Loss and damage
Providing assistance to climate victims
Véronique Rigot,
Policy officer at CNCD-11.11.11
“Yo también estoy indignado.”
In memoriam
Stéphane Hessel and José Luis Sampedro

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Paradise (before liquidation)
The story of a journey to the Kiribati islands, by Julien Blanc-Gras, journalist and writer

“Seen from Europe, climate change is an abstract threat. It’s something that is going to happen. Here, it is happening. Situated on the edge of the world, Kiribati is at the forefront in terms of environmental issues. This underdeveloped country is ahead of the rest of the planet, as at the beginning of 2001, when, due to its geographic location, it was the first country to see the new millennium.

On a personal level, I’m sure choosing this topic is a bad strategic decision. It would be hard to find anywhere less trendy than Kiribati. Who could possibly be interested in this far-flung corner of the world, whose name is rarely met with anything other than “where’s that?” in conversation? Let’s be honest: climate change is not a sexy topic. From time to time it fills a slot on a television news broadcast in the form of anxiety-provoking predictions. The global ecological threat feeds our penchant for indignation ("damn polluters") and adds to our guilty conscience as hyperconsumers ("hang on! I’m a polluter, too"). It stimulates guilt, a sentiment much in vogue in a Western world shaped by both the shame of its colonial past and the masochism inherited from its Christian culture. We give ourselves a hard time for five minutes, thinking about the planet we will be leaving to our children, and then we go and do the shopping. All things considered, I think we don’t care. Chatting around the coffee machine, we talk about the weather, never about climate. It’s normal: rents are exorbitant and we won’t have any pension, so we need to get our priorities right. The future? We can worry about that tomorrow.

I, however, have to admit the truth: I am here. On top of my obsession with travelling to unlikely destinations, I have to admit a certain fascination with this process that is under way, much as passers-by are drawn towards an accident and reporters towards dead bodies.

How can we live knowing that the world is going to come to an end? How can we tackle a catastrophe that has the unwanted distinction of being unprecedented? Ordinary, disasters are instantaneous. An earthquake or tsunami can devastate regions and shatter destinies in a matter of seconds. Disasters can be cyclical, like droughts, epidemics or famines. Kiribati is experiencing a disaster in slow motion.”
The sense of urgency is clearly visible when you are there\(^2\)”, said Connie Hedegaard, the European Commissioner for Climate Action, at the Pacific Islands Forum that was held at the beginning of September 2013. The Majuro Declaration, which was signed at the close of the forum, is a call to all governments, economic entities, businesses, civil-society organisations and individuals to take action on climate change.

“Soon it will be too late for the planet\(^3\)”. Ban Ki-moon, Secretary-General of the United Nations, used these words in early April 2013 to call for action to ensure the planet is inhabitable for the 9 billion individuals who will live on Earth in 2050. For many years, the scientific findings of the Intergovernmental Panel on Climate Change (IPCC) have been unequivocal on the topic of global warming caused by greenhouse gas emissions from human activity. Despite an undeniable increase in awareness of the problem, modern society remains stuck in a pattern of unsuitable lifestyles and excessive consumption.

Climate change is already visible from Bangladesh to West Africa, and in all developing countries. Such countries are most vulnerable to climate risks even though, historically speaking, they are not responsible for the CO\(_2\) trapped in the atmosphere since the industrial revolution. That is “the fundamental injustice of climate change\(^4\)”, according to Jean-Pascal van Ypersele, a Belgian climate expert who is Vice-Chair of the IPCC.

Faced with these climate risks, adaptation initiatives are insufficient; what we need to discuss now is a new mechanism for taking responsibility for the damage caused by inevitable disasters. This is the demand being made by the most vulnerable countries within the UN: they wish to go beyond climate insurance and instead see the creation of an international institutional mechanism to take responsibility for climate loss and damage at the Warsaw Climate Change Conference due to be held in Poland in November 2013. This mechanism must be an integral part of the future international climate agreement that must be signed by 2015.

Climate loss and damage includes the negative impacts of climate change (real and/or potential, and both human and natural) resulting from acute disasters (sudden and extreme weather events that often cause vast physical damage) or from slow-onset processes (disasters that last longer and are often more insidious). Whether visible or silent, these disasters take many forms and are often difficult to categorise.

A number of slow-onset events are currently taking place in regions vulnerable to climate change. Examples of this include the persistent drought in the Sahel region of West Africa and the sea level rise in southern Bangladesh. In these two extremely poor regions, these slow, silent disasters are the perfect example of this definition of loss and damage.

They demonstrate the absolute necessity of working to reduce vulnerability to climate change through broader adaptation measures integrated with development strategies. They also demonstrate the need to compensate the affected populations for the economic and other losses caused by climate change, and the challenge this represents in terms of estimating the damage suffered.
Having clarified the concept and the related challenges, the matter of the type of assistance to be offered to climate change victims will be studied, as well as the roles of the public and private sectors.

Traditional private insurance is unaffordable for the majority of the population of developing countries. Moreover, although semi-public regional insurance mechanisms have been set up to cover the damage caused by acute disasters, the model is incomplete in that it does not permit universal access to adequate coverage of the risks (the least-developed countries struggle to pay the premiums) and, in particular, in that it does not cover slow-onset processes.

Developing countries therefore wish to see the creation of a new, more comprehensive international mechanism. The ambitions of our governments in terms of mitigating global warming and providing adaptation assistance and climate finance will determine the scope of the future negative effects of global warming, and these topics are being covered by current negotiations. Taking responsibility for climate loss and damage must be an integral part of the future international climate agreement, with an implicit priority given to the most vulnerable populations, and an acknowledgement of the “polluter pays” principle.

Beyond these considerations, the main goal is to see the UN take a pragmatic stance on the world we could find ourselves living in in the future, one that is 4°C hotter than today. Specifically, developing countries expect progress on ways to prevent and protect themselves against loss and damage (the preventive aspect), particularly in terms of more ambitious commitments to reduce greenhouse gas emissions. However, they also want progress on ways to repair the damage suffered (the remedial aspect).

The insurance industry has a strong presence in the debate on loss and damage. Between worrying about contributing to the fight against global warming and the prospects for potential profits, its main objective remains the transfer of risks, and its contribution to taking full responsibility for loss and damage therefore remains limited. The public sector must therefore guarantee the fundamental interests of climate victims.

However, our governments are confronted with a series of challenges that must be overcome in order to take responsibility for climate loss and damage, such as fighting against global warming to reduce the risks, implementing social safety nets, overseeing private-sector initiatives, anticipating future developments and, above all, finance. The public sector must combine the various approaches to risk management and integrate them into development assistance, adaptation assistance and initiatives to reduce natural disasters. The main objective should be to strengthen vulnerable communities’ resilience to the effects of climate change.

A microinsurance project for small-scale farmers in Ethiopia is one example of a new insurance model that is gaining popularity through the world: an indexed insurance scheme that pays out based on climatic conditions, rather than giving compensation following a disaster. While it is an interesting idea, the project demonstrates that the public sector has a key role to play in guaranteeing the fundamental rights of the local populations affected.

In conclusion, in parallel to the development of local insurance initiatives, it is essential that an international mechanism be created. We are asking the European Union, a pivotal actor in negotiations between Northern countries and developing countries, to use all its power to push for recognition of and responsibility for the loss and damage caused by climate change.

We advise governments to invest proactively in dealing with the risks (the preventive aspect), as well as pragmatically developing appropriate assistance measures for the victims of climate change (the remedial aspect). In the short term, they must commit to: (1) reducing their greenhouse gas emissions; (2) financing adaptation; and (3) establishing an international mechanism to deal with loss and damage.
A/ WHEN ADAPTATION WILL NO LONGER BE POSSIBLE

1/ The failure of mitigation

The reports of the IPCC are unequivocal: global warming is caused by greenhouse gas emissions from human activity. In order to combat global warming, the first measure that should be taken is to limit emissions of CO₂ and other greenhouse gases. This measure is commonly called global warming “mitigation”. The Kyoto Protocol is currently the only international agreement that aims to limit the amount of CO₂ emitted into the atmosphere. However, it only applies to few industrialised countries. While we await an international agreement legally binding for all countries (by 2015)6, the protocol has been extended to cover the 2013-2020 period.

