



Working glossary
For the SBI Work Program on Loss and Damage

29 November 2011

Working glossary draft for informal discussion at COP17 for Parties and relevant stakeholder organizations

by the Munich Climate Insurance Initiative (MCII), hosted at UN University

Keywords: SBI Work Program on Loss and Damage, risk management, insurance, climate adaptation, climate variability, climate change, Cancun Adaptation Framework, Bali Action Plan, ex ante and ex post risk management, financial risk transfer, capacity

PLEASE COMMENT: This working glossary has benefited from the feedback and ideas of many different experts and delegates. We welcome your comments (kindly provide any feedback to warner@ehs.unu.edu, and copy kreft@ehs.unu.edu).

Working glossary draft for informal discussion at COP17 for Parties and relevant stakeholder organizations

by the Munich Climate Insurance Initiative (MCII), hosted at UN University

Contents

1. Introduction	3
Objectives of this working glossary	3
Loss and Damage in the context of UNFCCC discussions	3
Climate change and climate variability continuum	4
2. Assessing risk of loss and damage related to climate variability.....	5
Basic concepts for assessing loss & damage related to extreme weather events	7
3. Risk Management tools, approaches, measures, activities.....	8
Ex Ante Tools	9
Ex Post Tools	10
Financial Risk Management of climate variability.....	11
4. Loss & Damage, interactions between climate variability & climate change	12
Beyond climate variability & adaptation? IPCC Special Report on Extreme Events.....	12
5. Conclusions and Outlook	13
Implications for longer-term Party considerations about loss and damage	13
Outlook	14
References for glossary	15

Working glossary

For the SBI Work Program on Loss and Damage

29 November 2011

Working glossary draft for informal discussion at COP17 for Parties and relevant stakeholder organizations

by the Munich Climate Insurance Initiative (MCII), hosted at UN University

1. Introduction

The topic of loss and damage in the context of climate change has gained increasing importance in the UNFCCC climate talks in recent years. This working draft provides an overview of key terms related to risk assessment related to climate variability and change, ex ante and ex post tools to manage some of these risks, and how discussions on loss and damage in the UNFCCC may be shaped by considerations of both climate variability and longer-term climate change.

Objectives of this working glossary

This working glossary has three objectives::

- First, this document attempts to offer UNFCCC delegates working on agenda items such as Adaptation and the SBI Work Program on Loss and Damage an **overview of the range of possible impacts of climate variability and climate change** (related to loss and damage).
- Second, the document aims to support familiarizing UNFCCC delegates with **technical terms and concepts that will be useful in discussing loss and damage** in the context of the adaptation, loss and damage, and other relevant agenda items. This includes a broad description of **different ways of managing risks and reducing loss and damage associated with climate change**, ranging from those undertaken in advance (ex ante) and those undertaken after loss and damage may have occurred (ex post).
- Third, the document outlines **areas where more understanding is needed** to support discussions on loss and damage, particularly the interactions between climate variability and longer-term climate change. For example, disaster risk reduction is often conceptualized as part of adaptation, while other **parts of loss and damage go beyond adaptation** and require fundamentally new ways of thinking.

Loss and Damage in the context of UNFCCC discussions

Historically, the underlying UNFCCC discourse on loss and damage—and more broadly of climate change impacts on society—has evolved along two parallel lines. From the early 1990s to the mid-2000s, the dialogue has been characterized by an emphasis on mitigation: avoiding the causes of climate change first and cautioning polluters with the concept of polluter pays principle. The potential impacts of extreme weather events and longer-term impacts related to sea level rise, glacial melt, desertification etc. were considered politically unacceptable and a strong case for ambitious mitigation.

A second strand of discussion – focusing on adaptation—became more prominent around the time of the IPCC Fourth Assessment report in 2007 and the release of the Stern Review: Scientists and policy makers concurred that some impacts of climate change may already be manifest and that adaptation was therefore a necessary complement to mitigation in order to cushion the blow to society from some of the expected impacts of climate change. This track of discourse contributed to Parties and

