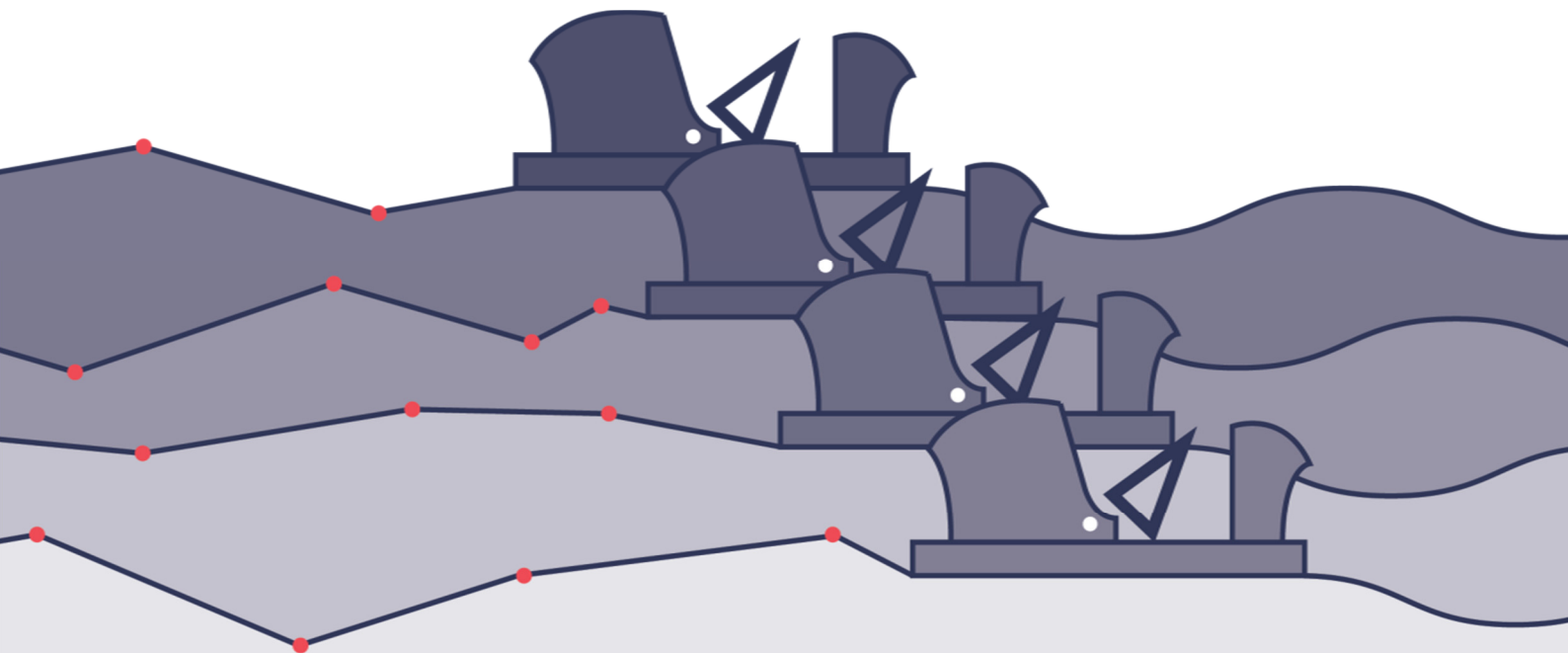


# Addressing the impacts of climate change through an effective Warsaw International Mechanism on Loss and Damage

Submission to the second review of the Warsaw International Mechanism on Loss and Damage under the UNFCCC

Rebecca Byrnes and Swenja Surminski

October 2019



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## About this submission

This submission has been prepared to inform the review of the Warsaw International Mechanism on Loss and Damage (WIM) that will take place at the 25th Conference of the Parties to the United Nations Framework Convention on Climate Change in December 2019.

## About the authors

Rebecca Byrnes is a Policy Analyst at the Grantham Research Institute on Climate Change and the Environment and Swenja Surminski is Head of Adaptation Research at the Institute.

## Authors' note

The authors welcome this opportunity to assist and support the work of the UNFCCC's WIM. The Grantham Research Institute has been actively working with policymakers, industry and communities for a decade to address issues around climate change policy, adaptation and Loss and Damage. The evidence provided in this submission is based on the authors' experience working with climate negotiators within the UNFCCC arena and is underpinned by their research, in particular the IGA/Rockefeller project 'Evaluating the Resilience Impact of Climate Insurance' (ERICI), investigating insurance as a tool for financial and climate resilience, and the Zurich Flood Resilience Alliance project, where the Institute is collaborating with communities at risk of flooding to support *ex-ante* investments in flood resilience. The Institute is also co-founder of the Loss and Damage Network, which brings together academics and practitioners working on Loss and Damage, and co-edited and financially supported the publication of the *Loss and Damage from Climate Change* book (Springer, 2018).

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This policy paper is intended to inform decision-makers in the public, private and third sectors. It has been reviewed by internal and external referees before publication. The views expressed in this paper represent those of the author(s) and do not necessarily represent those of the host institutions or funders.

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# Summary

The rise in global temperature as a result of climate change is increasing the frequency, severity and unpredictability of events such as heatwaves, floods, droughts and tropical cyclones, and is causing associated sea level rise and glacial and ice sheet retreat. Impacts are already being felt, with lives, livelihoods, health, cultural sites and ways of life lost or damaged due to climate events. Effective mitigation of greenhouse gas emissions can help to diminish climate hazards, while measures designed to help societies adapt to the consequences, combined with effective governance and improved socioeconomic development, can reduce exposure and vulnerability to those hazards.

However, with a significant amount of global warming already locked into the climate system, not all climate events can be prevented or prepared for. A holistic climate policy needs to focus on both reducing risk of further impacts and on ensuring measures are in place to respond to current and future losses and damages from climate impacts when they occur. This requires action at all levels of governance, from international frameworks to local communities. It also requires scaled-up finance to help countries and communities recover from the impacts of climate-related events as extreme weather events and slow-onset processes such as desertification become more frequent, more severe and more unpredictable with climate change.

This submission aims to inform the review of the Warsaw International Mechanism on Loss and Damage (WIM) that will take place at the 25th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in December 2019. The submission aims to take a step back and understand the needs of, drivers behind and gaps in the Loss and Damage policy debate, how it relates to other international frameworks and efforts in the areas of mitigation, adaptation, disaster risk reduction and sustainable development, and to identify how the WIM can be most effective.

We argue that the WIM can support a holistic climate policy approach at all levels through five recommended activities:

1. **Establishing a Loss and Damage finance facility through new resources** to direct rapid-response finance to where it is needed, facilitate increased availability of finance aimed at slow-onset events like desertification and sea level rise, improve access for poor and vulnerable communities to this Loss and Damage finance, and provide finance to support capacity-building and knowledge-sharing.
2. **Acting as an international overseer by monitoring and reporting on progress**, including through the UNFCCC global stocktake and independent reports on gaps in Loss and Damage action and support, by gathering information on progress in scaling up Loss and Damage finance, accessibility and use of funds, and highlighting where inadequate climate change mitigation or adaptation efforts are resulting in losses and damages that are greater than they should be.
3. **Scaling up existing knowledge development** efforts under the WIM and support for the improved collection, accessibility and dissemination of climate risk and disaster information.
4. **Providing concrete technical and financial advice** to governments through a mechanism similar to the Climate Technology Centre and Network but dedicated to Loss and Damage.
5. **Acting as an international convenor** to bring together relevant international bodies and regional country groups, to break down silo working and facilitate cooperation, including through long-term risk-pooling initiatives and international funds.

# 1. Introduction

As the impacts of climate change increase, ensuring that developed and developing nations alike are equipped to address the resultant losses and damages is a matter of fairness and equity as well as economic sense.

The 'Loss and Damage' policy debate remains extremely contentious in the international climate negotiations. This stems partly from historical calls by developing countries for compensation by developed countries for losses and damages associated with climate change. Such calls were a major red line for developed countries who have sought, by contrast, to treat Loss and Damage as a sub-component of adaptation within the UNFCCC negotiations, rather than as a standalone pillar (Calliari et al., 2018; Thomas and Benjamin, 2018; Vanhala and Hestbaek, 2016). This contention has stalled progress on pursuing effective policies and programmes to address the associated issues internationally.

However, at its core, the Loss and Damage issue is simple: a failure to adequately reduce greenhouse gas emissions, and too little progress in adapting to the climate change already locked into the Earth's systems, mean that people, infrastructure, businesses and the natural environment face harm from extreme weather events and from slow-onset processes including drought and sea level rise.