As the years have gone by, climate-related ambitions have been eroded. On the one hand, countries are withdrawing from the Kyoto Protocol. Among the countries that were initially stakeholders, Canada, Japan, New Zealand and Russia have announced their withdrawal. Belarus, Kazakhstan and Ukraine are considering withdrawing, while the United States is no more prepared to discuss ratifying the protocol than it was in 1997. As a result, the protocol is currently applicable only to a handful of countries: the EU member states, Australia, Iceland, Norway and Switzerland.

On the other hand, mitigation goals are not very ambitious. In late 2009, in Copenhagen, the parties agreed to limit the increase in the atmosphere’s temperature to no more than 2°C higher than Industrial Revolution levels by the end of the century. If we combine the emissions reduction objectives set under the Kyoto Protocol and the goals announced by non-stakeholder countries, we can expect the average atmospheric temperature to increase by much more than the target of 2°C7.

The findings of the most recently published reports are alarming. According to the International Energy Agency (IEA, 2012b), “greenhouse gas emissions correspond to a long-term average increase of 3.6°C in the global temperature”. Auditing giant PricewaterhouseCoopers (PwC, 2012) believes it is “too late for 2°C”. Based on its Low Carbon Economy Index9— which measures an economy’s reduction in carbon intensity by monitoring emissions in relation to GDP— it measured an annual decarbonisation rate of 0.8% for the 2008-2011 period, against a required rate of 3.7% each year until 2050. As a result, the planet is heating up, and we should expect “not 2°C, but 4°C or even, based on our current rates, 6°C” (PwC, 2012).

An average increase of 4°C by the end of the century is being predicted by a growing number of scientists10, and even by the World Bank (2012, 2013). The World Bank even claims that certain localised areas could see higher increases still: urban centres in the Arab world could see night-time temperatures rise by 6°C (Verner, 2012).

Current mitigation efforts are clearly failing. Since 2010, the UNEP has been publishing an annual report on the gap between emissions reduction needs and prospects11.

5/ Director of the Center for Participatory Research and Development (CPRD) in Dhaka, Bangladesh.
6/ This agreement is expected to be signed in 2015, in accordance with the decision taken in Durban (COP17) in late 2011. The parties to the United Nations Framework Convention on Climate Change (UNFCCC), i.e. all the stakeholder countries, agreed to sign an international agreement by 2015, which should come into force by 2020.
7/ Calculation methods and scenarios differ from one organisation to another. According to the United Nations Environment Programme (UNEP), the increase could vary between 3 et 5°C (Emission Gap Report, 2012).
10/ See, for example, BETTS and al., 2011.
The report compares the commitments made by countries to reduce greenhouse gas emissions by 2020 with what would be necessary to achieve the objective of limiting the global temperature increase to 2°C (and 1.5°C). As seen in Figure 1 above, the gap is deplorable. In 2010, emissions totalled 49 gigatonnes of CO₂ equivalent (GtCO₂ eq). If we carry on business as usual (dotted line in the figure 1), 57 to 60 GtCO₂eq will be emitted into the atmosphere in 2020, whereas we need to restrict emissions to between 41 and 47 GtCO₂eq in order to be on course to achieve the objective of a maximum increase of 2°C.

The UNEP is examining various scenarios for reducing the gap, based on the reduction announcements made by different countries. In the best-case scenario, assuming that countries intensify their reduction efforts, 52 GtCO₂eq will be emitted into the atmosphere in 2020, which means that we will not comply with the objective of 41 to 47 GtCO₂eq and compliance with the 2°C limit remains hypothetical.

In May 2011, the IEA’s chief economist also admitted that mitigation had failed: "According to the IPCC’s projections, there..."
is a 50% chance that the temperature will increase by more than 4°C by around 2100. The same statement was reiterated in November 2012: “Successive editions of this report have shown that, as the years go by, the objective of limiting global warming to 2°C is becoming more and more costly and difficult to achieve.”

Although the opinion that current mitigation efforts have failed is unanimous, a number of actors are hopeful that the situation can be turned around. It is still "technically possible" to reduce the gap by acting "quickly and with a concerted effort", according to the UNEP. For the IEA, it is a matter of energy efficiency: "If we wish to achieve the global objective of 2°C, our consumption between now and 2050 must not exceed one third of proven reserves fossil fuels.”

In light of a demand for energy from non-OECD member countries that looks set to continue to rise (by 65% between 2010 and 2040, according to Exxon Mobil forecasts (2012)), the usage of fossil fuels is not going to be seriously reconsidered. On the

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13/ AIE, 2012b. p.4.
15/ IEA, 2012b.p.4.
The world is getting hotter, and the failure of mitigation measures leads us to conclude that it will continue to do so. The effects of global warming are already well known: sea level rise, coastal erosion, soil salinisation, increased droughts and water scarcity, melting of polar ice caps and glaciers, intensification of extreme weather events, precipitation leading to floods, etc.19

The first victims are also well known. The populations of the countries that are most vulnerable to climate change are responsible for a tiny percentage of the historic global CO2 emissions accumulated in the atmosphere 20. This has led the UNDP (UNDP, 2008 & UNDP, 2013) to speak of climate injustice: “Though countries with a low human development index (HDI) have barely contributed to global climate change, they seem to have to suffer the biggest losses in terms of annual precipitation and a rapid increase in precipitation variability, which has direct implications for production and agricultural livelihoods.21”

The IPCC experts expect the effects of global warming to intensify: “The models predict a pronounced increase in extreme temperatures by the end of the 21st century”; heavy precipitation will probably become more frequent, as will droughts. In short, “weather extremes will have a profound impact on sectors that are closely linked to the climate, such as water resources, agriculture and food production, forestry, health and tourism.”22

The need to adapt to climate change is being taken very seriously and, since 2004, the least-developed countries have been required to submit their national adaptation programmes of action (NAPAs) to the secretariat of the UNFCCC. Priorities are listed by country.
and by sector23 and numbered so that they can be supported primarily by the Least Developed Countries Fund.

The most recently established of the UN funds dedicated to supporting countries vulnerable to climate change is the Adaptation Fund24. Created following the signing of the Marrakech Accords in 2001, but operational only since 2010 and currently underfunded25, it is already supporting 28 projects in 27 developing countries. These projects involve water and coastal area management, food security and disaster risk reduction.

“Too little, too late, too fragmented26.” These comments made by Romain Weikmans, a doctoral student at the Université libre de Bruxelles (ULB), sum up the current status of funding for adaptation. Funding from the UN remains insignificant, in relation to both the amounts dedicated to mitigation (the rapid financing provided for under the Copenhagen Accord in late 2009 was intended to cover adaptation and mitigation, but only 21% has been allocated to adaptation27) and the amounts necessary to respond to actual needs. According to the World Bank (2010), an additional $70 billion to $100 billion of public development aid is required each year between 2010 and 2050 solely for adaptation measures relating to agriculture, coastal protection, infrastructure and the economy as a whole, whereas that amount has been pledged28 by 2020 to finance both mitigation and adaptation. The actual cost is probably all the more difficult to calculate because there is no operational definition of adaptation29.

On the ground, adaptation initiatives do not wait for hypothetical financing from the UN: they have been flourishing at the local level
for several decades. It is generally acknowledged that adaptation efforts are already being undertaken, but large-scale, systematic reviews of organised adaptation initiatives under way remain rare and incomplete, particularly when it comes to initiatives carried out in developing countries (Weikmans, 2012a). From an analysis of the projects supported by the Adaptation Fund, Romain Weikmans has identified a short-term vision that aims primarily to “fill a gap in terms of adapting to current climatic conditions” (Weikmans, 2012a), as is the case with most adaptation efforts.

Adaptation is, above all, intrinsically linked to development. Moreover, adaptation strategies seem to be mistaken for development and poverty reduction policies: land development, implementation of building codes, improving health monitoring, and rehabilitating ecosystems.

According to Romain Weikmans, “moreover, it is now widely acknowledged among the scientific community that development aid interventions that fail to take climate change into account can see

**TEXT BOX 1**

**THE THREE PILLARS OF THE FIGHT AGAINST CLIMATE CHANGE**

The first step in the fight against climate change is to tackle the main cause of global warming by limiting atmospheric emissions of CO₂ and other greenhouse gases. This first pillar is commonly called global warming “mitigation”.

