6 September 2002

ENGLISH/SPANISH ONLY

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
Seventeenth session
New Delhi, 23–29 October 2002
Item 4 (f) of the provisional agenda

METHODOLOGICAL ISSUES

LAND USE, LAND-USE CHANGE AND FORESTRY: DEFINITIONS AND MODALITIES FOR INCLUDING AFFORESTATION AND REFORESTATION ACTIVITIES UNDER ARTICLE 12 OF THE KYOTO PROTOCOL

Views from Parties on issues related to modalities for the inclusion of afforestation and reforestation project activities under the clean development mechanism in the first commitment period

Submissions from Parties

1. The Conference of the Parties (COP), by its decision 17/CP.7 (paragraph 10 (b)), requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to develop definitions and modalities for including afforestation and reforestation project activities under the clean development mechanism in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to decision -/CMP.1, (*Land use, land-use change and forestry*) (FCCC/CP/2001/13/Add.2).

2. The SBSTA, at its sixteenth session, agreed on terms of reference and an agenda for the work referred to in paragraph 1 above. It invited Parties and organizations to submit their views on issues related to modalities for the inclusion of afforestation and reforestation project activities under the CDM in the first commitment period. The deadline for the submission of this information was 20 August 2002 (FCCC/SBSTA/2002/6, annex I).

3. The secretariat has received 12 submissions from Parties. In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced[*] in the language in which they were received and without formal editing.

4. The secretariat has also received two submissions from intergovernmental organizations and four from non-governmental organizations. It is the practice of the secretariat not to reproduce documents from organizations. These submissions can be found in document FCCC/WEB/2002/12, available on the UNFCCC web site at: http://unfccc.int/resource/webdocs/2002/12.pdf.

[*] These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

CONTENTS

PAPER NO. 1: AZERBAIJAN

The International modalities corresponding to the regional needs and the financial resources are few. The preparation of forest inventory demands a great resource.

PAPER NO. 2: BOLIVIA

DEFINITIONS AND MODALITIES FOR INCLUDING AFFORESTATION AND REFORESTATION ACTIVITIES UNDER ARTICLE 12 OF THE KYOTO PROTOCOL

In accordance with decision 17/CP.7, adopted in the Conference of the Parties at its seventh session (COP.7) and being guided by the document FCCC/SBSTA/2002/L.8, the Government of Bolivia submits his position with relationship to the modalities for including Afforestation and Reforestation project activities under the Clean Development Mechanism (CDM) in the first commitment period.

Initially, the Bolivian Government clearly recognizes the importance of the flows and storage of Carbon Dioxide by the activities of Afforestation and Reforestation (A & R) and considers that these can play an important role in the system of compliance of the Kyoto Protocol (KP) through the CDM.

To establish definitions and modalities for the inclusion of the A & R project activities, it is necessary consider the following modalities for addressing the issues of:

1. NON-PERMANENCE

The sequestration of atmospheric carbon in the biomass by A &R activities is considered no permanent and subject to risks, since the achieved effect can be reversed in any moment by means of natural or direct Human-Induced disturbance.

Bolivia considers that non-permanence or the temporary nature of the reductions of emissions through A & R are not an unbeatable defect. Without a doubt, this type of activities can contribute to diminish the growth in the atmospheric concentrations of CO_2 for some decades or more.

Maintain the carbon outside of the atmosphere, storing it in forest ecosystems for 20 years or more and then liberating them provides a net benefit to the society, since it defers the damages on the climate. However the issue of permanence of the benefit of carbon should be recognized.

With the purpose of address this issue and to not continue being used this to delay the inclusion of the A & R activities into CDM, the following aspects should take into account:

- From a normative perspective the permanence should be defined in terms of a reasonable duration. The Kyoto Protocol adopts a horizon of 100 year to evaluate the impact of emissions[1]. Due to the environmental benefits generated by this type of activities, we consider that this period should be smaller than 100 years.

- With the purpose of guarantee the permanence of the anthropogenic sinks of carbon, each host Party should have a normative legal framework, to regulate the A & R activities under the CDM, including preventive measures and a regime of penalties by non compliance to these.

- In the areas of action of the projects, it should be completely clear the ownership of the land , in order to protect the forested areas of probable human invasions and settlements.

- To reduce the risks, should be analyzed the possibility to implement mechanisms of appropriate insurance for each type of planted forest.

[1] Decision 2/CP.3 ((FCCC/CP/1997/Add.1), Mentioned in Chomitz (1998).

- It is recommended to elaborate sound methodologies to measure the risks of natural disasters or not foreseen anthropogenic activities and maintain them as support " buffer " or insurance in the event of failure of the project during their lifetime. This percentage of carbon captured as " buffer " would not be marketed.

- A second way to address this issue could be consider and analyze "concession of temporary credits for the A & R activities". This means that during accounting of the carbon credits , non-permanence of the sequestration activities could be reflected through issue of temporary credits, valid for 7 year term[2]. A Party that makes use of such temporary credits to compensate a part of its emissions, should substitute them for other credits 7 years later.

  In relation to the project activities, if the sequestration continues after 7 years, new temporary credits could be issued. It means that the validity of the temporary credits could be extended every 7 years.

- In relation to the previous point, for A & R project activities the accreditation period should be extended up to 28 years, with 7 year periods renewable for 3 times.

2. ADDITIONALITY

All A & R project activities under the CDM, should fulfill the requirement of additionality, being additional to any activity that would occur in the absence of the CDM activity.

To fulfill this indispensable requirement, should be developed well defined rules, so guarantee that reductions are real and measurable in the long term. With this purpose should be considered the following modalities :

- The reductions generated by the A & R project activities should be quantified regarding a baseline, in which the additional reductions can be measured and quantified coherently in the time.

- The baselines should be elaborated according an evaluation of the historical tendencies of the land-use and using models of dynamic future. For this purpose, local data and specific background should be obtained.

- When elaborating the baseline also should take into account the legal and socio-economic aspects, and changes in the future national and regional policies, and future policies to be developed in the area of action of the A & R project activities, that facilitate interpretation in the best possible way what would have occur in the absence of the project activities.

- The baselines should be elaborated following different scenarios, using as reference, different types of assumptions as alternative to the scenario of most probable occurrence.

- One of the ways to guarantee the real benefits of the A & R project activities is the elaboration of "dynamic" baselines, that could be adjusted, when new information or tendencies become evident.

- The A & R project activities under the CDM, should demonstrate that are different and additional to "business as usual" activities, like it would be the case of the afforestation and reforestation projects that habitually carry out the forest companies to fulfill their commercial objectives before the Kyoto Protocol.

---

[2] One of the agreements on the accreditation period establishes a seven year period, renewable twice up to a 21 year maximum of crediting. In this case, for each renovation a new process of validation of the project baseline should be carried out.

- In relation to the previous point, the modalities to determine additionality should take into account the projects with high positive socio-economic impacts, that still being theoretically profitable, are not scored as business as usual activities due to presence of restrictions and/or barriers.

3. LEAKAGE

As a result of the execution of project activities of carbon sequestration, can be generated negative or positive externalities in other places outside of the area of action of the project.

All A & R project activities should determine with accuracy if the resulting effects in carbon flows outside of the project area are denying partial or totally the positive benefits in the action area of the project.

For developing countries the expressed in the paragraph above, means a complicated and expensive question, due to the lack of sound information, of the complexity of the factors that determine the patterns of land-use and the great number of informal stakeholders in the rural areas.

However, the determination of these externalities is very important. With this purpose it is proposed the following modalities :

1st. OPTION:

- It is very important reduce the costs of the leakage analyses, and in this sense it is proposed apply a discount factor or coefficient for all A & R project activities on the base of a risk evaluation of the specific project.

2nd. OPTION:

- It is important that the A & R project developers could carry out efforts to quantify the negative externalities and the effectiveness of any measure to reduce them.

- The results of the leakage analysis should be included in the general accounting of the carbon reduction benefits of a project activities.

- To be able to analyze and quantify the externalities related to carbon sequestration, it is important and necessary the identification and analysis of the different types and sources of leakages. It is suggested adopt a standard terminology to define these.

- After identifying leakage types and involved stakeholders, it is important estimate the quantity of occurring or projected in the future leakages . Numerous methodologies are developed to estimate leakages. In this case, special attention should be paid to definition of the project boundaries, to capture all the effects in the emission reductions.

- After quantification of the leakage affecting the project, should be developed an analysis on measures that could be carried out to mitigate them. In this case, it should be carried out studies on effectiveness of the measures and to estimate their cost/effectiveness.

- As much as possible the A & R project activities should be designed appropriately in such a way to neutralize the probable presence of leakages.

4. UNCERTAINTIES

Uncertainties refer to that the methodologies used for carbon measurement in the forested and reforested forests are not precise, and in consequence their results are uncertain to be credited as reduction of emissions.

The carbon capture forestry projects could be measured with high accuracy as numerous forestry sciences researchers affirm[3].

The above-mentioned, means high costs especially for developing countries, which have incipient technologies, because as the accuracy increases in the carbon measurements the costs also increases in the projects.

In the A & R project activities the uncertainty can be appropriately managed, with a minimum margin of error, considering the following modalities:

- Should be developed standardized measurement methodologies with a high degree of precision and accuracy. In this case, modalities and criteria should be developed, promoting a optimal combination of the most advanced techniques in field measurements, modeling and remote sensing.

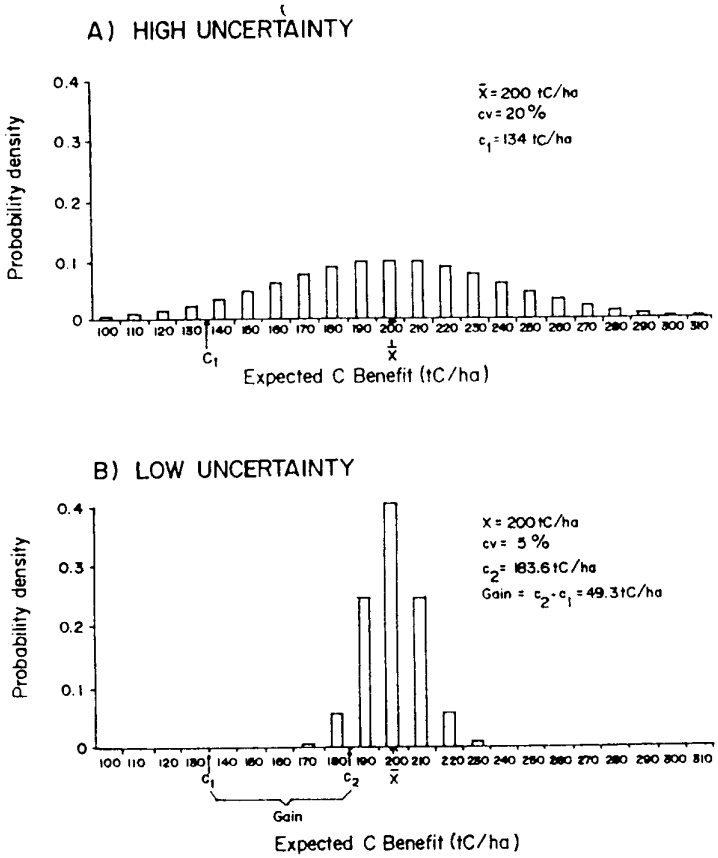
- In the projects where doubt or uncertainties exist, these should be quantified using conservative or low estimates.

