain elusive.

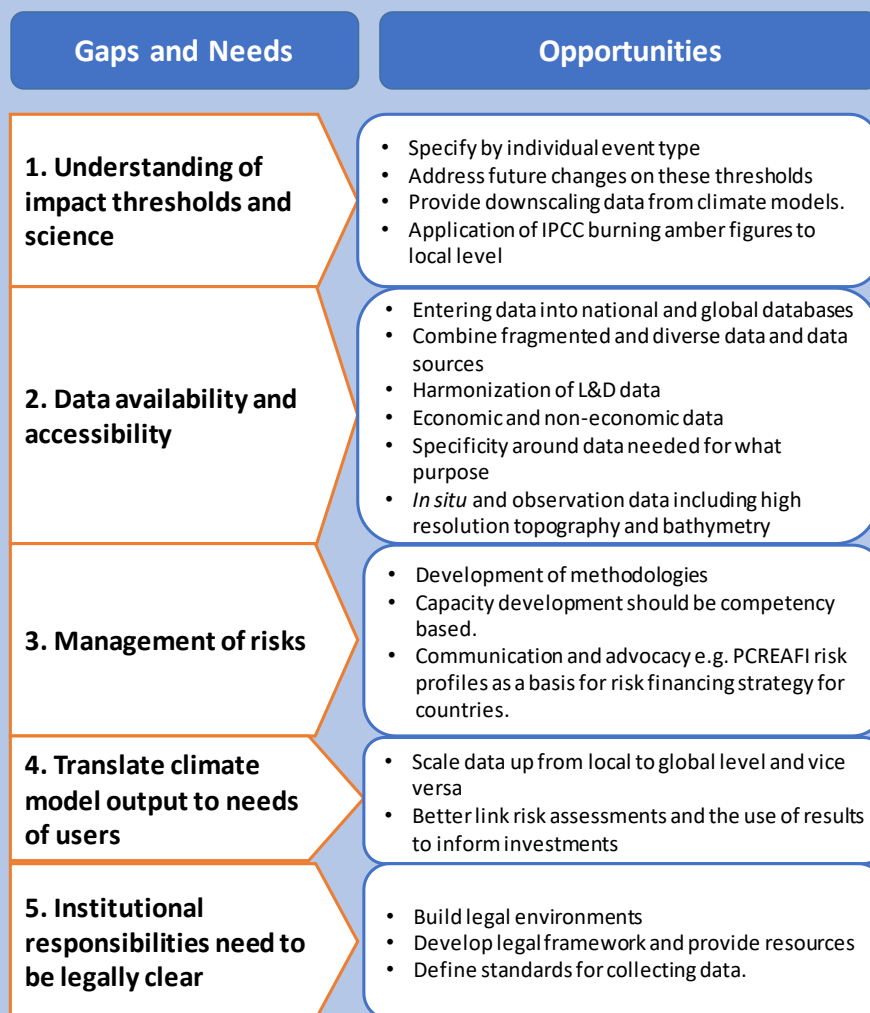
Across the different regions, participants noted that under reporting of the impacts of extreme events can be a disadvantage to some rural/marginalized regions when it comes to post-event assistance. In terms of overall disaster related losses, the UNDRR through the **2019 Global Assessment Report on Disaster Risk Reduction⁴**, discussed that severe inequalities between low- and high-income countries persist, with the lowest-income countries bearing the greatest relative costs of disasters. Human losses and asset losses relative to gross domestic product tend to be higher in the countries with the least capacity to prepare, finance and respond to disasters and climate change, such as in small island developing states.

Furthermore, the workshop noted that since 1990, 92% of mortality attributed to internationally reported disasters associated with natural hazards has occurred in low- and middle-income countries, persistently concentrated in the Asia-Pacific and Africa regions. Multi-hazard disasters have affected 88 million people in countries reporting through Sendai Framework Monitor in the period 1997–2017, with floods

⁴ Available: <https://gar.unisdr.org/>

affecting 76 million people. Disasters stemming from natural hazards have displaced an average of almost 24 million people each year over the last decade and remain the main trigger of displacement.

Figure 3
Capacity gaps, needs and opportunities to facilitate risk assessments at local, national, regional levels in the context of averting, minimizing and addressing loss and damage.



More data is good but analytical capacity to use the data is even more important. There must be feedback mechanisms that lead to action in the community.

At the national level, risk assessments and capacity needs/gap analysis of loss and damage have facilitated a better understanding of non-economic losses, migration, displacement and mobility in some countries. In Senegal, risk assessment and management targeting populations, localized areas and sectors (e.g. coastal, water and agriculture) have provided information on vulnerable households. Similarly, in the Pacific Islands, a loss and damage gap analysis have been carried out in 2015 in Samoa, Vanuatu and Kiribati that have helped articulate capacity needs. **A competency-based approach is needed to enhance capacity development and to further define CRM options and loss and damage better at the national level.**

Relevant tools, methodologies and approaches to facilitate comprehensive risk assessments and management

At the community level, **participatory risk assessment tools can aid risk assessment and recording the lived experiences of economic and non-economic losses and damages are needed.** Information from such assessments can improve understanding of climate change trends and taking action to avoid or reduce future disasters and losses. For example, the Practical Action discussed the application of Flood Resilience Measurement for Communities (FRMC) tool⁵. The FRMC tool collects data based on assigned methods and visualizes, analyses and stores resilience data for a comprehensive analysis and the validation process. Similarly, other NGOs have developed a Handbook for Community- Led Assessment of Climate-Induced Loss and Damage⁶. The seven-step handbook uses participatory tools such as risk mapping, seasonal and hazard calendars, and trend analysis. The process also encompasses interviewing individual expert stakeholders such as local authorities, disaster management experts and climate scientists, thus enriching the community-level risk data with expert knowledge.