In view of the findings on climate change reported by the scientific community, those who are the most exposed and/or most vulnerable must be able to adapt their way of life in light of visible or foreseeable phenomena. This second pillar is known as “adaptation”.

Mitigation and adaptation are two pillars that are officially recognised by the parties to the UNFCCC.

However, there are some aspects of climate change for which adaptation strategies are not possible, either because it is too late and the environmental damage is irremediable, or because the effects are inevitable. For the victims of climate change, global warming is causing damage for which they must be compensated. The recognition by the UNFCCC of this third pillar, known as “loss and damage”, is a fundamental aspect of climate justice for the most vulnerable, who, historically, are not responsible for the amount of CO₂ accumulated in the atmosphere.
their objectives severely compromised. In practical terms, it is particularly important to integrate development aid and adaptation aid. According to the author, however, it is important to be able to distinguish between financing for activities for the former and for the latter, since their objectives do not overlap entirely. This distinction between funding pledged in terms of public development aid and additional finance relating to climate concerns is also provided for by article 4 of the UNFCCC, which states that "new and additional" financing must cover the costs incurred by the fight against climate change.

Insufficient and sometimes too readily assimilated into development efforts and public development aid, adaptation could be suffering from fundamental doubts over its future. Unconvinced that adaptation to a +4°C world is possible, the World Bank concluded its 2012 report with these words: "Given that it remains uncertain whether adaptation and further progress toward development goals will be possible at this level of climate change, the projected 4°C warming simply must not be allowed to occur—the heat must be turned down."

### 3/ The need for assistance in response to loss and damage

The UN, the IPCC, the World Bank and national governments are not throwing in the towel when it comes to climate change. We know the facts: our greenhouse gas emissions are leading us towards a world that will be 4°C hotter or worse, and certain consequences are inevitable, despite the adaptation efforts and disaster risk reduction mechanisms put in place. A new assistance mechanism must therefore be conceived on a global scale: we need to give political priority to the recognition of loss and damage.

The concept of loss and damage takes into account the consequences of climate change when it is not possible—or no longer possible—to adapt. In the eyes of vulnerable countries—including island states threatened with submersion, which seek assistance in international negotiations—the concept constitutes a third pillar of the fight against climate change (see Text Box 1).

Although this request for assistance is not new, the debate has only really emerged recently within the UN, provoking a number of questions. The following chapter will be dedicated to clarifying this concept.

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30/ Weikmans, 2012a.
31/ For more on this topic, see GAMBINI, 2011, p.9.
32/ World Bank, 2012, p.64.
33/ See, for example, the UN disaster risk reduction initiative, 2013: http://www.unisdr.org/who-we-are/international-strategy-for-disaster-reduction
B/ WHAT DO WE MEAN BY LOSS AND DAMAGE?
1/ Definition and illustrations

According to natural-disaster experts, a disaster is a “situation or event that exceeds the scope of local capacities, requiring outside help on a national or international scale: an unforeseen and often sudden event that causes serious damage, destruction and human suffering”.

The concept of loss and damage has not – yet – been given an official definition approved by climate negotiations. However, the working programme on loss and damage (Cancún Agreement) and the UNFCCC have drawn up a framework for the concept: the direct impacts of climate change are categorised according to whether they are acute (sudden, rapid-onset events) or chronic (slow-onset events).

According to a technical note issued by the secretariat of the UNFCCC (UNFCCC, 2012a), rapid-onset events can take place in a matter of days, or even hours, whereas slow-onset processes develop gradually over several years or are recurring events of increasing frequency or intensity.

The secretariat of the UNFCCC also refers to the Cancún Agreement: slow-onset extreme weather events include “sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification”. Scientific references include both droughts and sea level rise (Siegele, 2012).

This categorisation is debated by experts. The difficulty consists, on the one hand, of distinguishing between these acute and chronic events, and, on the other hand, of identifying those that are more or less influenced by climate change (which would have happened anyway, but whose frequency, severity and/or localisation varies following climate change) and those that are caused entirely by climate change.

We can therefore distinguish between two broad types of disaster: sudden extreme weather events, which often cause considerable physical damage, and slow-onset events, which are longer and often more insidious processes.

Some disasters are more visible than others, both to the naked eye and in the media. Although the distinction is not always clear, it could lead to a second categorisation, between visible disasters and silent disasters. The European Commission and the Red Cross have headed a campaign about silent disasters. Because of the very nature of silent disasters, it is often difficult to immediately calculate the number of victims and the extent of the economic and non-economic damage. Two slow-onset events that have turned out to be genuine silent disasters are detailed in Text Boxes 2 and 3 respectively: the drought in the Sahel region of West Africa and the rising water levels in Bangladesh.

In order to help focus the debate on loss and damage, a consortium of NGOs, research centres and other organisations, coordinated by the Climate and Development Knowledge Network (CDKN), which we will refer to as the “Loss and Damage Consortium”, has proposed an operational definition of the concept, which will be used as a working definition and will be developed and refined.
as the discussions progress: it defines loss and damage as “representing the actual and/or potential manifestation of climate impacts that negatively affect human and natural systems.”

Damage can be considered as referring to negative impacts that can be repaired or restored, whereas loss can be characterised as negative impacts that cannot be repaired or restored (CDKN et al. 2012).

For the authors, the time and spatial scales are vast: loss and damage include manifestations that are current or have occurred in the past, as well as those that will take place in the future; the spatial scale is currently mainly local, but could expand considerably, taking into account non-economic values and interconnections leading to transnational effects (CDKN et al., 2012). Also, as the authors note, “the scale of future loss and damage could be inconceivable.”

Climatic disasters, whether acute or chronic, visible or silent, are a daily reality for many developing countries. The United Nations University (UNU) and the CDKN have demonstrated this by focusing on five countries which, despite adapting to climate change, are suffering loss and damage for various reasons (Warner et al., 2012). These countries are Micronesia (sea level rise), Bhutan (irregular monsoons), Kenya (floods), Bangladesh (soil salinisation) and Gambia (drought).

35/ For an accident to be recorded in the database, at least one of the following four conditions must be met: death of 10 or more people; 100 or more victims; declaration of a state or emergency; call for international assistance.
36/ UNFCCC, Decision 1/CP.16.
37/ The use of the term “event” to describe these chronic phenomena is contested, since they are actually processes, rather than events in the strictest sense (Siegele, 2012).
40/ The consortium of organisations includes Germanwatch, the United Nations University Institute for Environment and Human Security (UNU-EHS), the International Centre for Climate Change and Development (ICCCAD) and the Munich Climate Insurance Initiative (MCII).
41/ As a starting point for any definition, the consortium turned to paragraph 25 of Decision 1/CP.16 (Cancún, 2010), which had launched a two-year working programme aimed at developing recommendations on “steps making it possible to rectify the loss and damage related to the impacts of climate change,” which were due to be examined during COP18.
42/ CDKN et al., 2012, p.2.
43/ Ibid, p.3.
West Africa is facing weather extremes, particularly in coastal regions and towns (Drame 2012), as well as in the Sahel region. In the coming years, the region will see a general rise in temperature (IPCC, 2012 and CDKN, 2012): arid zones will probably become more arid still, while weather events will become both more frequent and more intense.

According to the IPCC, precipitation trends in West Africa remain uncertain (CDKN, 2012). It can therefore be difficult to associate the floods West Africa has experienced in recent years with climate change (although they have been particularly visible disasters). According to Aliou Diouf, of Senegalese NGO Enda, rather than being the cause of the problem, climate change “accelerates and amplifies it.”

Nevertheless, there has been an exceptional increase in the number of floods following heavy rains: “The number of events rose from an average of fewer than two per year before 1990 to more than eight, even 12, on average per year in the 2000s.” 2007 and 2009 were particularly bad years.

An increase in temperatures, meanwhile, is very likely (IPCC, 2012). Prolonged droughts may also intensify. After a very wet period from 1950 to 1969, rainfall trends in the Sahel show consistently dry years between 1970 and 1993, followed by a brutal pattern of alternating between very wet and very dry years from 1993 onwards (Figure 3, Ali, 2009).