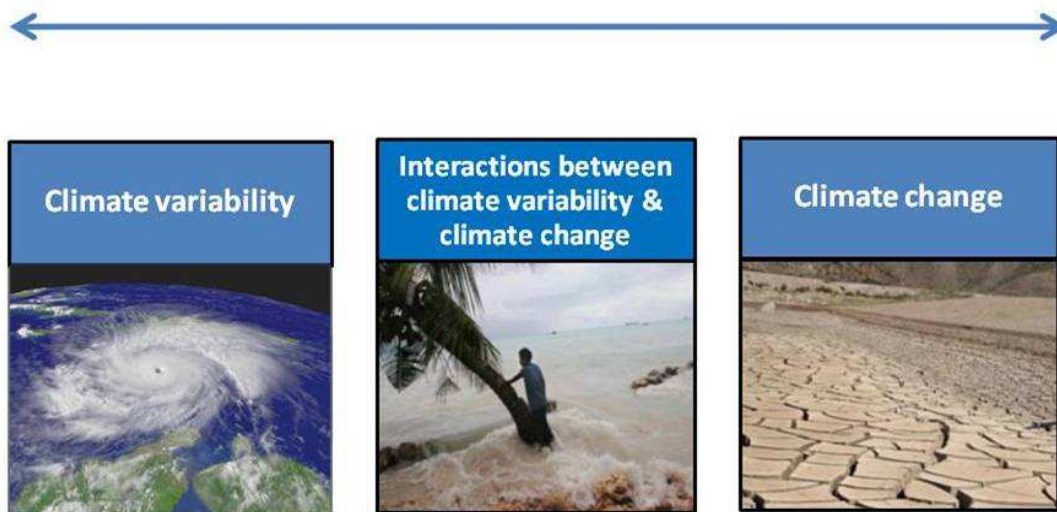
Observers introducing ideas that were oriented towards implementation of risk management and risk transfer as part of adaptation. Disaster risk management and reduction have played a role in these adaptation-focused discussions, and show up in the Bali Action Plan and Cancun Adaptation Framework.

The Cancun Adaptation Framework created a work program under the Subsidiary Body on Implementation (SBI) to consider Loss and Damage¹. In order to structure the content of the work programme, Parties agreed at the SB 36 in June 2011 to shape the subsequent discussions around three areas: 1) assessment of risk, 2) implementation options and pathways, 3) possible roles of the convention. This working glossary follows this organization and offers widely used terms and concepts to support delegates in these three parts of discussions on loss and damage².

It is hoped that this glossary will support Parties in conceptualizing loss and damage and articulating their country needs. This glossary is a work-in-progress and we invite comment and participation in future drafts from all Parties, relevant UN and other stakeholder organizations. Note that this glossary focuses on climate variability and the risk management cycle, and more work is needed to understand the medium and longer-term interactions of climate variability and climate change.

Climate change and climate variability continuum

Parties to the UNFCCC have requested support in understanding, planning for, and enacting programs that address potential loss and damage associated with climate variability and climate change.



¹ Paragraph 28 of 1CP/16. Parties agreed to initiate the Loss & Damage Work Programme under the Subsidiary Body for Implementation that would report back to COP 18 to suggest further actions by Parties on the issue. The mandate of the work programme includes consideration of a) a potential international climate risk insurance facility, b) risk reduction and management, c) slow onset risks, and d) to find ways to engage stakeholders with relevant expertise.

² This document relies heavily on a glossary provided by United Nations University, host of MCII, and other authoritative sources which are referenced in endnotes.

Climate Extreme (extreme weather or climate event): “The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. For simplicity, both extreme weather events and extreme climate events are referred to collectively as “climate extremes.””

Climate Change: “A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.”

“This definition differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), where climate change is defined as: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.” The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes.]”

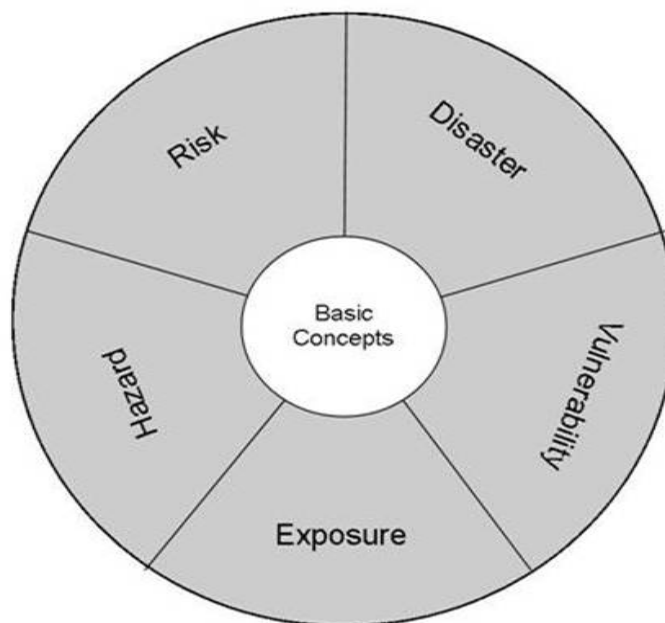
Source: [IPCC SREX Summary for Policymakers](#), November 2011, page 2.