Climate change is a threat-multiplier: it is amplifying existing challenges and inequalities and particularly impacting the most vulnerable (Surminski, 2016). This is especially problematic for developing countries, whose social and economic development is at risk.

The second review of the Warsaw International Mechanism on Loss and Damage (WIM), due to take place at the 25th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in December 2019, provides an opportunity to take stock of progress towards establishing processes to address losses and damages and to find common ground on which meaningful work can be undertaken to protect vulnerable populations in particularly vulnerable countries (UNFCCC decisions 3/CP.18 and 2/CP.19). Acting on Loss and Damage requires solutions across all levels of governance, from local communities through to global climate diplomacy (Mechler et al., 2018).

## Aims of this paper

This paper outlines a set of observations on Loss and Damage and makes recommendations for the WIM. It draws from the Loss and Damage literature and the experience of the authors over years of working in the context of the UNFCCC negotiations and within academia.

The paper aims to advocate and illustrate how to:

- **Depoliticise** the international Loss and Damage discussions by highlighting the need for urgent action on Loss and Damage and finding common ground on which to undertake that action.
- **Reimagine** the role of the WIM to identify how it could have the greatest possible chance to protect lives and livelihoods, alongside promoting effective *ex-ante* (preventative) efforts to be undertaken by governments and communities that will reduce losses and damages in the first place.
- **Mainstream** Loss and Damage within broader climate change, disaster risk reduction and sustainable development discussions, policy development and planning.

The paper first considers what is meant by Loss and Damage in more detail, then sets out why action on Loss and Damage should be integral to climate action at all levels, before focusing on how to maximise the role of the WIM.

### Box 1. Loss and Damage: terminology

We use the plural form and lowercase letters – 'losses and damages' – to refer broadly to observed impacts and projected risks from climate change. We use the capitalised singular form – 'Loss and Damage' – where we are referring to the associated policy debate.

Although lacking a clear definition, in its widest sense the United Nations Framework Convention on Climate Change's (UNFCCC) Loss and Damage concept refers to the *negative consequences of climate change*.

Within the UNFCCC, the policy focus is on "addressing loss and damage associated with climate change impacts, especially in developing countries that are particularly vulnerable to the adverse effects of climate change" (UNFCCC Decision 3/CP.18, preamble).

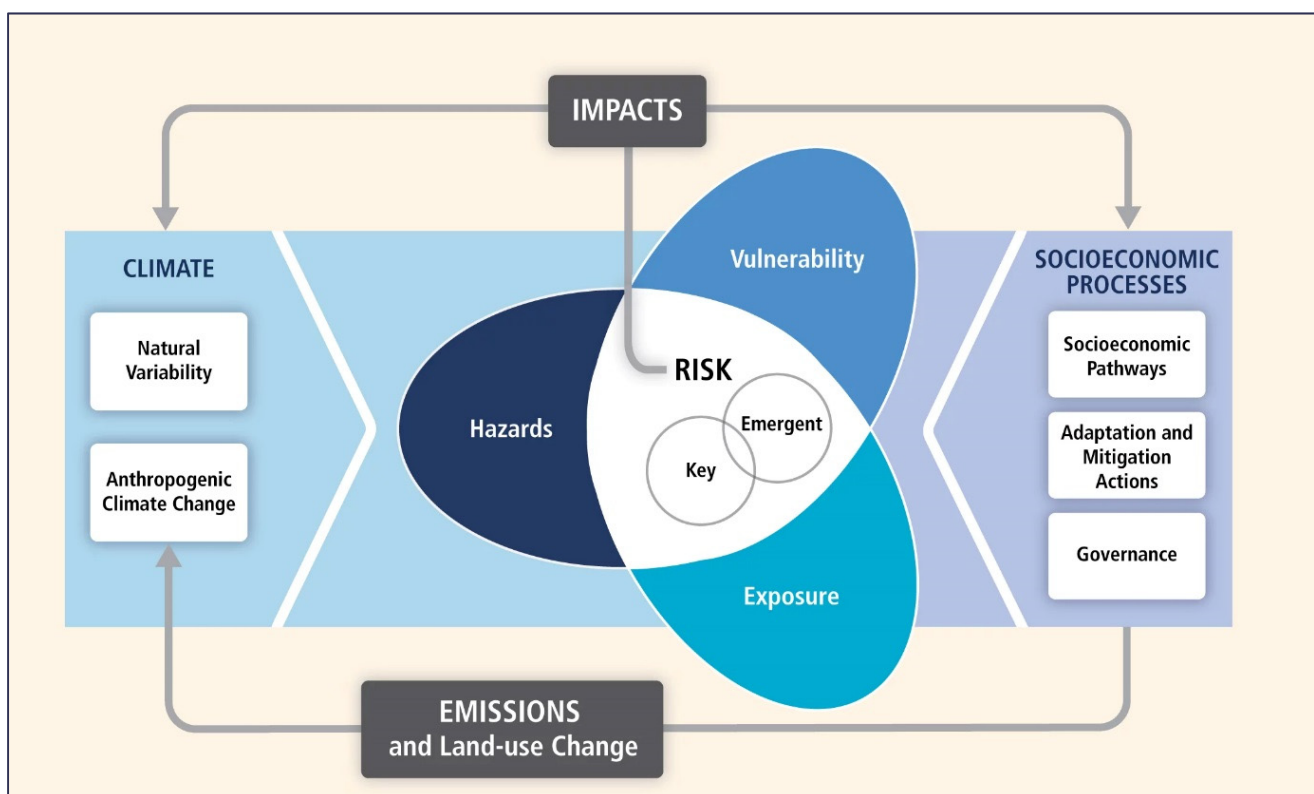
## 2. What is meant by Loss and Damage in the climate change context?

Climate impacts arise through a combination of both anthropogenic (human-caused) climate change and natural climate variability (see the IPCC's depiction of this in Figure 1 below). Anthropogenic climate change not only increases the frequency and severity of climate-related events overall but also can compound the effects of natural climate variability, such as El Niño cycles, leading to more destructive climate impacts and greater losses and damages (Trenberth, 2018). Reducing greenhouse gas emissions through mitigation measures would slow down the rate of global warming and in turn reduce the frequency and severity of many of these events, while adaptation to climate change can reduce the exposure and vulnerability of communities to the climate change hazards that do occur.

Importantly, the extent of losses and damages is not only determined by climate change action, but also by a complex interplay of socioeconomic processes: governance arrangements and the rate and type of economic development play a major role in factors such as urbanisation, land-use patterns, quality and location of infrastructure, education and other conditions that impact on the vulnerability and exposure of communities, businesses and countries to climate change.

As climate change impacts increase in the future, more ambitious mitigation and greater adaptation efforts will be needed to reduce and prepare for current and future climate risk.

**Figure 1. The interplay between hazards, vulnerability and exposure to climate change dictates its impacts and the extent of losses and damages**



Source: Intergovernmental Panel on Climate Change [IPCC] (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. WGII\_AR5\_Fig 19-1, Summary for Policymakers* p 3.

### The limits to adaptation

With a significant amount of global warming already locked into the climate system, not all climate events can be prevented or prepared for. The Paris Agreement on climate change aims to keep average global temperature rise well below 2°C and pursue efforts to limit warming to 1.5°C above pre-industrial levels. While limiting warming to 1.5°C is technically feasible, achieving it looks increasingly challenging

as global emissions are still rising. Further, the recent special report on *Global Warming of 1.5°C* by the Intergovernmental Panel on Climate Change (IPCC) noted that even with warming of 1.5°C the world will face sea level rise, species loss and extinction, ocean acidity causing loss in marine biodiversity, fisheries and ocean ecosystems, and risks to “health, livelihoods, food security, water supply, human security, and economic growth” (IPCC, 2018: 9).

The Loss and Damage pillar of the UNFCCC negotiations arose from the acknowledgment that there are limits to how much it is possible to adapt to the impacts of climate change (Alston et al., 2018; Dow, Berkhout, Preston et al., 2013; Dow, Berkhout and Preston, 2013; Morrison and Pickering, 2013). Losses and damages occur where adaptation actions are unaffordable, not physically or technically possible, socially difficult or simply not sufficient to prevent some harm to humans, the environment and assets (Morrison and Pickering, 2013). The more global temperatures continue to rise, the more likely it is that adaptation limits will be reached.

The impacts of climate change that cannot or will not be avoided through mitigation or adaptation efforts are particularly challenging for those poor countries that are already exposed to harsh climate conditions. They include the losses and damages both from changes in the frequency, intensity and geographical distribution of *extreme weather events* such as storms and floods, and from *slow-onset phenomena* such as sea level rise, ocean acidification, loss of biodiversity and desertification.

