

**Commitments for Annex I Parties under paragraph 1(b)(i) of the Bali Action Plan:
Evaluating developed countries' historical climate debt to developing countries
Submission by the Republic of Bolivia to the AWG-LCA**

Introduction

In the context of paragraph 1(b)(i) of the Bali Action Plan, we call on developed countries, including countries that are not Parties to the Kyoto Protocol, to commit to deep emission reductions that are consistent with the ultimate objective of the Convention, reflect their historical responsibility for the causes of climate change, and respect the principles of equity and common but differentiated responsibilities in accordance with the UNFCCC.

Mandate

Paragraph 1(b)(i) of the Bali Action Plan calls on developed countries to undertake:

Measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them, taking into account differences in their national circumstances.

Paragraph 1(b)(i) commits all developed country Parties to the Convention, whether or not they are also Parties to the Kyoto Protocol, to undertake binding obligations to reduce greenhouse gas emissions.

The scale of mitigation commitments for Annex I Parties

Annex I Parties to the Kyoto Protocol are committed to establish further mitigation commitments in accordance with Article 3.9 of the Kyoto Protocol. It is appropriate that these further commitments are quantified under the Kyoto Protocol.

As stated in our submission under the AWG-KP, these obligations must be for a commitment period from 2013 to 2017. They must be quantified on the basis of a clear and objective methodology addressing, inter alia:

- The historic responsibilities of developed countries for current atmospheric concentrations;
- The historic and current per-capita emissions of developed countries; and
- The share of global emissions required by developing countries in order to meet their first and overriding priorities, which are economic and social development and poverty eradication.

Comparability of efforts

Mitigation commitments under paragraph 1(b)(i) must be comparable in scale, timing and legal effect. To ensure comparability of efforts, Annex I Parties that are not Parties to the Kyoto Protocol are called on to undertake quantified emission reduction commitments that, inter alia:

- Are for the period 2013 to 2017;
- Are quantified in terms of the base year of 1990;
- Are subject to comparable provisions for monitoring, reporting and verification; and
- Are subject to comparable to provisions for compliance and enforcement.

Flexibility mechanisms under the Kyoto Protocol shall not be available to non-Parties to the Protocol.

Additional measures for compliance and enforcement

If, after measuring, reporting and verifying, the failure of a developed country to fulfill its reduction commitments is identified then penalties should be applied. This may include increased future reduction commitments by an amount calculated as a multiple of the shortfall in implementation. Financial contributions may also be assessed as penalties or fines and paid into an enhanced financial mechanism under the Conference of Parties, as proposed by the G77 and China.

In the context of paragraph 1(b)(i) of the Bali Action Plan, we call for efforts by all developed country Parties to the Convention to undertake commitments that reflect their full contribution to the causes and consequences of climate change.

The scale and timing of emission reductions by Annex I countries must be sufficient to ensure that developed countries' historical debt for their excessive past consumption of environmental space, and their continuing excessive per-capita emissions, is fully repaid to developing countries, and this repayment must begin with the outcome to be agreed Copenhagen (see relevant aspects of Appendix for elaboration of the concept of developed countries' climate debt).

**Evaluating developed countries' historical climate debt to developing countries
Submission by Bolivia**

Introduction

We call on developed countries to commit to deep emission reductions in order to advance the objective of avoiding dangerous anthropogenic interference with the climate system and its consequences, to reflect their historical responsibility for the causes of climate change, and to respect the principles of equity and common but differentiated responsibilities in accordance with the UNFCCC.

The causes and consequence of climate change

Since 1750 the emission of greenhouse gases has increased significantly as the result of human activities. These emissions have accumulated in the atmosphere leading to current atmospheric concentrations, which now far exceed levels dating back hundreds of thousands of years. These concentrations, in turn, are warming the Earth with significant and catastrophic effects.

Current levels of warming are already damaging forest, mountain and other ecosystems, melting snow and glaciers, thinning ice sheets, causing the oceans to rise and acidify, threatening coral reefs and intensifying droughts and floods, fires and extreme weather events. These adverse effects threaten to worsen the damages already produced by the current global warming on the Earth's systems.

The countries most vulnerable to the adverse effects of climate change are developing countries. Climate-induced disasters, water stress, adverse impacts on agriculture, threats to coastlines, ecosystems and infrastructure, and altered disease vectors are already imposing substantial and rising costs, damages and setbacks in development – undermining developing countries' rights and aspirations to development.