2. Assessing risk of loss and damage related to climate variability

This section introduces common concepts important for assessing risks related to extreme weather events. Conceptual gaps exist around assessing longer-term impacts of climate change and associated loss and damage. These will be addressed in future iterations of this working document.

The basic terms presented here related primarily to extreme events, as concepts like „hazard,“ „risk“ and „disaster“ are temporally and spatially discrete. In contrast, climate change is an ongoing process characterized by some slow, and some discontinuous shifts. Concepts such as „vulnerability“, „exposure“ on the other hand can be applied across the spectrum of loss and damage (from climate variability to climate change) and are helpful in guiding some kinds of assessment of loss and damage potential.

Basic Concepts for Loss & Damage related to extreme weather events



A range of tools exist to assess the risk from temporally and geographically specific weather-related extremes. But as noted in the figure above, loss and damage comes from a combination of risk, vulnerability, and the weather-related hazard event. Thus, assessment of all three elements is needed for a better understanding of loss and damage potential in relation to climate change. The assessment tools broadly outlined in the box below include quantitative measures as well as qualitative characterizations, including perspectives of affected communities.

Assessment Tools
Risk assessment "A methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend."
Vulnerability assessment "Vulnerability assessment measures the seriousness of potential threats on the basis of known hazards and the level of vulnerability of societies and individuals. It should identify the location of vulnerable populations, the threats to their well being and the extent of their vulnerability." UNEP (2002)
Hazard Mapping "The process of establishing geographically where and to what extent particular hazards are likely to pose a threat to people, property and the environment."

Basic concepts for assessing loss & damage related to extreme weather events

Basic Concepts

Risk

"The probability of harmful consequences, or expected loss of lives, people injured, property, livelihoods, economic activity disrupted (or environment damaged) resulting from interactions between natural or human induced hazards and vulnerable conditions. Risk is conventionally expressed by the equation: Risk = Hazard x Vulnerability." UNDP (2004)

