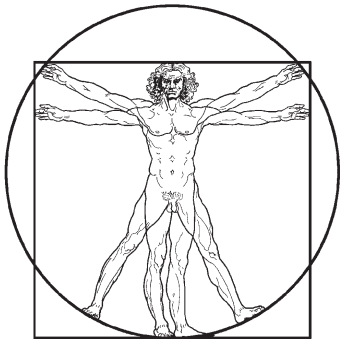

Loss and damage due to climate change

An overview of the UNFCCC negotiations

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Partners

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INTRODUCTION

The number of disasters in the first seven years of the 21st century has doubled in comparison to 1987–1997, according to figures from the international disaster database of the Centre for Research on the Epidemiology of Disasters. This rise is caused almost entirely by an increase in weather-related disasters. Developing countries, where over 95 per cent of deaths from natural disasters in the past 25 years have occurred, have borne the brunt of this increase. According to the global reinsurance company Munich Re, direct economic losses (averaging US$100 billion per annum in the last decade) in relation to national income were more than double in low-income countries, compared to high-income countries. On average, 250 million people are affected annually – up by more than 30 per cent in just a decade.

In response to this increase, it has become increasingly important for the international community to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events.

This is especially so since empirical data suggest that the growing frequency and intensity of extreme weather events is adding to the vulnerability of poor communities in developing countries, particularly in Least Developed Countries (LDCs), Small Island Developing States (SIDS) and Africa. As climate change drives an increase in the frequency and intensity of natural hazards, the challenges faced by food-insecure communities struggling to improve their lives and livelihoods will also increase. The impacts of loss and damage due to weather extremes and longer-term climatological shifts can set back development and reinforce the cycle of poverty in developing countries. Many highly exposed developing countries lack the financial resources and

Box 1: Key points from the 2011 IPCC Special Report on Extreme Events

- Even without taking climate change into account, disaster risk will continue to increase in many countries as more people and assets are exposed to weather extremes.
- Evidence suggests that climate change has changed the magnitude and frequency of some extreme weather and climate events ('climate extremes') in some regions already.
- Climate change will have significant impacts on the severity and magnitude of climate extremes in the future. For the coming two or three decades, the expected increase in climate extremes will probably be relatively small compared to the normal year-to-year variations in such extremes. However, as climate change becomes more dramatic, its effect on a range of climate extremes will become increasingly important and will play a more significant role in disaster impacts.
- There is better information on what we expect in terms of changes in extremes in various regions (rather than just globally).
- High levels of vulnerability, combined with more severe and frequent weather and climate extremes, may result in some places, such as atolls, being increasingly difficult places in which to live and work.
- A new balance needs to be struck between measures to reduce risk, transfer risk (e.g. through insurance) and effectively prepare for and manage disaster impact in a changing climate. This balance will require a stronger emphasis on anticipation and risk reduction.
- In this context, existing risk management measures need to be improved as many countries are poorly adapted to current extremes and risks, let alone those projected for the future.
- Countries' capacity to meet the challenges of observed and projected trends in disaster risk is determined by the effectiveness of their national risk management system.
- In cases where vulnerability and exposure are high, capacity is low, and weather and climate extremes are changing, more fundamental adjustments may be required to avoid the worst disaster losses.
- Any delay in greenhouse gas mitigation is likely to lead to more severe and frequent climate extremes.

Source: Mitchell, T/ Van Aalst, M. 2011

mechanisms to fully recover from disaster shocks, while external investors are becoming increasingly wary of the risk of catastrophic infrastructure losses.

The Intergovernmental Panel on Climate Change (IPCC) released a summary of a *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* (SREX) in November 2011 (*see Box 1*). SREX warns of ever more frequent disasters in a warming world, and includes a catalogue of measures at local, national and international level that successfully reduce disaster risk. It suggests that such measures will need to be significantly scaled up, alongside deep cuts in greenhouse gas emissions, if countries and communities are to avoid the worst disasters in a changing climate.

The report is also clear that in some cases, upgrading existing approaches will not be enough and more systemic transformations will be required. The limits of adaptation need to be better understood, to indicate how fundamental these systemic transformations will need to be in the face of loss and damage that is difficult or impossible to restitute. Meanwhile, comprehensive approaches are needed, designed to manage the spectrum of loss and damage under significant uncertainty. Planning "only" for the extreme events of today could leave countries in a position in the future where scarce resources are devoted to a static understanding of climate-related risks. In contrast, planning for both current climate variability and longer-term shifts in climate patterns can help smooth planning pathways and cushion the negative impacts of loss and damage in the future.