Given the **dynamic nature of emerging risks at the sub-national level**, some tools and methods have taken a more quantitative approach to identifying at-risk areas and determining the major driving factors of risk. The Index for Risk Assessment or INFORM, presented by the Inter-Agency Standing Committee (IASC) and the European Commission, is an open source risk assessment methodology for humanitarian crises and disasters. The INFORM sub-national risk index provides a detailed overview of risk and its components that is comparable across a single region or country. It can be used by decision-makers to analyze and visualize risk (see Box 2). From an insurance sector perspective, the Munich Climate Insurance Initiative discussed that evidence-based risk assessment methodologies incorporating economics helps in the financing of adaptation and disaster risk management. Such models can facilitate capacity, quantifying the value added of insurance solutions and mobilize support for crisis and disaster response, preparedness, and resilience.

Comprehensive approaches using a combination of qualitative and quantitative data collection methods and tailored to the scope of assessment can aid in the collection of economic and non-economic losses and damages data. **Such assessments though require coverage of an entire risk spectrum across rapid onset extreme weather events and slow onset processes.** For example, in India, the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) has developed a six-step climate risk management framework and assessment focusing on rural livelihoods and infrastructure. Coverage of an entire spectrum of climate risks in assessments, such as that in Tamil Nadu and Himachal Pradesh regions of India, helps facilitate the identification of management options for drought, extreme heat, and water stress, floods and landslides (that have related impacts on livelihoods, crops and assets).

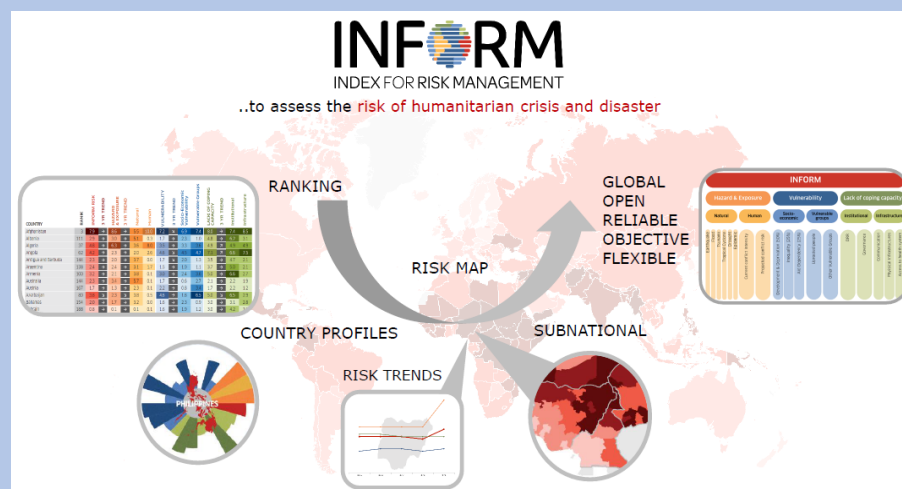
⁵ Available: <https://floodresilience.net/frmc>

⁶ Available: <https://actionaid.org/publications/2020/handbook-loss-and-damage-assessment>

Participatory tools help communities assess and record the economic and non-economic losses and damages they have experienced. They can then use this information for several purposes.

Box 2

The INFORM Subnational risk index visualizes risk and its components that is comparable across a single region or country.



Available: www.inform-index.org

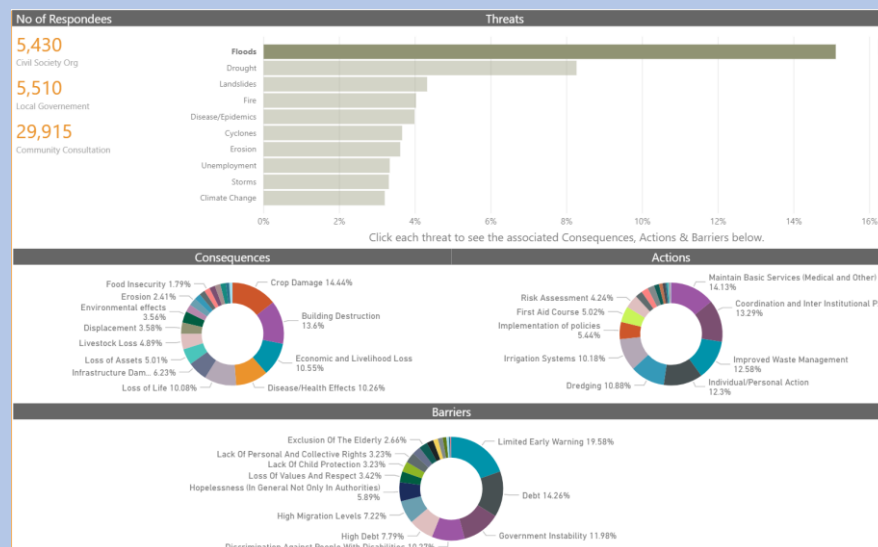
Comprehensive risk management needs risk assessments that tackle the diversity of threats communities are faced with...but this is not always the case. Local knowledge guides effective action.

