Submission on the costs, benefits and opportunities for adaptation based on different drivers of climate change impacts, including the relationship between adaptation and mitigation

Submission by Bolivia on behalf of the LMDC

A. Mandate

1. Recalling the related to mandated first version of a technical paper synthesizing submissions on the costs, benefits and opportunities for adaptation based on different drivers of climate change impacts, including the relationship between adaptation and mitigation (FCCC/ADP/2013/L.2, paragraph 8), countries of the LMDC take this opportunity to submit inputs for the development of this technical paper.

B. General Context

2. Sustainable development is the underlying context and poverty eradication is the overarching priority for developing countries in pursuing the right to sustainable development. There has been some progress towards achieving sustainable development and poverty reduction, but there is much to go, and this will continue to be the priority of developing countries.

3. However, the impacts of climate change are an obstacle for achieving sustainable development and poverty eradication and for enabling economic development to proceed in a sustainable manner. As stated in the IPCC 4th Assessment Report, "an assortment of climate-related vulnerabilities will seriously impede progress in achieving the mid-century goals [MDGs]"[1]. The vulnerability of countries to the impacts of climate change challenges and the losses related to these impacts make the achievement of Millennium Development Goals, such targets 1, 2 and 7. The increased scale and frequency of extreme events and potentially catastrophic slow-onset events could jeopardize achieving the Millennium Development Goals.

4. While there are opportunities for achieving sustainable development objectives and adaptation benefits, these opportunities cannot be overestimated. Without appropriate and adequate support in accordance with Article 4.4 and 4.8 of the Convention, the cost of adaptation detracts from other development priorities. In this regard, as stated in the Rio+20 Declaration,[2] we emphasize that adaptation to climate change represents an immediate and urgent global priority.

C. Costs of climate change impacts

5. Climate change has undermined the achievement of sustainable development. Economic and non-economic losses both represent lost development opportunities and a threat to the right to development. At the heart of the challenge of loss and damage is addressing the needs and aspirations of communities and people, who have contributed least to the causes of climate change, yet are among its first and worst victims. Indigenous peoples and local communities are harmed by changing ecosystems and threats to traditional livelihoods, while farmers and farming communities often dependent on rain-fed agriculture could experience massive drops in production leaving millions without food. The additional challenge posed by climate change impacts erodes national capacities to achieve resilience and thus prevent backsliding of

[1] Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability, Chapter 20.

[2] Rio+20 Declaration, Paragraph 190

achievements towards the MDGs, sustainable development, and poverty eradication.

Reality of Impacts

6. Loss and damage is already a reality in many developing countries. For example:

- Bolivia has suffered from recurrent serious impacts of climate change causing major damage and losses. Between 1982 and 2008 Bolivia lost due to the effect of extreme events more than 2.5 billion dollars. In the biennium 2006/2007 Bolivia lost more than 1% of its GDP, with important losses in agriculture and livestock. In the last 25 years the losses and damage have amounted to 18% of the total GDP and 3 million people affected.
- In El Salvador, the frequency of extreme weather events increased from one per decade in the late sixties and seventies to eight in the first decade of this century. Only considering three of the five extreme weather events occurred between 2009 and 2011 economic losses amounted to 6% of GDP. The last of them breaking all historical records in duration and precipitation.
- Iran's agricultural production is decreasing by 30% each year due to drought, while damages caused by floods is about USD 75 million each year as these events impact on agriculture systems, natural and water resources in the country.
- Nicaragua has suffered in the period 2005-2011 the adverse impact of climate change, affecting more than 600 million hectares of croplands. This represents an economic loss of US$652 million annually, equivalent to 10% of the GDP. In October 2011 a climatological phenomenon categorized as a simple storm affected around 150,000 people. Nicaragua's rehabilitation and reconstruction will require at least US$2 billion.
- In Ecuador, agriculture and health are the main affected areas by climate change. In 2012, floods caused USD 70 millions of losses, (source Ministry of Agriculture and Livestock of Ecuador). In health, dengue cases increased by 241% in 2012 (source Ministry of Health of Ecuador).
- The Philippines is facing devastation of its fruit export plantations by cyclones that are hitting areas that were previously free from calamity, while more intense rainfall and resulting flooding result in deaths, displacement, destruction and lost productivity in urban centres.
- Loss and damage due to climate change impacts in Venezuela were especially high on 2010. During the dry season, the hydroelectric sector, which makes 72% of Venezuela's energy matrix, reached its historical lowest level, jeopardizing power generation causing losses equivalent to $ 80 Billion. In the second semester of 2010, extreme rains caused landslides and floods leaving 150.000 families homeless, destroying roads and costing approximately $10 Billion, equivalent to 1,3% of Venezuela's GDP. These economic figures underestimate the full extend of loss and damage, as they do not consider non-economic impacts.
- With the increase of temperatures, crops are requiring more water and regions such as the Arabian Peninsula are depleting their underground reservoirs and as a consequence, the waters will become salinized. This

will cause lack of both drinking water and the main source of water used for agriculture.