Climate adaptation policies and programmes typically involve *ex-ante* actions aimed at building resilience *before* the occurrence of an extreme weather or slow-onset event. Actions to address losses and damages build on these efforts by also establishing mechanisms to help those who have already experienced losses and damages through financial or other forms of support such as social safety nets or social protection programmes (*ex-post* relief).

### 3. Integrating Loss and Damage into climate action

Addressing losses and damages should be made integral to all climate action and a matter on which all countries must make progress urgently – this applies both within the UNFCCC framework and outside of it. The following points illustrate why this must happen.

#### **i) Some losses and damages are already unavoidable.**

Even with the most ambitious mitigation and adaptation efforts, losses and damages will occur, as we have described above. This means that effective *ex-post* support mechanisms, finance and transformational solutions are required, such as resettlement (as a last resort) and retraining of workers to allow them to diversify their livelihoods away from industries that will no longer be viable (Serdeczny, 2018).

#### **ii) Loss and Damage measures can stimulate greater mitigation and adaptation efforts.**

There is a direct correlation between the degree of mitigation and adaptation action taken and the losses and damages suffered. As such, the amount of losses and damages experienced and projected could become the benchmark for measuring progress on dealing with climate change, and the main objective of climate change agreements. Loss and Damage should therefore have a higher priority in any climate change policy and action, providing the rationale for taking action to reduce and prepare for climate change in the first instance. However, it is important to note that due to time-lags in the climate system and lead-times for infrastructure and other investments, mitigation and adaptation action can do little to reduce losses and damages in the short term, and other support for immediate climate impacts is vital.

#### **iii) Significant additional finance is needed to support both pre-emptive action and post-disaster recovery.**

Many of the countries most affected by climate change did little to cause it yet face significant losses and damages. Projections of potential losses in developing countries start at US\$400 billion per year by 2030 on a pathway that sees global warming remain below 2°C and in a scenario where there is US\$200 billion-worth of adaptation measures in place (Baarsch et al., 2015). The cost of losses could burgeon if average global temperatures increase beyond this – up to US\$4 trillion per year on a trajectory to over



3°C of warming by 2100, according to the Climate Vulnerable Forum (McKinnon 2012, cited in Gewirtzman et al., 2018).

Developed countries have an obligation to provide developing countries with finance, technology and capacity-building in relation to Loss and Damage.<sup>1</sup> However, existing funding for pre-emptive and post-disaster relief is insufficient (UNDRR, 2019). Countries and donors should invest in effective *ex-ante* climate change adaptation and resilience-building to prevent losses and damages as far as is possible (Vaughan et al., 2019), but recognising that there are limits to adaptation – and therefore that effective *ex-post* relief strategies (following disasters) also need to be in place.

Losses and damages from extreme weather and slow-onset events are already occurring. Experience shows that even current levels of losses and damages can cripple economies. A recent example is Hurricane Dorian, which led to the loss of at least 60 lives and left around 76,000 homeless in the Bahamas, causing an estimated US\$7 billion in damages and destroying industries that are vital to the Bahamian economy (Bryant, 2019; Fitzpatrick, 2019; International Medical Corps, 2019). With insufficient finance following a disaster, it is harder to prevent the worsening of secondary impacts, for example the spread of disease or continued failure of major infrastructure services (Hallegatte et al., 2019). With climate change increasing the frequency, severity and unpredictability of extreme weather and slow-onset events, there will be a greater need for finance to deal with their impacts.

The discussion on finance needs to broaden beyond insurance. Mechanisms such as social protection schemes, resilience bonds and finance that can be scaled up over time to address slow-onset events need to be brought to the fore – detailed further on p6 below (Kreienkamp and Vanhala, 2017; Stabinsky and Hoffmaister, 2015).

**iv) Communities need to be able to respond flexibly to climate-related events that will become increasingly frequent, severe and hard to predict.**

Finance should support the implementation of and replication of existing initiatives – for example, many existing social protection schemes are significantly under-resourced – and replicate these where relevant (Tenzing, in review). Flexibility is important to ensure that support is available across different scales, from households to the regional level, to rapidly address increasingly unpredictable climate impacts, in terms of the timing, severity and type of events that will occur. To enable such flexibility, there is a need for improved data collection and projections on losses and damages, both to increase understanding of the impacts of past events and to project future climate impacts. This will enable effective planning for losses and damages, including ensuring finance and policies are in place ready to respond rapidly as climate-related events escalate (Thomas and Benjamin, 2018).

**v) Risk awareness is vital at all levels of government decision-making, particularly in light of heightened uncertainty and projected increased climate impacts into the future.**

Losses and damages are ultimately experienced at the national and sub-national level, often by vulnerable communities that have little capacity to respond. With the increasing frequency, severity and unpredictability of extreme weather and slow-onset events due to climate change, it is important to increase understanding of risk, both to improve adaptation to climate change and to build flexibilities and contingencies into government decision-making at all levels to be able to respond to climate change impacts when they do occur. Participation by affected communities in the planning and process of addressing losses and damages is vital, alongside measures that enable local communities to be able to respond faster, including through capacity-building, preparedness training and leveraging existing schemes such as microfinance. This has been shown to work in practice: for example, the resettlement of a village in Mararo in the Solomon Islands was considered to be a success because of the collective decision-making of the community (Thomas and Benjamin, 2017).

National-level policies are important for coordinating local efforts, channelling finance and resources, establishing safety nets and creating, analysing and sharing climate risk information. Planning for Loss and Damage responses and considering climate risk in all government decisions and investments is also vital to addressing losses and damages at all scales. This means ensuring that no decisions or investments create additional risks as a result of their proposed actions, building in contingencies to

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<sup>1</sup> Under UNFCCC COP Decision 2/CP.19 para 14.



prepare for possible future losses and damages, and setting aside funds through insurance or other policies to safeguard all adaptation, mitigation and development actions and assets. Such considerations should include more effective spending of *ex-ante* adaptation finance and ultimately reduce the need for Loss and Damage support.

National-level funds, supported by international finance, can help countries to rebuild quickly after such devastating events. For instance, Bangladesh is currently undertaking a process to establish a national Loss and Damage mechanism (Haque et al., 2018). Although the design of the mechanism is not yet clear, a National Steering Committee and Technical Working Group have been established and will oversee a two-year pilot programme to experiment with measures to address different aspects of Loss and Damage, including both fast and slow-onset events (International Centre for Climate Change and Development, 2018).

Regional and international coordination can feed into and inform policy approaches at the national and sub-national level through a two-way flow of information on climate risks, impacts and effective policy approaches.

### **Beyond insurance: tools to address losses and damages**

Discussions about tools to deal with financing of losses and damages to date have primarily focused on risk transfer mechanisms such as insurance, which can stretch adaptation limits and, where those limits have been reached, cushion the impacts of losses and damages (Schäfer et al., 2018). However, there are significant limitations to using risk transfer for slow-onset events and there are also concerns that this tool will become less available in the future, as losses and damages from climate change continue to rise. Furthermore, insurance comes at a cost and the payment of insurance premiums raises important equity and fairness considerations: insurance often remains unaffordable for many and in the nations most vulnerable to climate change governments may have to decide between purchasing risk transfer instruments and providing funding for other aspects of development (Gewirtzman et al., 2018). This requires interventions such as subsidising premiums or providing other support for poorer jurisdictions (Linnerooth-Bayer et al., 2018).

While insurance is an important tool for addressing losses and damages, the problem requires a more holistic and far-reaching set of interventions to address the full spectrum of climate impacts experienced. These include measures such as social protection schemes; longer-term finance to address slow-onset events; improved finance and planning for rapid post-event disaster relief; improved data collection and projections of future losses and damages; measures to reduce non-economic losses and damages; international agreement on the rights and status of persons displaced due to climate change; and mainstreaming resilience across all investments and policy decisions (Tanner et al., 2015).

### **Acting to limit non-economic losses and damages**

The impacts of climate change are also more than just financial. Non-economic losses and damages include harm to tangible and intangible assets ranging from life itself to health, human mobility, access to territory, cultural heritage, indigenous and local knowledge, biodiversity, ecosystem services, habitats, social cohesion, culturally important landscapes, education, traditions and other social capital (Preston, 2017; Fankhauser et al., 2014; UNFCCC, 2013).

For example, the history and culture of many small island developing states are under threat from sea level rise, which poses an existential threat to many of these states (Handmer and Nalau, 2018; van der Geest et al., 2018). Some communities face irreversible losses: ancestral homes and burial grounds are at risk of submersion on islands on which families have lived for generations, posing a threat that goes beyond destruction of livelihoods. Climate change adaptation and mitigation are important to prevent such loss as far as is possible. Relocation should be a last-resort option; for example, studies of Pacific Islanders confirm the majority do not want to migrate (Thomas and Benjamin, 2017; van der Geest et al., 2019).