Comprehensive approaches tailored to the scope of assessment and using a combination of methods can facilitate collection economic and non-economic losses and damages data, including both qualitative and quantitative data collection methods. **Such assessments require coverage of an entire risk spectrum across rapid onset extreme weather events and slow onset processes.** For example, in India, GIZ (GP Loss & Damage) has developed a six-step climate risk management framework and assessment focusing on rural livelihoods and infrastructure. A highlight of the assessment was the evaluation of risk tolerance by target groups in Tamil Nadu and Himachal Pradesh regions of India: assessing the level of damages and losses which communities can recover from allows for decision makers to prioritize on those risk (levels) which would be not tolerable for the concerned target groups.

While tools and methodologies can facilitate greater information on loss and damage resulting from climate-related events, the resulting unavoidable impacts are local and context specific. Workshop participants highlighted that **everyday disasters are a high priority for communities** and comprehensive risk management needs to tackle the diversity of threats vulnerable communities are faced with. The Global Network of Civil Society Organizations for Disaster Reduction (GNDR) discussed the Views from the Frontline (VFL) 2019 initiative, which is a forward-looking monitoring process that supports inclusive people-centered approaches to disaster risk reduction (see Box 3). Tools like the VFL have generated detailed knowledge on local threats, consequences, actions and barriers directly identified by communities at the frontline of climate-induced impacts.

Box 3

An example of data on threats, consequences, actions and barriers identified by communities in the GNDR Views from the Frontline 2019.



Available: <https://gndr.org/programmes/views-from-the-frontline.html>

The measurement of multidimensional vulnerability remains immature, and systematic effort and sustained funding is required for disaggregated data collection. The use of quantitative markers, proxy indicators and extrapolated data represents lines of enquiry to be further elaborated. These can support the development of a more coherent, higher-resolution understanding of vulnerability.

The workshop underscored the **importance of best available local and scientific knowledge, combination of data collection methods, participatory consultations, innovative thinking, stakeholder coordination and partnerships in risk assessments**. Some of the key challenges for community-level risk assessments of loss and damages identified include: access, language and cultural barriers; absence of technical capacities; documented evidence on non-economic losses; voice of and opportunity for local people’s engagement; sufficient allocation of resources for comprehensive risk assessments.

Experiences from undertaking risk assessments across different scales suggest that **the purpose and scope of risk assessment should inform the use of different tools and methodologies**. There are several risk assessment tools and methodologies, and the use of right method depends on the context, scope of risk assessment, availability of resources, scale (temporal, geographical) and type of hazards. Practitioners and policymakers require an understanding of selecting tools and methodologies that best suits their needs. More tools for prioritizing and for risk mapping, as appropriate, is needed to help policymakers develop long-term risk reduction frameworks for both extreme events and slow onset processes. Experts suggested that operations and workflows of agencies should embed risk assessments that better characterize loss and damage.

Workshop participants shared that the current approaches to risk measurement and management are inadequate to meet the challenges of the multifaceted, compound and interconnected hazards, as communities lack an understanding of the breadth of exposures and vulnerability. Most existing approaches to understanding risk, risk assessment and modelling are tuned to the largest and most historically obvious and tractable “peaks” of risks for human beings rather than the full topography of risks and the interdependencies among them. This inability to adequately understand

and robustly manage systemic risk is an important challenge for risk assessments in the context of loss damage.

c. Institutional processes, types of organizations and agencies needed to facilitate capacity

It was difficult for participants to address institutional processes required to facilitate capacity for comprehensive risk assessment without first considering the types of data gaps and challenges to risk assessment (see section b), as the scope of the workshop was to evaluate how such processes could address capacity gaps and needs. Organizations and agencies have different mandates, purposes, and operational mechanisms which can lead to “siloe approaches” to CRM. As such cooperation amongst a mix of institutional processes and types of organizations and agencies can facilitate capacity for CRM implementation (see Table 1).

Close collaboration between national meteorological and hydrological services and national disaster management offices is needed to establish interoperable datasets for tracking loss and damage associated with the events affecting each country.

Table 1
Institutional processes and types of organizations and agencies to facilitate capacity for comprehensive risk assessment.

Institutional processes	Types of organizations and agencies
Institutionalization and integrated communication channels	National and regional focal points, meteorological/climate observations agencies, relevant NGOs, civil society stakeholders, local governments
Global-level integration of relevant climate change, disaster risk reduction and humanitarian activities	National governments, UN agencies, other international agencies
Enhancing cooperation and dialogue of different agencies at the local and national level	Ministries, CCA, DRR, national governments (example mentioned: Joint National Adaptation Plan)
Data collection and integration	National statistics agencies, other agencies that collect and manage local data, ministries, national governments, UN agencies, other international agencies

Across all governance levels, **communication was expressed as a need to facilitate local integration, national alignment, and global harmonization.** Communication, awareness and messaging on risk management need to use the right language for the right audience, and the messaging needs to connect to the audience at different levels. Effective communication channels could facilitate integrated ex ante and ex post actions (rather than stand-alone strategies) to collect and use observation and risk assessment data.