- As much as possible, should be reported the net carbon benefit, based on the lower limit of the confidence interval.

- Statistical tools can be used for the uncertainty analysis of the carbon sequestration of the afforestation and reforestation activities, as showing in the following graphs[4]:

[3] Kenneth, G & MacDicken, K.G. A Guide to Monitoring Carbon Storage in Forestry and Agroforestry Projects. (Arlington, Virginia: Winrock International, 1997).
Trexler and Associates (1998).

[4] Fearnside, P.M. Uncertainty in land-use change and forestry sector mitigation options for global warming: Plantation silviculture versus avoided deforestation. In Biomass and Bioenergy 18 (6): 457-468 (2000).



5. SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACTS, INCLUDING IMPACTS ON BIODIVERSITY AND NATURAL ECOSYSTEMS.

In accordance with the article 12 of the Kyoto Protocol, "the purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention,....". In this sense, all A & R project activities should contribute to the Sustainable Development of the host country of the project.

Each country should select its own sustainable development criteria, based on its national strategic priorities for sustainable development.

In a general way, all A & R project activities should produce the following socio-economic and environmental positive impacts:

Social priorities

- Positive impacts in the local, national and global community. At local level it is important to analyze the employment generation, technical assistance, credits generation, improvement of quality of life, etc.

Economic priorities

- Assure economic benefits to families in a long time.

- Establish forest plantations of species with commercial value.
- Elevate economic value of small and medium land properties by means of forest plantations.
- Assure periodic revenues for carbon trading.

Environmental priorities

- Generation of following positive environmental impacts:

- Recovery of damaged by erosion, degraded and in desertification process soils, and with minimum or without current vegetal cover. These criteria are in accordance with the United Nations Convention on Desertification.

- Protection of water sources and courses, water basins and lands under danger of erosion.

- Valuation of native forest species or forest species adapted in the country, that don't represent environmental uncertainties.

- Development of activities that don't include deforestation or substitution of native forests.

- Development of activities that promote agroforestry projects.

- Development of activities that represent positive effects on the biodiversity.

PAPER NO. 3: CANADA

ISSUES RELATED TO MODALITIES FOR INCLUDING AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM IN THE FIRST COMMITMENT PERIOD

1. INTRODUCTION

The Bonn Agreement and the Marrakech Accords include LULUCF CDM project activities with eligibility limited to afforestation and reforestation. The Marrakech decisions on sinks as well as CDM provide the time frame and the deadline for completion of work on Sinks and CDM modalities by CoP9 in order for such projects to take place during the first commitment period.

It is Canada's strong belief that only the question of permanence is unique to sinks and needs to be addressed carefully in elaborating the modalities for afforestation and reforestation projects under the CDM. The other issues including baselines and additionality should be subject to equivalent requirements as project activities that reduce emissions from sources.

It is also Canada's firm position that Parties should come to agreement on the definitions and modalities for including afforestation and reforestation project activities by CoP9. Canada looks forward to working constructively and cooperatively with all other Parties towards that end.

2. DEFINITIONS OF AFFORESTATION AND REFORESTATION

2.1. Mandate for developing definitions

The Marrakech Accords do not elaborate definitions of "afforestation" and "reforestation" for the purposes of the CDM.

First, while paragraph 4 of draft Decision -/CMP.1 (*Land use, land-use change and forestry*) specifies that Parties adopt definitions, modalities, rules and guidelines relating to LULUCF under Articles 3, 6 and 12, this does not imply that all such definitions, modalities, rules and guidelines apply to each of the Articles. Rather, Parties were careful in the Annex to specify which paragraphs are relevant to which Article.

Second, while definitions of afforestation and reforestation are provided in paragraph 1 (b) and (c), respectively, of the Annex to draft decision -/CMP.1 (*Land use, land-use change and forestry*), the chapeau of paragraph 1 is specific that these definitions shall apply "for LULUCF activities under Article 3, paragraph 3 and 4".

Third, section D ("Article 12") of the Annex is intentionally silent on the issue of definitions because the Parties decided to request the SBSTA to "develop definitions and modalities for including afforestation and reforestation project activities under the clean development mechanism in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems". The fact that the Parties deliberately chose to include this request in both decision 11/CP.7 and 17 CP.7 reinforces their intention to have definitions of afforestation and reforestation for the purposes of the CDM elaborated in a future process undertaken by SBSTA.

Fourth, application of the definition of afforestation and reforestation agreed in the Annex requires use of the definition of forest, which in turn requires a choice about the three parameters in the forest definition. Paragraph 16 of the Annex requires that Annex 1 Parties make a choice about the parameters – no mention is made of non-Annex 1 Parties having to make parameter choices related to Article 12 projects.

Therefore it is clear that Parties did not decide that the definition of forest, upon which the definitions of afforestation and reforestation depend, should be applied to Article 12 projects.

In light of these facts, it cannot be reasonably argued that the Article 3 definitions automatically apply to Article 12, nor that the Parties have made any decision, even implicitly, on definitions for the purposes of Article 12. Instead, as noted in part I A. of the Note by the Chair (FCCC/SBSTA/2002/4), SBSTA, being guided by the principles in the preamble to decision -/CMP.1 (Land use, land-use change and forestry) and the terms of reference developed at SBSTA 16 (Annex II of FCCC/SBSTA/2002/4), has a mandate to develop definitions for afforestation and reforestation projects under the CDM.

2.2. Proposal of Canada

It is Canada's position that the existing Art. 3 definitions for "afforestation", "reforestation" and "forest" (para. 1(a) of the Annex to decision 11/CP.7) should be the basis for definitions for the purposes of the CDM. In Canada's view, the existing definitions are broad and flexible enough to be applied to forest types and national circumstances of developing countries throughout the world. Thus, Canada reiterates the proposal it advanced at SBSTA 16, namely that:

i) The definition of "forest" under the CDM, in the first commitment period, shall be the same as that adopted by the Parties in paragraph 1 (a) of the Annex to draft decision -/CMP.1 (LULUCF). Each non-Annex I Party shall, for the purposes of applying the definition of "forest" as contained in paragraphs (ii) and (iii) below for afforestation and reforestation project activities under the CDM, select a single minimum tree crown cover value between 10 and 30 per cent, a single minimum land area value between 0.05 and 1 hectare and a single minimum tree height value between 2 and 5 meters. The selection of a non-Annex I Party shall apply to all its afforestation and reforestation project activities under the CDM, and shall be fixed for the duration of the first commitment period. The selection shall be included in the domestic guidelines of the non-Annex I Party with respect to participation in the CDM.

ii) The definition "afforestation" under the CDM, in the first commitment period, shall be the same as that adopted by the Parties in paragraph 1 (b) of the Annex to draft decision -/CMP.1 (LULUCF);

iii) The definition of "reforestation" under the CDM, in the first commitment period, shall be the same as that adopted by the Parties in paragraph 1 (c) of the Annex to draft decision -/CMP.1 (LULUCF) except that the date shall be changed to 31 December 1999. The definition shall read as follows:

> *"Reforestation" is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1999.*

The rationale for changing the reference date is that the later base year will increase the opportunity for potential benefits from reforestation activities in the CDM because:

a) Moving the date increases the total amount of eligible land area for "reforestation" projects, thereby allowing greater choice as to where to conduct a reforestation project;

b) More land means there will be greater opportunity for projects to be pursued with high environmental and social benefits;

c) It will be easier to substantiate that project lands meet the reforestation definition, as lands cleared more recently are likely to have more and better historical land use information, thereby decreasing project costs and uncertainty; and

d) A more diverse range of geographical areas will be eligible for CDM "reforestation" projects.

Moving the base year date to 1999 will have no impact on the potential for perverse incentives, such as land-clearing for the express purpose of establishing "CER plantations", as the base year date remains in the past and can still have no influence on actions already taken.

2.3. Environmental and Social Benefits

Moving the date forward to 31 December 1999 increases the total amount of area available for reforestation. Although the amount of the increase in available land as a result of moving the date is disputable given the generally poor information on the subject, the fact that the amount would increase is not.[1] Increasing the geographical coverage of eligible lands in turn will provide host countries with greater opportunity to put together projects that better fit their sustainable development goals. For example, a host country will have greater opportunity to host reforestation projects that support goals to increase labor employment, capital and industry development, and to better protect the natural environment.

Moving the base year for reforestation maximizes the land eligible for reforestation projects to include all the forestland converted to non-forest land during the 1990s. These lands are, in general, more likely to be closer to deforestation fronts and therefore the ecosystem services of natural forests (e.g. seed sources and pollinators). Reforestation project on these lands can contribute to stabilizing deforestation fronts, conserving biodiversity in remaining natural forests and reducing degradation of converted lands. Thus, moving the base year improves the potential for reforestation projects to be successful and to have the greatest positive environmental impact.

In many cases, abandoned lands will have some form of re-established shrub and/or woody vegetation that must be cleared to make way for a reforestation project. Moving the reforestation base year may reduce the likelihood of clearing this re-established vegetation on abandoned land, thereby reducing project related emissions.

2.4. Improved Data Quality

Moving the date also increases the amount of land that will clearly and undisputedly meet the definition. This point is supported by recent research conducted by the FAO Forestry Department.[2] This research demonstrated that more accurate methods of detecting and recording land-use change, such as through remote sensing or by direct survey, are now more common than in the past. For example, the amount of information data from remote sensing doubled between the 1980s and 1990s while the amount of information from household surveys has tripled over the same period. In addition to increased adoption of new and improved information tools, data from remote sensing covers a broad range of geographical locations. Therefore, moving the date not only increases the total area of land potentially available but also increases the amount of land that can be proven to meet the definition.

2.5. Broader Potential Participation

Changing the date will increase the number of countries and regions where reforestation activities will be eligible. Countries that have had historically poor quality and/or incomplete information regarding land use would be limited in their ability to substantiate that a given area did not contain forest as of 31 December 1989. However, in many cases they will be able to now take advantage of newer, high quality

[1] FAO, 2001, Global Forest Resources Assessment 2000 Main Report, FAO Forestry Paper 140. Mathews, E., 2001, Understanding the FRA 2000, World Resources Institute Forest Briefing NO.1.