D. Implementation gaps from unfulfilled commitments

7. Progress on climate action to date has been slow due to unfulfilled Annex 1 commitments. Lack of ambition on mitigation by developed countries and the continuing attempt to downplay the contribution and impacts of the accumulation of greenhouse gases since the beginning of the industrial revolution on the planet, today and in the future.
8. Vulnerability and risk drivers are not the cause of losses: loss and damage result from climate impacts. Damage and loss can be exacerbated due to underlying vulnerabilities, but vulnerability is not the cause of drought or sea level rise. If an old person slowly crossing a street is hit by a car, they are hurt by the car not by her underlying vulnerability of being old and walking slowly. The duty of States to abide by the 'no-harm' rule applies to the harm caused from the historical accumulation of greenhouse gases and this duty is not exonerated by the vulnerability of those affected, especially when some of those vulnerabilities are due to uncontrollable or historical circumstances, such as geophysical conditions, global unfair economic conditions, structural conditions created under colonialism, etc.
9. Additionally, with respect to drivers of climate change impacts, it must be clear that exposure to climate change impacts has increased due to inadequate historical and current insufficient action by developed countries to reduce emissions making climate change more severe. Similarly, the adaptive capacity of developing countries as it relates to the driver for climate change impacts is also determined by the ability of developing countries to implement adaptation actions, which has been significantly hindered due to limited means of implementation.

E. Benefits and opportunities for adaptation

10. Action must focus on achieving sustainable development and poverty eradication. Climate change impacts can constraint sustainable development and adaptation provides an opportunity to avoid the detrimental impact of climate change in achieving sustainable development and poverty eradication.
11. There are important benefits of adaptation when aligned with development priorities, but it cannot be assumed that one can be replaced with the other. It is necessary to explore constraints for these benefits: they depend on work advancing (or not) in the UNFCCC, unmet financial needs, unmet technology needs
12. The continuing accumulation of greenhouse gases in the atmosphere, the denial or rewriting of historical responsibility, and the limited support for adaptation constraints how much developing countries can do. Moreover, there are real physical limits to adaptation. As temperatures and sea levels rise, territory will become uninhabitable and unproductive. Soil moisture levels will decrease to the point that cultivation of crops is no longer viable in entire regions. Groundwater sources in coastal areas will become too saline to provide drinking water for people living there. Adaptation will become impossible on low-lying islands and in the most arid regions, leading to permanent loss of lands,

livelihoods, and cultural resources. These impacts and constraints for adaptation need to be carefully considered when benefits and opportunities.

13. Further, the notion of monitoring and evaluation of adaptation building on results-based approaches is not appropriate. It assumes that the results of adaptation interventions can be observed in the short-term projects or programme, but in reality such 'results' need to be understood over long periods, spanning decades at least. Thus, Monitoring and evaluation should be first and foremost designed to measure the compliance of developed country Parties with the support that was committed to developing countries to address the adverse impacts of climate change. Separate from these frameworks, monitoring and evaluation of adaptation must be done bearing in mind that adaptation is a long-term process, where adjustments and corrections are inherent to the changing condition and uncertainty of the effects of climate change, and that measuring its benefits requires an adequate conceptual framework.

F. Adaptation Capacity and Economic Diversification

Comparing adaptation action in developing countries to developed countries show the importance of countries adaptive capacity. Factors such as economic diversification and resilience and economic development are key for the adaptation of a country to climate change vulnerabilities. Therefore, as a mean to support adaptation actions under the convention, actions that build and increase a country's adaptive capacity, such as economic diversification, building economic resilience and human development should be showcased, encouraged and supported under the UNFCCC.

G. Relationship between adaptation and mitigation

14. Understanding the linkages between adaptation and mitigation should not condition action on one element upon the other and limit opportunities arising from each. It is not acceptable to condition adaptation and its support to mitigation ambition. The key linkage is in pursuing adaptation, with some co-benefits, which may be for example, for health, food security, and in some instances for mitigation of greenhouse gases, as long as these do not carry any negative social or economic impacts to developing countries specifically.

15. The relationship between adaptation and mitigation must be understood as part of allowing for integrated efforts, including on areas such as forest, water and coastal management and others. The IPCC also indicated the complementarity between many of the options for adaptation and mitigation, and that the further exploitation and promotion of synergies between mitigation and adaptation, could also advance sustainable development as well as economic diversification and resilience. Therefore, the overriding priority of any action seeking to explore the relationship between adaptation and mitigation is to achieve sustainable development, eradicate poverty and make countries resilient to climate and economic vulnerabilities.