The historical cumulative emissions debt of developed countries

Responsibility for the majority of the historical emissions contributing to current atmospheric concentrations and to current and committed future warming lies with developed countries. Developed countries with less than twenty percent of the world's population are responsible for around three quarters of historical emissions. Their current per person emissions continue to exceed those of developing countries by a factor of four. Their accumulated historic emissions on a per person basis exceed those of developing countries by a factor of eleven.

Developed countries – which have contributed disproportionately to the causes of climate change – now seek to appropriate a disproportionate share of the Earth's remaining environmental space. By basing their future emission allowances on their past excessive level of emissions, they seek an entitlement to continue emitting at 70% or more of their 1990 levels through until 2020 (i.e. consistent with reductions of 30% or less). At the same time, they propose limiting developing countries – which most need environmental space in the course of their development – to much lower levels of per person emissions.

The excessive past, current and proposed future emissions of developed countries are depriving and will further deprive developing countries of an equitable share of the much diminished environmental space they require for their development and to which they have a right. By over-consuming the Earth's limited capacity to absorb greenhouse gases, developed countries have run up an "emissions debt" which must be repaid to developing countries by compensating them for lost environmental space, stabilizing temperature and by freeing up space for the growth required by developing countries in the future.

Quantifying developed countries' mitigation commitments

Developed countries' commitments to reduce emissions should be sufficient to address their historical emission debt, minimize their contribution to further adverse impacts on the climate and developing countries, provide sufficient environmental space for developing countries to develop, and conform with the ultimate objective of the Convention.

The scale and timing of these commitments should reflect the latest scientific information and be rooted in the objective, principles and provisions of the UNFCCC and its Kyoto Protocol. They should be quantified on the basis of a clear and objective methodology that reflects, among other factors:

- The historic responsibility of developed countries for current atmospheric concentrations;
- The historic and current per-capita emissions of developed countries; and
- The share of global emissions required by developing countries in order to meet their first overriding priorities which are the economic and social development and poverty eradication.

The establishment of assigned amounts of emissions for developed countries is a question of policy as well as science and must address issues of equity as well as effectiveness. The level of their assigned amounts also bears a close relationship to the extent of their obligations to provide compensation for the effects of climate change. Bearing in mind these considerations, the Annex to this document offers some possible elements of a methodology for evaluating developed countries' emission debt and associated further mitigation commitments.

Emissions and adaptation debts are components of climate and ecological debt

Despite not being responsible for the problem of global warming, developing countries are among the worst affected its adverse impacts. The historical emissions of developed countries, as well as denying developing countries the atmospheric space they need for development, are harming poor countries and people who live daily with rising costs, damages and lost opportunities for development.

These impacts are the direct result of current atmospheric concentrations, which have been caused predominantly by emissions from developed countries. Developed countries are thus responsible for compensating developing countries for their contribution to the adverse effects of climate change as part of an "adaptation debt" owed by developed countries to developing countries.

Developed countries "climate debt" – the sum of their emissions debt and adaptation debt – are part of a broader ecological debt reflecting their heavy environmental footprint, excessive consumption of resources, materials and energy and contribution to declining biodiversity and ecosystem services.

Repaying their climate debt

The climate debt of developed countries must be repaid, and this payment must begin with the outcomes to be agreed in Copenhagen.

Developing countries are not seeking economic handouts to solve a problem we did not cause. What we call for is full payment of the debt owed to us by developed countries for threatening the integrity of the Earth's climate system, for over-consuming a shared resource that belongs fairly and equally to all people, and for maintaining lifestyles that continue to threaten the lives and livelihoods of the poor majority of the planet's population. This debt must be repaid by freeing up environmental space for developing countries and particular the poorest communities.

There is no viable solution to climate change that is effective without being equitable. Deep emission reductions by developed countries are a necessary condition for stabilizing the Earth's climate. So too are profoundly larger transfers of technologies and financial resources than so far considered, if emissions are to be curbed in developing countries and they are also to realize their right to development and achieve their overriding priorities of poverty eradication and economic and social development. Any solution that does not ensure an equitable distribution of the Earth's limited capacity to absorb greenhouse gases, as well as the costs of mitigating and adapting to climate change, is destined to fail.