[2] FAO, 2000, Tropical Deforestation Literature: Geographical and Historical Patterns in the Availability of Information and the Analysis of Causes, Forest Resources Assessment Programme, Working Paper 27, Rome.

information sources, such as remote sensing, that will likely be able to substantiate land-use changes that occurred after 31 December 1989 and prior to 31 December 1999. In particular, least developed countries will have increased opportunity to host CDM reforestation projects, thereby increasing the scope of CDM projects available to least developed countries to support their pursuit of sustainable development.

3.0 PERMANENCE

3.1 Issues related to permanence

The issue of permanence is unique to sinks projects. While energy sector projects can also be unexpectedly discontinued or interrupted for a number of reasons, the GHG emissions they had already reduced or avoided are not lost. This is not the case for sinks projects. However, the loss or reversal of biologically sequestered carbon need not be permanent: carbon can be recaptured in the event of a loss of part or all of an afforestation or reforestation project. The key to dealing with risks to permanence of afforestation and reforestation projects is to ensure that the issue is technically dealt with from the inception of a project, in project design. In this regard, Canada believes it is important for project developers to have access to all approaches and tools that can reduce and mitigate the project-specific risks to permanence. Thus, Parties should agree on a menu of options for addressing permanence, rather than attempting to prescribe a single solution.

3.2 Approaches for achieving permanence

There are undeniably risks to the permanence of sinks projects. These risks are not unique to CDM projects but are similar to the kinds of risks currently faced by forest industry and forestry-related development project managers around the world. There is a body of knowledge and experience in identifying risks to permanence on a project specific basis in the design phase and managing them after project implementation. Accordingly, risks to permanence of afforestation or reforestation projects are not an insurmountable technical problem but are chiefly an issue of risk management.

If a risk management approach to permanence is to be effective, there are a number of policy requirements that will have to be agreed on. The requirements should be incorporated into the modalities for including afforestation and reforestation project activities in the CDM, both as a confidence building measure and to ensure there is no ambiguity on dealing with permanence during the implementation of the CDM. The policy requirements are:

Contingency: The basic essential element for dealing with permanence is a mandatory requirement for all afforestation or reforestation projects to have a risk management plan. Project participants need to incorporate into their project design from the beginning the identification of risks to permanence, a plan to mitigate the risks and a contingency plan to deal with partial or complete reversal events. Submission of thorough identification of risks and a well designed risk management plan at the registration stage should to be a requirement for afforestation or reforestation CDM project validation and registration.

Liability: Parties would need to agree on who is responsible for managing the risk to permanence, and clearly assign liability in the event of a loss of project permanence. This will remove uncertainty for the project participants. The project proponent should have responsibility for producing the risk management plan, which should be detailed in the project design document.

Certification: In the event of a partial or full reversal during the project lifetime, the project participants should be required to include such information in its monitoring reports prepared for certification purposes.

3.3 Options for assuring permanence

There area a number of strategies for managing the risks associated with permanence of afforestation and reforestation projects. These strategies fall into two categories: insurance and risk mitigation. To

minimize the possibility of reversal, projects can incorporate several of the following risk management approaches.

Insurance approaches

Insurance: In this approach, projects use traditional insurance instruments to insure against loss. They would be insured for replacement of either the physical project or for the CERs lost. The project participants would pay the cost and could pass it on to CER buyers. Several large multinational insurance companies are investigating or developing insurance products for CDM projects.

Self-insurance/reserves: In this approach, project developers divert a portion of the CER stream to a contingency reserve. In the event of a partial loss, buyers can be compensated from the reserve. In the event of a total loss, the reserve is worthless unless it has been generated by a multi-element project that incorporates an energy component (e.g. an agriculture/solar or an afforestation/biomass energy project).

Risk management Approaches

Project portfolio: This approach manages risk by gathering multiple projects under one portfolio and then selling units of the entire portfolio to investors. The portfolio can be made of many afforestation or reforestation projects or a mixture of afforestation or reforestation and energy sector projects. In either case, the risk of a specific project failing is diluted across the entire portfolio; the larger and more varied the number of projects in the portfolio, the smaller the risk. Of course, individual projects still require their own risk management plans.

Multi-component activity/project – In this case, the risk of catastrophic failure of an entire project is diluted by including more than one type of emissions reduction activity within the project. For example, an afforestation project might be supplemented by a sustainable managed woodlot to serve as a source of biomass fuel and/or sustainable agriculture capacity building and technology transfer and/or locally appropriate small scale energy generation to provide power. A reversal of credits affecting one component of the project wouldn't compromise the entire project's generation of CERs.

Geographic dispersion – In this case, elements of the projects are dispersed across a wider geographic area reducing the risk that a catastrophic event will destroy the entire project. The farther the elements are physically separated, the lower the risk of total project failure. This approach would be useful for many types of afforestation or reforestation projects but would likely add some cost to the project related to implementing and managing multiple sites. There are likely to be limits to geographic dispersion. Dispersing project elements across international boundaries could significantly increase complexity and transaction costs. It is also not clear how a project with more than one host country would be treated under the CDM.

Local community involvement – This approach dilutes the risk of human related causes of project failure by vesting the local community in the success of the project. While community involvement is a way to ensure the fulfillment of the sustainability requirement of afforestation or reforestation CDM projects, it is also a way to contribute to permanence by addressing the root causes of deforestation – poverty and lack of access to resources alternatives. For example, if a local community is dependent on biomass fuel, an afforestation or reforestation project that restricts or denies access to fuel wood is likely to have problems with poaching and reversal of sequestered carbon benefits. On the other hand, a project that recognizes the local community needs and incorporates relevant economic development into the project design is less likely to suffer reversals.

4. OTHER ISSUES

4.1 Definitions

The Annex to draft Decision -/CMP.1 (Article 12) contains provisions on of "baseline", "additional", "leakage" and "project boundary", uncertainties, and socio-economic and environmental impacts. In addition, the project cycle described in the Annex should be applicable to all types of project activities

under the CDM. Thus, the current text should, with appropriate minor revisions, be applied equivalently to afforestation and reforestation project activities. For the most part, the minor revisions required are the inclusions of specific references to the anthropogenic removals by sinks of greenhouse gases. Canada's position is that existing provisions in the decision are sufficient for application to afforestation and reforestation projects.

4.1.1 Baselines and Additionality

As with CDM project activities that reduce emissions from sources, both project-specific and standardized baseline methodologies should be available to CDM afforestation and reforestation project activities. Standardized baselines in particular are efficient for small-scale projects with the added appeal that they lower transaction costs.

The additionality of afforestation and reforestation projects should be determined by comparing changes in carbon stocks and non-carbon dioxide greenhouse gas emissions from a project against a baseline representing projections for land use and associated changes in carbon stocks and non-carbon dioxide greenhouse gas emissions that would occur in the absence of the proposed project activity. To demonstrate additionality for afforestation/reforestation projects, the project developer would need to make the case that removals by sinks in the project scenario are increased beyond those that would occur in the absence of the validated project.

Paragraphs 37d, 43-45, 48, 53f,g, 59, 62f, 63, 64, Appendix B 2d in the Annex to draft Decision -/CMP.1 (Article 12) deals with baselines and additionality (see section 5.1). These sections, with appropriate minor revisions, should be applied equivalently to afforestation and reforestation project activities.

4.1.2 Boundaries and Leakage

The project boundary defines the limits within which the project is implemented and its removals by sinks occur. Leakage, with respect to CDM sinks project activities, should be defined as the change in emissions and removals outside the project boundary that are measurable and directly attributable to the project. Leakage, which can be both positive and negative in its impact on the greenhouse gas balance of a project, should be addressed either through a project-specific approach or via a multi-project approach.

The potential for leakage (both positive and negative) should be reported in the CDM project design document and assessed by operational entities as part of the project validation and registration process, as well as accounted for in the calculation of CERs.

Paragraphs 50-53c,f,g, 59, 62f, Appendix B 2a, 2b(ii), 2i(iii), (v) in the the Annex to draft Decision -/CMP.1 (Article 12) describe the treatment of leakage and project boundary for CDM project activities that reduce emissions from sources (see section 5.2): These sections, with appropriate minor revisions, should be applied equivalently to afforestation and reforestation project activities.

4.1.3 Uncertainties

The approaches to baselines, additionality, leakage and permanence need to account for uncertainties. The current CDM project cycle in the Annex to draft Decision -/CMP.1 (Article 12) deals with uncertainties for CDM project activities that reduce emissions from sources (paragraphs 45b, 53e, 54, 57, 62 b,c,d, Appendix B 2b(ii), 2i, 2h), requiring not only monitoring of data for the project, but also monitoring of data outside the project boundary (see section 5.3). In Canada's view, these provisions are sufficient and these sections, with appropriate minor revisions, should be applied equivalently to afforestation and reforestation project activities. With respect to permanence, any approaches to be considered should take into account uncertainties.

4.1.4 Socio-economic and environmental impacts

Guidelines for stakeholder consultations and analysis of environmental impacts should be the same as those for CDM project activities that reduce emissions from sources. Within the Annex to draft Decision

-/CMP.1 (Article 12), paragraphs 37b,c, 40b,c, 53d, 62b, Appendix B 2e(i)(ii), 2g, deal with the process for stakeholder consultation, and documenting and monitoring for environmental impacts (see section 5.4). These sections, with appropriate minor revisions, should be applied equivalently to afforestation and reforestation project activities.

5.0 APPENDIX – Relevant excerpts from the Annex to draft Decision -/CMP.1 (Article 12) (FCCC/CP/2001/13/Add.2):

5.1 On Baselines and Additionality

37. The designated operational entity selected by project participants to validate a project activity, being under a contractual arrangement with them, shall review the project design document and any supporting documentation to confirm that the following requirements have been met:

…

(d) The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity, in accordance with paragraphs 43 to 52 below;

43. A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.

44. The baseline for a CDM project activity is the scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity. A baseline shall cover emissions from all gases, sectors and source categories listed in Annex A within the project boundary. A baseline shall be deemed to reasonably represent the anthropogenic emissions by sources that would occur in the absence of the proposed project activity if it is derived using a baseline methodology referred to in paragraphs 37 and 38 above.

45. A baseline shall be established:

(a) By project participants in accordance with provisions for the use of approved and new methodologies, contained in decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(b) In a transparent and conservative manner regarding the choice of approaches, assumptions, methodologies, parameters, data sources, key factors and additionality, and taking into account uncertainty;

(c) On a project-specific basis;

(d) In the case of small-scale CDM project activities which meet the criteria specified in decision 17/CP.7 and relevant decisions by the COP/MOP, in accordance with simplified procedures developed for such activities;

(e) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.

48. In choosing a baseline methodology for a project activity, project participants shall select from among the following approaches the one deemed most appropriate for the project activity, taking into account any guidance by the executive board, and justify the appropriateness of their choice:

(a) Existing actual or historical emissions, as applicable; or

(b) Emissions from a technology that represents an economically attractive course of action, taking into account barriers to investment; or

(c) The average emissions of similar project activities undertaken in the previous five years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category.