Disaster

"A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources."¹

Disaster risk

"The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period."²

Vulnerability

"The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard."³

Exposure

"People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses."⁴

Natural Hazard

"Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage."⁵

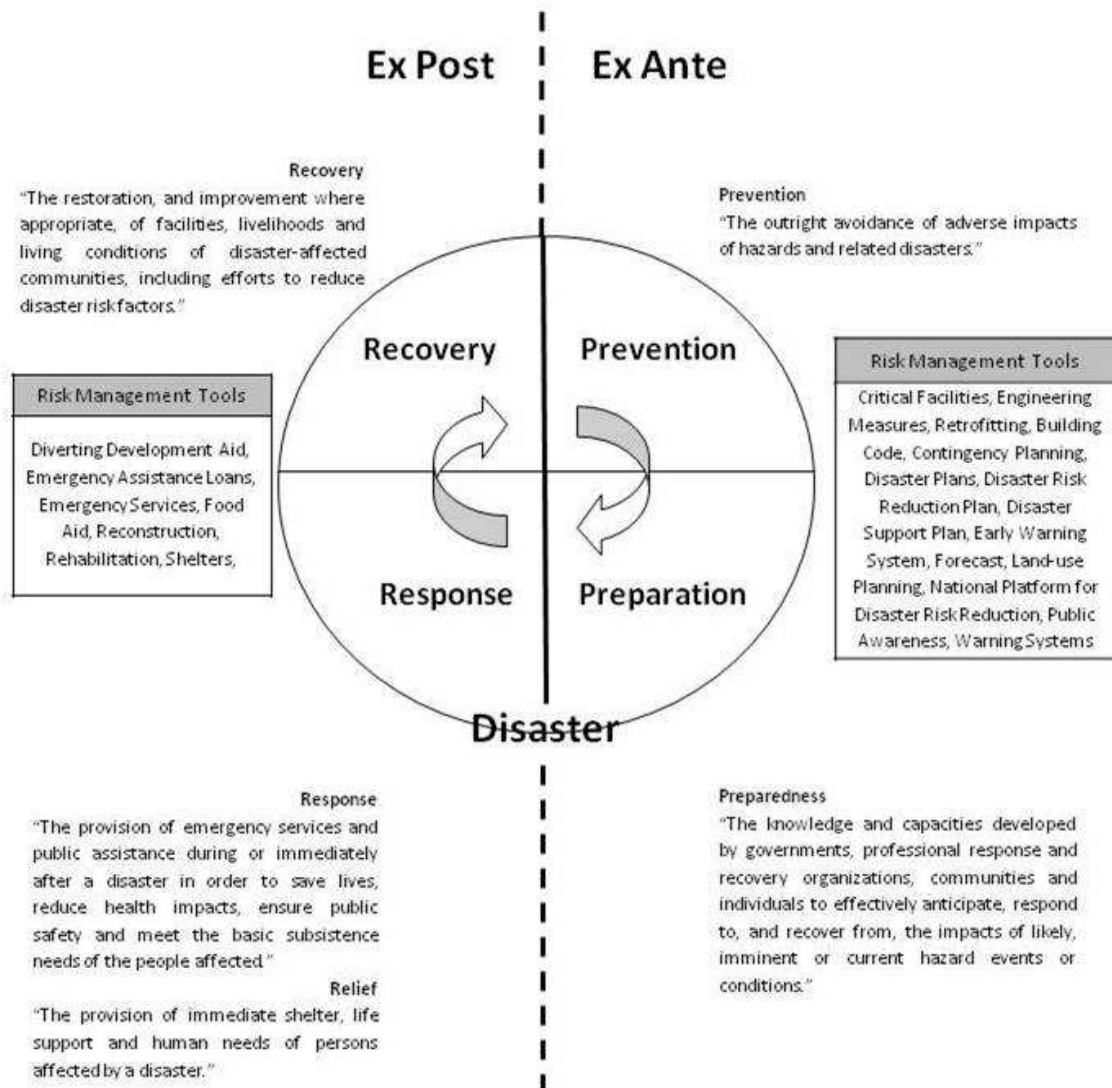
3. Risk Management tools, approaches, measures, activities

Disaster Risk Management Cycle

"Disaster management aims to reduce, or avoid, the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery. The Disaster management cycle illustrates the ongoing process by which governments, businesses, and civil society plan for and reduce the impact of disasters, react during and immediately following a disaster, and take steps to recover after a disaster has occurred."

Disaster Risk Management

"The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster."



Ex Ante Tools

Disaster Risk Reduction

"The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events."⁶

Comment: A comprehensive approach to reduce disaster risks is set out in the United Nations-endorsed Hyogo Framework for Action, adopted in 2005. The International Strategy for Disaster Reduction (ISDR) system provides a vehicle for cooperation among Governments, organizations and civil society actors to assist in the implementation of the Framework. Note that while the term "disaster reduction" is sometimes used, the term "disaster risk reduction" provides a better recognition of the ongoing nature of disaster risks and the ongoing potential to reduce these risks. Also note the "mitigation" is often used by disaster risk managers to indicate activities that reduce disaster risk or help ameliorate the impacts. "Mitigation" in the context of climate change is used to indicate reduction of greenhouse gases which cause changes in global temperatures and climate systems.

Structural¹

Critical Facilities

"The primary physical structures, technical facilities and systems which are socially, economically or operationally essential to the functioning of a society or community, both in routine circumstances and in the extreme circumstances of an emergency."⁷

Engineering Measures

Common structural measures for disaster risk reduction include dams, flood levies, ocean wave barriers, earthquake-resistant construction, and evacuation shelters.

Retrofitting

"Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards."⁸

Building Code

"A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage."⁹

Contingency Planning

"A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations."¹⁰

Non-Structural²

Disaster Plans

"An agreed set of arrangements for preventing, mitigating, preparing for, responding to and recovering from a disaster. A formal record of agreed disaster management roles, responsibilities, strategies, systems and arrangements."¹¹

Disaster Risk Reduction Plan

"A document prepared by an authority, sector, organization or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives."¹²

Disaster Support Plan

"Refers to those plans, which are designed to address specific hazards and are used in support of national disaster planning arrangements. Aircraft crashes are an example of such plans."¹³

Early Warning System

"The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss."¹⁴

Forecast

"Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area."¹⁵

Land-use Planning

"The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses."¹⁶

National Platform for Disaster Risk Reduction

"A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multi-sectoral and inter-disciplinary in nature, with public, private and civil society participation involving all concerned entities within a country."¹⁷

Public Awareness

"The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards."¹⁸

Warning Systems

"The purpose of warnings is to persuade and enable people and organizations to take actions to increase safety and reduce the impacts of a hazard, which can be either quick onset i.e., cyclones, floods or slow onset, famine or man-made such as fires, explosion, chemical spills etc."¹⁹

¹ Structural measures: Any physical construction to reduce or avoid possible impacts of hazards, or application of engineering techniques to achieve hazard-resistance and resilience in structures or systems.