In developing countries, there is a clear need to build the capacity of National Statistics, Civil Protection and Hydrometeorological Offices in collection, analysis and management of baseline data in a systematic way that will allow for attribution of loss and damage, whilst accounting for causal physical phenomena. Participants expressed that the investment in national statistics and hydrometeorological offices were declining and national-level capacity-building investments can enhance data availability, accessibility, storage and use. Combining observation and risk assessment data by statistical agencies and sectorial ministries, could better inform risk analysis and reduction efforts. In practice, achieving this

depends on the need for coordination, robust methodological guidelines, communication and institutional leadership. Overall, workshop participants expressed the need to support national agencies in collecting the *'right data, at the right time, and in the right way'*.

At the national level, 'integration' and 'institutionalization' were frequently highlighted by participants as important factors to facilitate effective communication and promote coherence in policies and organizations with different mandates (e.g. climate services agencies, disaster and humanitarian response). An example discussed by the Disaster Research Center of The Paraná State, was the partnership with the Civil Defense of Paraná and the Paraná State University in Brazil. The partnership brings together 25 institutions (universities, research centers and other sectors, public and private) that led to the creation of the State Council of Protection and Civil Defense (*Centro Estadual de Gerenciamentode Riscoe Desastres*) to support integrated risk management.

At the regional level, opportunities for national agencies to tap into the services of regional organizations with mandates on risk assessments and planning were identified as an opportunity. For example, representatives from the Pacific Community discussed that the Pacific Resilience Partnership (PRP) has brought together climate and disaster risk reduction practitioners, government agencies, development partners and beneficiaries in the Pacific region. Under the auspices of the PRP, a number of working groups have been established to provide a platform for data and information exchange, facilitating communications, risk financing and insurance. Furthermore, under the Pacific Meteorological Council (affiliated to PRP) several data panels have been established, inclusive of hydrology, climate information, DRR, and early warning and preparedness.

At the global level, coordination and integration is a challenge, while presenting an opportunity for the United Nations and international development agencies to support national governments in harmonizing and mainstreaming of climate change, disaster risk reduction and humanitarian mandates. **Data collection and managing integration across government ministries are important to implementing CRM that could be supported by international agencies.** There is a lack of awareness with respect to linking observation data to risks and impacts. While, developing countries are embarking on initiatives to access climate finance and tap into relevant knowledge networks, there is a gap in the awareness on what loss and damage data is already available and how better it can be utilized. **International agencies can address this gap via awareness-raising programmes.**

- d. Linking products of risk assessments to planning processes, and ways to achieve coherence between sectors.

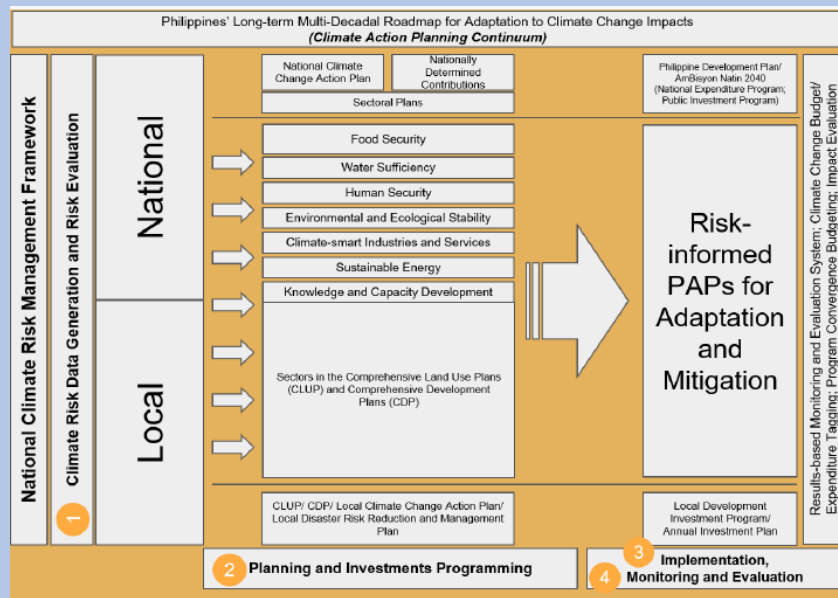
Linking products of risk assessments to planning processes

The linking of products of risk assessments to planning processes including the development of National Adaptation Plans (NAPs), DRR strategies, and Nationally Determined Contributions (NDCs) were discussed in the plenary and group discussion sessions. Four overarching ways to link risk assessments to planning

Few countries operate centralized coordination mechanisms among DRR, CCA and development planning, let alone transdisciplinary, integrated, multisectoral assessment, planning and decision-making structures that are required to understand and address systemic risks

processes were identified: **risk management policy frameworks, use of loss and damage databases, a coherent structure for linking loss and damage data and analysis, and the catalytic role of civil society.** First, a risk-based policy framework at the national level can be useful in driving climate and disaster risk action across the different levels of governance while coordinating national efforts towards integrated planning and investment across different sectors. Representative from The Philippines shared an example of a National Risk Management Framework put in place by government ministries to work in partnership with the private sector and civil society to integrate risk planning horizontally and vertically into national planning (see Box 4). The framework enables application of a standard policy and scientific framework (with national baselines and critical thresholds) to be used for planning of vulnerable sectors- energy, food security, energy, and natural resources. The framework is further informed by climate risk assessment tools such as climEx.db and CDRA Profiler.