According to Ali (2009), 1970 therefore marks what is commonly referred to as the Sahel climate rupture, a phenomenon that is the subject of an international scientific consensus and has not been observed in any other region of the world. This rupture affects the entire region, without exception. For the period beginning in 1993, the situation is different: a clear distinction can be observed between the western Sahel (Senegal and Mali), where drought persisted, and the eastern Sahel (Chad and eastern Niger), which saw a return to wetter conditions (Ali, 2009).

Consequently, in the western Sahel, where 80% of the population lives off rain-fed agriculture, the reduction in precipitation, as well as the acceleration in water evaporation and the heatwaves caused by rising temperatures, accentuate the risk of famine (although there may be other social, political and economic factors that also contribute). Other direct consequences include cattle deaths and soil salinisation, while indirect effects, such as the development of cholera or malaria, may be amplified.

While it is difficult to draw any conclusions on the heavy floods (even though this is certainly a visible disaster), the drought in West Africa is a typical example of a chronic, silent disaster, a slow-onset event that has very probably been exacerbated by climate change.
FIGURE 3

VARIABILITY OF THE SAHEL RAINFALL INDEX FROM 1950 TO 2006

Source: ALI, 2009

45/ Africinfos, 2013. Afrique sub-saharienne : les inondations causent beaucoup de dégâts [Sub-Saharan Africa: floods cause terrible damage]
46/ Energie, Environnement et Développement (ENDA Tiers monde): www.enda.sn, also a member of the Climate Action Network (CAN)
for West Africa: www.climatenetwork.org/
47/ Carrapide, 2013. Inondations à Dakar : les changements climatiques ne sont pas à l’origine du mal [Floods in Dakar: climate change is not the cause of the problem]: http://carrapide.com/xibar/25568/inondations-a-dakar-les-changements-climatiques-ne-sont-pas-a-lorigine-du-mal
BANGLADESH BETWEEN DESERTIFICATION AND SEA LEVEL RISE

Bangladesh is an extremely poor country, which is experiencing desertification in the north, while the south is facing floods and soil degradation due to sea level rise. On top of these plagues, the country has to deal with devastating cyclones. In this country, many adaptation projects are under way and all of them are priorities: raising road levels, building dykes along the country’s 6,000 km of coast, building anti-cyclone shelters, and setting up alert systems using mosques and mobile phones. The government’s limited resources will not be able to fund all of the country’s needs. The Environment and Forest Minister estimates that $10 billion is required, whereas Bangladesh has received less than $250 million from international donors for its adaptation plan. Moreover, the majority of this money was borrowed, and therefore will have to be repaid.

Around two thirds of Bangladeshi territory peaks at less than 5m above sea level. Thus, according to Mr van Zetten of the Coastal Zone Management Centre, “for floods to be considered “serious”, more than 50% of the territory must be flooded.”

However, the true chronic, silent disaster is the salinisation of soil and water. On the one hand, greater evaporation caused by rising temperatures increases the accumulation of salts in arid soils and inhibits seed germination and plant growth, which in turn diminishes harvests (UNFCCC, 2012a). On the other hand, sea water penetrates ever further into the estuaries of the Bay of Bengal, into the soil and into aquifers, as a result of floods and sea level rise (IPCC, 2007).

With a high concentration of salt, the soil becomes unsuitable for growing rice and vegetables. Growers are forced to sell their land to entrepreneurs. These entrepreneurs then transform the land into shrimp farms with a view to exporting their produce. The farms are unsustainable and require considerable investment, frequently resulting in excessive debt for investors, without being able to guarantee a good return.

The Bangladeshi government is taking this problem very seriously and working on a variety of rice that is resistant to water salinity and floods. With 150 million inhabitants, the country is densely populated (more than 1,000 inhabitants per km²). According to government estimates, around one fifth of the population will have to leave their land by the end of the century as a result of climate change.

Bangladeshi NGO Network for Climate Change says that migrations have already begun because of this chronic, silent disaster: farmers and fishermen are leaving for Dhaka, the capital, and other big cities, with some even travelling to India, leaving women, children and the elderly in an extremely vulnerable situation marked by poverty and malnutrition.

50/ For an in-depth analysis of the impact of cyclones Sidr and Aila (which hit in 2007 and 2009 respectively), see Shamsuddoha et al., 2012.
51/ Interview conducted by Julien Bouissou for Le Monde, 11 February 2013.
52/ In a scandal denounced by NGOs, 92% of this international finance dedicated to adaptation is in the form of loans to Bangladesh. For more on this topic, see GAMBIni, 2011, p.9.
53/ Coastal Zone Management Centre: http://www.sczmc.org/
54/ Germanwatch, 2004, p.5.
55/ See also Le Monde, 11 February 2013, Au Bangladesh, survivre avec le changement climatique [In Bangladesh, surviving alongside climate change], a report by Julien Bouissou.
56/ For more information on environmental migration, see Vanderstappen, 2013.
2/ Reducing vulnerability

No developing country will be spared from climate change. The scope of the disasters that occur is related to the level of development: the presence of disaster risk management and adaptation mechanisms can help to strengthen resilience and reduce exposure and/or vulnerability to climate change (IPCC, 2012). Reducing these risks should make it easier to diminish loss and damage.

Vulnerability to climate change is a difficult notion to define, which illustrates how difficult it is to quantify the effects of climate change. Nevertheless, certain sectors are generally considered to be more vulnerable. This is the case for water, agriculture and food security, forest exploitation, health and tourism, as well as fishing and general infrastructure (roads, railways, airports, ports, warehouses, etc.) that has a clear link with trade flows.

The IPCC has proposed a scientific definition of vulnerability (2012): “The propensity or predisposition to be negatively affected.” Exposure, meanwhile, is defined by “the presence of populations, livelihoods, environmental resources and services, infrastructure, or economic, social or cultural assets in places that could be negatively affected.”

In the late 2000s, several countries and groups of countries made a point of highlighting their vulnerability so that they could obtain a priority position for receiving international financial aid. It seemed that the debate on recognising vulnerability did not have an outcome, since any attempt at “objective” classification of countries was potentially contestable (SEI, 2010), and science did not have an answer to this political debate (Klein, 2009).

In light of this, the debate about vulnerability subsided, with the countries of the South uniting behind the need to recognise loss and damage. The main focus of the issue of vulnerability continues to relate to assessing the complexity of quantifying effects and assessing the scope of the challenges and realities of underdevelopment.

Meanwhile, a comprehensive vulnerability index was developed by Maplecroft in 2011, that does not seem to have met with

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60/ GIEC, 2012, p.4
radical opposition. The index combines vulnerability and exposure, classifying 170 countries in terms of their vulnerability to climate change over a 30-year period. It is based on 42 social, economic and environmental factors, including exposure to natural disasters and sea level rise, development, natural resources, the importance of agriculture and conflicts. The index also evaluates future vulnerability by analysing the adaptation capacities of a country’s government and infrastructure. A brief analysis shows that the developing world is particularly vulnerable, with certain very exposed areas: South and East Asia, sub-Saharan and East Africa, Central America and western South America.

However, the Netherlands, which scientists consider to be very exposed to sea level rise, is not deemed very vulnerable, thanks to their capacity to adapt. The group of 16 countries classified as the most vulnerable (see Figure 4) contains mostly South and South-East Asian countries, as well as Est African countries (Madagascar, Mozambique, Zimbabwe, Malawi and Ethiopia), and Haiti. Five Asian countries considered to have a high development potential are classed among the most vulnerable: Bangladesh, India, the Philippines, Vietnam and Pakistan.

Within individual countries, marginalised groups (especially women, children and the elderly) are unanimously considered to be particularly vulnerable to weather extremes. Moreover, the IPCC claims that non-extreme weather events, as opposed to extreme weather events, can have extreme consequences where vulnerability is high. For example, this is the case in West Africa, where vulnerability is exacerbated by demographic growth, the degradation of ecosystems and the overexploitation of natural resources, as well as by insufficient health, education and governance standards (IPCC, 2012).