HISTORY OF NEGOTIATIONS UNDER THE UNFCCC

From the early 1990s to the mid-2000s, negotiations under the UN Framework Convention on Climate Change (UNFCCC) were focused mainly on mitigation. Adaptation figured to a considerably lesser extent, and although the Alliance of Small Island States (AOSIS) have held a position since the early 1990s, that States harmed by loss and damage related to climate change should be able to seek compensation to rehabilitate their societies, any discussion of liability and compensation has remained controversial for most industrialized countries. Issues such as human migration and displacement were not mentioned in official texts at this time.

By the mid-2000s, and certainly with the publication of the IPCC Fourth Assessment Report in 2007, it became clear that the level of overall ambition with regard to emissions reduction was too low to prevent climate change. Scientists and policy makers concurred that some impacts of climate change may already be manifest, and adaptation was now a necessary complement to mitigation (Ott et al. 2008). It became increasingly necessary to discuss adaptation and the negative impacts of climate change on human society. This led to discussions on the need for adaptation finance, and activities that would help countries (particularly those most vulnerable to the negative impacts of climate change) to adapt and manage loss and damage. The implementation of risk management and risk transfer measures was discussed as part of adaptation.

In 2007, the Bali Action Plan called for *[r]isk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance*; and for consideration of *[d]isaster reduction strategies and means to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change* (UNFCCC 2007). Although the Bali Action Plan contained an entire section on (disaster) risk management and loss and damage associated with climate change, any association or mention of compensation or liability for such loss and damage was a cause for discomfort for industrialized countries.

Throughout the international climate change negotiations following the Bali Action Plan (UNFCCC 2007), risk management and insurance featured prominently in discussions of the Ad Hoc Working Group on Long

Term Cooperative Action (AWG-LCA) (UNFCCC 2008, 2009, 2010). Developing countries maintained that there would be unavoidable loss and damage from the adverse impact of climate change, and that a reference to risk reduction and loss and damage must be incorporated in institutional arrangements and finance (UNFCCC 2008, *see Box 2*). Some developing countries expressed interest in the AOSIS proposal (AOSIS 2008) for a mechanism for risk reduction, management and sharing to be established, with the following three components:

> (a) A *risk management* and *prevention* component to promote risk assessment and risk management tools and strategies at all levels, with a view to facilitating and supporting the implementation of risk reduction and risk management measures;
>
> (b) An *insurance component* to address climate-related extreme weather events, and risks to crop production, food security and livelihood; and
>
> (c) A *rehabilitation* and compensation component to address progressive negative impacts that result in loss and damage (UNFCCC 2009).

After Bali, some industrialized country Parties uncomfortable with the direction this issue was taking attempted to subsume the section on risk management into other sections, cut it from the discussions, or otherwise avoid discussions related to proposals around compensation for loss and damage. Some industrialized countries indicated their preference to address only risk management, insurance and related capacity building.

At the fifteenth conference of parties (COP15) in Copenhagen in 2009, as matters relating to adaptation came closer to agreement, a draft negotiating text included several key references to risk reduction and specific tools like insurance. Loss and damage was addressed in paragraph 8 of the AWG-LCA´s text related to adaptation. The timing is notable: COP15 produced the Copenhagen Accord, which pledges to counter the impacts from climate change by funding "fast-track activities" in the order of US$ 30 billion until 2012, rising to US$ 100 billion by 2020 (UNFCCC 2009). Some industrialized country Parties were keen to move from discussions on compensation and liability, to an alternative framing of adaptation around the emerging institutional infrastructure around climate finance and governance. Parties wary of "compensation" may have wanted to manoeuvre the issue of loss and damage out of the process; however, they needed to build consensus with the mass of countries that are anticipated to experience loss and damage in the future.

A compromise was found at COP16 in Cancun in 2010. The Cancun Agreements, ((UNFCCC 2010), recognized *the need to strengthen international cooperation and expertise in order to understand and reduce loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events*. A footnote to this paragraph lists the following impacts: sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification. In response, it was decided to *establish a work programme in order to consider, including through workshops and expert meetings, as appropriate, approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change*.

At COP17 in Durban, negotiators reached consensus on elements of the SBI Work Program on Loss and Damage from COP17 to COP18 (2012). Decision -/CP.17 (UNFCCC 2011) requests the SBI to *continue the implementation of the work programme on approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change and to make recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session*. It calls on stakeholders and experts to share the outcomes, lessons learned, and good practice related to the implementation of existing risk assessment and risk management approaches.