Box 4
The Philippine National Climate Risk Management Framework for integrating climate risk across different sectors.



Produce useful information and products for the development of climate-evidence base and climate-rational in investment projects.

Second, **national and sub-national loss and damage databases should complement risk management policy frameworks to track loss and damage associated with natural hazard events overtime.** In Paraná, Brazil, the *Sistema Informatizado de Defesa Civil (SISDC) do Paraná* database system was developed to register, track, geo-locate, and manage extreme events. The municipal coordination defense manager registers incidents and facilitates the dissemination of reports, land registers, shelter registers, geolocation of incidents and monetary assistance. The database has enabled assessment of a number of incidents, types of extreme events, human and material loss and damage in real time in Paraná. Similarly, open-source databases could help facilitate the sharing, uptake, use of risk assessment data by different stakeholders and adapt to different user needs as illustrated by the INFORM model (see Box 2). Participants pointed out that databases and models should be regularly updated to ensure that risk assessment can support decision-making processes.

Third, in linking risk assessments to vulnerable sectors such as agriculture and livelihoods, **tools for use and uptake of risk information can avoid duplication in and strengthen coordination across sectors.** The UN Food and Agriculture Organization (FAO) provided examples of different risk assessment tools such as hazard maps, hazard calendars, Integrated Food Security Phase Classification Phases, contingency plans, map risks, Agricultural Stress Index System⁷, Predictive Livestock Early Warning System Trend Analysis that can be directly channeled to planning for climate-resilient agriculture. The FAO has initiated the Loss Estimation in Agriculture and Food Security⁸, which reports on the impact of extreme events and crises on agriculture. The latter is a holistic approach to assessing the impact of various types of such events in various country contexts in the entire sector (crops, livestock, fisheries, aquaculture and forestry). The estimates can be used by policymakers to evaluate adaptation and DRR options and calibrate observation data and impact-based risk assessments.

Finally, perspectives shared by the civil society suggests that non-state actors and CSOs play a vital role in the preceding three aspects of linking of products of risk assessments to planning processes. For example, the GNDR shared experiences from the Philippines where CSOs have developed positive relationships with local governments through landscape-based approach to embrace vertical coherence. The partnerships have enabled provisions of expertise on local priorities, embracing DRR and mainstreaming it in adaptation and Sustainable Development Goals policies.

Promoting coherence across the continuum of reducing risks, planning, and contingency arrangements

The issue of achieving coherence in policy processes related to loss and damage elements of the Paris Agreement, the Sendai Framework for DRR and the link to adaptation sector was discussed by the workshop participants. Participants pointed out that there are at least three communities of practice that overlap in addressing adverse impacts of climate change at this workshop, which included:

- The **loss and damage community** in the context of the UNFCCC and Paris Agreement working on ways to avert, minimize and address loss and damage associated with the adverse effects of climate change, within the framework of the WIM;
- The **adaptation planning community** working on developing the NAPs, and the subsequent implementation of the adaptation policies, projects and programmes identified therein; and
- The **management of extreme events**, including in the context of the Sendai Framework.

An underpinning challenge for the three communities is **how to frame risk and assess it, supported by data collection, and relevant analytical methodologies.** While risk assessment is common to and intersecting across the three communities of practice, participants highlighted that they are currently not developed consistently for the different end-users. For national governments the lack of coherence across the three global policy circles implies different reporting

⁷ Available: <http://www.fao.org/gIEWS/earthobservation/>

⁸ Available: <http://www.fao.org/3/i8656EN/i8656en.pdf>

CSOs are critical in promoting policy coherence in the risk management process through gathering local and contextual information and facilitating participative consultations with local communities.

requirements and how products of risk assessments could be used. There are significant overlaps, with opportunities to enhance collaboration to link risk management needs.

With respect to **promoting coherence the different communities, participants identified the opportunity to address the continuum of risk from pre-emptive adaptation planning and apply contingency measures to address loss and damage.**

This can be done through coordinated and coherent risk assessments involving a combination of: capturing of costs and benefits of adaptation; measuring damages of the adverse impacts of climate change; supporting effective decision-making at appropriate levels; assessing invest costs for adaptation; promoting the use of contingency instruments; addressing loss and damage resulting from the adverse impacts as and when they happen.

The representative of the **Least Developed Countries Expert Group (LEG) discussed ways in which they work with the GCF on the formulation and implementation of NAPs.** The LEG collaborates with UN organizations, agencies and many diverse actors to support countries to formulate NAPs, and works directly with developing countries, especially the LDCs, providing technical guidance and support on NAPs and other areas of work under the Convention and the Paris Agreement. The LEG is also supporting developing countries to effectively formulate their NAPs through an initiative called Open NAPs. Furthermore, the LEG pointed out that they work with the UNDRR in promoting coherence between NAPs and relevant targets under the Sendai Framework.

The workshop participants further identified the following ways, drawing upon the lessons learned and experiences on linking products of risk assessments to planning processes, and to enhance collaboration across the loss and damage, adaptation and DRR communities:

- Apply a rigorous methodological approach to risk assessment and management, most adequate to the specific context;
- Examining climate/disaster risks in a consistent manner across different communities;
- Undertaking risk assessments based on purpose and scope. For example, for adaptation, risk assessments may be determined by capital and investment which are done based on risk profiles of the country;
- Conceptualizing a common approach to risk dimensions across a continuum and risk assessment cutting across all three communities; and
- Appreciating the notion of transferring risks in order to harmonize action through partnerships and investments (e.g. in the insurance sector).