53. Project participants shall include, as part of the project design document, a monitoring plan that provides for:

…

(c) The identification of all potential sources of, and the collection and archiving of data on, increased anthropogenic emissions by sources of greenhouse gases outside the project boundary that are significant and reasonably attributable to the project activity during the crediting period;

…

(f) Procedures for the periodic calculation of the reductions of anthropogenic emissions by sources by the proposed CDM project activity, and for leakage effects;

(g) Documentation of all steps involved in the calculations referred to in paragraph 53(c) and (f) above.

59. Subsequent to the monitoring and reporting of reductions in anthropogenic emissions, CERs resulting from a CDM project activity during a specified time period shall be calculated, applying the registered methodology, by subtracting the actual anthropogenic emissions by sources from baseline emissions and adjusting for leakage.

62. In accordance with the provisions on confidentiality in paragraph 27(h) above, the designated operational entity contracted by the project participants to perform the verification shall make the monitoring report publicly available, and shall:

(a) Determine whether the project documentation provided is in accordance with the requirements of the registered project design document and relevant provisions of decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(b) Conduct on-site inspections, as appropriate, that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observation of established practices and testing of the accuracy of monitoring equipment;

(c) If appropriate, use additional data from other sources;

…

(f) Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information derived under subparagraph (a) above and obtained under subparagraph (b) and/or (c) above, as appropriate,using calculation procedures consistent with those contained in the registered project design document and in the monitoring plan;

63. The designated operational entity shall, based on its verification report, certify in writing that, during the specified time period, the project activity achieved the verified amount of reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity. It shall inform the project participants, Parties involved and the executive board of its certification decision in writing immediately upon completion of the certification process and make the certification report publicly available.

64. The certification report shall constitute a request for issuance to the executive board of CERs equal to the verified amount of reductions of anthropogenic emissions by sources of greenhouse gases.

Appendix B

…

2. The purpose of this appendix is to outline the information required in the project design document. A project activity shall be described in detail taking into account the provisions of the annex on modalities and procedures for a CDM, in particular, section G on validation and registration and section H on monitoring, in a project design document which shall include the following:

…

(d) Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity;

5.2 On Leakage and Boundaries

50. Reductions in anthropogenic emissions by sources shall be adjusted for leakage in accordance with the monitoring and verification provisions in paragraphs 59 and 62(f) below, respectively.

51. Leakage is defined as the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity.

52. The project boundary shall encompass all anthropogenic emissions by sources of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the CDM project activity.

53. Project participants shall include, as part of the project design document, a monitoring plan that provides for:

…

(c) The identification of all potential sources of, and the collection and archiving of data on, increased anthropogenic emissions by sources of greenhouse gases outside the project boundary that are significant and reasonably attributable to the project activity during the crediting period;

…

(f) Procedures for the periodic calculation of the reductions of anthropogenic emissions by sources by the proposed CDM project activity, and for leakage effects;

(g) Documentation of all steps involved in the calculations referred to in paragraph 53(c) and (f) above.

59. Subsequent to the monitoring and reporting of reductions in anthropogenic emissions, CERs resulting from a CDM project activity during a specified time period shall be calculated, applying the registered methodology, by subtracting the actual anthropogenic emissions by sources from baseline emissions and adjusting for leakage.

62. In accordance with the provisions on confidentiality in paragraph 27(h) above, the designated operational entity contracted by the project participants to perform the verification shall make the monitoring report publicly available, and shall:

(a) Determine whether the project documentation provided is in accordance with the requirements of the registered project design document and relevant provisions of decision 17/CP.7, the present annex and relevant decisions of the COP/MOP;

(b) Conduct on-site inspections, as appropriate, that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of

measurements, observation of established practices and testing of the accuracy of monitoring equipment;

(c) If appropriate, use additional data from other sources;

…

…

(f) Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information derived under subparagraph (a) above and obtained under subparagraph (b) and/or (c) above, as appropriate,

using calculation procedures consistent with those contained in the registered project design document and in the monitoring plan;

Appendix B

…

2. The purpose of this appendix is to outline the information required in the project design document. A project activity shall be described in detail taking into account the provisions of the annex on modalities and procedures for a CDM, in particular, section G on validation and registration and section H on monitoring, in a project design document which shall include the following:

(a) A description of the project comprising the project purpose, a technical description of the project, including how technology will be transferred, if any, and a description and justification of the project boundary;

(b) A proposed baseline methodology in accordance with the annex on modalities and procedures for a CDM including, in the case of the:

…

(ii) Application of a new methodology:

- Description of the baseline methodology and justification of choice, including an assessment of strengths and weaknesses of the methodology;
- Description of key parameters, data sources and assumptions used in the baseline estimate, and assessment of uncertainties;
- Projections of baseline emissions;
- Description of how the baseline methodology addresses potential leakage;

(iii) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account and an explanation of how the baseline was established in a transparent and conservative manner;

…

(v) Description of formulae used to calculate and to project leakage;

5.3 On Uncertainties

45. A baseline shall be established:

…

(b) In a transparent and conservative manner regarding the choice of approaches, assumptions, methodologies, parameters, data sources, key factors and additionality, and taking into account uncertainty;

53. Project participants shall include, as part of the project design document, a monitoring plan that provides for:

…

(e) Quality assurance and control procedures for the monitoring process;

54. A monitoring plan for a proposed project activity shall be based on a previously approved monitoring methodology or a new methodology, in accordance with paragraphs 37 and 38 above, that:

(a) Is determined by the designated operational entity as appropriate to the circumstances of the proposed project activity and has been successfully applied elsewhere;

(b) Reflects good monitoring practice appropriate to the type of project activity.

57. Revisions, if any, to the monitoring plan to improve its accuracy and/or completeness of information shall be justified by project participants and shall be submitted for validation to a designated operational entity.

62. In accordance with the provisions on confidentiality in paragraph 27(h) above, the designated operational entity contracted by the project participants to perform the verification shall make the monitoring report publicly available, and shall:

…

(b) Conduct on-site inspections, as appropriate, that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observation of established practices and testing of the accuracy of monitoring equipment;

(c) If appropriate, use additional data from other sources;

(d) Review monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent;

Appendix B

…

2. The purpose of this appendix is to outline the information required in the project design document. A project activity shall be described in detail taking into account the provisions of the annex on modalities and procedures for a CDM, in particular, section G on validation and registration and section H on monitoring, in a project design document which shall include the following:

…

(b) A proposed baseline methodology in accordance with the annex on modalities and procedures for a CDM including, in the case of the:

…

(ii) Application of a new methodology:

- Description of the baseline methodology and justification of choice, including an assessment of strengths and weaknesses of the methodology;
- Description of key parameters, data sources and assumptions used in the baseline estimate, and assessment of uncertainties;

…

(i) Documentation on the analysis of the environmental impacts, including transboundary impacts;

(h) Monitoring plan:

5.4 On Socio-economic and environmental impacts

37. The designated operational entity selected by project participants to validate a project activity, being under a contractual arrangement with them, shall review the project design document and any supporting documentation to confirm that the following requirements have been met:

…

(b) Comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the designated operational entity on how due account was taken of any comments has been received;

(c) Project participants have submitted to the designated operational entity documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts and, if those impacts are considered significant by the project participants or the host Party, have undertakenan environmental impact assessment in accordance with procedures as required by the host Party;

40. The designated operational entity shall:

…

(b) In accordance with provisions on confidentiality contained in paragraph 27(h) above, make publicly available the project design document;

(c) Receive, within 30 days, comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available;

53. Project participants shall include, as part of the project design document, a monitoring plan that provides for:

…

(d) The collection and archiving of information relevant to the provisions in paragraph 37(c) above;

62. In accordance with the provisions on confidentiality in paragraph 27(h) above, the designated operational entity contracted by the project participants to perform the verification shall make the monitoring report publicly available, and shall:

…

(b) Conduct on-site inspections, as appropriate, that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observation of established practices and testing of the accuracy of monitoring equipment;

Appendix B

2(e) Environnemental impacts:

(i) Documentation on the analysis of the environmental impacts, including transboundary impacts;

(ii) If impacts are considered significant by the project participants or the host Party: conclusions and all references to support documentation of an environmental impact assessment that has been undertaken in accordance with the procedures as required by the host Party;

PAPER NO. 4: CHILE

The following is a proposal of the Government of Chile on issues related to definitions and modalities for the inclusion of afforestation and reforestation (A&R) project activities in the Clean Development Mechanism (CDM), in the first commitment period. (document FCCC/SBSTA/2002/6, annex I, paragraph 1 b).

I. DEFINITIONS

For the purpose of establishing definitions for the inclusion of A&R in the CDM, the following elements are proposed to be considered:

1. The definitions of "forest", "afforestation" and "reforestation" to be used in the CDM during the first commitment period, should be the same as those that were adopted for in article 3.3 of the Kyoto Protocol, which are contained in the annex to decision 11/CP.7.

2. As it is pointed out in document FCCC/SBSTA/2002/INF.11, additionality and leakage are defined in the annex to decision 17/CP.7 (paragraphs 43 and 51, respectively). There are no definitions for non-permanence, uncertainties and socio-economic and environmental impacts.

3. In the Summary of the Special Report of the IPCC on LULUCF (see the glossary) "permanence" is defined as: "Longevity of a carbon pool and the stability of its stocks, given the management and disturbance environment in which it occurs". With this antecedent, it is proposed to define the "non permanence" as: "The reversible condition of the carbon retained in a carbon pool, caused by direct and indirect human-induced activities, or by natural causes."

4. It is proposed to define "uncertainty" in afforestation and reforestation projects in the CDM as: "The lack of security or certainty in the estimate and measuring of the volume of CO_2 absorption carried out by a sink in a certain period of time, in accordance with the approved methodologies."

It is useful to distinguish uncertainty from risk, reserving the term risk to describe the probability of reversion of the sequestered carbon by natural causes or by anthropogenic activities not planned.

5. It is proposed to define "environmental impacts" as "The positive or negative alterations of the biotic or non biotic characteristics of the natural and intervened systems that are reasonably attributable to the A&R project activities in their influence area, taking into account the approaches accepted by the Convention on Biological Diversity."

6. It is proposed to define "socioeconomic impacts" as "The changes in social and economic conditions that are reasonably attributable to the A&R project activities in their influence area, that can affect human well-being positively or negatively".