The Decision also [*a*]*ppreciates the need to explore a range of possible approaches and potential mechanisms, including an international mechanism, to address loss and damage, with a view to making recommendations on loss and damage to the Conference of the Parties for its consideration at its eighteenth session* (UNFCCC 2011).

CURRENT STATUS OF THE NEGOTIATIONS

This section summarizes the major elements of the Durban decision relating to the work programme on loss and damage (Decision -/CP.17), and reflects on some of the elements and opportunities that are likely to be important for vulnerable countries to articulate their needs and positions.

The Durban decision lists the following three thematic areas for consideration over the next year:

1. Assessing the risk of loss and damage associated with the adverse effects of climate change, and current knowledge.
2. A range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events, taking into consideration experience at all levels.
3. The role of the UNFCCC in enhancing the implementation of approaches to address loss and damage associated with the adverse effects of climate change.

In addition, Decision -/CP.17 also includes an annex of question, submitted by Parties in relation to the first two thematic areas (assessing and addressing risk). These questions are expected to help shape the agenda of the activities that will take place over 2012 in the run-up to COP18, including:

- An expert meeting on thematic area 1 (assessing risks) to be held before SBI 36 (May 2012)
- A technical paper on assessing risks to feed into the expert meeting mentioned above
- Four expert meetings, three at the regional level and one for small island developing States before SBI 37 (December 2012), to address issues related to the thematic area 2
- A technical paper on slow onset events, taking into consideration the outcomes of the regional experts, mentioned above
- A literature review of existing information and case studies on the topics in the context of the thematic area 2
- Submissions from Parties, relevant organizations and other stakeholders on the possible elements to be included in the recommendations on loss and damage

Assessing risk

One of the basic requirements for effective management and reduction of loss and damage is risk assessment, and a better understanding of exposure to loss and damage. This is especially the case for developing countries, where such information and data is sometimes lacking.

Decision calls for a meeting of experts to be held meeting on this issue before June 2012, to draw on a range of expertise and experience within and outside the Convention. It calls for the UNFCCC Secretariat to prepare a technical paper before the expert meeting, in collaboration with relevant organizations and stakeholders, summarizing current knowledge on relevant methodologies, data requirements, lessons learned, gaps in assessment approaches, and existing relevant work and literature. A report from this meeting will be presented to COP18 for consideration.

The questions relating to the assessment of loss and damage in the annex to the Durban decision relate to understanding the data and information requirements, methods and tools, implementation, and decision-making support.

Under this thematic areas, the SBI Work Program on Loss and Damage should aim to contribute to a better understanding of the tools needed to help Parties characterize exposure (including risk assessment, mapping, and typologies of assets exposed to loss and damage) through both, rapid-onset events like weather extremes and slower-onset foreseeable events related to climate change (both of which require a different response). It will be essential that activities before COP18 take into account not only existing ways of assessing the risk of loss and damage associated with climate variability (such as weather-related risks), but also assessing risks of climate change (such as slow onset, creeping adverse effects like sea level rise).

In some cases there may be gaps in approaches, particularly on assessment of risk of loss and damage for longer-term potential consequences. These should be noted (such as in the technical paper), but must be considered in order to maintain a comprehensive perspective. Many of the issues related to longer-term slow onset adverse effects of climate change may not be fully reflected in current risk assessment approaches, but are of great concern for LDCs and SIDS. This thematic area also has the opportunity to address the interaction between climatic variability and climate change (such as storm surges and sea level risk impacts).

Such assessment activities could also be useful for other areas of adaptation, drawing attention to sectors, geographic regions, etc. which may need particular attention. This area of discussion could lead to discussions of the role of the Convention in facilitating the assessment, mapping, modelling and evaluation of risks.

Addressing risk

A variety of tools are available to help vulnerable countries address exposure to loss and damage related to medium and macro-level risks (such as weather variability and extreme events often of a rapid-onset nature), and longer-term foreseeable risks (such as sea level rise and desertification). The Durban decision calls on the Secretariat review existing literature, information and case studies on the topics in the context of this thematic area, to feed into four regional expert meetings, also to be organised by the Secretariat. Of these four expert meetings, three will be held at the regional level, and one for SIDS (in conjunction with other related events, where possible) before SB37 at COP18 (December 2012). These workshops will take into account the outcomes of the expert meeting on assessment. The Decision also calls for the Secretariat to prepare a technical paper on slow onset events, taking into account the outcomes of the regional expert meetings, and report the outcomes to SB37 at COP18.