The above approaches can contribute to a positive CRM culture, strengthen decision-making and help identify and manage cascading risks in complex situations. For policymakers, practitioners and researchers, the increased focus on linking risk assessments to development planning has the potential to facilitate adaptation, DRR and achieving coherence between sectors. Overall the products and outcomes of risk assessments should justify investments, bridge data gaps, help communities address capacity gaps, and identify risk profiles and thresholds of hazards.

Raise awareness and provide advice on building technical expertise in developing countries on how to frame and assess climate risk to support risk management under adaptation in NAPs, Loss and Damage under the WIM, and with the disaster community under the Sendai Framework.

III. LESSONS AND PRACTICES

Despite the gaps and needs expressed at the workshop, participants also noted that practices related to coordination, communication and information exchange related to managing climate change associated losses and damages are being implemented across different regions. Hybrid approaches to bringing community-based, sub-national, national governments, private sector and NGOs can offer flexibility to stakeholder coordination. A combination of top-down and bottom-up coordination approaches were identified by participants to facilitate access to scientific information and evidence-based practices and inform national policy-making (see Box 5). Formal and informal engagement processes, where relevant, could facilitate observation, risk assessments, risk transfer, including transboundary risks.

Promote a coherent approach to addressing the continuum of risk. This can be done through coordinated and coherent risk assessments, capturing of costs and benefits of adaptation, and the measurement of damages of the adverse impacts of climate change.

Box 5

The key elements to consider when facilitating coordination and institutional processes relating to CRM (e.g. through national-level platforms):

- Be cross-sectional and engage different ministries, (e.g. through national-level platforms), levels of expertise and range of stakeholders.
- Identify relevant sectors and corresponding agencies to work with.
- Taking a phased approach and using relevant tools to ease the burden of CRM. Work firstly with agencies that already are on board and develop strategies to engage other sectors/agencies.
- Uptake relevant scientific information to drive policy-making.
- Employ a vertical approach to coordinating and communicating loss and damage information.
- Facilitate integration at the community level to address several different needs.
- Involve international agencies and try to align processes across governments and in different countries.
- Employ formal and in-formalized engagement approaches in a complementary way.

Participants at the workshop exchanged experience, lessons learned and ways to overcome challenges to implementing CRM approaches:

- i. **Local knowledge should guide engagement on CRM:** CRM requires risk assessments to account for a diversity of climate and non-climate threats faced by communities across the risk continuum. Different dimensions of climate-related risks affect people simultaneously. Similarly, extreme event impacts are local, context specific and commonplace disturbances can be a priority for vulnerable communities experiencing adverse climate impacts.
- ii. **Local knowledge and science should inform risk assessments:** Risk assessments grounded in local knowledge of risks and science can produce results that are non-biased. Collaboration with local communities and CSOs create evidence-based narratives of assessments.
- iii. **Facilitating participatory consultations can link local-level risk assessments to national risk planning frameworks:** Local risk assessments gather local and contextual information on resources, capacities, risks and vulnerability, which is an important starting point in linking loss and damage information to national planning frameworks.

- iv. **Importance of linking meteorological observations, projections and forecasts to impacts:** Tools to facilitate the linkages between observations and impacts, as well as link these to existing projects include: standard procedures, hybrid methodologies, and enhanced uptake of scientific data, upgraded systems and technology, maps, database of historical events and their consequences, exposure data, national risk profiles, in situ and remote earth observations, local contextual and disaggregated information on extreme and slow onset events, and advocacy tools and strategies.
- v. **Learning from observations, assessments and how risks evolve is important:** Lessons on different temporal and spatial scales need to be discussed across different communities of practice, combining different knowledge bases and promoting interdisciplinary dialogue. There is a value in producing joint loss and damage databases and identifying common solutions - doing so would engender more coherent approaches in the future and analysis across databases.

The LEG would like to encourage inclusion of the adaptation and NAP community in further workshops on CRM such as this

IV. CONCLUDING REMARKS AND POSSIBLE NEXT STEPS

During the workshop, participants discussed actions that could address the needs and gaps discussed for promoting and scaling up of CRM approaches. This led to the identification of entry points by participants for collaboration and further consideration. The possible next steps by WIM, the work on LDCs under the Least Developed Country Expert Group and Sendai Framework on DRR may include the following actions:

- Significant opportunities to continue providing a space for the value added of observations and risk assessment discussion in the work of the WIM, including input to the WIM review process and integrating ways to address capacity gaps in the work of the TEG CRM.
- Raise awareness and provide guidance on building technical expertise in developing countries on how to frame and assess climate risk to support comprehensive risk management under adaptation in NAPs, loss and damage under the WIM, and the community of practice under the Sendai Framework.
- Raise awareness on minimum standards and data to be collected by all countries to scaling-up of CRM approaches in NAPs, loss and damage and DRR communities, based on experience of countries that have progressed in their monitoring and early warning system efforts; and why and how such efforts should be supported through existing applicable financing channels;
- Raise awareness to the Excom, and other relevant support programmes, on the current spatial and temporal coverage of data monitoring efforts to support CRM (climate data, event histories, etc.) in order to highlight where significant gaps in coverage remain (mainly in the LDCs and SIDs) so provision of support can be enhanced to fill those gaps;
- Raise with the Excom how such technical capacity-building for climate risk assessments can be supported through current climate finance channels

(mainly the GCF, GEF and other sources of climate finance outside the Convention);

- The inclusion of the adaptation and NAP community in future workshops on CRM to broaden the discourse to cover perspectives on risk assessment and management as to complement the existing practices of the loss and damage and DRR communities; and
- The WIM ExCom could facilitate collaboration with other UNFCCC constituted bodies such as the LEG (within the context of national adaptation plans) and relevant regional and global programmes to facilitate capacity-building for enhanced observation and risk assessment in the context of loss and damage.