In order to reduce the risks related to these vulnerabilities, the IPCC (2012) recommends boosting resilience, i.e. “the ability of a system and its component parts to anticipate, absorb, accom-

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**FIGURE 4**

CLASSIFICATION OF THE 16 MOST VULNERABLE COUNTRIES

<table>
<thead>
<tr>
<th>1/ Bangladesh</th>
<th>9/ Zimbabwe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/ India</td>
<td>10/ Myanmar</td>
</tr>
<tr>
<td>3/ Madagascar</td>
<td>11/ Ethiopia</td>
</tr>
<tr>
<td>4/ Nepal</td>
<td>12/ Cambodia</td>
</tr>
<tr>
<td>5/ Mozambique</td>
<td>13/ Vietnam</td>
</tr>
<tr>
<td>6/ Philippines</td>
<td>14/ Thailand</td>
</tr>
<tr>
<td>7/ Haiti</td>
<td>15/ Malawi</td>
</tr>
<tr>
<td>8/ Afghanistan</td>
<td>16/ Pakistan</td>
</tr>
</tbody>
</table>

Source: Maplecroft, 2011
“Floods and droughts were the biggest killers this year: they were responsible for around 80% of deaths. Since they took place in the poorest countries, however, the economic losses suffered were small.”

Debarati Guha-Sapir

In the previous section, we saw the correlation between the developing world and vulnerability to climate change, as well as the difficulty of quantifying and measuring the extent of the effects and, therefore, of loss and damage.

Statistics and figures (see text box 4) contribute to the recognition of climate loss. In addition to economic figures, the recognition of “non-economic” consequences is a complementary stage, which gives the term “damage” its full meaning. Damage is defined as “the effect or result of a disaster – which therefore entails the right to compensation in accordance with the rules of liability law”.

The damage suffered by a physical person may result from a violation of his/her physical integrity (bodily or aesthetic damage) or of his/her property (material, financial or property damage). It may also result from hurt to his/her feelings, which is known as moral damage (Lexinter, 2013).

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63/ Olivier De Schutter is a professor at the Université de Louvain and a UN Special Rapporteur on the right to food: http://www.srfood.org/
64/ AFP. 14 March 2013. Lack of climate action risks developing world gains: UN.
65/ Shamsuddoha and al., 2012. p.12.
67/ This chapter was written before the UNFCCC technical paper on non-economic loss was available. For more information: https://unfccc.int/secretariat/employment/UserManagement/FileStorage/VPTZ4KJRHUG0E9IF910XYAQW62CLB5
AN OVERVIEW OF THE COST OF DISASTERS IN RECENT YEARS

On average, between 2002 and 2011, floods and droughts affected more people (those injured, left homeless or otherwise affected), while storms and heatwaves caused more deaths. Floods and storms were the most frequent phenomena, both in the 2002-2011 period and in 2012 (UNISDR, 2013).

We should be cautious when dealing with analyses of annual or even decennial data. Climatologists base their research on a 30-year period in order to study development trends of climatic events. For the period from 1980 to 2011 (30 years), Figure 6 clearly confirms the upward trend in floods and storms, even though the increase is uneven. There was also a slight increase in extreme temperatures.

In 2011, as in the 2002-2011 period, Asia was the continent most affected by natural disasters: China, the Philippines, India and Indonesia featured in the top five countries most frequently affected over the last decade, along with the United States. Asia suffered 44% of the natural disasters of the last decade, followed by the Americas (28%), Africa (19%), Europe (5.4%) and Oceania (3.3%). Proportionally much more affected on a human scale, Asia accounted for 86.3% of the victims, with a particularly high number of victims of cyclones and floods, whereas Africa was home to 9.2% of the victims (primarily due to the drought in East Africa) (Guha-Sapir and al., 2012).

According to the IPCC, “between 1970 and 2008, more than 95% of the deaths caused by natural disasters took place in the developing world” (IPCC, 2012). The economic costs of natural disasters in 2012 were incurred mainly due to Hurricane Sandy ($65 billion) and the drought in the United States ($20 billion), whereas the Philippines suffered the heaviest human losses as a result of Typhoon Bopha in December (which killed 1,900 people), although it does not feature on the list of the most costly disasters. This is because few Filipinos are insured.

The costs for 2012 are estimated at $138 billion, making it the fourth time in five years that the cost has exceeded $100 billion (the amount industrialised countries have pledged for adaptation and mitigation yearly by 2020). These figures are underestimated: they are based on insurance companies’ calculations, but only a minority of people have insurance in developing countries.
Estimates of global damage are based on different criteria, such as the number of deaths (confirmed deaths and people who are missing, presumed dead), the number of people affected (injured, homeless or otherwise affected), and the estimated cost of the damage. The number of displaced (whether internally or externally, temporarily or permanently) is also increasingly being taken into account.

It is clear, however, that these estimates are not always precise and vary from one situation to another, depending on the duration of the disaster, the availability of information and access to the disaster site, and the socio-economic, cultural and sometimes ethical context.

Estimates of individual damage are even more complex for slow-onset processes. How can we estimate the loss and damage associated with the salinisation of the land of a family of rice growers in southern Bangladesh or with the prolonged drought in West Africa? When does the phenomenon begin and end?

What are its spatial limits? Intangible losses, such as the impact on mental health, lost income over an entire lifetime due to lack of education, malnutrition caused by years of drought and the loss of cultural heritage and identity, are difficult to quantify.

Faced with the complexity of disasters of this kind, the experts are agreed on the use of classic non-economic evaluation methods and, in particular, a multi-criteria analysis that evaluates the different options based on qualitative or semi-quantitative weighted criteria and subsequently classifies them according to their score and weight (UNFCCC, 2012).
In the case of a drought, the Centre for Research on the Epidemiology of Disasters (CRED) is concerned about the complexity of its impacts: the lack of standardisation clearly contributes to the difficulty of estimating the damage caused by a drought, particularly in terms of direct human impacts (Guha-Sapir et alii, 2012). For Luc Gnacadja, Executive Secretary of the United Nations Convention to Combat Desertification, “drought is predictable and does not happen overnight. Therefore, it should not claim lives nor lead to famine”. Alert systems and political measures are therefore of the utmost importance. He recognises, however, that droughts are “slow and silent killers (…) that make us underestimate their urgency”.

Classic non-economic evaluation methods do not enable us to estimate everything, however. What is a life worth? The question is a provocative one, but it symbolises how difficult it is to recognise non-economic losses. What is the value of the land of a family’s ancestors or of a plant used for ritual ceremonies that does not grow anywhere else? What is its value in the eyes of a family, in the eyes of their children and grandchildren? Is it the same value that we would give it?

The assignment of a monetary value to all goods, resources and ecosystems may seem to be the solution of choice in light of the complexity of estimating damage. This solution is also promoted for ecosystems and biodiversity by the UNEP, which, in response to the reluctance of civil society, denies that it wants to commodify resources, claiming that it simply wishes to illustrate the value of nature by bringing it into the equation.

Monetising the value of assets (goods, resources or ecosystems) is, however, a dead-end street in the eyes of many observers, including the ATTAC Ecology and Society Commission, which believes that certain goods have “no intrinsic economic value”. What we measure economically should include all costs, but even when that is possible, “it does not say anything about human well-being, (…) nature or culture”.

While waiting for the debate to progress, including via the publication of a technical note by the UN on the matter of non-economic losses, in May 2012, the G77 and the group of least-developed countries proposed a list of domains that can be considered under non-economic losses, which included territories, ecosystems, cultural heritage, values, livelihoods, local and indigenous knowledge, water availability and displacements (ActionAid and al., 2012).

This chapter aimed to clarify the concept of loss and damage and to identify the various elements of the debate. While the debate on recognition of vulnerability eventually subsided, the issue of estimating damage seems to be extremely complex to clarify.

The second part will examine the issue of the type of assistance that should be provided to the victims of climate change, as well as the roles of the public and private sectors. Insurance, or a more global mechanism? What demands are vulnerable countries making as part of international negotiations and what topics will be at issue in the years to come? The last chapter will be dedicated to a discussion of the roles of the public sector (the responsibility of governments) and the private sector (the insurance and reinsurance industry) in managing climate risks and, above all, in providing assistance to the victims.

