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VICEMINISTER OF ENVIRONMENT, NATURAL RESOURCES AND FORESTRY DEVELOPMENT

NATIONAL CLIMATE CHANGE PROGRAM

WORLD BANK – NATIONAL STRATEGY STUDIES PROGRAM

National Strategy Study for the Participation of Bolivia in the CDM

Executive Summary (Short Version)

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Introduction

The Government of Switzerland, in a joint effort with the World Bank, has supported a number of studies which analyze the options and opportunities associated with the implementation of greenhouse gas (GHG) emission mitigation projects in developing countries and countries with economies in transition. The Bolivian study is the second Swiss-funded study to be carried out under the National Strategy Studies (NSS) Program of the World Bank in Latin America.

The objective of the study is to provide the relevant Bolivian authorities with a conceptual reference framework and analytical instruments to evaluate proposed options, and enhance understanding of issues, problems and opportunities presented by potential international markets for certified GHG emission reductions (CERs) through the Clean Development Mechanism (CDM).

The study has consolidated and built up completed and ongoing efforts in Bolivia, addressed to climate change issues and developed by the Climate Change National Program, including the First National Communication to the UNFCCC and other related activities. In this sense, the study was focused on improvement of the mitigation options analyses for the energy and non-energy sectors at macro and sectoral levels, 1994 GHG inventories and its projections and to analyze and recommend the appropriate design or redesign of domestic institutions that would allow and facilitate the participation of Bolivia in the GHG emission reduction markets.

The study is addressed to policy makers in Bolivia and beyond, as well as to CDM project developers in the country and other developing countries, the academia, the growing climate change community and - perhaps most importantly - representatives of the international private business community who are considering to venture into the emerging market of greenhouse gas mitigation.

Main Results of the Study

Three Main Results

Forestry and Unilaterality: This study strongly supports the Bolivian negotiation position in the following issues: a) demanding Land Use, Land Use Change and Forestry projects (LULUCF projects) to be included in the CDM and b) requesting unilateral financing of CDM projects to be accepted (see Chapters 2, 5 and 6).

CDM Surplus Sharing: An innovative approach on CDM surplus sharing is presented: CDM host governments are encouraged to ensure that part of the CDM surplus is retained in the host country. For this reason, as complementary way to credit-sharing arrangements, a taxing regime analysis, which could offer major advantages to both host countries and investors, is presented instead. The proposal is based on existing fiscal legislation and can be easily implemented (see Chapter 5).

Approval for CDM activities: A straightforward procedure for CDM project approval is hereby outlined, based on existing legislation - an aspect that greatly facilitates the fast implementation of the suggestions of this study (see Chapters 4 and 5).

Key Chapter Results

Mitigation Potentials in the sectors of Land Use, Land Use Change and Forestry, Energy, Industry and Transport

- Bolivia will benefit from the Clean Development Mechanism (CDM) in a meaningful way only if forest protection and reforestation projects are eligible under the CDM. Activities related to land-use change and forestry are responsible for 82.8 % of CO_2 emissions in Bolivia, and 97.7% of Bolivia's CO_2 abatement potential is in this sector, potential that is equivalent to 903 million tons of CO_2. The study identifies a mitigation potential in the LULUCF sector of 73.5 million tons of CO_2 per year in average, while the average potential in the energy sector is 1.8 million tons CO_2 per year, taking into account conservative assumptions for these estimations.
- The study gives a number of examples of potential CDM projects in the forestry sector (presenting an assortment of mitigation options), and whose CO_2 mitigation effect is demonstrated as being measurable and sustainable in the long-term. These projects would not only reduce emissions at very competitive costs, but also produce numerous collateral benefits for the environment, local communities and biodiversity itself.
- Examples for projects of this sort are: introduction of sustainable agroforestry production methods, to allow rural population to shift away from traditional slash-and-burn agriculture, which is a primary cause of deforestation in Bolivia; introduction of low-impact logging; more efficient protection of national parks, whereby economic alternatives such as agroforestry are offered to the local population; natural regeneration of forests; and finally reforestation and afforestation.
- Apart from its great potential in the forestry sector, Bolivia can also offer a variety of mitigation options in the energy sector (for residential, commercial, industrial, and transportation sectors). Even considering that gas fired plants and hydropower produce a major part of electricity in Bolivia, a potential for GHG emissions reductions also exists in the power generation sector.
- Mitigation options exist as well in rural areas, and emissions reduction effects can be achieved. In these areas, dispersed population is not connected to the grid and electricity is usually produced by diesel power generators, which can be replaced by small hydropower plants, as there exists an interesting hydroelectric potential not yet developed in the country, as well as wind and solar energy (the latter having significantly higher costs).
- Finally, switching from diesel and gasoline to compressed natural gas is a very interesting mitigation option in the Bolivian transport sector, with great potential of GHG emissions reductions.