However, it is estimated that between 8 and 52 million people from Southeast Asian and Pacific Islands alone will have to move from their home regions because of climate change by 2050 (Thomas and Benjamin, 2017). The most commonly cited figure for the number of people worldwide who are likely to be displaced by climate change by 2050 is 200 million – although estimates vary widely, depending on

the climate scenario modelled, from 25 million to 1 billion people (Myers, 2005; Stern, 2006; Brown, 2008; Morrison and Pickering, 2013; Stapleton et al., 2017). Some countries are already preparing for this last resort option. For example, Kiribati has purchased 20 square kilometres of land in Fiji, initially to be used for farming, but available to resettle families if ultimately needed (Goering, 2017).

## 4. Loss and damage in the UNFCCC: the role and progress of the WIM to date

The institutional and intellectual divide that often exists between climate change mitigation, adaptation, disaster risk reduction, sustainable development and Loss and Damage efforts has been useful in ensuring that each of these issues receives adequate and specialised attention. However, it can also result in some areas overshadowing others and a failure to understand how action in one area can support or hinder efforts in another. Losses and damages from climate change arise out of interactions, interdependencies and feedback loops between the natural climate system and human actions. Roberts et al. (2015) note the synergies between the Sendai Framework on disaster risk reduction, the Sustainable Development Goals and the Paris Agreement, and recommend that these processes should be seen “as a collective means to avoid loss and damage that can be avoided, and implement approaches to address unavoidable loss and damage”.

The WIM is mandated to fulfil three **functions** (Decision 2/CP.19, para 5):

- a) Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts
- b) Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders
- c) Enhancing action and support, including finance, technology and capacity building, to address loss and damage associated with the adverse effects of climate change

In 2017, the five year rolling work plan of the Executive Committee of the WIM was finalised, with five **work streams** (UNFCCC, 2017, Annex), designed to enhance cooperation and facilitation in relation to:

- a) Slow onset events
- b) Non-economic losses
- c) Comprehensive risk management approaches (including assessment, reduction, transfer and retention) to address and build long-term resilience of countries, vulnerable populations and communities to loss and damage, including in relation to extreme and slow onset events
- d) Human mobility, including migration, displacement and planned relocation
- e) Action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change

The WIM Executive Committee has undertaken a range of activities across all five of these work streams, and has made some good progress in fulfilling its first two functions (see Table 1 and Appendix below). The WIM has generated and shared knowledge on Loss and Damage in several areas, particularly with regards to risk transfer and displacement. Several technical expert groups have been established and online materials developed that enhance knowledge in the areas of slow onset events, non-economic losses and comprehensive risk management. The taskforce on displacement in particular has been successful in convening international organisations, including the International Organization for Migration and the Platform on Disaster Displacement, alongside experts, to generate knowledge and recommendations on addressing displacement due to losses and damages (UNFCCC, n.d., c). However, there has been less focus on ensuring context-specific and tailored information is available to individual countries.

All activities under the third function relating to action and support to date have related to development and provision of information. The Fiji Clearinghouse for Risk Transfer, for example, is a repository of information but does not directly facilitate the provision of finance to countries that need it. Where there have been finance-specific events, such as the Suva Expert Dialogue on sources of finance and ways of accessing it (UNFCCC, n.d., b), these have focused primarily on *ex-ante* risk reduction rather than how to address *ex-post* losses and damages when they occur, and any focus on the latter has primarily been oriented around risk transfer mechanisms. There is therefore a major gap in activities to facilitate provision of finance to particularly vulnerable countries (as mandated under paragraph 5(c) (iii) of UNFCCC decision 2/CP.19), and in ensuring information on finance is not limited to risk transfer mechanisms such as insurance, but includes wider considerations such as direct transfers, risk pooling, resilience bonds, and safety nets such as social protection.

Table 1 provides a summary of the types of activities that have been undertaken by the Executive Committee of the WIM to date, drawing on the reports of the Committee and the UNFCCC website. We include a list of all activities in Appendix 1, which demonstrates that the vast majority of activities fall into the first two functions of the WIM, namely “enhancing knowledge and understanding”, and “strengthening dialogue and coordination”.

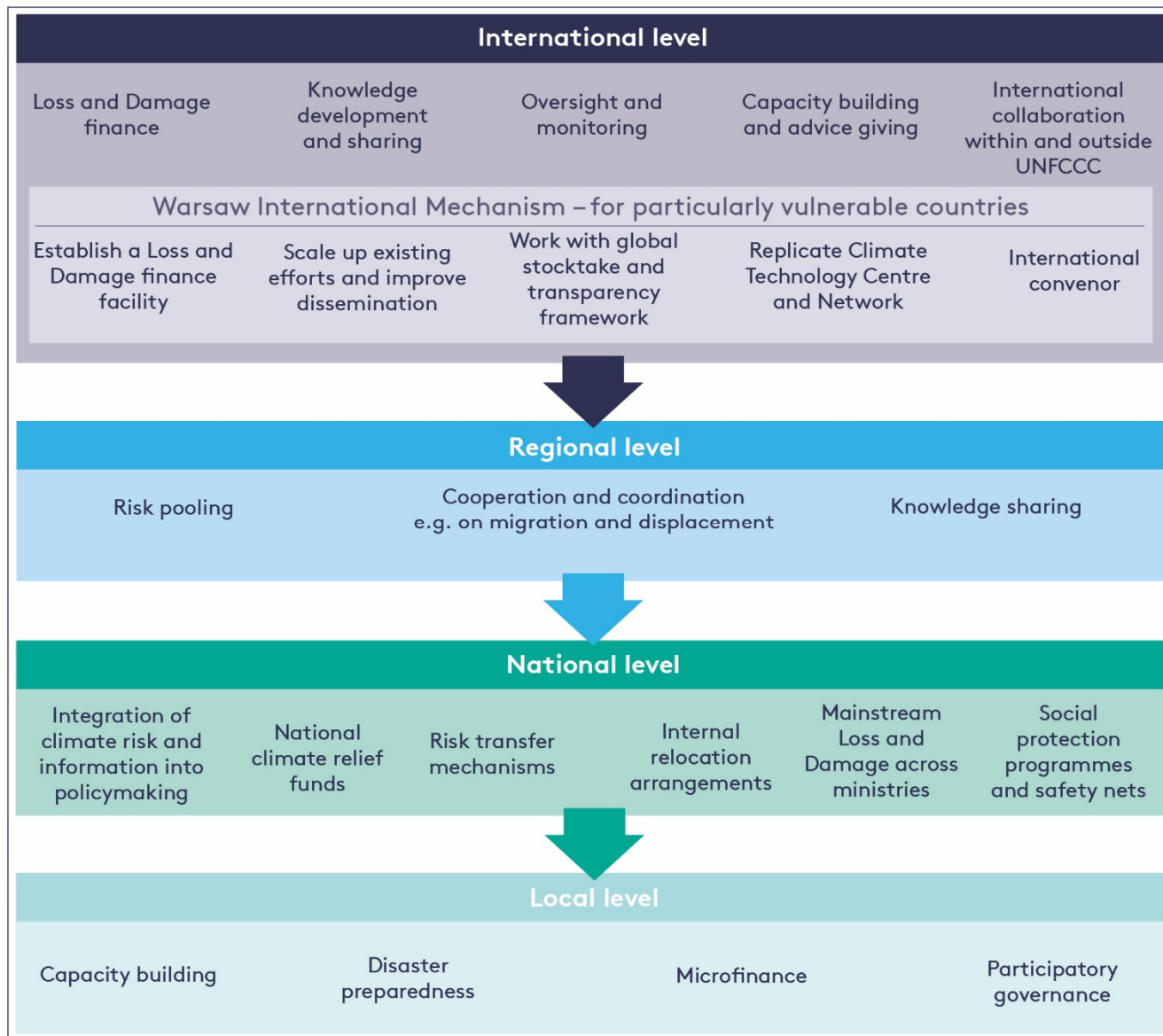
**Table 1. Summary of activities of the WIM, 2016–2019**

Functions <sup>1</sup>	Activities	Work plan <sup>2</sup>	Gaps
Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts	Several technical expert groups and a roster of experts  Case studies, technical reports, tutorials and publications, database of organisations, key messages, compendium of risk management approaches  Survey and assessment of needs and current knowledge	(a), (b), (c), (d), (e) and cross-cutting	Disseminating information to users in developing countries  Tailoring information to country-specific needs
Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders	Joint workshops and side events  Collaborate with UNFCCC constituted bodies (e.g. Standing Committee on Finance)  Task force on displacement  Engaged external stakeholders and experts	(a), (b), (d), (e) and cross-cutting	Collaboration with other international bodies  Regional dialogue and coordination
Enhancing action and support, including finance, technology and capacity building, to address loss and damage associated with the adverse effects of climate change	Synthesis papers and draft inputs on approaches  Expert dialogue and engagement with Paris Committee on Capacity Building  Fiji Clearing House on Risk Transfer	(e)	Facilitating the actual transfer of finance, technology and capacity-building  Identifying ways to support approaches other than risk transfer mechanisms
Sources: 1. UNFCCC Decision 2/CP.19, para 5. 2. UNFCCC (2017) Annex. Letters correspond with list on p7 above.			