² Non-structural measures: Any measure not involving physical construction that uses knowledge, practice or agreement to reduce risks and impacts, in particular through policies and laws, public awareness raising, training and education.

Ex Post Tools

Emergency Assistance Loans

"[An Emergency Assistance Loan] is limited to circumstances where a member with an urgent balance of payments need is unable to develop and implement a comprehensive economic program because its capacity has been damaged by a conflict, but where sufficient capacity for planning and policy implementation nevertheless exists."²⁰

Emergency Services

"The set of specialized agencies that have specific responsibilities and objectives in serving and protecting people and property in emergency situations."²¹

Humanitarian Assistance such as Food Aid

"The definition of food aid should not just be focused on its source of funding, or by specific transactions, such as 'items donated from external donors to recipient', but should include consideration of a) all related international and domestic actions and programs, and b) the role of non-food resources brought to bear jointly with food to address key elements of hunger problems. As such, food aid can be understood as all food supported interventions aimed at improving the food security of poor people in the short and long term, whether funded via international, national public and (sic) private resources."²²

Rehabilitation

"Concurrent with or immediately after relief activities, post-disaster rehabilitation is carried out to restore the normal functions of public services, business, and commerce, to repair housing and other structures, and to return production facilities to operation. However, mitigation is often ignored in this phase: rehabilitation proceeds without any measures to reduce the chances of the same impact if the event happens again. In developing countries, road systems that are flooded or blocked by landslides year after year are commonly rebuilt at the same site and with similar design specifications."²³

Reconstruction

Repairing, rebuilding, and otherwise restoring the functionality of infrastructure and other assets following damage from a hazard event. Full reconstruction may depend on the availability of sufficient resources to undertake and complete restitution of damage.

Financial Risk Management of climate variability

Insurance-linked Securities

Insurance-linked securities, most commonly catastrophe (cat) bonds, offer an avenue to share risk more broadly with the capital markets. Cat bonds are issued by the risk holder (usually a government or insurance company) and trigger payments on the occurrence of a specified event. This event may be a specified loss or may be a parametric trigger, such as the wind speed at a location. In 2006, the Government of Mexico issued a cat bond (the Cat-Mex bond) that transfers earthquake risk to investors by allowing the government to not repay the bond principal if a major earthquake were to hit Mexico.

Micro-insurance

Micro-insurance is characterized by low premiums or coverage and is typically targeted at lower income individuals who are unable to afford or access more traditional insurance. Micro-insurance tends to be provided by local insurance companies with some external insurance backstop (e.g. reinsurance). Micro-insurance can cover a broad range of risks; to date, it has tended to cover health and weather risks (including crop and livestock insurance). Weather insurance typically takes the form of a parametric (or index-based) transaction, where payment is made if a chosen weather-index, such as 5-day rainfall amounts, exceeds some threshold. Such initiatives minimize administrative costs and moral hazard and allow companies to offer simple, affordable and transparent risk transfer solutions. One of the largest micro-insurance schemes, the Weather-based Crop Insurance Scheme, was established by the Government of India and currently protects more than 700,000 farmers against drought.

Reserve Fund

Catastrophe reserve funds are typically set up by governments, or may be donated, to cover the costs of unexpected losses.

Risk Pooling

Risks pools aggregate risks regionally (or nationally) allowing individual risk holders to spread their risk geographically. Through spreading risks, pooling allows participants to gain catastrophe insurance on better terms and access collective reserves in the event of a disaster. An example is the Caribbean Catastrophe Risk Insurance Facility (CCRIF), which allows Caribbean governments to purchase coverage for earthquake and/or hurricane. The CCRIF was able to secure US\$110 million of reinsurance capacity in addition to its own reserves.