Annex 1- Workshop Agenda

Time	Purpose	Co-Facilitator(s)
Day 1 – Tuesday 29 October 2019		
8.30 -9.00	Registration	
9:00 – 9:30	<p>Introduction Welcome remarks by organizers of the workshop <i>Ms. Le-Anne Roper, TEG-CRM Champion</i> <i>Mr. David Stevens, Head Officer, Secretariat of the United Nations Office for Disaster Risk Reduction</i></p> <p>Participant self-introductions Overview of workshop agenda</p> <p><i>Moderator: Ms. Le-Anne Roper, TEG-CRM Champion</i></p>	TEG-CRM
9.30-10:00	<p>Session 1: Understanding of comprehensive risk management from the perspective of science This session will focus on the understanding of how science can be translated into policy, and drive action to avert, minimize and address loss and damage associated with climate change impacts, taking into consideration uncertainty.</p> <p>Joint presentation on understanding of risks by Ms. Zinta Zommers, UNDRR Sect., Mr. Maarten van Aalst, International Federation of Red Cross and Red Crescent Societies/ University of Twente and Ms. Koko Warner, UNFCCC Sect.</p> <p>Open discussions, Q&A and participant reflections <i>Moderator: Mr. Nedal Katbeh-Bader, TEG-CRM Champion</i></p> <p>Intended Output: <i>Heightened awareness on risk-informed planning for CRM</i></p>	TEG-CRM
10.00-10:15	Coffee Break and Family Photo	
10:15-12.00	<p>Session 2: Multi-hazard early warning systems (MHEWSs) for extreme and slow-onset events This session will feature presentations on country and regional experiences on the state of MHEWSs (global, regional and national levels) for key elements of climate risks and how to build MHEWSs capable of providing systematic risk information to decision-makers.</p> <p>Panelists: Experts from operational national and sub-regional early warning systems, Hydrometeorological and Disaster Risk Reduction:</p> <ul style="list-style-type: none"> - <i>Mr. Michel Staudinger, President of the Regional Association VI (Europe)/ Permanent Representative of Austria to WMO/ Director of Central Institute of Meteorology and Geodynamics, Austria by skype – 15mins</i> 	WMO

	<ul style="list-style-type: none"> - Ms. Julia Chasco, Head of Meteorology and Society Department, Meteorological Service of Argentina TBC by skype– 15 mins - Mr. Mussa Mustafa, Deputy Director-General, National Institute of Meteorology, (INAM), Maputo, Mozambique by skype - Mr. John Harding, Head, Climate Risk and Early Warning Systems, WMO <p>Open discussions and Q&A (45mins; 11:15-12:00) Moderator: Mr. James Douris, Project Officer, WMO</p> <p>Intended Output: Exchange of information on how countries are developing MHEWSs and the type of technical and institutional support needed to enhance capacities to implement MHEWSs.</p>	
12:00 -13:00	Lunch	
13.00-14:30	<p>Session 3: Climate information and monitoring systems This session will take a closer look at climate information and monitoring systems, its role in short to long-term planning and the WMO Cataloguing of Hazardous Events, including linking losses and damages to hazards as a way to improve monitoring.</p> <p>Panelists: Experts from national and regional climate centers and national disaster management offices:</p> <ul style="list-style-type: none"> - Mr. Stefan Rösner, Head Division Regional Climate, Deutscher Wetterdienst (From climate monitoring to climate watch – Europe’s approach and challenges) – 15mins - Mr. James Douris, Project Officer WMO (Linking climate extremes and impacts via cataloguing of hazardous events)- 40mins <p>Open discussions and Q&A Moderator: Mr. Stefan Rösner, Deutscher Wetterdienst</p> <p>Intended Output: Identification of the requirements for monitoring climate risks and impacts and the technical, financial and institutional support needed to enhance capacity for implementation where needed.</p>	WMO
14:30 -15:00	Coffee	
15:00- 16:00	<p>Session 3: Climate information and monitoring systems (continued) Open plenary discussion on key out-takes from session 1-3 and participant feedback Within the context of loss and damage, participants will discuss in an open plenary format the key gaps and needs from the first three sessions, and identify opportunities to link hydrometeorological, climate observations and forecasting</p> <p>Moderator: Mr. Christoph von Stechow, TEG-CRM Champion</p>	TEG-CRM