## 5. Recommendations for strengthening the role of the WIM

Figure 2 presents examples of the types of actions that different levels of government can take to prepare for and address Loss and Damage effectively and fairly, to protect vulnerable communities. The WIM has an important role to play at the international level to support particularly vulnerable developing countries to be able to undertake the activities needed at the regional, national and local level to protect their populations.

Figure 2. Example actions on Loss and Damage at different levels



Source: Authors

Based on the gaps identified in Table 1 and the literature, we set out the following five recommendations for how the WIM could adequately fulfil its mandated functions. As outlined above, Loss and Damage should be mainstreamed across all levels of governance and the WIM has an important role to play in providing facilitating information, cooperation and support that can underpin activities at all levels.

### Recommendation 1. Establish a Loss and Damage finance facility

Under the decision establishing the WIM, developed countries are requested “to provide developing country Parties with finance, technology and capacity-building, in accordance with decision 1/CP.16 [the

Cancun Agreements] and any other relevant decisions of the Conference of the Parties” (UNFCCC Decision 2/CP.19 para 14). The WIM has already established a clearinghouse for risk transfer, and it is important that the WIM ensures that risk transfers are accessible (Linnerooth-Bayer et al., 2018).

However, the WIM also needs to broaden its focus beyond insurance to consider other avenues of finance, establishing a Loss and Damage finance facility that addresses needs currently not met by disaster risk or adaptation finance, in both the context of impacts from slow-onset events and existential threats such as loss of species, land and livelihoods, or recovery from droughts. A Loss and Damage finance facility is needed to help rebuild and recover from losses and damages caused while supporting longer-term systems change to prevent further losses and damages from occurring. Finance can be directed towards social protection schemes, livelihood diversification, relocation of communities and industries if necessary, and support for displaced persons (Gewirtzman et al., 2018).

The finance facility should take a central role in designing and administrating these different strands of Loss and Damage finance, as well as monitoring and facilitating delivery of and use of funds to ensure that they are aimed at poor, vulnerable and hard-to-reach communities. The facility could be set up in partnership with an existing fund such as the Green Climate Fund, but with the mandate to address the gaps in current climate finance both through directing funds particularly towards addressing instances of losses and damages, and working with mitigation and adaptation finance to build in contingencies, safety nets and/or capacity-building to ensure these projects are taking Loss and Damage considerations into account.

To the extent that such tools can be used as both *ex-ante* and *ex-post* measures, this calls for more cooperation between climate adaptation, Loss and Damage and development-related funds and institutions. It also requires better understanding of how these mechanisms can be utilised to build resilience both before and after losses and damages occur, while also ensuring that finance for losses and damages is additional and complementary to, but not replacing existing development and aid flows.

## **Recommendation 2. Act as an international overseer, monitoring and reporting on progress**

Under its first two functions of “enhancing knowledge and understanding” and “strengthening dialogue, coordination, coherence and synergies among relevant stakeholders”, the WIM should perform a monitoring role with the responsibility to report not only on progress on addressing losses and damages, but also on how international progress on mitigation and adaptation goals is reducing losses and damages or stalling progress on doing so (thereby contributing to an increase in losses and damages).

An important way in which the WIM can do this is to collect and synthesise information to feed into the ‘global stocktake’, a five-yearly stocktake of global efforts to achieve the Paris Agreement. The global stocktake is able to take into account efforts to avert, minimise and address losses and damages, and the WIM is invited to prepare synthesis reports on efforts to enhance understanding, action and support on Loss and Damage (UNFCCC decision 19/CMA.1). The WIM should take this role very seriously and ensure sufficient resources are allocated to assessing progress on both reducing and addressing losses and damages, including highlighting where future *ex-ante* and *ex-post* action and finance should be directed and scaled up.

Outside of the global stocktake, the WIM should be empowered to produce standalone reports that could take the form of a ‘loss and damage gap report’. This would be similar to, and build from, gap reports on adaptation and mitigation and should identify: where greater support for losses and damages is needed, the extent to which losses and damages could have been prevented through improved mitigation and adaptation, where policies are failing to adequately respond to losses and damages, and where international collaboration and coordination across thematic areas, including mitigation, adaptation, sustainable development and disaster risk reduction, could be improved.

To undertake this monitoring and reporting role, the WIM should be enabled to seek information from the UNFCCC’s transparency mechanism (noting that reporting of actions to address Loss and Damage under the framework is voluntary [Puig, 2019]), from other inputs into the global stocktake, and from scientific bodies including the IPCC. The WIM should also be able to hire its own experts to conduct analysis into climate action relating to Loss and Damage at the national and international levels.

### **Recommendation 3. Facilitate knowledge development and sharing**

As climate change intensifies, many countries and regions will face increased climate risk that is outside of their historic experience. Improving understanding of the costs and impacts of past climate events in other countries as well as understanding what measures have worked best to deliver effective and efficient recovery efforts is vital to effective policy development and resource allocation.

Many poorer countries and communities would benefit significantly from improved data collection, analysis and awareness (of both weather and climate information, as well as localised impacts data), and international knowledge sharing, particularly if designed to assist them in anticipating where they are likely to face future climate impacts, where there are possibilities to reduce their losses and damages through adaptation, where to set aside funds or purchase risk transfer products, and, as a last resort, when to plan the relocation of citizens and communities.

The WIM has conducted several activities aimed at generating greater information on approaches to losses and damages, including establishing the Fiji Clearing House on Risk Transfer, several technical papers and synthesis papers and establishment of technical expert groups on slow onset events, non-economic losses and comprehensive risk management (see Table 1 above). However, little action has been taken to ensure both accessibility of this information and dissemination of the information to the relevant people at a national level. The WIM should ensure a greater focus on the accessibility and dissemination of information on climate risk and impacts, and approaches to address losses and damages, to the relevant people within national governments (Jones, 2017).

One way to achieve this may be through establishing regional centres and focal points, using a model such as the Sub-Regional Resource Facilities of the United Nations Development Programme (UNDP), which, despite being under-resourced, played a key role in documenting best practice, establishing thematic groups and networks, referring experts, and creating links between institutions at the regional level (Weidner and Rahman, 2000).

With respect to information on disasters and climate impacts, several databases already exist in the disaster risk reduction sphere, including DesInventar, EM-DAT and the Sendai Framework Monitor.<sup>2</sup> These databases rely on countries to input their own disaster impact data, which means that the data available is not complete enough to inform decision-making in many developing countries (Osuteye et al., 2017). However, the Sendai Framework Monitor has systems in place to assist with capacity-building and information collection at the national level, so rather than duplicate efforts the WIM should work with the UN Office for Disaster Risk Reduction (UNDRR) to enhance both the DesInventar and Sendai Framework Monitor. This collaborative work should include:

- Capacity-building for countries to strengthen national-level monitoring and the ability to analyse and use the data available and expanding the databases to include slow-onset events.
- Improving access to data on discrete events, to enable understanding of the losses and damages caused by a particular extreme or slow-onset event.
- Linking reporting under the UNFCCC transparency framework and the Sendai Framework Monitor where relevant, to improve data collection and reduce reporting burdens on countries.
- Ensuring that climate and disaster information is directed to the national-level ministries and agencies that need it.

### **Recommendation 4. Provide policy and technical advice**

The WIM should be empowered to provide concrete advice and technical support to national governments in developing countries. It could do so through performing a similar function to the Climate Technology Centre and Network (CTCN), which was established under the UNFCCC's Technology Mechanism (Stabinsky, in preparation). The CTCN delivers free-of-charge technical advice to developing country governments on technology needs and barriers, suggested technologies, piloting and deployment of technologies, and policy and planning for technology rollout. It also provides training and

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<sup>2</sup> See [www.desinventar.net](http://www.desinventar.net), [www.emdat.be](http://www.emdat.be) and <http://sendaimonitor.unisdr.org> respectively.



capacity-building, including through regional forums, specific support to the least developed countries, and brings together technical experts and policymakers as part of its international network (CTCN, n.d.).