Developed countries must therefore fulfill their responsibilities through deeper domestic emission reduction commitments than so far considered in the current negotiations, and through all available means to generate the opportunities required for developing countries to achieve their development.

Developing countries are willing to play their part in addressing this common challenge. But any such participation can and must be based on the provisions of the Convention, on a clear understanding of the causes of climate change and its consequences, and on an equitable approach to stabilizing the Earth's climate system and to ensuring a sustainable future.

Annex

Elements of a methodology for evaluating Annex I countries' emission debt and associated mitigation commitments

Quantifying the extent of developed countries' emission debt and their associated future mitigation commitments should take into consideration, among other factors, the historical and proposed emissions by Annex I countries as well as the needs of developing countries for sufficient environmental space to achieve their rights to development.

Historical and proposed emissions by Annex I countries

The extent of developed countries excessive use of the Earth's limited environmental space can be illustrated by examining Annex 1 emissions (actual historical emissions plus a projection of future emissions through 2050), and by comparing it with an allocation based on equal per person emissions.

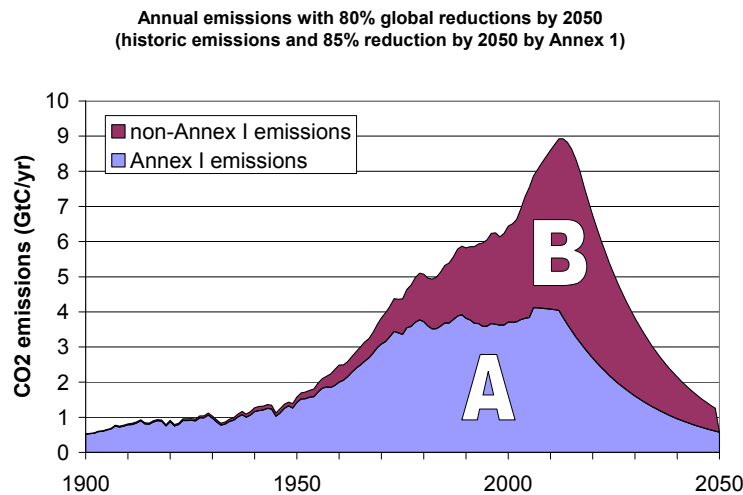


Figure 1

The total emissions of Annex I countries (Area A) will greatly exceed emissions of non-Annex I countries (Area B), even assuming that future emission reduction targets proposed by some Annex I countries are adopted. In particular, these figures assume a 30% reduction by Annex I countries from 1990 levels by 2020, and an 85% reduction by 2050 (see figure 1)ⁱ.

In contrast, if the global emissions in each year were shared equally on a per person basis in the past through to 2050, the emissions of Annex I countries (Area C) and non-Annex I countries (Area D) would be significantly different, respectively, assuming a global emission reduction of 80%.

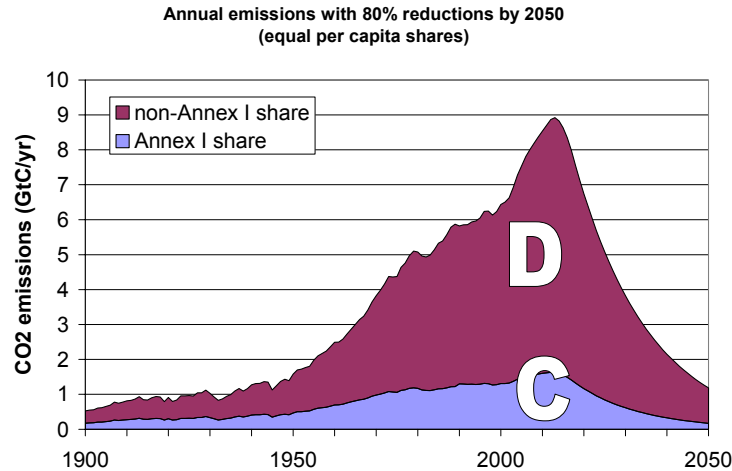


Figure 2

Note that this global emission pathway would still entail a considerable risk of exceeding 2°C, and major climate impacts and associated need for adaptation) (see figure 2).