II MODALITIES

1. Non permanence

a) The participants in A&R projects could establish appropriate modalities and norms to include preventive measures to minimize the effects of advance reversions of the sequestered carbon, in order to assure the validity of the project CER during the established period. Among these measures, it

could be considered to establish an insurance —expressed in CER— on the credited captures, similar to the insurance against forest fires.

b) For the purpose of defining the methods for carbon credits accounting, and to give due bill of the non permanence issue, methods should be arranged that are consistent with the Agreements of Marrakech. These methods should ensure that credits are assigned on the basis of measured and verified captures, that stimulate long-term captures, and that they facilitate the development of a market of attractive CER for the investors. Among the options to accept would be the renewable Temporary CER for preset periods, and the CER emitted on the base of storage average. In this way, it would be avoided the need of establishing security factors or buffers by defect, which may not reflect the specific characteristics of the projects.

c) In order to promote long-term carbon sequestration, the A&R projects should contemplate the possibility of accreditation periods longer than those proposed for projects that reduce emissions by sources in the CDM (a maximum of seven years which may be renewed at most two times, or a maximum of ten years with no option of renewal, as it is established in paragraph 49 of the annex to decision 17/CP.7). In this way, it is proposed that the A&R projects, according to their specific characteristics, can last up to 50 years or more, in accordance to the useful life of the forest species that are considered in these projects.

2. Additionality

a) Following decision 17/CP.7 (annex, paragraph 43) a CDM A&R project activity is additional if anthropogenic greenhouse gas removals by sinks are enhanced over those that would have occurred in the absence of the registered CDM project activity. In consequence, modalities and norms should be developed to assure that projects accepted in the CDM are additional. The baselines should be developed using reliable methodologies that combine historical precedents, legal aspects, and tendencies expected in the absence of the project.

b) The modalities to estimate additionality should take into account the eligibility of projects with high socioeconomic impact and promote sustainable development.

c) A&R project activities in the CDM should offer an opportunity to Non Annex I countries for reinforcing their programs of forest development, forest incentives and national policies of sustainable development.

3. Uncertainties

a) The modalities to broach uncertainties should reaffirm the principle of the Convention that the lack of scientific certainty should not be used as a reason for postponing measures of climate change mitigation. In most of ecosystems and biomes, uncertainty can be properly managed using conservative approaches and statistical tools, as intervals of trust, to carry out the estimates. The uncertainties can be reduced minimizing or avoiding the use of values by defect. For it is necessary that Non Annex 1 countries strengthen, with the necessary cooperation, their national research programs oriented to determine, among others, the expansion factors of biomass above and below ground and the net primary production of the ecosystems that will be replaced by the new forests.

b) It can be considered that the paragraphs related to uncertainties, indicated in table 2 of the document FCCC/SBSTA/2002/INF.11, apply to A&R project activities in the CDM, adding the sentence "and removals by sinks" following "anthropogenic emissions of greenhouse gas by sources."

c) The lack of certainty in the estimation and measurement methods for changes in stock of a carbon pool within a certain period, can be minimized by the use of technical coefficients estimated by

means of same combination of direct measurements, activity data, and models based on accepted principles of statistical analysis, forest inventory, remote-sensing techniques and growth studies. In this way, the recommendations of the IPCC on Good Practices should be adopted.

d) Uncertainties are related to the atmosphere benefits quantification of the carbon sequestration forecast (*ex ante*) as much as its *ex post* measurement and the determination of greenhouse gas net emissions in the baseline.

4. Leakage

a) It is considered that paragraphs related to leakage, indicated in table 2 of the document FCCC/SBSTA/2002/INF.11, apply to the greenhouse gas removals by sinks of the A&R project activities in the CDM.

b) Project frontiers development is necessary to implement plans of surveillance agreed in decision 17/CP.7 (paragraph 53 of the annex). To that end, it would be useful to develop indicators that would allow to identify and to assess leakage for activities displacement. Following the Marrakech Accords, It is understood that project frontiers should include all the processes and activities that cause net changes in the greenhouse gas emissions that are measurable, and that are reasonably attributable to the project. The frontiers should consider, then, listings of activities and processes for monitoring in a geographical area and in a defined period.

c) It is convenient that modalities to be developed for A&R projects in the CDM could contemplate — with enough flexibility— cases of project activities that do not represent an important risk of negative leakage to be developed on lands with very scarce or null arboreal vegetation, or that do not present possibilities for activity displacements.

5. Socioeconomic and environmental impacts

It is considered that the paragraphs related to socio-ecomic and environmental impacts, indicated in table 2 of the document FCCC/SBSTA/2002/INF.11, apply to the greenhouse gas removals by sinks of A&R project activities in the CDM.

PAPER NO. 5: CHINA

SUBMISSION ON ISSUES RELATED TO MODALITIES FOR INCLUDING AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM IN THE FIRST COMMITMENT PERIOD

In accordance with the request of FCCC/SBSTA/2002/L.8, China submits the following views on issues related to definitions and modalities for including afforestation and reforestation (A&R) project activities under the CDM in the first commitment period. Further views and proposals may be elaborated and submitted.

China believes that the environmental integrity under the Kyoto Protocol must be ensured through, inter alia, development of sound definitions and modalities for including A&R project activities under Article 12 in the first commitment period and the modalities shall be guided by the principles adopted, in particular in the preamble of decision-/CMP.1 (land use, land-use change and forestry). It should be emphasized that carbon benefits of A&R CDM projects shall be real and measurable, and shall remain for long-term.

Following seven issues are among other key issues related to definitions and modalities for including A&R project activities under CDM in the first commitment period, and have to be addressed while elaborating the modalities and procedures:

1. Definitions
2. Non-permanence
3. Additionality and baseline
4. Leakage
5. Uncertainty
6. Environmental impact
7. Monitoring and verification

I. Definitions

1. The definitions on afforestation, reforestation and forest for LULUCF project activities in the CDM in the first commitment period, shall be the same as those adopted in the Annex of Decision 11/CP7.

2. Matters which have not yet been defined and adopted officially by COP for the purpose of establishing modalities and procedures for including A&R project activities under CDM in the first commitment period, such as, non-permanence, uncertainty, etc., shall be defined clearly and adopted by the COP.

II. Issue of non-permanence

1. From the scientific point of view, the release of the carbon stock is the distinct feature of A&R CDM project. Para. 1(g) of Draft decision -/CMP.1 (Land use, land-use change and forestry) states that reversal of any removal due to land use, land-use change and forestry activities shall be accounted for at the appropriate point in time. It is necessary to develop a sound methodology to address this issue and the regime to be used to credit A&R CDM project activity shall reflect fully this requirement.

2. In order to address the issue of non-permanence, it is proposed to use the concept of “temporary credits” for A&R CDM project activities. “Temporary credits” means that the credits accrued from A&R CDM project activities shall expire in certain time, for instance, five years.

3. Credits accrued from an A&R CDM project activities shall be calculated on the basis of the increased actual carbon stock of the A&R CDM project activities. And the crediting period for A&R CDM project activities shall be ten years without any renewal period.

4. All the credits generated from A&R CDM project activities shall have the same lifetime and shall expire in certain (five) years from issuance. Consequently, either the expired credits shall be replaced by new credits or the same amount of credits shall be cancelled from related holding account.

5. If carbon stock of an A&R CDM project activities is decreased during the project lifetime, an amount of credits equivalent to the decrease shall be cancelled from related holding account promptly.

III. Baseline and additionality

1. The carbon stock generated from the plot of land of an A&R CDM project activity, either naturally or artificially, in the absence of the A&R CDM project activity, shall be defined as baseline carbon stock. The baseline carbon stock shall be dynamic because the carbon stock generated from the plot of land will surely change over time.

2. The baseline for a proposed A&R CDM project activity shall be established on a project-by-project basis.

3. The baseline for an A&R CDM project activity shall be reviewed periodically, and revised if necessary, during the crediting period, to better reflect the dynamic nature of the baseline for A&R CDM project activity.

4. Many factors will affect the additionality determination, such as demand of economic development, government policies, cultural traditions, etc. And these factors have to be taken into consideration when addressing additionality.

IV. Project boundary and leakage

1. Leakage is defined as the decrease in GHG benefits outside of the project's accounting boundary caused by the project activities. Failing to account for leakage would result in the overestimation of project benefits. Possible elements to address leakage may include: (1) determining a reasonable project boundary; (2) establishing a monitoring system; (3) discounting the credits.

2. The project boundary shall be set in such a way that the identified leakage sources, to the extent possible, will be included.

3. The elements for monitoring system shall include, inter alia, (1) changes in carbon stocks in above-ground and below-ground vegetation, litter, dead wood and soil organic carbon; (2) changes in non-CO_2 GHG fluxes; (3) emissions associated with project activities; (4) carbon stock loss in other forests due to the project activities; (5) other factors.

4. GHG benefits from A&R CDM project shall be adjusted and discounted due to unavoidable leakage. The discount rate could be [ ]% off of the calculated carbon stock of an A&R CDM project.

V. Issue of uncertainties

1. Uncertainties exist in the whole process of A&R CDM project activities, which include, inter alia, uncertainty in baseline determination, that in project boundary determination, in carbon measurement (calculation, sampling, and so on), etc. It is commonly believed that uncertainties related to carbon stock benefits from A&R CDM projects are much more significant than that related to the CERs resulted from other sectors. Therefore, it is extremely important to develop a set of sound approaches to address uncertainties.

2. Methodologies should be developed to address the uncertainty in baseline determination, ensuring that the carbon stock benefit in natural or artificial conditions be estimated correctly or in a conservative manner.

3. A set of sound guidelines should be developed for sampling (range and frequency), measuring and modeling carbon stock benefits.

4. To ensure the environmental integrity, a certain discount rate due to uncertainties should be imposed to the carbon stock of A&R CDM project activities.

VI. Socio-economic and environmental impacts of the project, including impacts on biodiversity and natural ecosystems

1. It is believed that A&R CDM project activities would have significant socio-economic and environmental impacts, some of which may be positive but some may be negative.

2. The elements of the impacts may include, inter alia, (1) biodiversity; (2) the quantity and quality of forests, grazing land and soil; (3) water quality and water use; (4) food, fiber, fuel, and shelter availability; (5) employment, human health, poverty, and equity; and (6) indigenous peoples.

3. A series of methodologies and guidelines to assess the impacts as above mentioned shall be developed. Project participants shall take measures to mitigate and minimize the negative impacts of the A&R CDM projects.

4. The A&R CDM projects with negative and/or adverse impacts outweighing the positive impacts shall not be approved as CDM project.

VII. Monitoring and verification

1. Monitoring and verification is one of the key steps to ensure the environmental integrity of A&R CDM project activities.

2. For an A&R CDM project, all changes in the following carbon pools shall be measured: above-ground biomass, below-ground biomass, litter, dead wood, and soil organic carbon. The changes in CO_2 and non-CO_2 gases shall be measured because land use change can cause changes in the emission fluxes. Techniques and methods, for sampling and measuring individual carbon pools, shall be based on commonly accepted principles and criteria concerning forest inventory, soil sampling and ecological surveys. The GHG emissions or removals in control sites shall be measured at the same time.

3. Sample plots shall be established and maintained for evaluating changes in forest carbon pools and non-CO_2 GHG fluxes throughout the project lifetime.