The WIM has already established a roster of experts to contribute to the work plan of the Executive Committee through the technical expert groups (APN, 2019; UNFCCC, n.d., a), but these experts do not provide advice directly to countries. It has also established an interactive online community called RISK TALK,<sup>3</sup> which allows countries to ask questions about risk transfer mechanisms. RISK TALK operates in a similar way to a help page: it first displays generic answers to questions based on similar questions asked by others in the past; if this answer is not sufficient, a country is only then directed to a pool of experts, so it is unclear how tailored and context-specific the advice is likely to be. It also only provides information on questions regarding risk transfer.

The WIM could build on these existing activities to establish a mechanism similar to the CTCN, for example a 'Loss and Damage Centre and Network (LDCN)' (Stabinsky, in preparation). Through such a network, the WIM could support a broader pool of experts to provide in-kind support through free technical expertise to countries on appropriate finance mechanisms and policy frameworks to address Loss and Damage based on their particular context. The experts could be drawn from sectors including finance, disaster recovery, migration and displacement, and climate science. Experts would work with public servants in developing countries to co-develop approaches to addressing Loss and Damage based on the country context.

### **Recommendation 5. Be an international convener**

Another gap in the WIM's activities is the limited coordination with entities outside of the UNFCCC (as Table 1 and our Appendix show). The WIM through its Executive Committee should play a greater role in convening meetings of international bodies and experts relevant to Loss and Damage, such as the UN Refugee Agency (UNHCR), the UN Office for Disaster Risk Reduction (UNDRR), the Sendai Framework for Disaster Risk Reduction, the UNFCCC Adaptation Committee, the 2030 Sustainable Development Agenda, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Convention on Biological Diversity and other international bodies and funds such as the Green Climate Fund, Adaptation Fund, Least Developed Countries Fund and others. This could include joint work and knowledge sharing, including efforts to minimise overlap and duplication of work and to ensure coherence with disaster risk reduction frameworks (Stabinsky and Hoffmaister, 2015).

An important example of where this is starting to happen is in the case of climate-induced displacement of people through the task force on displacement. The task force has strong links with the International Organization for Migration, which leads on two of the pillars of the task force's work plan (Ionesco et al., 2018). This could serve to be a useful model for other areas of the Executive Committee's work plan.

The WIM should also convene national governments where possible to facilitate regional agreement on the settlement of migrants. For example, the Organisation of Eastern Caribbean States (OECS) signed a treaty in 2010 to establish an economic union that included free movement of persons and plans for harmonising social protection schemes, opening up opportunities for disadvantaged people to find employment in less vulnerable locations (Williams et al., 2013; OECS, 2016). Although the OECS treaty is not explicitly a climate-related agreement, and despite the fact that there have been some challenges in its implementation, agreements of this kind could be of significant benefit to persons who have been displaced due to climate impacts and are in need of immediate support and longer-term livelihood opportunities (Francis, 2019).

The WIM could also assist in convening discussions among regional groups and groups of sub-national actors to help replicate risk pooling initiatives, as well as to reform these regional efforts in relation to longer-term climate impacts, including slow-onset and non-economic losses. Existing pools like the Caribbean Catastrophe Risk Insurance Facility, Africa Risk Capacity and the Pacific Catastrophe Risk Assessment and Financing Initiative are designed to fulfil a role in diversifying risk, and to provide support to poorer countries through arrangements with international donors.

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<sup>3</sup> 'How to use RISK TALK': <http://unfccc-clearinghouse.org/find-solution>



## 6. Conclusion

Countries across the world are already facing losses and damages from climate change and these impacts will continue to escalate. The WIM has a vital role to play in ensuring that Loss and Damage is not sidelined but recognised as an important part of all climate, development and disaster-risk reduction programmes. Its Executive Committee, supported by the Conference of Parties to the UNFCCC as needed, should develop the processes and mechanisms set out in the five recommendations above to ensure finance, support and information are directed to where they are needed and that all relevant stakeholders are engaged in designing and implementing approaches to address losses and damages.

This action needs to happen alongside, and facilitate, mainstreaming of Loss and Damage considerations into decision-making at all levels of government. Urgent, far-reaching and holistic action on Loss and Damage is a matter of fairness for vulnerable countries, communities and households, and needs to be an integral component of policy and action tackling climate change.

## References

- APN (2019) *Call for Experts: Warsaw International Mechanism for Loss and Damage*. Asia Pacific Network for Global Change Research. <https://www.apn-gcr.org/2018/06/07/call-for-experts-warsaw-international-mechanism-for-loss-and-damage/>
- Baarsch F, Lissner T, Schleussner C F, Granadillos J, de Bruin K, Perrette M, Schaeffer M, Hare B (2015) *Impacts of low aggregate INDCs ambition*. Climate Analytics, research commissioned by Oxfam. [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/rr-impacts-low-aggregate-indcs-ambition-251115-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/rr-impacts-low-aggregate-indcs-ambition-251115-en.pdf)
- Brown O (2008) *Migration and climate change* (Report No. 31) IOM Migration Research Series. International Organization for Migration, Switzerland.
- Bryant M (2019) Devastation “still unfolding” in Bahamas as Dorian death toll rises to at least 50. *The Guardian*, 10 September. <https://www.theguardian.com/world/2019/sep/10/hurricane-dorian-bahamas-death-toll-devastation-latest>
- Calliari E, Surminski S, Myslak J (2018) The Politics of (and Behind) the UNFCCC’s Loss and Damage Mechanism, in: Mechler et al. (eds.) *Loss and Damage from Climate Change: Concepts, Methods and Policy Options*. Switzerland: Springer: 155-178.
- Climate Technology Centre and Network (n.d.) Home page: <https://www.ctc-n.org/>
- Dow K, Berkhout F, Preston BL (2013) Limits to adaptation to climate change: a risk approach. *Current Opinions in Environmental Sustainability* 5: 384–391. <https://doi.org/10.1016/j.cosust.2013.07.005>
- Dow K, Berkhout F, Preston B L, Klein RJT, Midgley G, Shaw MR (2013) Limits to adaptation. *Nature Climate Change* 3: 305–307. <https://doi.org/10.1038/nclimate1847>
- Fankhauser S, Dietz S, Gradwell P (2014) *Non-economic losses in the context of the UNFCCC work programme on loss and damage* (Policy Paper). Centre for Climate Change Economics and Policy (CCCEP) and Grantham Research Institute on Climate Change and the Environment. <http://www.lse.ac.uk/GranthamInstitute/publication/non-economic-losses-in-the-context-of-the-unfccc-work-programme-on-loss-and-damage/>
- Fitzpatrick L (2019) Health and Human Consequences Of Hurricane Dorian: Voices From The Ground. *Forbes*, 24 September. <https://www.forbes.com/sites/lisafitzpatrick/2019/09/24/health-and-human-consequences-of-hurricane-dorian-voices-from-the-ground/#5214dd5af83c>
- Francis A (2019) *Free movement agreements and climate induced migration: A Caribbean Case Study*. Sabin Center for Climate Change Law, Columbia Law School.
- Gewirtzman J, Natson S, Richards J A, Hoffmeister V, Durand A et al. (2018) Financing loss and damage: reviewing options under the Warsaw International Mechanism. *Climate Policy* 18: 1076–1086. <https://doi.org/10.1080/14693062.2018.1450724>
- Goering L (2017) Climate migration muddied by legal confusion in Pacific islands. *Reuters*, 9 November. <https://www.reuters.com/article/us-climatechange-pacific-migration/climate-migration-muddied-by-legal-confusion-in-pacific-islands-idUSKBN1D9285>
- Hallegatte S, Rentschler J, Rozenberg J (2019) *Lifelines: The Resilient Infrastructure Opportunity*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/31805>
- Handmer J, Nalau J (2018) Understanding Loss and Damage in Pacific Small Island Developing States, in: Mechler et al. (eds.) *Loss and Damage from Climate Change, op cit*: 365-382.
- Haque M, Mousumi P, Sultana S, Huq S (2018) Towards establishing a national mechanism to address losses and damages: A case study from Bangladesh, in: Mechler et al. (eds.) *Loss and Damage from Climate Change, op cit*: 451-474.
- International Centre for Climate Change and Development (2018) Introducing a National Mechanism on Loss and Damage in Bangladesh. Web page. <http://www.icccad.net/event/introducing-a-national-mechanism-on-loss-and-damage-in-bangladesh/>
- International Medical Corps (2019) *Hurricane Dorian Situation Report #12*. <https://reliefweb.int/report/bahamas/hurricane-dorian-situation-report-12-september-30-2019>
- Ionesco D, Chazalnoel M T, Sinziana I (2018) *Implementation of the Workplan of the Task Force on Displacement under the Warsaw International Mechanism for Loss and Damage, United Nations Framework Convention on Climate Change (UNFCCC)*. International Organization for Migration. <https://unfccc.int/process-and->

meetings/bodies/constituted-bodies/executive-committee-of-the-warsaw-international-mechanism-for-loss-and-damage-wim-excom/task-force-on-displacement/implementation-updates-task-force-on-displacement