Risk Transfer Tools – An Introduction

Catastrophe risk financing frameworks must be highly specialized to the type of coverage required and the local risk and social conditions. Broad types of catastrophe risk financing include:

(Traditional) Insurance

Insurance is a contractual transaction that guarantees financial protection against potentially large loss in return for a premium; if the insured experiences a loss, then the insurer pays out a previously agreed amount. Insurance is common across most developed countries and covers many types of 'peril', for example, many homeowners buy fire and theft insurance to protect their property and in some countries car owners are required to purchase automobile liability insurance.

Source: Warner, K., Ranger, N., Surminski, S., Arnold, M., Linnerooth-Bayer, J., Michel-Kerjan, E., Kovacs, P., C. Herweijer (2009): *Adapting to Climate Change: Linking Disaster Risk Reduction and Insurance*. Munich Climate Insurance Initiative (MCII) and United Nations International Strategy for Disaster Reduction Secretariat (UNISDR). Geneva.

4. Loss & Damage, interactions between climate variability & climate change

This working glossary has laid out the spectrum of potential loss and damage impacts, ranging from those related to extreme events (climate variability) and longer-term shifts in climate systems (climate change). The terms presented in the working glossary in sections two and three above focused almost exclusively on current knowledge and conceptualization of extreme events (climate variability). Yet to begin to tackle loss and damage, we need ways to think about not only climate variability, but how climate variability interacts with changes in climate systems which may not be temporally or spatially defined, but rather processes of changing how climate systems themselves are defined in given regions. This section examines areas where more thinking is needed on loss and damage. New concepts will be needed to guide policy and action in those issue areas that go beyond what we currently define as adaptation—such as the possibility that no degree of in situ adaptation will be possible in some geographic areas which could become less habitable or uninhabitable for human society in relation to anthropogenic climate change.

Beyond climate variability & adaptation? IPCC Special Report on Extreme Events

Climate change & variability	▪ 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: Headlines from the IPCC Special Report on Extreme Events, Dr. Tom Mitchell, Overseas Development Institute and Dr. Maarten van Aalst, Red Cross/Red Crescent Climate Centre
------------------------------	---

The IPCC released a summary for policy makers on the Special Report on Extreme Events (Nov. 2011), some of whose main points are abbreviated in the text box. The report points out that in areas where vulnerability are high and capacity to address impacts are low, that more fundamental adjustments may be required to spare human society from the worst disaster losses. More understanding is

needed about the limits of adaptation and how fundamental these adjustments must be in the face of loss and damage which may be difficult or impossible to reconstitute.

A majority of current concepts around ex ante, ex post, and financial risk management need expansion from “only” climate variability and “disasters” to also address climate changes. This glossary is based on terms used in existing discourse, particularly natural disaster risk management. This community focuses primarily on extreme events. Yet as the IPCC SREX report suggests, we already have interaction between climate variability and climate change and these impacts are expected to become more widespread and profound in the future. However, this is not yet reflected in our “vocabulary” for discussion the issues. This working glossary is evidence of this gap, and a call for contributions and further work from communities of practice (disaster risk managers, academia, operational organizations in humanitarian and development cooperation, etc.) not only to shape the concepts but also to be shaped by the emerging realities of loss and damage that spans climate variability and climate change.

5. Conclusions and Outlook

Implications for longer-term Party considerations about loss and damage

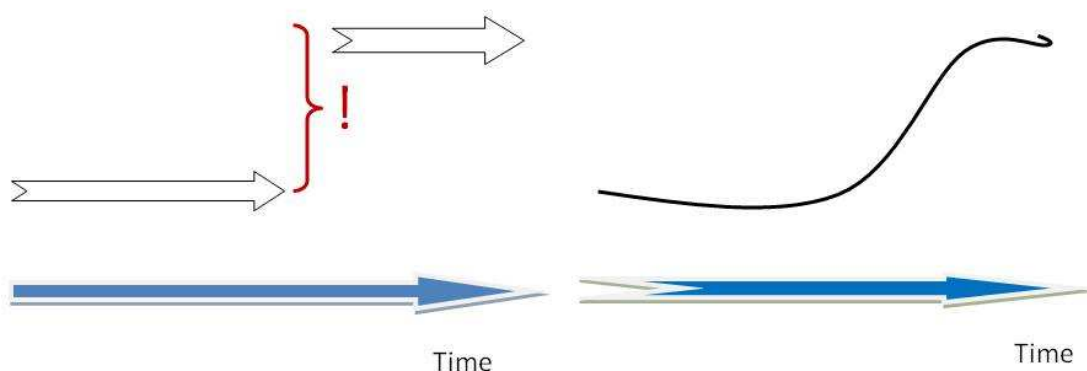
There are significant practical implications for policy and action from these shifts in both weather-related extremes in the short term and both weather-related extremes and shifts in regional climate patterns in the medium and longer term. The IPCC Fourth Assessment Report notes that those areas already vulnerable to environmental change and a number of environment-societal shifts are also most likely to experience the most negative impacts of climate change. Some of these impacts will involve loss and damage to life, property, and other assets important for the sustainable development of those countries which need these resources most.