DAY 2 - Wednesday 30 October 2019		
9:00-10:30	<p>Session 4: Comprehensive risk assessment</p> <p>This session will explore how multiple risks can be considered in comprehensive risk assessments that take into account the issues of scales (time, global, regional, national and local), exploring capacity gaps and ways to facilitate capacity for comprehensive risk assessments.</p> <p>Panelists:</p> <ul style="list-style-type: none"> - Ms. Eileen Turare, PCRAFI II Project Manager and Ms. Litea Biukoto, Team Leader-Risk Reduction, Pacific Community - Mr. Idy Niang Chargé de Programme sur le Climat, Direction de l'Environnement et des Etablissements Classes, Senegal - Mr. Colin McQuistan, Senior Advisor on Climate Change and DRR, Practical Action - Mr. Soenke Kreft, Executive Director, Munich Climate Insurance Initiative - Ms. Ainara Casajus Valles, Project Officer, Scientific Research, Joint Research Centre, European Commission - Ms. Solveig Schindler, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH <p>Open discussions and Q&A (30mins; 10:00-10:30) Moderator: Mr. Victor Cardenas, TEG-CRM</p>	UNDRR
10.30-10:45	Coffee Break	
10:45 -12:15	<p>Session 4: Comprehensive risk assessment (continued)</p> <p>Participants will divide into breakout groups to identify challenges, data gaps and institutional processes to scaling-up of action and cooperation.</p> <p>Parallel break-out group discussions (50mins; 10:45-11:25)</p> <ol style="list-style-type: none"> 1. Data Gaps: What are the capacity and data needs to conduct risk assessments at local, national, regional levels in the context of averting, minimizing and addressing loss and damage? 2. Institutional Processes: What processes and types of organizations and agencies can facilitate capacity for comprehensive risk assessment? <p>Reporting on the outcomes of the parallel breakout group discussions and Q&A Moderator: Mr. Victor Cardenas, TEG-CRM</p> <p>Intended Output: Identification of national and regional capacity gaps and ways to facilitate capacity for comprehensive risk assessments to avert, minimize and address loss and damage associated with climate change.</p>	UNDRR
12:15-13:00	Lunch	

<p>13:00 – 14:30</p>	<p>Session 5: Turning risk assessments into risk management This session will focus on the use of risk assessments development planning, including applications for adaptation planning, DRR strategies, highlighting ways to achieve coherence between sectors.</p> <p>Panelists: Specialists on climate risk management and policy integration and from research institutions, government representatives:</p> <ul style="list-style-type: none"> - <i>Mr. Jerome Ilagan, Chief, Policy Research and Development Division, Climate Change Commission, The Philippines</i> - <i>Profa Dra.Danyelle Stringari, Centro Universitário de Estudos e Pesquisas sobre Desastres</i> - <i>Ms. Valeria Dringo, Advocacy and Learning Coordinator, Global Network of Civil Society Organizations for Disaster Reduction</i> - <i>Mr. Shukri Ahmed, Deputy Strategic Programme Leader, FAO</i> <p>Parallel break-out group discussions:</p> <ol style="list-style-type: none"> 1. How can products of risk assessments feed into planning processes including the development of National Adaptation Plans (NAPs), DRR strategies, and NDCs? 2. How can we encourage multiple organizations and agencies to work together on risk management? What are the capacity needs to embed risk assessments into planning processes including the development of NAPs, DRR strategies, and NDCs? <p><i>Moderator: Ms. Zinta Zommers, UNDRR Sect.</i></p> <p>Intended Output: <i>Identification of challenges of using risk assessments and ways to apply this coherently to national policy planning processes.</i></p>	<p>UNDRR</p>
	<p>Rolling Coffee Break</p>	
<p>14:30-14:45</p>	<p>Reporting on the key outcomes of the parallel breakout group discussions</p>	<p>UNDRR</p>
<p>14:45 – 16:30</p>	<p>Session 6: Entry points for promoting and scaling-up comprehensive risk management The focus of this session is to synthesize knowledge and information on ways to continually identify and address capacity gaps in countries to enhance capacity-building for CRM approaches in the context of loss and damage, where needed.</p> <p>Panelists: WIM Excom Member/TEG-CRM Champion(s), Least Developed Countries Expert Group, Government representative, and UNDRR (10mins each)</p> <ul style="list-style-type: none"> - <i>Ms. Le-Anne Roper, TEG-CRM Champion</i> - <i>Mr. Benon Bibbu Yassin, Least Developed Countries Expert Group Member</i> - <i>Mr. David Stevens, Head Officer, Secretariat of the United Nations Office for Disaster Risk Reduction</i> 	<p>TEG-CRM</p>

	<p><i>Potential questions for panel discussion:</i></p> <ol style="list-style-type: none"> 1. How can experiences and lessons from the workshop facilitate stakeholder engagement and capacity-building? 2. How can we maximize synergies with national, regional and global policy processes to enhance capacities for observation and risk assessment? 3. How can we collaborate with regional and global programmes to enable the above? <p>Interaction on the purposes, relevance of data and capacity needs and gaps identified at the workshop and ways for WIM TEG-CRM and others on measures for facilitating and enhancing CRM capacity to relevant policy processes</p> <p><i>Moderator: Mr. Christoph von Stechow, TEG-CRM Champion</i></p> <p><i>Intended Output:</i> <i>Identification of ways WIM TEG-CRM could provide ideas and examples for measures for enhancing CRM capacity to relevant policy processes.</i></p>	
<p>16:30-17:00</p>	<p>Next Steps and Close Summary of key messages and recommendations AOB</p> <p><i>Moderators: Ms. Le-Anne Roper and Mr. Christoph von Stechow, TEG-CRM Champions</i></p>	<p>TEG-CRM</p>