The questions relating to approaches to address loss and damage in the annex to the decision relate mainly to getting a comprehensive overview of approaches and tools to address the full range of loss and damage, from climate variability (such as weather-related hazards) to climate change (such as slow onset impacts like sea level rise, ocean acidification, desertification, etc.).

According to the UN International Strategy for Disaster Reduction (UNISDR 2010), measures to address exposure to loss and damage could include:

- Pre-disaster preparedness measures, including early warning systems, community evacuation plans, food and water storage programs, back-up plans for critical infrastructure and energy, etc., to aid better awareness of what to do when a disaster occurs. Whereas pre-disaster preparedness can be relatively low cost (like contingency plans and awareness raising), they run the risk of encouraging "business as usual" practices in all sectors of the economy, once these preparedness measures are in place

- Risk reduction measures (flood protection, soil restoration, terracing, enforcement of appropriate building codes, retrofitting schools, hospitals and other infrastructure to make it more resilient to disaster shocks, moving human activities out of the path of disasters, etc.) can be costly and sometimes require new ways of going about economic activities. Studies indicate that the benefits can outweigh the costs several times. Risk reduction measures can be combined with risk transfer tools like insurance, social safety nets, contingency funds etc. to ensure that countries, communities, and people have the necessary and timely resources in the case that a disaster does strike (Warner et al. 2009a and 2009b, Warner et al. 2010).
- Emergency response measures include effective implementation of evacuation plans, administering emergency relief to affected populations, etc. These measures tend to be very expensive (such as providing clean water, tents, medical care, and other services) and often are brought at great cost by humanitarian organizations. Often only particularly large disasters result in the international provision of emergency response measures, leaving communities that have smaller but devastating events without help. However, these measures have the benefit of providing help for the period of time immediately following an extreme event.
- Post-disaster rehabilitation measures include rebuilding damaged infrastructure (bridges, roads, buildings) and restoring normal economic and social activities (markets, telecommunications, etc.). Post-disaster rehabilitation measures provide an opportunity to "rebuild right" and build in disaster risk reduction measures and other ways of avoiding or reducing future loss and damage. These measures are often financed with international financial institutions and can be costly, and sometimes lack of sufficient resources can result in a failure to rebuild at all.
- It would be useful for the SBI Work Program to explore experiences with particular instruments/ approaches in different areas of the world, to articulate lessons learned, good practices and challenges, and also generate an analysis of these instruments in the context of adaptation.

Implementation options

This area focuses on elements needed for implementation of the options identified above. Submissions from Parties and Stakeholders are invited by 17 September 2012, for consideration at COP18.

This area of the discussions could explore what implementation options would look like, depending on different combinations of issues such as Party needs, institutional arrangements/ operational entity, governance considerations, alternative financial arrangements, etc. Implementation options should consider placing the avoidance and reduction of loss and damage as a leading priority, but must consider ways to address vulnerable countries' legitimate calls for the establishment of mechanisms to address loss and damage from slow onset events.

CONCLUSIONS

Discussions on the issue of loss and damage have advanced substantially from Bali onwards. Over the next year, the SBI Work Program should aim to increase understanding of loss and damage and Parties and stakeholders and demystify implementation options, to prepare them to negotiate implementation options at COP18. The work program should be designed with enough flexibility to allow Parties and relevant stakeholder to exchange information and move forward even without perfect certainty in all areas. Measured progress over time and the ability to design solutions that offer some benefits for all Parties will contribute to a positive dynamic, and foster confidence in the process.

Implementation options agreed at COP18 could include elements such as a climate risk management facility, and a continued emphasis on capacity building, filling data gaps, and identifying financial needs. For the countries most vulnerable to loss and damage due to climate change, the negotiations over the next year and beyond could offer an opportunity to understand needs related to addressing loss and damage at the national, regional and international levels; explore linkages to the Green Climate Fund to the other adaptation mechanisms such as the Adaptation Committee; and work towards the establishment of a mechanism on loss and damage at COP18.

The process should not expect to find one single solution; rather, the SBI Work Program should look for combinations of tools that can be implemented at different levels, both under the Convention and outside. The coming year be as much a time of discussion and preparation for a decision about implementation under the Convention, as it will be about catalyzing experiments, pilot approaches, and learning on the ground. Over time, the work program could also provide an avenue to raise awareness of the consequences of failing to avoid dangerous climate change (Article 2 of the Convention), and become a rallying point for increased mitigation ambition.

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