The impacts of loss and damage related to weather-related stressors such as weather extremes and longer-term climatological shifts can set back development and reinforce the cycle of poverty in such countries. In this light, discussions and approaches are needed which are comprehensive and designed to manage the spectrum of loss and damage issues under significant uncertainty. Planning “only” for the extreme events of today could leave countries in a position in the future where scarce resources have been devoted to a static understanding of climate-related risks. In contrast, planning for both current climate variability and longer-term shifts in climate patterns would help smooth planning pathways and help cushion the expected negative impacts of loss and damage in the future.

The need for a comprehensive approach to loss & damage, taking climate variability and climate change into account

Planning “only” for the extreme events of today. It would be possible, unless care is taken, that current adaptation funding and activities focus entirely on enhancing resilience to current climate variability. This could lead to a situation in figure 1 in which resilience is maintained until a discontinuous climate / societal change occurs and creates an abrupt jump to a different state. This disruption can cause many societal problems.

Planning for both current climate variability and longer-term shifts in climate patterns. A smooth, gradual transition from current climate variability and ways of managing it to future climate variability, climate change, and ways of managing is more desirable (figure 2). Parties require better understanding of the implications of loss and damage in this context, in order to formulate appropriate policies and adaptation action.



A challenge lies in assessing what parts of resilience building efforts focus on managing current climatic variability, with current tools (e.g. using current tools and ways of managing risk – early warning, flood management, risk reduction measures, short term mobility like seasonal migration) and what parts of resilience need to be built for possibly unanticipated future climatic change and which may require fundamentally new approaches for particular communities to manage the new situation including both opportunities and challenges.

Outlook

These kind of conceptual issues need to be addressed in upcoming meetings and activities under the SBI work program on Loss and Damage. While Parties must still decide on the specific activities, Parties are moving forward with discussions on assessment, range of tools and potential roles of the UNFCCC.

Complementary to this UNFCCC process, other activities which support Parties are needed. This working glossary clearly has many gaps and requires contributions and collaboration among academia, practitioners, and other stakeholders. Further conceptualization on loss and damage will be needed, including a more clear understanding of the definition and parameters of loss and damage. We welcome feedback in filling these gaps and advancing knowledge to support Parties in the SBI Work Program on Loss and Damage.