71/ Interview conducted by Guha-Sapir and al., 2012, p.18.
72/ Idem.
74/ The examples cited by the authors are: bats, natural goods, nature itself and breast milk. Azam, G.; Bonneuil, C. and Combes, M., 2012. La nature n’a pas de prix : les négligences de l’économie verte (Nature is priceless: the mistakes of the green economy), ATTAC, Editions Les liens qui libèrent, p.149.
75/ Azam and al, 2012, p.150.
76/ The technical paper on non-economic losses was expected to be published in late May 2013.
A/ WHICH CLIMATE ASSISTANCE SHOULD BE PROVIDED?

1/ More than insurance...

Though the concept of loss and damage has emerged only recently within international negotiations, the idea of taking responsibility for the inevitable effects of climate change is far from new. It dates back to the early 1990s, before the UNFCCC had even been drawn up. Several Pacific islands threatened with submersion sought the creation of an insurance pool that would compensate island states for the effects of sea level rise.

Since then, understanding of the irreversible effects of climate change has increased, and the idea of the small island states has developed from a simple insurance scheme to a genuine international institutional mechanism whose role would be to compensate the victims of climate change for its harmful effects and contribute to their rehabilitation.

Keen to focus debate on loss and damage and to contribute to the recognition of the most vulnerable countries, Bangladesh has launched various public initiatives since the late 2000s: the Climate Vulnerable Forum77 seeks to bring countries vulnerable to climate change together to defend their cause, while the Loss and Damage in Vulnerable Countries Initiative78 aims to improve understanding of and focus debate on loss and damage. In order to do this, Bangladesh sought non-governmental support via the Loss and Damage Consortium (Cfr p. 12).

In order to help facilitate natural-disaster management, regional insurance mechanisms have been set up in the Caribbean (Caribbean Climate Risk Insurance Facility – CCRIF)79, the Pacific (Pacific Catastrophe Risk Assessment and Financing Initiative – PCRAFI)80 and Africa (Africa Risk Capacity)81. These mechanisms encourage climate change adaptation and risk management relating to all kinds of natural disasters, including cyclones, bad weather conditions, earthquakes and tsunamis. The advantage of such schemes is that they enable victims to be compensated quickly, without having to wait for international aid, which can sometimes be slow in coming.

These regional insurance schemes work on the principle of risk pooling, thanks to contributions made to a fund by international donors, development banks and countries in the region. The countries also pay an annual premium based on their desired level of cover. These premiums are sometimes too high for the...
countries and the fund is not able to fully compensate their losses, which are two major disadvantages of this type of mechanism. On the other hand, one of their major advantages is their capacity to disburse large sums of money quickly.

Though of interest, these regional insurance initiatives do correspond to only a certain component of the responsibility for loss and damage that vulnerable countries demand in international negotiations: responsibility for acute disasters. For chronic disasters, such as sea level rise, loss and damage is harder to estimate. Insurance experts are studying the extension of these regional insurance mechanisms to cover slow-onset events.

According to Bill Hare, an internationally renowned scientist who defends the concept of loss and damage, we can no longer deny the economic and non-economic impacts of global warming. In order to promote reflection on how this type of mechanism could work, he cites the example of deindustrialised regions where the loss and damage are too great to bear and which are being reborn thanks to large public subsidies.

2/ Creation of an international mechanism

Led by Vanuatu, in 1991 the Alliance of Small Island States (AOSIS) submitted a proposal of insurance to compensate victims for the damage caused by sea level rise. The idea of quantifying the impacts of climate change was, above all, intended to accentuate the pressure to step up mitigation efforts. Vanuatu’s proposal soon got lost among in-depth debates on the inability to measure the scope of climate damage, and survives only in the form of the word “insurance” included in the UNFCCC, which was signed in 1992.

At the Cancún Conference held in Mexico in late 2010, the concept of loss and damage officially became part of the negotiations, thanks to the creation of a two-year working programme dedicated to the topic. The issue was explored in depth during the Doha (Qatar) climate talks of December 2012, becoming the subject (along with climate finance) of intense negotiations between the group of developing countries (G77) and Northern countries for the last few hours of talks. The issue of recognition of loss and damage continues to be controversial, and the creation of a new international mechanism, as demanded by the countries of the South, is “politically unimaginable” for the Americans and the Norwegians.

In this debate, the EU is attempting to keep both parties sweet. Its aim is to obtain an international climate agreement by 2015, and it rightly recognises that it will not be able to do so without developing countries. Its real loyalties, however, lie with the countries of the North, those who are responsible for global warming and the resulting loss and damage, but also have the technology and potentially the funds to fight climate change and its effects.
In light of this, and despite the convincing words of Connie Hedegaard, the European Commissioner for Climate Action, on the urgency of acting for the climate, the EU continues to position itself as an intermediary between the North and the South: it insists on the need for regional and international cooperation in order to deal with all loss and damage and encourage economic and social resilience. Moreover, it claims that current knowledge is insufficient and that loss and damage evaluations are incomplete. It therefore insists, logically, on mechanisms for the exchange and sharing of information, data and knowledge.

The demand made by AOSIS gradually took shape over the years, and in 2012, it suggested putting this mechanism into action, with three components: (1) insurance, (2) rehabilitation / compensation and (3) risk management. These would be overseen by the secretariat of the UNFCCC. AOSIS also insisted on the need for a holistic approach aimed at bringing together adaptation tools, financial-risk management and loss and damage under a single mechanism.

For all developing countries, as for international NGOs, the recognition of loss and damage must be a feature of the new international climate agreement due to be signed by the end of 2015. It is a matter of climate justice and equity for the most vulnerable, who are not historically responsible for global warming.

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82/ This is the case for Haiti, which is a member of the CCRIF. See IRIN news, 5 March 2013. Despite hype, insurance not key to resilience for farmers.

83/ Bill Hare is the director of Climate Analytics and a co-author of IPCC reports, and has also been prolific in contributing to and consulting on climate-related issues, including for negotiators from the world’s least-developed countries.

84/ See RTCC, 5 June 2013. UN climate envoys urged to accelerate loss and damage planning.

85/ The working programme on loss and damage was scheduled to come to an end in late 2012 in Doha (COP18). In Doha, the working programme was extended by a year with a view to coming to an end at the Warsaw Climate Conference. For broader explanations, see Adaptation Committee, 2013. Outcomes of the work programme to consider 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.

Le Soir, 6 December 2012, Climat : l’ère des pertes et préjudices (Climate: the era of loss and damage), Michel de Muellenaere: http://www.lesoir.be/133151/article/actualite/monde/2012-12-06/climat-%E2%80%99%C3%A8re-des-pertes-et-pr%C3%A9judices
La Libre Belgique, 11 December 2012. Climat : il faudra attendre (Climate: we will have to wait), open letter from Véronique Rigot: http://www.cnid.be/Climat-il-faudra-attendre

87/ See Rigot, 2013.

88/ For more information, see AOSIS, 2012. AOSIS views on loss and damage.

89/ An open letter was addressed by CNCD-11.11.11 and the Climate Justice Platform to the Belgian ministers present at the COP18 in Doha (December 2012), demanding a new framework for climate loss and damage. It was co-signed by 47 NGOs and international civil-society networks, which simultaneously submitted the letter to their respective ministers. Available at: http://www.careclimatechange.org/files/Doha_COP_18/47NGOsSignOnLetter_LOSSDAMAGE_NoLogosPDF.pdf

3/ High stakes negotiations

The topic of loss and damage is on the agenda for the coming years: ideally, a mechanism will be created in Warsaw in late 2013, and its rules of functioning will be specified in 2014 so that it can become fully operational by 2015. The UN work programme will therefore have to be extended once again.

Ambitions in terms of mitigating global warming and providing adaptation assistance and climate finance will determine the scope of the future effects of global warming. The debate on loss and damage must also be an integral part of the preparatory discussions for the new international climate agreement due to be signed in 2015.

In principle, the causal link between the lack of ambition to limit global warming and the growing risk of loss and damage must be explicitly mentioned in the texts (unlike in the Doha decisions). The responsibilities of developed countries should be recognised, including those of their big businesses and heavily polluting industries.

Moreover, the interests of the poorest and most vulnerable populations and the balance of ecosystems must appear clearly in all decisions. In order to do this, different paths may be explored, such as social-protection mechanisms, the creation of an insurance component for climate risk, or various approaches aimed at rehabilitation (reconstruction, development, specific assistance, etc.).