- Intergovernmental Panel on Climate Change [IPCC] (2018) *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Geneva: World Meteorological Organization. <https://www.ipcc.ch/sr15/>
- Jones L, Champalle C, Chesterman S, Cramer L, Crane TA (2017) Constraining and enabling factors to using long-term climate information in decision-making. *Climate Policy* 17: 551–572. <https://doi.org/10.1080/14693062.2016.1191008>
- Kreienkamp J, Vanhala L (2017) *Climate change loss and damage (Policy Brief)*. Global Governance Institute. <https://www.ucl.ac.uk/global-governance/news/2017/mar/climate-change-loss-and-damage>
- Linnerooth-Bayer J, Surminski S, Bouwer L M, Noy I, Mechler R (2018) Insurance as a response to loss and damage? In: Mechler et al. (eds.) *Loss and Damage from Climate Change, op cit*: 483–512.
- McKinnon M (ed.) (2012) *Climate vulnerability monitor 2* (2nd ed). DARA and the Climate Vulnerable Forum. <http://daraint.org/climate-vulnerabilitymonitor/climate-vulnerability-monitor-2012/report/>
- Mechler R, Bouwer LM, Schinko T, Surminski S, Linnerooth-Bayer J. (eds.) (2018) *Loss and Damage from Climate Change: Concepts, Methods and Policy Options*. Switzerland: Springer.
- Morrison C, Pickering C (2013) Limits to Climate Change Adaptation: Case Study of the Australian Alps. *Geographical Research* 51: 11–25. <https://doi.org/10.1111/j.1745-5871.2012.00758.x>
- Myers N (2005) *Environmental Refugees: An Emergent Security Issue*. 13th Economic Forum, Prague, 23–27 May. <https://www.osce.org/eea/14851?download=true>
- Organisation of Eastern Caribbean States [OECS] (2016) Home page: <https://oecs.org/en/>
- Osuteye E, Johnson C, Brown D (2017) The data gap: An analysis of data availability on disaster losses in sub-Saharan African cities. *International Journal of Disaster Risk Reduction* 26: 24–33. <https://doi.org/10.1016/j.ijdr.2017.09.026>
- Preston C J (2017). Challenges and opportunities for understanding non-economic loss and damage. *Ethics, Policy & Environment* 20: 143–155. <https://doi.org/10.1080/21550085.2017.1342962>
- Puig D, Calliari E, Hossain M F, Bakhtiari F, Huq S (2019) *Loss and Damage in the Paris Agreement’s Transparency Framework*. Copenhagen, London and Dhaka: Technical University of Denmark, University College London and Independent University Bangladesh.
- Roberts E, Andrei S, Huq S, Flint L (2015) Resilience synergies in the post-2015 development agenda. *Nature Climate Change* 5: 1024–1025. <https://doi.org/10.1038/nclimate2776>
- Schäfer L, Warner K, Kreft S (2018) Exploring and managing adaptation frontiers with climate risk insurance. In: Mechler et al. (eds.) *Loss and Damage from Climate Change, op cit*: 317–342.
- Serdeczny O (2018) Non-economic Loss and Damage and the Warsaw International Mechanism. In: Mechler et al. (eds.) *Loss and Damage from Climate Change, op cit*: 205–220.
- Stabinsky D (in preparation) *An assessment of needs, finance, and institutional arrangements for addressing loss and damage in African countries: taking stock and looking forward*.
- Stabinsky D, Hoffmaister J P (2015) Establishing institutional arrangements on loss and damage under the UNFCCC: the Warsaw International Mechanism for Loss and Damage. *International Journal of Global Warming* 8(2): 295–318. <https://doi.org/10.1504/IJGW.2015.071967>
- Stapleton S O, Nadin R, Watson C, Kellett J (2017) *Climate change, migration and displacement: the need for a risk-informed and coherent approach*. London: Overseas Development Institute and United Nations Development Programme. <https://www.odi.org/publications/10977-climate-change-migration-and-displacement-need-risk-informed-and-coherent-approach>
- Stern N H (ed.) (2006) *The economics of climate change: The Stern review*. Cambridge: Cambridge University Press.
- Surminski S (2016) Loss and damage of climate change – from managing risks to the politics of compensation. *The Political Anthropologist*, 8 November. <http://www.politicalanthropologist.com/2016/11/08/loss-damage-climate-change-managing-risks-politics-compensation/>
- Surminski S, Tanner T (eds.) (2016) *Realising the “triple dividend of resilience”: a new business case for disaster risk management, climate risk management, policy and governance*. Cham, Switzerland: Springer.

- Tanner T, Surminski S, Wilkinson E, Reid R, Rentschler JE, Rajput S (2015) *The Triple Dividend of Resilience: Realising development goals through the multiple benefits of disaster risk management*. Global Facility for Disaster Reduction and Recovery (GFDRR) at the World Bank and Overseas Development Institute (ODI), London. [https://www.gfdr.org/sites/default/files/publication/The\\_Triple\\_Dividend\\_of\\_Resilience.pdf](https://www.gfdr.org/sites/default/files/publication/The_Triple_Dividend_of_Resilience.pdf)
- Tenzing J (in review) *Integrating social protection and climate change adaptation: A review*.
- Thomas A, Benjamin L (2017) Policies and mechanisms to address climate-induced migration and displacement in Pacific and Caribbean small island developing states. *International Journal of Climate Change Strategies and Management*. <https://doi.org/10.1108/IJCCSM-03-2017-0055>
- Thomas A, Benjamin L (2018) Management of loss and damage in small island developing states: implications for a 1.5 °C or warmer world. *Regional Environmental Change* 18: 2369–2378. <https://doi.org/10.1007/s10113-017-1184-7>
- Trenberth KE (2018) Climate change caused by human activities is happening and it already has major consequences. *Journal of Energy and Natural Resource Law* 36: 463–481. <https://doi.org/10.1080/02646811.2018.1450895>
- United Nations Framework Convention on Climate Change [UNFCCC] (2012) *A literature review on the topics in the context of thematic area 2 of the work programme on loss and damage: a range of approaches to address loss and damage associated with the adverse effects of climate change*. UN Doc FCCC/SBI/2012/INF.14.
- UNFCCC (2012) Decision 3/CP.18 in: *Report of the conference of the Parties on its eighteenth session, held in Doha from 26 to 8 December 2012, Addendum*. UN Doc FCCC/CP/2012/8/Add.1.
- UNFCCC (2013) Decision 2/CP.19 in: *Report of the conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013, Addendum*. UN Doc FCCC/CP/2013/10/Add.1.
- UNFCCC (2015) *Paris Agreement*. [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)
- UNFCCC (2017) *Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts*. UN Doc FCCC/SB/2017.1. Annex.
- UNFCCC (2018) Decision 19/CMA.1 in: *Report of the conference of the Parties serving as the meeting of the Parties to the Paris Agreement on the third part of its first session, held in Katowice from 2 to 25 December 2018. Addendum*. UN Doc FCCC/PA/CMA/2018/3/Add.2.
- UNFCCC (n.d., a) Roster of Experts of the Warsaw International Mechanism. Web page. <http://unfccc-clearinghouse.org/form/expert-roster>
- UNFCCC (n.d., b) Suva expert dialogue. Web page. <https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage-ld/workshops-meetings/suva-expert-dialogue>
- UNFCCC (n.d., c) Task Force on Displacement. Web page. <https://unfccc.int/wim-excom/sub-groups/TFD#eq-1>
- United Nations Office for Disaster Risk Reduction [UNDRR] (2019) *Global Assessment Report on Disaster Risk Reduction*. Geneva, Switzerland: UNDRR
- van der Geest K, Burkett M, Fitzpatrick J, Stege M, Wheeler B (2019) Marshallese perspectives on migration in the context of climate change. *Migration, Environment and Climate Change: Policy Brief Series* 5(1). <https://collections.unu.edu/view/UNU:7421>
- van der Geest K, de Sherbinin A, Kienberger S, Zommers Z, Sitati A et al. (2018) The impacts of climate change on ecosystem services and resulting losses and damages to people and society. In: Mechler et al. (eds.) *Loss and Damage from Climate Change*, op cit: 221–236.
- Vanhala L, Hestbaek C (2016) Framing Climate Change Loss and Damage in UNFCCC Negotiations. *Global Environmental Politics* 16: 111–129. [https://doi.org/10.1162/GLEP\\_a\\_00379](https://doi.org/10.1162/GLEP_a_00379)
- Vaughan A, Mechler R, Hagon K, Norton R, Szönyi M et al. (2019) *Saving Lives and Livelihoods: The urgent need to invest in flood resilience*. Zurich Flood Resilience Alliance policy brief, May. <https://www.mercycorps.org/sites/default/files/979-PA-ZFRP-PB-LivesLivelihoods-V6b-WEB.pdf>
- Weidner D, Rahman MS (2000) *Review of the SURF System: Way Forward for Knowledge Management in UNDP*. Report Prepared for Evaluation Office, UNDP New York. <http://web.undp.org/evaluation/evaluations/documents/SURF-evaluation-MainReport.pdf>
- Williams A, Cheston T, Coudouel A, Subran L (2013) Tailoring Social Protection to Small Island Developing States: Lessons Learned from the Caribbean. *Social Protection & Labor Discussion Paper no. 1306*. <https://www.gfdr.org/sites/default/files/documents/Tailoring%20Social%20Protection.pdf>