Note also that a per-capita allocation to developed countries would still be advantageous to them as their higher levels of emission intensity, technology and financial capacity allow them to secure greater levels of welfare for each unit of carbon emitted.

Annual emissions with 80% global reductions by 2050 (showing Annex 1 over-use)

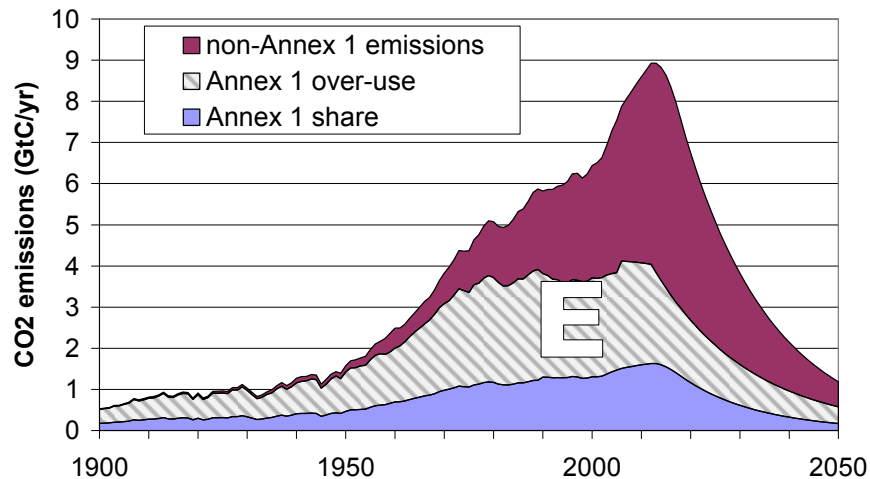


Figure 3

The difference between actual/projected emissions and a fair allocation illustrates Annex I countries' excessive use of the Earth's limited environmental space (see figure 3). Specifically, it demonstrates that a wealthy minority has already over-consumed a considerable amount of environmental space by 2050 (Area E), denying it to the poorer majority who needs it in the course of their development. ⁱⁱ

Just as proposals by Annex I countries fail to address their responsibility for historical emissions, they also fail to evaluate the environmental space needed by developing countries in the future.

The needs of developing countries

In evaluating this need, projections of emissions of developing countries associated with their economic growth and development pathways can be considered. In the absence of technological and

financial support, the emissions pathway is shown as “development without support” (see figure 4). Respecting a right to development would imply that the developing countries should be allocated the environmental space necessary to satisfy their development and poverty eradication needs, given the amount of financial and technological support that is made available.

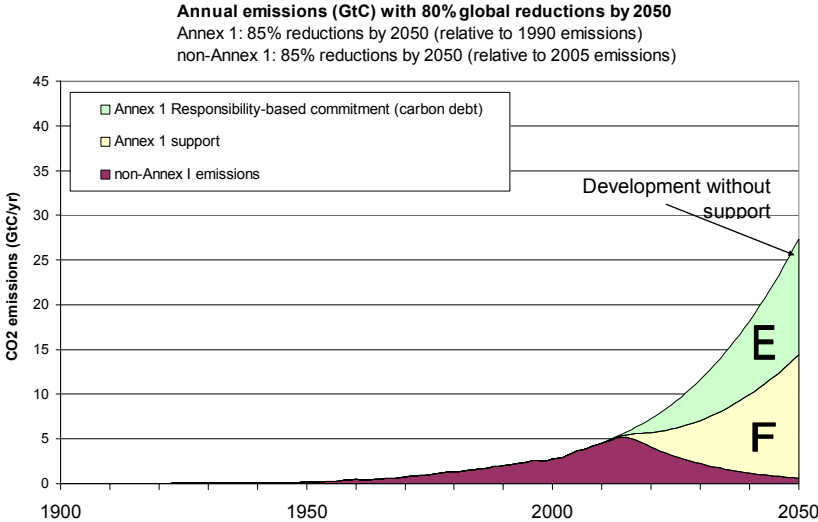


Figure 4

Different assumptions about the development pathway for developing countries will affect the level of support required to enable emissions to be adequately mitigated without losses of welfare in developing countries. **A moderate development pathway would require support to enable considerable reductions by 2050 (see figure 4).ⁱⁱⁱ A higher growth pathway (e.g. 5.5% growth per year) would require support to enable reductions of a higher level by 2050 (see figure 5).**