The International CER Market

- The study analyses the results of the most recent GHG market models. In the case of an unrestricted international GHG market, these models show a CER price range between 4 and 18 US$/ton CO_2 by 2010. The potential market size of the CDM could achieve from 1,312 Mton CO_2 to 2,651 Mton CO_2 in 2010.
- Inclusion of "*hot air*" (non-cost reductions, generated particularly in countries with economies in transition) is one of determinants of price and market size of CDM. In a scenario that considers exclusion of "*hot air* ", achieving higher prices for CERs, the participation of Bolivia in the CDM market increases.

- As important determinants of the CO_2 price, restrictions in both demand and supply are analyzed. Restrictions in demand might be caused by an agreement to limit GHG trading to a certain percentage of the overall Annex I emission reduction commitment, but also by national legislations in Annex I countries. Such demand restrictions could cause a fall in CER price below 1 US$/t CO_2.
- Much less attention has been given in the literature to potential supply restrictions. It is, however, not unrealistic to suggest that the CER production could significantly fall short of the theoretical mitigation potential in developing countries. In this case the CERs may reach prices of 20 US$/t CO_2 and more.
- The study identifies financial products and services that are expected within the CER market. Thereby, it is suggested that within a developed GHG market, all major finance products such as futures, options, swaps, funds and insurance will be available. Products that are currently being introduced in the market at this point in time were identified as well.
- The most important market option in the CDM for Bolivia is the inclusion of LULUCF activities; nevertheless, the projects in the energy sector represent a real alternative. If LULUCF activities do not become a part of the activities accepted under the CDM, participation of Bolivia and other non-Annex I countries will be relatively small in the global market of GHG.

Foreign Direct Investment and Climate for Investment in Bolivia

- CDM projects are foreign direct investments. For this reason the study explores in detail the climate investment in Bolivia. Bolivia has experienced an impressive increase in FDI flows to the country during the 1990s. While annual FDI inflows amounted to 53 million US$ a year on average during 1987-1992, inflows rapidly and steadily increased to 872 million US$ in 1998.
- The main obstacles for international investments in Bolivia are inadequate infrastructure, deficient tax regulations and corruption. National investors find that the main investment disincentive is the lack of funding.
- On the positive side, terrorism, price controls, foreign currency regulations, crime, and inflation practically are not present in Bolivia.

Institutions to promote CDM Investment

- A key issue for attracting CDM investment is to offer a speedy, transparent and straightforward approval procedure for CDM projects.
- The study suggests that the existing Bolivian legislation for investments is sufficient to ensure that CDM investments contribute to sustainable development -a condition for projects to be approved and accepted as CDM projects. The only exception is perhaps "social sustainability", and thus project developers should encompass the project targets in accordance with local development expectations. In this field some additional guidance may be sought in the “Agenda 21” and "The World Bank Environmental and Social Safeguard Policies”, and more specifically in the “Operational Directive OD 4.20, Indigenous Peoples”.
- The document furthermore summarize how an efficient office for the CDM could be established at the national level, based on existing institutions and taking into account existing legislation.

- The analysis suggests that the CDM office's tasks should be restricted to a minimum of activities, which, in turn, will be determined by the requirements lined out in the current post-Kyoto negotiation texts.

Bolivia's Strategy to Maximize Benefits from CDM

- Bolivia advocates for the inclusion of forestry activities in the CDM. The study supports the findings that CDM forestry projects are of foremost importance to Bolivia, and that such projects can produce measurable and long-term GHG mitigation effects.
- The analysis suggests that Bolivia should enter as soon as possible the GHG market, in order to gain experience in the activities and services associated with the CDM, and to ascertain that Bolivia is an attractive destination for CDM investment. The arguments that suggest waiting for better CER prices are hereby discussed and refuted. However, the proposition for an early market entry has to be considered in association with the suggestion of establishing a CDM tax regime, allowing Bolivia to participate in the surplus generation of CDM activities (see next bullet).
- The study suggests the Bolivian Government to ensure that part of the surplus generated in CDM projects is retained in Bolivia. At the same time, it makes relative undertaking of case-by-case CER credit sharing agreements, because it is considered that transaction costs for such agreements could be quite high, and the agreements could show themselves unfavorable to investors. However, previous experiences of Bolivia, on the subject of Activities Implemented Jointly (AIJ), did not show major problems.
- It is suggested to analyze in depth the establishment of a CDM tax regime, which is similar to the tax regime in the Bolivian mining sector. Such a regime would be stable in the long term, considering that the taxes are compatible with international double taxing agreements, and would allow firms to deduct losses from the taxable income, which reduces the risk for the investor.