4. In order to ensure the accurate accounting of credits accruing from A&R CDM project activities, each designated operational entity shall only be allowed to perform either validation or verification function within an A&R CDM project activity.

5. Reporting guidelines for A&R CDM project activities shall be established, which shall include following elements: 1) measuring and monitoring methods; 2) the geographical locations and areas of the boundaries for the A&R project and monitoring; 3) methods for establishing the baseline, including the description land use type before the A&R project; 4) methods to estimate the GHG benefit, including factoring out the GHG benefit resulted from the non-anthropogenic effect, such as elevated carbon dioxide concentrations above pre-industrial levels and indirect nitrogen deposition; 5) methods to address the uncertainty issues; 6) methods to address the non-permanence issue; 7) assessment of the impact on environment.

PAPER NO. 6: COLOMBIA

COLOMBIAN SUBMISSION – DEFINITIONS AND MODALIDITIES FOR INCLUDING AFFORESTATION AND REFORESTATION ACTIVITIES UNDER ARTICLE 12 OF THE KYOTO PROTOCOL

In response to the invitation made by SBSTA 16 in document FCCC/SBSTA/2002/L.8, Colombia welcomes the opportunity to submit its views on issues related to modalities for the inclusion of afforestation and reforestation project activities under the CDM in the first commitment period.

Background

The Conference of the Parties, at its seventh session, decided that the eligibility of land use, land use change and agroforestry project activities under the clean development mechanism (CDM), would be limited to afforestation and reforestation for the first commitment period.

The Conference of the Parties, at its seventh session, requested the Subsidiary Body for Scientific and Technical Advice (SBSTA) to develop definitions and modalities for including afforestation and reforestation project activities under the CDM in the first commitment period, taking into account the issues of non-permanence, additionality, leakage, uncertainties and socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and being guided by the principles in the preamble to decision -/CMP.1 (LULUCF) and the terms of reference developed for the work to be conducted in this regard, with the aim of adopting a decision on these definitions and modalities at COP9, to be forwarded to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session.

The Conference of the Parties, at its seventh session, decided that the decision by COP9 referred to above shall be in the form of an annex on modalities and procedures for afforestation and reforestation project activities under the clean development mechanism reflecting, *mutatis mutandi*s, the annex to decision 17/CP.7 on modalities and procedures for a clean development mechanism.

The SBSTA, at its sixteenth session, developed and adopted terms of reference and an agenda for the work to be conducted under paragraph 2 above. Among the sources of information to be used in carrying out this work, the terms of reference and agenda include the submissions from Parties and organizations on their views on issues related to modalities for the inclusion of afforestation and reforestation project activities under the CDM in the first commitment period

The present document contains Colombia's views on issues related to modalities for the inclusion of afforestation and reforestation project activities under the CDM in the first commitment period.

Definitions

As a first issue related to modalities for including LULUCF project activities under the clean development mechanism in the first commitment period, Colombia believes the matter of definitions to be fundamental in achieving the purpose of the CDM, as established in Article 12, paragraph 2, of the Kyoto Protocol.

In this regard, the annex to decision 11/CP.7 contains definitions for forest, afforestation, and reforestation applicable to LULUCF activities under Articles 3.3 and 3.4 of the Kyoto Protocol, as stated in paragraph 1 of the given annex.

Although in general these definitions are adequate for activities under the CDM, the existing definition of reforestation limits eligible activities to those occurring on land that did not contain forest as of 31

December 1989. This reference date was selected accordingly with the base year used to establish emission reduction commitments and assigned amount units for Annex I Parties.

However, we believe that in terms of information availability this reference year is inconvenient for developing countries wishing to participate in the CDM, given that these countries do not necessarily have the supporting information to demonstrate the non-forested situation of the land before 1990.

As a result, the date limitation will become a systematic barrier to the equitable geographic distribution of forest project activities under the CDM, marginalizing the least developed countries from participating in the mechanism due to possible information availability restrictions. Disregarding the preambular consideration in Decision 17/CP.7 which refers to the promotion of the equitable distribution of CDM project activities at regional and subregional levels, the obstacle of a fixed date set at December 31, 1989 may furthermore not be easily overcome through capacity-building activities because of the difficulty of generating non-existent historical information. The cost of alternative options to reproduce such information would, in any case, disincentive possible project participants from developing LULUCF activities under the CDM in developing countries where such historical proof is not readily available.

In light of the above reasons, Colombia proposes a modification to the existing definition of reforestation, consistent with the establishment of a threshold to avoid perverse incentives (i.e. for deforestation) and allowing for the construction of information and the participation of least developed countries.

The modified definition would read as follows:
"Reforestation" is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest for a period of at least [10] years immediately prior to the moment of registry of the project activity

We believe our proposal will enable all Parties not included in Annex I to participate in the CDM with afforestation and reforestation project activities and this way contribute to the ultimate objective of the Convention, as intended in Article 12.2 of the Kyoto Protocol.

Non – permanence

The issue of permanence is specific to project activities having to do with emission removals by sinks and calls for a different treatment of such activities from those concerning emission reductions by sources. Therefore, particular modalities are needed to allow for the adequate handling of the non-permanence issue.

Colombia understands non–permanence as being the susceptibility of sink project activities to reemit the carbon dioxide initially sequestered from the atmosphere in case of: diseases, forest fires, logging, etc. The problem lies in the generation of credits resulting from LULUCF CDM projects that Annex I Parties to the Kyoto Protocol can use to fulfill their emission reduction commitments, emitting more greenhouse gases (GHG) at home backed by the implementation of a project activity elsewhere that initially captured gases from the atmosphere but eventually reversed its carbon sequestration, thus severing the environmental integrity of the Kyoto Protocol.

The issue of non–permanence must be dealt with then in its two dimensions: 1) the afforestation and reforestation project activity capturing GHG from the atmosphere, and 2) the use of a permit, non – permanent as well, by an Annex I country to achieve its emission reduction commitments.

The Colombian proposal recognizes the temporary character of an emission removal by sinks, and transfers the non-permanence feature to the permits issued in order to guarantee the integrity of the Protocol. Our proposal places an expiry date on the permits or certificates resulting from a LULUCF CDM project activity, turning such permits into non–permanent compliance mechanisms. The certificate would thus give an Annex I country a temporary permit to emit, committing the Party to carry out either a permanent emission reduction by sources or another temporary reduction once the expiration of the initial permit has passed, in order to continue fulfilling its Article 3.1 commitments.

A system of temporal certificates can demonstrably safeguard the environmental integrity of the Kyoto Protocol, being equivalent to the system of permits resulting from emission reduction projects under the CDM[1].

Modalities for the implementation of the Colombian proposal on non-permanence

For the implementation of this proposal, new modalities must be added to the afforestation and reforestation CDM project cycle as well as to the accounting system for compliance assessment:

Project cycle
The LULUCF project activity shall generate CERs for the amount of carbon captured during its accreditation period. In addition, the certificates shall include the verified duration of the capture.

It is therefore necessary to periodically monitor the carbon stock stored by the project activity, issue the certificates accordingly to the registered increases in stock and regularly update the sequestration period of the permits issued.

Accounting system (national registries)

An Annex I Party to the Kyoto Protocol will be able to use a temporary permit resulting from a CDM LULUCF project activity in order to fulfill its emission reduction commitments. To do so, the Party must transfer a CER to its holding account and, consistent with our proposal, at this time calculate the expiry date for the permit by adding its sequestration period to the date the CER was retired from the account. Upon the expiration of its certificate, the Annex I Party shall transfer a temporary or permanent permit to its cancellation account.

The compliance assessment and verification shall follow up on the temporary credits that have been retired and not cancelled.

Set out below is the implementation plan for the Colombian proposal, based on the provisions contained in decision 17/CP.7:

Proposal

Clean Development Mechanism Registry requirements

- *The CERs resulting from afforestation and reforestation project activities will have three additional specifications: 1. Duration of the capture or sequestration period 2. Expiry date and 3. Unit Number cancelled at the time of expiration.*

[1] A more complete explanation of the proposal is included in document FCCC/SBSTA/2000/MISC8.

Monitoring:

- *Project participants shall periodically register the carbon stock or content for the project, as well as the net change in carbon with respect to the previous monitoring period. These registers shall be available during the project's entire accreditation period.*

Verification:

- *The designated operational entities shall determine the net change in carbon stocks of project activities and:*
  - *If the net change results in an additional sequestration with respect to the prior verification report, the operational entity shall request the issuance of the corresponding additional amount of CERs with a sequestration period equal to zero as well as request the updating of the sequestration period of the CERs previously issued and not retired from the account, adding to them the time passed between the present and past verifications.*
  - *If the net change results in a stock reduction with respect to the prior verification report, or if no changes in stock were registered, the operational entity shall request the updating the sequestration period by adding the time passed between the present and past verification to a CER amount equivalent to the present stock. Project participants will select those certificates to be updated.*

Issuance and updating of CERs

- *The CDM registry shall issue CERs equivalent to the amount requested in the verification report for LULUCF project activities, with a sequestration period equal to zero and an indefinite expiry date; and shall update the sequestration period accordingly with the verification report by the operational entity.*

CERs Retirement

- *Each Annex I Party can retire CERs resulting from afforestation and reforestation project activities whose capture duration or sequestration period is at least 5 years*
- *At the moment of a LULUCF CERs retirement, the expiry date of the certificate shall be established by adding the sequestration period, as last updated, to the retirement date*

Cancellation

- *Upon the expiration of the CERs resulting from afforestation and reforestation project activities, the Annex I Party to the Protocol shall transfer an equivalent amount of ERUs, AAUs, RMUs or CERs not resulting from a LULUCF project activity, to the relevant cancellation account*

Cancellation account for LULUCF CERs

Annex I countries shall have a national registry including a cancellation account for LULUCF CERs for the commitment period.

Additionality

We believe the additionality requirement for afforestation and reforestation project activities under the CDM should be the same as that for CDM emissions reduction project activities, with the related provisions reading as follows:

An afforestation or reforestation CDM project activity is expected to result in ***an enhancement of removals by sinks*** *that is additional to any that would occur in the absence of the proposed project activity.*

*An afforestation or reforestation CDM project activity is additional if the anthropogenic **removals by sinks are enhanced above** those that would have occurred in the absence of the registered CDM project activity.*

*The baseline for a LULUCF CDM project activity is the scenario that reasonably represents the anthropogenic emissions by sources **and removals by sinks** of greenhouse gases that would occur in the absence of the proposed project activity. A baseline shall cover emissions **and removals** from all gases. A baseline shall be deemed to reasonably represent the anthropogenic emissions by sources **and/or removals by sinks** that would occur in the absence of the proposed project activity if it is derived using a baseline methodology referred to in paragraphs 37 and 38 of decision 17/CP.7.*

We consider the first two baseline approaches outlined in paragraph 48 of decision 17/CP.7 to be applicable to LULUCF CDM project activities, with the following highlighted modifications:

In choosing a baseline methodology for a project activity, project participants shall select from among the following approaches, the one deemed most appropriate for the project activity, taking into account any guidance by the executive board, and justify the appropriateness of their choice:

(a) *Existing actual or historical **levels of net carbon sequestration**; or*

(b) ***Levels of carbon sequestration of the expected land-use change that represents an economically attractive course of action, taking into account barriers to investment;***

Leakage

We consider that the leakage issue regarding afforestation and reforestation project activities under the CDM should be dealt with in the same manner as in CDM emissions reduction project activities.