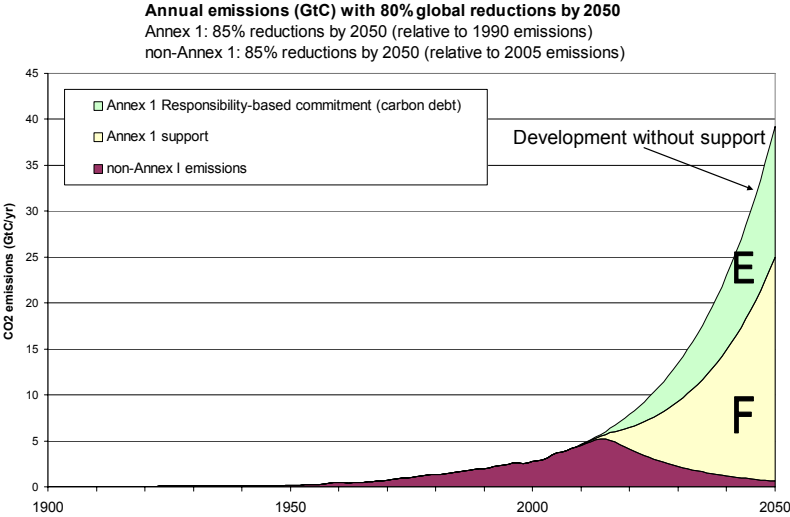


Figure 5

Based on such pathways, and the need for environmental space they imply, an ambitious package of financial and technological transfers is clearly required from Annex I Countries to help developing countries reduce their emissions without undermining development. The necessary lower global emissions path demanded by the science would thereby be enabled.

Quantifying commitments for Annex I countries

Mitigation commitments for Annex I countries must, at a minimum, reflect their historical responsibility for the causes of climate change and the needs of developing countries for adequate environmental space in future. Developed countries must repay developing countries in the environmental space required for their development by making emission reductions as deep as technically possible. The more the repay now; the less they repay later.

To the extent it is not technically possible to repay the full measure of debt in terms of environmental space, some part of may need to be repaid by Annex I countries in the form of financing and technology (Area E) (i.e., as recognition of the greatly responsibility of Annex I for the problem of climate change). The remainder is justified by the greater financial and technological capability of Annex I countries (Area F). Together, these reflect the UNFCCC principles of countries acting “on the basis of equity and in accordance with their common but differentiated responsibilities”.

In line with approaches such as these, Annex I countries’ further commitments under the Kyoto Protocol, as well as the full, effective and sustained implementation of their commitments under the UNFCCC, must be based on a fuller evaluation of their historical emissions debt and an appropriate sharing of the remaining available environmental space among Annex I and non-Annex I countries, taking into account their accumulated emissions and the needs of developing countries for adequate environmental space.

It must also be based on fulfillment by Annex I countries of their commitments to provide the full incremental costs of implementing measures covered by Article 4.1 of the Convention. These include full incremental costs associated with the “development, application and diffusion, including transfer, of technologies, practices and processes to control greenhouse gas emissions” and the formulation and implementation of “national and, where appropriate, regional programs containing measures to mitigate climate change”.

Reference: Calculations based on dataset “National CO2 Emissions from Fossil-Fuel Burning, Cement Manufacture, and Gas Flaring: 1751-2005”, August 27, 2008, Gregg Marland, Tom Boden, Robert J. Andres. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, <http://cdiac.ornl.gov>

ⁱ This global scenario establishes a emission budget for the period 1800 and 2050 and assumes a global emission reduction of 80% from 1990 levels by 2050, corresponding to a low-moderate reduction which still results in a significant risk of exceeding 2°C (and associated adaptation impacts and needs in developing countries). We note that this scenario is based on proposals by the European Union for emission reductions by ; Bolivia has proposed a first commitment period ending in 2017.

ⁱⁱ This constitutes part of the emissions debt owed to developing countries, which would be larger when adjusted for differing levels of technology and capacity. Developed countries, with higher historical and current levels of capacity and technology are able to secure greater levels of welfare for each unit of emissions allocated to them.

ⁱⁱⁱ This “development without support” emissions pathway is based on Sheehan (2008) as cited in den Elzen and Hohne (2008)