Projects

- Chapter 6 of the NSS introduces a number of potential Bolivian CDM projects. The projects are developed up to a pre-feasibility stage and the data is presented in a Uniform Reporting Format, which is based on the international standard format accepted by UNFCCC for present AIJ projects.
- The information provided will allow potential investors to have an overview of CDM investment opportunities in Bolivia and provide a basis for deciding whether to further develop a project, with the aim of finally investing in one or several projects.
- Calculations of the expected GHG effects of the projects and the associated costs were carried out taking into account the most recent methodologies for the evaluation of CDM projects. GHG project effects are calculated by a strict comparison between a baseline scenario and the project scenario.
- To guarantee maximum consistency of the calculation of project effects, a standardized Bolivian NSS Excel Sheet has been used to calculate incremental costs, GHG effects and costs per ton of CO_2 equivalent.
- A comprehensive *Guideline for CDM Projects* has been devised and has been provided to project developers, explaining in detail how to develop a CDM project idea, and how to use the Excel File provided.

- Projects include GHG mitigation options in the land use change & forestry, energy, and transportation sectors.

The Negotiation Position of the Bolivia and COP-6

The Bolivia NSS has reviewed the Bolivian legislation and regulations, and has designed an appropriate institutional framework to promote the inclusion of the widest range of projects that can effectively mitigate GHG concentrations. Assuming strict additionality rules and effective monitoring, Bolivia should be free to develop its own projects, and Annex I countries should be allowed to invest in the most cost-effective options at the international level. In order to promote sustainable development, the CDM should channel investment flows towards all sectors: energy, transport, industry and LULUCF. Bolivia has prioritized its interests in the employment, income and environmental benefits that may be derived from new major forestry projects. In order to promote the objectives of the Kyoto Protocol and maximize the potential benefits of the CDM for Bolivia, the national negotiating position for COP-6 is based on the following principles:

- The inclusion of project activities in forests and other terrestrial ecosystems in the CDM, based on reasons of environmental and climatic coherence, sustainable development, competitiveness, and legal interpretation of Kyoto Protocol as part of the same legal framework which involves Agenda 21 and other Multilateral Environmental Agreements.
- The possibility of financing CDM projects not only by Annex I countries, but also by international organizations and host countries (unilateral and multilateral model, in addition to the supposedly conventional bilateral model).
- The possibility that CERs generated by a CDM project could be transferred from one Annex I country to another Annex I country to comply with its emission reduction commitments.
- The financing of the adaptation fund for countries that are highly vulnerable to climate change should come from the three Kyoto flexibility mechanisms, and not only from CDM. To promote an equitable treatment among the three mechanisms, including the use of equivalent rules for all mechanisms, and the assignment of equivalent administrative and adaptation charges to all of them.
- Ensure that qualifying CDM projects are creditable from January 1 of 2000 onward, or as soon as possible, depending on COP-6 decisions. This will enable to open the opportunities for participating countries to immediately formulate and develop eligible projects, and therefore immediately ensure benefits from these investments.
- Given the sectoral and regional differences, the definition of the project baseline should be defined project-by-project, according to the characteristics of each project.
- Minimize international transaction costs, risks and barriers. Minimize all international transaction costs and potential barriers to the use of the CDM, including search, negotiation, legal, approval, monitoring and certification costs, both at the international and domestic levels.
- Tradability and fungibility of CERs should not be constrained. Annex B nations should be free to seek and invest in the most cost effective emissions mitigation projects throughout the world, in order to meet the objectives of Article 12. This will enable the efficient use of the unilateral model and prevent the slowing down of the growth of the market.
- Sustainable development criteria for approval of CDM projects must be defined by each developing nation. Each country has different priorities and conditions for sustainable development and these should not be defined externally, but they should be also consistent

with the objectives of other Multilateral Environmental Agreements, with the principles agreed in the Agenda 21 and the work developed by the U.N. Commission on Sustainable Development.

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