Uncertainties

In order to reduce the uncertainties associated with carbon sequestration measurement, the CDM executive board shall approve methodologies related to baselines and monitoring plans for afforestation and reforestation projects under the CDM, taking into account the work being developed by the IPCC, in accordance with paragraph 3(a) of decision 11/CP.7.

Socio-economic and environmental impacts

With the intention of avoiding perverse incentives and promoting long-term LULUCF activities, we propose that the accreditation period for these projects under the CDM be determined by the project participants according to the specific characteristics and circumstances of the project.

In addition, the project design document should include a provision regarding the environmental impacts of the afforestation or reforestation CDM project activity, subject to validation by the operational entity, which shall ensure that the project does not reduce the project area biodiversity with respect to the baseline scenario.

PAPER NO. 7: COSTA RICA

PROPUESTA PARCIAL

Cambio de Uso de la Tierra y Silvicultura

Artículo 12 del Protocolo de Kioto:
Definiciones y modalidades.

Preámbulo:

La Conferencia de las Partes (COP) en los documento FCCC/CP/2001/13/add.1 y FCCC/CP/2001/13/add.2, en sus decisiónes 11/CP.7 y 17/CP.7, solicitó al Órgano Subsidiario de Asesoramiento Científico y Tecnológico (OSACT) el desarrollo de definiciones y modalidades para la inclusión de las actividades de forestación y reforestación bajo el mecanismo de desarrollo Limpio en el primer período de compromiso, teniendo en cuenta las cuestiones de la no permanencia, la adicionalidad, las fugas, las incertidumbres y los efectos socioeconómicos y ambientales, incluidas las repercuciones en la diversidad biológica y los ecosistemas naturales y guiándose por los principios enunciados en el preámbulo de la decisión …/CMP.1, (*Uso de la tierra, cambio de uso de la tierra y silvicultura*).

A fin de contribuir al desarrolo de definiciones y otros aspectos relacionados con el Cambio de uso de la Tierra y la Silvicultura (CUTS) en el Protocolo de Kioto, Costa Rica somete a la consideración de la Secretaría de la CMNUCC, su posición inicial sobre algunos de los elementos solicitados.

1. Actividades de CUTS directamente humano inducidas elegibles bajo el Artículo 12.

Costa Rica considera que las actividades humanas elegibles para proyectos del MDL en la categpría de CUTS, serán aquellas limitadas a la forestación y la reforestación, como se define en el documento FCCC/CP/2001/13/add.2 en su decisión 17/CP.7. Se incluirán todos aquellos proyectos directamente inducidos que incrementen los depósitos de carbono a través de las actividades de forestación y reforestación.

En virtud de lo anteriormente expresado y considerando que la regeneración natural asistida puede ser un gran aporte para la recuperación de tierras degradadas en nuestros países, la elegibilidad de las actividades de cambio de uso de la tierra y la silvicultura bajo el MDL, se circunscribirán a la forestación y la reforestación, según las definiciones aplicadas al Artículo 3.3 para tales actividades y contenidas dentro del documento FCCC/CP/2001/Add.1, en su decisión 11/CP.7,

Definiciones:

Forestación: conversión, por actividad humana directa, de tierras que carecieron de bosque durante un período mínimo de 50 años en bosques[1] mediante plantación, siembra o fomento antropógeno de semilleros naturales;

Reforestación: conversión por actividad humana directa de tierras no boscosas enbosques[2] mediante plantación, siembra o fomento antropógeno de semilleros naturales en terrenos donde antiguamente hubo bosques, pero que están actualmente deforestados. En el primer período de compromiso, las actividades de reforestación se limitarán a la reforestación de terrenos carentes de bosques al 31 de diciembre de 1989

2. Other methodological issues

2.1 Baseline and additionality

Concientes de que según el Artículo 12.5 del MDL indica que los proyectos serán certificados sobre la base de "beneficios reales, medibles y de largo plazo relacionados con la mitigación del cambio climático" y que "las reducciones de las emisiones que sean adicionales a las que se producirían en ausencia de las actividades del proyecto certificado", se debe establecer una línea base a nivel de cada proyecto que refleje el escenario sin proyecto. La diferencia entre la línea base y el escenario de emisiones con proyecto determinará los beneficios netos de carbono relacionados con las actividades del proyecto y su adicionalidad.

Costa Rica considera que para proyectos forestales, es factible utilizar los mismos criterios ya esbozados para proyectos de energía en el ducumento FCCC/CP2001/13/Add.2, en su Decisión 17/CP.7 párrafo 49, considerando eso si las características particulares de las actividades forestales de forestación y reforestación en cuanto a los plazos.

2.2 Adicionalidad y antropogeneidad

Uno de ls requisitos indispensables para la elegibilidad de las actividades en la modalidad de CUTS es la demostración de su naturaleza antropogénica.

Recocociendo que, de acuerdo con la previsiones del Artículo 12.5, la adicionalidad [3] es uno de los criterios para la elegibilidad de las actividades de proyectos MDL y recordando que las actividades de

[1] "Bosque" superficie mínima de tierras de 1,0 hectárea (ha) con una cubierta de copas (o una densidad de población equivalente) de 30% y con árboles que pueden alcanzar una altura mínima de 5 metros (m) a su madurez *in situ*. Un bosque puede consistir en formaciones forestales densas, donde los árboles de diversas alturas y el sotobosque cubren una proporción considerable del terreno, o bien en una masa boscosa clara. Se consideran bosques también las masas forestales naturales y todas las plantaciones jóvenes que aún no han alcanzado una densidad de copas de el 30% o una altura de los árboles de entre 5 m, así como las superficies que normalmente forman parte de la zona boscosa pero carecen temporalmente de población forestal a consecuencia de la intervención humana, por ejemplo de la explotación, o de causas naturales, pero que se espera vuelvan a convertirse en bosque;

[2] "Bosque" superficie mínima de tierras de 1,0 hectárea (ha) con una cubierta de copas (o una densidad de población equivalente) de 30% y con árboles que pueden alcanzar una altura mínima de 5 metros (m) a su madurez *in situ*. Un bosque puede consistir en formaciones forestales densas, donde los árboles de diversas alturas y el sotobosque cubren una proporción considerable del terreno, o bien en una masa boscosa clara. Se consideran bosques también las masas forestales naturales y todas las plantaciones jóvenes que aún no han alcanzado una densidad de copas de entre el 30% o una altura de los árboles de entre 5 m, así como las superficies que normalmente forman parte de la zona boscosa pero carecen temporalmente de población forestal a consecuencia de la intervención humana, por ejemplo de la explotación, o de causas naturales, pero que se espera vuelvan a convertirse en bosque;

[3] Las reducciones de emisiones serán certificadas solamente si son "adicionales a cualquiera que hubiese ocurrido en ausencia de las actividades del proyecto".

CUTS facilmente satisfacen el criterio de adicionalidad financiera[4], Costa Rica considera que la inclusión de estas actividades de proyecto bajo el MDL, fortalece, a través de la prueba de adicionalidad, la condición antropogénica de las actividades CUTS "per se", y refuerza sus contribuciones al objetivo último de la CMNUCC.

2.3 Vigilancia y Verificación

Reconociendo las previsiones del anexo de la Decision 17/CP.7, todo proyecto MDL debe someterse a un ciclo de evaluación para ser suceptible al registro ante la Junta Ejecutiva del MDL. Costa Rica es de la opinión que tales previsiones garantizan la integridad ambiental del Protocolo de Kioto y que a través de una auditoría y verificación independiente de las actividades de un proyecto se asegura transparencia, eficiencia y responsabilidad. Sin embargo, al igual que se ha hecho para otro tipo de opciones de mitigación, se debe estipular procedimientos simplificados para actividades de proyectos forestales de pequeña escala.

Costa Rica considera como esencial la necesidad de un sistema de vigilancia a nivel del proyecto, para cuantificar y controlar los beneficios netos de carbono durante la vida del proyecto. La vigilancia será complementada con una auditoría externa para validar sus resultados y para verificar el desempeño del proyecto en términos de sus beneficios netos en carbono.

Los procesos de vigilancia, certificación, verificación y sus interacciones son, la base elemental para asegurar la efectividad ambiental de las actividades del proyecto, así como la integridad y credibilidad del MDL.

2.4 Fugas

El potencial de fuga[5] en un proyecto MDL no es un problema exclusivo de las actividades de CUTS. Es un problema común a todas las otras opciones de mitigación elegibles bajo el MDL. Además, algunos proyectos de CUTS, debido a su naturaleza, tienen poco o ningún riesgo de fuga.

Reconociendo la orientación explícita de las actividades de proyecto bajo el MDL, Costa Rica considera que se pueden adoptar diversas medidas para reducir el riesgo de fuga. Sin embargo, la medida más efectiva es a través de una decuado diseño de proyecto y límites de proyecto bien definidos.

Además, considerése que en muchos casos, la ampliación de los límites del proyecto puede controlar las fugas. Las fugas pueden ser disminuidas a través del diseño de proyectos a escala nacional, en los cuáles las debilidades de un proyecto pueden ser dsiminuidas por las ventajas de otros. Dependiendo de la localización del proyecto, puede considerarse el potencial de fugas a través de las fronteras.

En todo caso, la fuga puede ser cuantificada y descontada de los beneficios netos de carbono totales a ser reclamados por el proyecto y si no es posible, a nivel de proyecto se establecerá una reserva temporal o permanente de reducciones de emisiones certificadas, según la naturaleza del proyecto, con el objetivo de compensar este riesgo potencial.

2.5 Riesgos

Costa Rica, piensa que los riesgos y las incertidumbres no son inherentes solamente a los proyectos forestales, por lo que se debe dar un trato igualitario a este respecto. Por lo tanto, reconociendo la

[4] El criterio de adicionalidad financiera es un complemento al concepto de adicionalidad ambiental y se refiere al hecho de que "si el proyecto MDL hubiese ocurrido sin la valoración económica de las reducciones de emisiones certificadas dentro de las finanzas del proyecto".