In terms of form, in order to guarantee the effectiveness of the institutional mechanism created, it must be designed in such a way as to ensure good coordination between the multiple UN bodies concerned with issues related to loss and damage.

Lastly, while the issue of compensation remains particularly sensitive, or even controversial, the fact remains that financial resources will be necessary, and will have to come in addition to the $100 billion pledged each year until 2020 for mitigation and adaptation. The reluctance of the Northern countries to commit to additional financing on top of the current climate finance must be overcome by creating new sources of funding. These new sources of finance will include the progressive reallocation of the subsidies currently granted to fossil fuels, the financial-transaction tax, the international tax on air and maritime transport, additional contributions related to the percentage of CO₂ emitted, etc. There is no shortage of projects, but they are being implemented very slowly.

Though the countries in favour of this international mechanism are strategically refusing to put forward a figure for its financing for the moment, the key principle is that this financial pressure should be targeted at the big emitters (which have the financial resources), to encourage them to emit less CO₂. With the arrival of this financial dimension at the negotiating table, we will have to be prepared for a return to debates based on the recognition of the “polluter pays” principle.

Beyond the creation of the mechanism, the major challenge of the negotiations is to see the UN take a pragmatic stance on the world we could find ourselves living in the future, one that is 4°C hotter than today. In short, the most vulnerable countries are awaiting progress on both the preventive aspect (how can we avoid and protect ourselves against the risk of loss and damage?) and the remedial aspect (how can we repair this loss and damage?). The next chapter will be dedicated to discussing the roles of the public and private sectors in these areas.
B/ WHAT ROLES SHOULD BE PLAYED BY GOVERNMENTS AND THE INSURANCE INDUSTRY?

Faced with the prospect of a world that is 4°C hotter, what role should the public and private sectors play in relation to loss and damage? This chapter will be dedicated to a discussion of the assistance that can be provided to the victims of climate change, in both a preventive and a remedial sense.

1/ Private insurance is not a panacea

The insurance industry is heavily present in the negotiations on creating an international mechanism for loss and damage. It became aware several years ago that it could provide solutions in the fight against climate change. The Munich Climate Insurance Initiative95 was therefore created, bringing together insurers, climate change experts, NGOs and researchers.

As opposed to the fairly clear role played by other big private-sector lobbies with a view to restricting the UN negotiations, the insurance industry presents a very different face. Insurers are experts on risk transfer, a very lucrative activity. Given that very few – or even no – people in emerging and developing countries are insured, the potential profits are enormous. This is the case in sub-Saharan Africa and South-East Asia, where the prospects for promoting microinsurance products are the brightest, according to Munich Re (2012)96, a giant of the reinsurance industry (companies that insure insurance companies).

However, the potential losses for insurers that fail to manage climate risk correctly are also considerable. The issue is therefore a nuanced one. Limited risks are easier to measure and monitor. In the same way that, in the past, we have seen insurance companies invest in fire prevention or combating cancer (in relation to the tobacco industry), today the insurance industry is attempting to prevent the effects of global warming (MCII, 2011).

The insurance industry is therefore working alongside NGOs to push for greater mitigation efforts and to present its own solutions. However, in the eyes of the IPCC and development cooperation NGOs, exclusively private insurance is not a panacea for climate shocks97. In the most vulnerable countries, the poorest populations could easily be seduced by promises of financial compensation in the event of a disaster. The first difficulty is the obligation to pay out sums of money that small farmers do not always have98. Another problem is that private insurance companies are reluctant to cover

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91/ The positions and recommendations expressed in this section were prepared during summer 2013 by the adaptation group of Climate Action Network-International, of which CNCD-11.11.11 is a member, ahead of the Warsaw negotiations and looking towards 2015.

92/ The work programme was extended by a year with a view to establishing institutional arrangements, such as an international mechanism (UNFCCC, Decision 3/CP.18, §9).

93/ Loss and damage must be integrated into the discussions of the Durban Platform (ADP).

94/ The countries of the North have always been reluctant to recognise this principle, which would impose huge financial commitments on them. This debate has led to the “compromise principle” of the recognition of “common but differentiated responsibilities and respective capacities”.

95/ The Munich Climate Insurance Initiative (MCII) is associated with the NGOs and research centres within the Loss and Damage Consortium.


97/ See Guardian, 6 March 2013. Insurance only part of disaster resilience, says climate change panel.

98/ This means that insurance is not accessible to everybody, and may force some households to reallocate money that was initially intended to be used for other expenses, such as children’s education or health care.
large-scale systematic risks (as with floods in the Netherlands, for example, for which compensation is paid out by the government, since private insurance does not cover them99). Lastly, in principle, insurance contributes above all to a transfer of risk. Though it is being developed in certain sectors100, risk reduction is still at a preliminary stage when it comes to climate matters. One initiative currently being piloted in Africa is Africa Risk Capacity101. It requires governments that wish to take part in regional insurance schemes to present plans for preventing droughts and natural disasters that could result in famine and millions of deaths.

Boosting resilience to climate shocks and implementing risk reduction and prevention mechanisms must therefore remain within the remit of the public sector.

If well designed, insurance can encourage risk reduction and promote resilience strengthening. This is the opinion of Koko Warner, an expert at the United Nations University. Insurance mechanisms can help to give the poorest populations confidence in the future, thereby encouraging them to invest in education, health and farming practices (in which they would not otherwise have invested due to uncertainty)102.

Perhaps the key is to design insurance differently. Whereas traditional insurance seeks to compensate an estimated loss, the new insurance seeks to compensate a farmer for his lost earnings in the event of bad weather conditions. The farmer therefore has his income insured in the event of unfavourable climatic conditions, which is easier than paying out compensation after assessing damage. While this model is not applicable to all situations, it is currently being explored in several regions of the world, including Africa (for droughts), the Caribbean (for hurricanes) and India (for floods). It is a concrete way of helping thousands of small farmers facing a changing climate.

Designing insurance differently also involves thinking about scale, as Text Box 5 illustrates. Microinsurance is a form of small-scale insurance that is intended to be accessible to everybody in proportion to their means. It also means opening up insurance partnerships to other actors in order to facilitate the funding of initiatives, and above all to serve the interests of the populations affected by climate change.

99/ See IRIN news, 5 March 2013. Despite hype, insurance not key to resilience for farmers.
100/ Private insurers dispense advice in order to reduce the risk of damage (in relation to fire insurance, for example, but prevention is not their core business.
101/ Africa Risk Capacity (ARC): http://www.africanriskcapacity.org/
102/ IRIN news, 5 March 2013. Despite hype, insurance not key to resilience for farmers.
Text Box 5

Microinsurance in Ethiopia

Food microinsurance based on a climate index is more than a private insurance; it means the beginning of the implementation of a social-protection structure. Oxfam America and a team of researchers from Columbia University headed a pilot project in the Horn of Africa. In northern Ethiopia, one of the hottest regions on the planet, whose dried-up water sources could plunge the entire population into a food crisis, 200 farmers in a village \(^\text{103}\) began in 2009 to test a new insurance mechanism known as index-based insurance. Having been extended to more than 18,000 farmers in 76 villages in 2012 \(^\text{104}\), the Horn of Africa Risk Transfer for Adaptation Program (HARITA) is now considered to be a genuine success by Oxfam America and its partners \(^\text{105}\). The initiative is currently supported by the United States Agency for International Development (USAID) and the World Food Programme (“R4 Rural Resilience Initiative”).

Small-scale farmers in Ethiopia need loans to buy seeds (equivalent to around $20), and failure to pay back the loan often means going to prison. Most small-scale farmers are considered uninsurable by insurance companies. Oxfam offers them microinsurance for an annual sum of $5. The decision to pay out compensation is linked not to a measurement of damage incurred, but to weather conditions and, where appropriate, to the minimum rain needed on a certain date to enable normal harvest growth \(^\text{106}\). If compensation is paid out, they will receive up to $25.

“The objective is not to sell people as much insurance as possible, but to lift them out of poverty \(^\text{107}\),” insist the project’s backers. While this is certainly an interesting idea, it has a downside: small-scale farmers who cannot afford to pay the annual $5 premium can pay in kind by providing labour. This is known as the insurance-for-work model. In exchange for the payment of their subscription, small-scale farmers who are insolvent can spend around 10 days working on community projects aimed at preserving soil and water.