# Appendix

## Activities of the Warsaw International Mechanism for Loss and Damage (WIM) matched against the WIM's mandated functions and work plan

In the table that starts on p18 below we list all of the activities identified in the annual reports of the Executive Committee of the Warsaw International Mechanism for Loss and Damage, starting with the 2016 report,<sup>4</sup> and match these activities against the mandated functions of the WIM and the work plan of the Executive Committee (ExCom) of the WIM. These reports can be found at:

<https://unfccc.int/process-and-meetings/bodies/constituted-bodies/executive-committee-of-the-warsaw-international-mechanism-for-loss-and-damage-wim-excom/reports-of-the-executive-committee>

Activities that occurred in 2019 were gathered from the UNFCCC loss and damage web pages at: <https://unfccc.int/topics/adaptation-and-resilience/workstreams/approaches-to-address-loss-and-damage-associated-with-climate-change-impacts-in-developing-countries>

Although the five year rolling work plan of the ExCom was only formalised in 2017, in the table we have included the relevant work streams of the work plan next to activities that occurred before this date to provide an indication of the breadth of the work undertaken by the ExCom throughout its existence.

**The work streams referred to under 'Work plan' in column four of the table are as follows:**

- a) Enhanced cooperation and facilitation in relation to slow onset events
- b) Enhanced cooperation and facilitation in relation to non-economic losses
- c) Enhanced cooperation and facilitation in relation to comprehensive risk management approaches (including assessment, reduction, transfer and retention) to address and build long-term resilience of countries, vulnerable populations and communities to loss and damage, including in relation to extreme and slow onset events
- d) Enhanced cooperation and facilitation in relation to human mobility, including migration, displacement and planned relocation
- e) Enhanced cooperation and facilitation in relation to action and support, including finance, technology and capacity-building, to address loss and damage associated with the adverse effects of climate change

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<sup>4</sup> 2016 was the first year that the Executive Committee of the WIM was fully operational; the WIM began to implement its initial two-year work plan at the end of 2015.

Functions of the WIM (UNFCCC Decision 1/CP.19, para 5)	Sub-functions of the WIM (UNFCCC Decision 1/CP.19, para 5)	Activities (Reported in ExCom annual reports and on UNFCCC website)	Work plan of the WIM ExCom (ExCom 2017, Annex )
Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts	(i) Action to address gaps in the understanding of and expertise in approaches to address loss and damage associated with the adverse effects of climate change	Expert dialogue on technologies for averting, minimising and addressing loss and damage in coastal zones (2019)	(e) Enhanced cooperation and facilitation in relation to action and support, including finance, technology and capacity-building
		Established technical expert groups on slow onset events, non-economic losses and comprehensive risk management (2018)	(a) Enhanced cooperation and facilitation in relation to slow onset events (b) Enhanced cooperation and facilitation in relation to non-economic losses (c) Enhanced cooperation and facilitation in relation to comprehensive risk management approaches
		Established a roster of experts (2018)	Cross-cutting
		Assessment of current state of knowledge on slow onset events (2017)	(a)
		Experts engaged in intersessional work and at ExCom meetings (2016 and 2017)	Cross-cutting
		Online database with information on more than 163 organisations working on slow onset events (2016)	(a)
		Process to improve state of knowledge on slow onset events and identify follow-up actions (2016)	(a)
		Established expert group on comprehensive risk management and transformational approaches (2016)	(c)
		Established expert group on non-economic losses and identified issues for deliberation (2016)	(b)
		Expert side event during negotiations on non-economic losses, followed by summary note and photo campaign (2016)	(b)
(ii) Collection, sharing, management and use of relevant data and	Surveys of developing countries on climate risk needs and approaches (2017)	Cross-cutting	

	information, including gender-disaggregated data		
	(iii) Provision of overviews of best practices, challenges, experiences and lessons learned in undertaking approaches to address loss and damage	Strengthened knowledge centre of Fiji Clearing House for Risk transfer with online case studies, tutorials and publications (2018)	(e)
		Made information available on existing policies at national and international level, institutional frameworks and state of knowledge on displacement (2018)	(d) Enhanced cooperation in relation to human mobility
		Established compendium on comprehensive risk management approaches (2017)	(c)
		Information paper on existing financial instruments (2016)	(e)
		Initial synthesis on migration, displacement and human mobility (2016)	(d)
		Initial compendium of comprehensive risk management approaches (2016)	(c)
		Developed communication strategy to enhance outreach of ExCom (2017)	Cross-cutting
(b) Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders	(i) Providing leadership and coordination and, as and where appropriate, oversight under the Convention, on the assessment and implementation of approaches to address loss and damage associated with the impacts of climate change from extreme events and slow onset events associated with the adverse effects of climate change	Engaged in the first UNFCCC gender dialogue (2018)	Cross-cutting
		ExCom and Technology Executive Committee (TEC) held joint meeting to scope policy brief on technologies for coastal zones (2018)	(e)
		Collaborated with constituted bodies including the Standing Committee on Finance (SCF) and TEC (2017)	Cross-cutting
		Established a dialogue between the Adaptation Committee, the Consultative Group of Experts, the Least Developed Countries Expert Group, the SCF and the TEC (2016)	Cross-cutting
		Promoted slow onset events as topic for research agenda to Subsidiary Body for Scientific and	(a)



		Technological Advice (SBSTA) Chair and SBSTA Research Dialogue (2016)			
		Engaged with Standing Committee on Finance regarding financial instruments for Loss and Damage (2016)	(e)		
		Engaged with TEC on technologies to reduce or avert losses and damages (2016)	(e)		
		Identified entry points for engagement with constituted bodies, expert groups and work programmes under the UNFCCC (2016)	Cross-cutting		
	(ii) Fostering dialogue, coordination, coherence and synergies among all relevant stakeholders, institutions, bodies, processes and initiatives outside the Convention, with a view to promoting cooperation and collaboration across relevant work and activities at all levels	Held joint workshop with International Organization for Migration and Platform on Disaster Displacement to develop recommendations for integrated approaches to addressing climate displacement (2018)	(d)		
		Established task force on displacement to develop recommendations regarding displacement due to climate change (2017)	(d)		
		Collected input from external stakeholders for clearinghouse for risk transfer (2017)	(e)		
		Technical meeting with experts and representatives of international and UN organisations (2016)	Cross-cutting		
		Enhancing action and support, including finance, technology and capacity building, to address loss and damage associated with the adverse effects of climate change	(i) Providing technical support and guidance on approaches to address loss and damage associated with climate change impacts, including extreme events and slow onset events	Synthesis paper of submissions on actions that require finance to address Loss and Damage (2018)	(e)
				Suva expert dialogue and subsequent technical paper on sources of financial support and ways to access it (2018)	(e)
Engaged with Paris Committee on Capacity Building, considering joint action to address capacity gaps (2018)	(e)				
Launched Fiji Clearing House for Risk Transfer as repository of knowledge on insurance and risk transfer (2018)	(e)				

	(ii) Providing information and recommendations for consideration by the Conference of the Parties when providing guidance relevant to reducing the risks of loss and damage and, where necessary, addressing loss and damage, including to the operating entities of the financial mechanism of the Convention	Developed key messages on Loss and Damage finance instruments (2016)	(e)
		Drafted inputs for how approaches to Loss and Damage can be designed and implemented (2016)	(e)
	(iii) Facilitating the mobilisation and securing of expertise, and enhancement of support, including finance, technology and capacity-building, to strengthen existing approaches and, where necessary, facilitate the development and implementation of additional approaches to address loss and damage associated with climate change impacts, including extreme weather events and slow onset events	Established RISK TALK under Fiji clearinghouse for risk transfer (2017)	(e)