References for working glossary

- ¹ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Disasters are often described as a result of the combination of: the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation.
- ² United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: The definition of disaster risk reflects the concept of disasters as the outcome of continuously present conditions of risk. Disaster risk comprises different types of potential losses which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the patterns of population and socio-economic development, disaster risks can be assessed and mapped, in broad terms at least.
- ³ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management. Vulnerability varies significantly within a community and over time. This definition identifies vulnerability as a characteristic of the element of interest (community, system or asset) which is independent of its exposure. However, in common use the word is often used more broadly to include the element's exposure.
- ⁴ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Measures of exposure can include the number of people or types of assets in an area. These can be combined with the specific vulnerability of the exposed elements to any particular hazard to estimate the quantitative risks associated with that hazard in the area of interest.
- ⁵ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Natural hazards are a sub-set of all hazards. The term is used to describe actual hazard events as well as the latent hazard conditions that may give rise to future events. Natural hazard events can be characterized by their magnitude or intensity, speed of onset, duration, and area of extent. For example, earthquakes have short durations and usually affect a relatively small region, whereas droughts are slow to develop and fade away and often affect large regions. In some cases hazards may be coupled, as in the flood caused by a hurricane or the tsunami that is created by an earthquake.
- ⁶ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology>
- ⁷ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Critical facilities are elements of the infrastructure that support essential services in a society. They include such things as transport systems, air and sea ports, electricity, water and communications systems, hospitals and health clinics, and centres for fire, police and public administration services
- ⁸ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Retrofitting requires consideration of the design and function of the structure, the stresses that the structure may be subject to from particular hazards or hazard scenarios, and the practicality and costs of different retrofitting options. Examples of retrofitting include adding bracing to stiffen walls, reinforcing pillars, adding steel ties between walls and roofs, installing shutters on windows, and improving the protection of important facilities and equipment.
- ⁹ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Building codes can include both technical and functional standards. They should incorporate the lessons of international experience and should be tailored to national and local circumstances. A systematic regime of enforcement is a critical supporting requirement for effective implementation of building codes.
- ¹⁰ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Contingency planning results in organized and coordinated courses of action with clearly-identified institutional roles and resources, information processes, and operational arrangements for specific actors at times of need. Based on scenarios of possible emergency conditions or disaster events, it allows key actors to envision, anticipate and solve problems that can arise during crises. Contingency planning is an important part of overall preparedness. Contingency plans need to be regularly updated and exercised.
- ¹¹ Institute for Disaster Risk Management. <http://www.eird.org/cd/on-better-terms/docs/Institute-for-Disaster-Risk-Management-Glossary.pdf>
- ¹² United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Disaster risk reduction plans should be guided by the Hyogo Framework and considered and coordinated within relevant development plans, resource allocations and programme activities. National level plans needs to be specific to each level of administrative responsibility and adapted to the different social and geographical circumstances that are present. The time frame and responsibilities for implementation and the sources of funding should be specified in the plan. Linkages to climate change adaptation plans should be made where possible.
- ¹³ Institute for Disaster Risk Management. <http://www.eird.org/cd/on-better-terms/docs/Institute-for-Disaster-Risk-Management-Glossary.pdf>
- ¹⁴ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: This definition encompasses the range of factors necessary to achieve effective responses to warnings. A people-centered early warning system necessarily comprises four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression

-
- “end-to-end warning system” is also used to emphasize that warning systems need to span all steps from hazard detection through to community response.
- ¹⁵ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: In meteorology a forecast refers to a future condition, whereas a warning refers to a potentially dangerous future condition.
- ¹⁶ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Land-use planning is an important contributor to sustainable development. It involves studies and mapping; analysis of economic, environmental and hazard data; formulation of alternative land-use decisions; and design of long-range plans for different geographical and administrative scales. Land-use planning can help to mitigate disasters and reduce risks by discouraging settlements and construction of key installations in hazard-prone areas, including consideration of service routes for transport, power, water, sewage and other critical facilities.
- ¹⁷ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: This definition is derived from footnote 10 of the Hyogo Framework. Disaster risk reduction requires the knowledge, capacities and inputs of a wide range of sectors and organisations, including United Nations agencies present at the national level, as appropriate. Most sectors are affected directly or indirectly by disasters and many have specific responsibilities that impinge upon disaster risks. National platforms provide a means to enhance national action to reduce disaster risks, and they represent the national mechanism for the International Strategy for Disaster Reduction.
- ¹⁸ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Public awareness is a key factor in effective disaster risk reduction. Its development is pursued, for example, through the development and dissemination of information through media and educational channels, the establishment of information centres, networks, and community or participation actions, and advocacy by senior public officials and community leaders.
- ¹⁹ Institute for Disaster Risk Management. <http://www.eird.org/cd/on-better-terms/docs/Institute-for-Disaster-Risk-Management-Glossary.pdf>
- ²⁰ International Monetary Fund. Factsheet: IMF Emergency Assistance: Supporting Recovery from Natural Disasters and Armed Conflicts (15 September 2011) <http://www.imf.org/external/np/exr/facts/conflict.htm>
- ²¹ United Nations International Strategy for Disaster Reduction. <http://www.unisdr.org/we/inform/terminology> Comment: Emergency services include agencies such as civil protection authorities, police, fire, ambulance, paramedic and emergency medicine services, Red Cross and Red Crescent societies, and specialized emergency units of electricity, transportation, communications and other related services organizations.
- ²² Von Braun, J. 2003. *Berlin statement prepared as policies against hunger II: defining the role of food aid*. (2-4 September, 2003) http://foodaid.zadi.de/index_en.html
- ²³ Primer on Natural Hazard Management in Integrated Regional Development Planning. Chapter 1. Organization of American States. (Washington DC: 1991). <http://www.oas.org/dsd/publications/unit/oea66e/ch01.htm>

This document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of developing countries. However, the views expressed and information contained in it are not necessarily those of or endorsed by DFID or the members of the Climate and Development Knowledge Network, which can accept no responsibility or liability for such views, completeness or accuracy of the information or for any reliance placed on them.