This insurance-for-work mechanism is based on the Productive Safety Net Programme (PSNP) launched in Ethiopia several years ago, which aimed to help 8 million of the poorest Ethiopians to overcome food insecurity by providing them with food in exchange for hours spent working on community projects. In principle, the worst off (those who are ill, elderly or disabled), who are prevented from working, should benefit from a system of equalisation.

Poor small-scale farmers find themselves having to pay to protect themselves against climate impacts for which they are not responsible. Despite being potentially useful, the initiative could be considered immoral. Moreover, despite being associated with actors that are not short of money, the scheme forces small farmers to work to pay their premium of just $5.

The climate microinsurance on offer is usually born out of a promising idea, but its implementation needs to be overseen by the public sector so as to guarantee the fundamental interests of the local populations concerned.

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103/ The scheme began in Adi Ha, where the 200 households in question represented around 20% of the population.
104/ Oxfam America, 6 December 2012. Largest weather index insurance payout for small scale african farmers triggered by satellite technology.
105/ Oxfam’s partners in the HARITA project are the Rockefeller Foundation, Swiss Re, the International Research Institute for Climate and Society (IRI), the Relief Society of Tigray, the Dedebit Credit and Savings Institution, Nyala Insurance Company and Africa Insurance Company.
106/ Versions of the mechanism applied in other regions could, for example, define wind speed for cyclones.
2/ Challenges facing the public sector

Though private insurance is no panacea, the public sector does not always manage to do any better. It faces several major challenges of its own, including risk reduction, anticipation, overseeing initiatives and finance. Limiting emissions remains the best way to prevent the effects of global warming. The demand for responsibility to be taken for loss and damage is therefore always accompanied by an urgent call to limit global warming, as illustrated by the recent declaration made by the Seychelles Ambassador to the negotiations: "the priority for vulnerable nations is – for now at least – working on increasingly desperate ways to control the world’s carbon emissions."

For the Loss and Damage Consortium (Kreft and al., 2012), risk reduction is the starting point. Current political engagement on climate change is mainly reactive. We need to change to a proactive approach. This requires strong institutions and rigorous collection of data on extreme weather conditions and vulnerability, as well as risk mapping. Early-alert systems that incorporate native and community knowledge must also be put in place.

With regard specifically to slow-onset events, the public authorities should focus on anticipating and planning for slow climate developments. Anticipation is a second challenge for the public sector. In addition to anticipation, the IPCC recommends a diversification of activities.

The issue of how to oversee and manage risk transfer initiatives is a third sizeable challenge for the public sector. There are a number of insurance, reinsurance, legal and other mechanisms that can take on different dimensions depending on the spatial scale involved (ranging from local to international, via national and regional) and the sectors concerned. Here, the specific challenge will be to continue to be able to oversee the various initiatives and, in particular, the private sector, in such a way that the proposed mechanisms serve the interests of states and their citizens above all else.

The biggest challenge facing the public sector will therefore be to combine these different approaches to risk management and vulnerability reduction and to integrate them into existing initiatives: development aid, adaptation aid, natural-disaster reduction, etc. Adaptation aid and development aid should ideally be integrated and aim to boost the resilience of communities that are vulnerable to the effects of climate change.

In order to be able to face all of these challenges, the challenge of financing must first be tackled. Reducing vulnerability to climate change does not bring any direct financial benefits (just a reduction in future losses related to the impacts of climate change) and therefore, like adaptation finance, cannot be left to the private sector, and the money granted cannot be loaned. If there is any private-sector intervention, it will have to be strictly supervised.

Moreover, since climate-related disasters put a strain on government budgets (40% of the budget of the Philippines is dedicated to intervention following climate-related disasters), sectors such as education and infrastructure development tend to be underfunded. Social-protection mechanisms or reserve funds should also be set up to compensate the unforeseen financial charges incurred due to climate stress in particularly vulnerable countries, so that they can be "self-insured". This is the challenge of social protection.

It is clear that the public sector is facing numerous challenges: the most vulnerable countries therefore need increased cooperation aimed at strengthening institutions. No climate assistance can be given to the most vulnerable populations without international solidarity.
Mitigation has failed so far, and adaptation is insufficient. In light of this analysis, the third pillar of the fight against climate change is described in the first part of this document. After mitigation and adaptation, the concept of loss and damage takes into account the consequences of climate change when it is not possible or is no longer possible to adapt.

It is still possible to limit our greenhouse gas emissions so as to stay on course to meet the target of a maximum temperature increase of 2°C. We need to act quickly, however, as now, when we are experiencing a rise of only 0.8°C compared with the industrial period, the effects of climate change are already extremely destructive and deadly for the most vulnerable countries. These effects have become a human reality in the form of the prolonged drought in West Africa and the dangers posed by sea level rise in Bangladesh.

While there is a consensus on the need to help reduce exposure to climate-related disasters and the vulnerability of populations, the recognition of vulnerability has been the subject of a long debate that has revealed the scale and complexity of the effects of climate change, whereas the issue of estimating economic and non-economic damage remains extremely complex, as are the negotiations themselves.

Rather than traditional insurance that would compensate them for damage that is difficult to quantify, developing countries want assistance, as described in the second part of the study. Rather than a regional risk transfer mechanism that would come into play only in the event of sudden disasters, they want to see the creation of an international mechanism to take responsibility for loss and damage caused by all kinds of disasters, whether visible or silent.

The United States and Norway are opposed to this demand made by the countries of the South, whereas the EU is trying to keep both sides happy. Nevertheless, the recognition of climate loss and damage must be an integral part of the new international climate agreement due to be signed by the end of 2015. In order for this to happen, the relevant mechanism must be created during the Warsaw Conference of November 2013, with a pragmatic stance being taken on the prospect of a 4°C rise in global temperatures, in both the preventive and the remedial sense.

While the private sector does not offer a panacea with its traditional insurance mechanisms (mainly because prevention is not its main aim), the public sector also faces numerous challenges in terms of both the preventive aspect (prevention and protection) and the remedial aspect (repair). The discussion about the roles of the private and public sectors has revealed that both sectors have shortcomings, that it is essential to boost governments’ institutional capacities, and that the private sector can help to develop the outlines of new insurance models.
The future probably lies in the development of new insurance mechanisms (such as food microinsurance) which, though they have potential, must be developed under the aegis of the public sector so as to guarantee genuine social protection for the poorest.

For the victims of climate change, the main topic at issue remains that of human rights: the right to life, development, water and food. It is therefore time to implement the principle of precaution and the “polluter pays” principle that were enshrined in the Rio Declaration of 1992, as well as the principle of common but differentiated responsibilities and of equity in space and time.

We advise governments to invest proactively in dealing with the risks (the preventive aspect), as well as pragmatically developing appropriate assistance measures for the victims of climate change (the remedial aspect).

In order to so do, governments must:

1/ While it is still possible, and in order to prevent us from heading down a disastrous path towards a world that is 4°C hotter, drastically reduce domestic greenhouse gas emissions so as to stay on course to meet the +2°C target by the end of the century;

2/ Deliver climate finance in order to reach $100 billion annually by 2020. Ensure at least 50% of public finance is dedicated to developing countries’ adaptation needs. Climate finance must be new and additional (…)’ finance must be new and additional to public development aid, and must take the form of gifts to vulnerable countries. The Adaptation Fund must receive substantial, predictable finance (regardless of changes in the carbon price);

3/ Establish an international assistance mechanism for climate victims, setting out its rules of functioning so that it can become operational in 2015 and be an integral part of the new international climate agreement. The core principles of the mechanism should be:

a/ Promotion of fundamental human rights and protection of the most vulnerable;
b/ Prevention and anticipation of current and long-term risks;
c/ 100% public financing based on the “polluter pays” principle;
d/ Strict supervision of the role of the private sector;
e/ Exclusion of loans for compensating loss and damage.
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Network on Climate Change Bangladesh (NCC – Bangladesh): http://nccbd.org/

Climate Action Network (CAN International): www.climatenetwork.org

Loss and damage in vulnerable countries initiative: www.loss-and-damage.net
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