[5] Fuga se refiere al fenómeno a través del cual un proyecto, a pesar de que reduce emisiones o incrementa depósitos de carbono dentro del sitio del proyecto, las desplaza o incrementa fuera de sus límites, reduciendo los beneficios netos en carbono del proyecto.

variedad de riesgos implícitos e incertidumbres inherentes a las actividades de CUTS, Costa Rica considera que a fin de responder a la efectividad ambiental, todos los proyectos MDL incluirán, como parte integral de su diseño, un análisis y valoración de riesgos e incertidumbres y establecerá a nivel de proyecto, una reserva temporal o permanente, según sea el caso de reducciones de emisiones certificadas, para compensar los riesgos potenciales relacionados con los factores naturales, antropogénicos, políticos, económicos y financieros.

2.6 Permanencia

Una de las principales preocupaciones relacionadas con el uso de los sumideros como opciones de mitigación de gases de efecto invernadero (GEI) es el cuestionamiento de la 'permanencia', el tiempo durante el cual el carbono permanece almacenado después de haber sido fijado en la vegetación, o la "reversabilidad" de los beneficios del almacenaje [6]. Los bosques, las plantaciones y otros depósitos de carbono son vulnerables a los desastres naturales tales como inundaciones, sequías y huracanes, así como incendios o intervenciones humanas impredicibles, las cuales pueden afectar los beneficios netos en carbono del proyecto sin ser reflejados dentro de la contabilidad.

Costa Rica considera que el aspecto de la permanencia en las actividades de CUTS dentro del MDL debe ser solventado a través de la aplicación del método de cambio en las existencias para proyectos MDL (Propuesta Colombiana), aunque este concepto puede también ser utilizado con el método de almacenamiento promedio. En esencia, lo que se propone es que el inversionista tenga la responsabilidad de sustituir los créditos de fijación con créditos de " reducción de emisiones" al final de un cierto período o cuando el proyecto finaliza. Sin embargo, Costa Rica es del criterio que se debe hacer la salvedad para aquellos proyectos cuyo fin es la recuperación de tierras marginales a través de la regeneración asistida, en donde la permanencia de las existencias de carbono en la biomasa, no está supeditada a un ciclo comercial.

[6] Artículo 12.5, " la reducción de emisiones resultante de cada actividad de proyecto deberá ser certificada….sobre la base de….unos beneficios reales, mensurables y a largo plazo en relación con la mitigación del cambio climático"

PAPER NO. 8: DENMARK ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES

COPENHAGEN, 14 AUGUST 2002

VIEWS ON ISSUES RELATED TO MODALITIES FOR THE INCLUSION OF AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM IN THE FIRST COMMITMENT PERIOD.

Introduction

The EU supports the conclusions of SBSTA16 (FCCC/SBSTA/2002/L.8) regarding the ToR and work programme to develop definitions and modalities for including afforestation and reforestation (AR) activities under Article 12 of the Kyoto Protocol. The EU looks forward to completion of the work by COP9, as agreed in Marrakech.

AR CDM activities are to be implemented in accordance with the general CDM rules (Decision 17/CP7)[1] and should reflect, *inter alia*, the principles in paragraph 1 of the decision -/CMP.1/(LULUCF)[2]. However, as Decision 17/CP7 recognises in its request to SBSTA, that to some extent AR activities require additional or different modalities in order to address particular features which distinguish these activities from, for example, CDM energy projects. These features include:

- carbon sinks based on AR activities are not fully stable and sequestration can be reversed,
- forests are living systems, subject to natural forces, and change over time with or without human intervention,
- AR activities in one area can trigger or influence activities elsewhere, thus impacting sequestration and/or emissions beyond the project area,
- forests accommodate rich biodiversity, thus AR activities may positively or negatively impact upon biodiversity and other important environmental values,
- AR activities can involve large rural areas, thus affecting the socio-economic circumstances of the population in these areas.

A wide range of international and national policies address forest issues, including recommendations on national forest programmes. Parties should develop and implement such programmes. Where these are available, or where forests are given significant coverage in national strategies for sustainable development or other national strategies, these should provide a framework for AR CDM activities. Similarly, relevant internationally agreed decisions and recommendations on forests should apply for AR CDM activities.

[1] FCCC/CP/2001/13/Add.2
[2] FCCC/CP/2001/13/Add.1

Definitions of forest, afforestation and reforestation

The first step is to agree definitions for *forest, afforestation* and *reforestation* to be used for AR CDM activities. The EU is in favour of applying definitions already agreed for use under Articles 3.3 and 3.4 and as set out on page 58 of FCCC/CP/2001/13/Add.1.

The EU noted the discussion at SBSTA 16 on the limitations of the current definition[3] of reforestation to areas that did not contain forest after the 31 December 1989, but believes that the existing definitions should not be changed because:

1. a sufficient time period is needed in order to avoid incentives to deforest native forest areas and replace them with plantations, and projects where this has occurred since 1990 should not be rewarded,

2. the time period needs to be sufficiently long to be able to distinguish reforestation from regeneration after normal harvesting, which does not count as reforestation under the definitions agreed for Art 3.3 and 3.4,

3. it should be possible to deal with any problem of lack of data on historical land-use by using satellite imagery data or local information, possibly in combination,

4. the precedent set by one revision of any agreed definition could lead to further calls for revisions for subsequent commitment periods, potentially resulting in incentives to deforest,

5. opening this aspect of the Marrakesh Accords (MA) definitions would set a precedent for further changes.

EU proposal

The EU is in favour of applying definitions already agreed for use under Articles 3.3 and 3.4 and as set out on page 58 of FCCC/CP/2001/13/Add.1.

With respect to the application of the definition of forest the EU believes that the designated national authority of the host country should determine one set of thresholds within the ranges provided by the definitions in FCCC/CP/2001/13/Add.1 to be applied to all AR activities hosted in that country for the first commitment period.

[3] FCCC/CP/2001/13/add.1

Non-permanence

Need for special treatment of AR activities

Fossil carbon saved by energy related CDM projects will not be released subsequently by accident or natural disaster, but in contrast, a distinct feature of sink activities is the risk that carbon stocks sequestered will be subsequently released and hence, the greenhouse gas benefits of the CDM project will be reversed. This is called *sink reversal* or *non-permanence*. With contiguous commitment periods, any reversal of carbon sequestration in Annex I countries will be permanently accounted for, but since non-Annex I Parties have no emission limitations and reduction commitments, the risk of reversal of AR activities under the CDM requires special treatment.

Principles

Development of modalities to address non-permanence should:

1. Provide a transparent and effective system, which ensures that any losses of greenhouse gas benefits, can be swiftly and fully compensated for, in which any provision to address non-permanence can be enforced if necessary. Liability needs to be clearly defined and attributed.
2. Be consistent with workable monitoring, verification and certification rules, be integrated with accounting rules for Annex I countries, and be consistent with general rules and principles defined in IPCC good practice guidance on LULUCF.

EU proposal

The EU has further developed the proposal, that was tabled in its original form by Colombia, for dealing with non-permanence in a way that avoids penalising projects where reversal does not occur, and guarantees complete replacement (with a delay of at most one commitment period) of the lost carbon if there is reversal. The proposal would work as following:

a) Credits resulting from AR CDM activities are issued following verification and certification by the designated operational entity (OE).

b) Credits, including those arising for carbon accumulated under prompt-start of the CDM are valid for use in helping to meet commitments in the Commitment Period (CP) in which they were issued. They expire five years after issuance. This ensures that the credits will be valid for use in helping to meet commitments for the current commitment period only, because they will have expired by the time the following five year commitment period comes to an end. Because they expire, the credits have been called Temporary Certified Emissions Reduction Units (TCERs), but other names could apply.

c) When a TCER that has been used to help meet commitments expires, the corresponding amount of units would be subtracted from the *current* assigned amount of the Party that used it. In effect this means that the Party must replace the TCER if it is to stay in compliance, when compliance is assessed at the end of the subsequent commitment period.

d) Therefore, if new verification at the project level shows that there has been no reversal, a new TCER, valid for another five years, can be issued for the *original* carbon. This process must not take place more frequently than at five yearly intervals, to avoid more than one TCER being in circulation for a given unit of carbon.

e) The project will be able to issue additional TCERs over and above the renewed units if verification shows that carbon has been sequestered over and above the original amount. These TCERs will enter the system and be treated in exactly the same way as time goes on. If verification shows that all or part of carbon stocks are not longer in place (i.e. that there has been reversal) correspondingly fewer TCERs will be issued and the reversal will be fully compensated for (after a time delay of no more than five years) by the subtractions from the assigned amount guaranteed under step c). If, for any reason, there is no verification of sequestered carbon, TCERs in circulation will expire and will have to be compensated.

This process has significant advantages compared to alternative approaches to deal with non-permanence. Credits are based on actual monitoring, not on *estimated, assumed or average stock change* approaches. Possible loss of carbon after the project period is accounted for, which is not the case for options based on *permanent credits for actual stock changes*. The temporary credit will allow any holder of it to postpone an emission reduction by one CP. There is no need to elaborate specific provisions for *purchaser responsibility*, or *project owner* or *seller liability* in the case of reversal. There is no need for complex *insurance provisions* or calculations of the risk of reversal or risk calculations implied by *discounting* approaches or arbitrary *tonne-year accounting* approaches. Furthermore, the separation of accounting between the Party and the project levels means that TCER purchasers do not need to keep track of project monitoring, which would have implications for fungibility.

Additionality

Need for special treatment of AR activities

Forestry is an established economic sector in many developing countries that may include AR activities. Therefore, additionality criteria for AR activities under the CDM are required.

Principles

The EU believes that further development of modalities should ensure that:

1. only truly additional AR activities should be eligible for carbon credits;

2. net removals are to be additional to those that would have occurred in the absence of the CDM project;

3. public funding for carbon credits generating components of AR activities under the CDM is not to result in the diversion of official development assistance (ODA) and is to be separate from and not counted towards the financial obligation of Parties included in Annex I[4].

[4] Preamble of Decision 17/CP.7 (FCCC/CP/2001/13/Add.2)

Approaches

In view of the difficulty of assessing additionality for sink projects, the following approach would be feasible in terms of testing environmental additionality relative to a baseline. AR CDM activities are to be validated in accordance with the general CDM rules as set up by the MA and developed by the Executive Board (EB) and specific CDM AR rules as required and established by COP9.

Environmental additionality (emissions/removals) is a requirement for all acceptable AR CDM activities. Additionality at project level is related to the establishment of a baseline. In that regard additionality at project level is dealt with by comparing the removals and emissions with the baseline, taking account of the most likely prospective land-use prevailing at the time of project start.

The approach would also require reference to national policies, plans etc.[5], indicate how and which barriers have been overcome in undertaking the project, and whether the specific activity would have been funded by already available means, including ODA, in the absence of the CDM project. This approach would be subject to the professional judgement of the OE conducting the validation procedure.

Baselines

Need for special treatment for AR activities

As stated in paragraphs 43 and 44 in the annex of decision 17/CP.7 additionality and baselines are inter-linked. Forests are living systems with natural cycles and site-specific influences on carbon uptake rates. For the elaboration of baselines this means that natural site-specific factors have to be taken into account as well as land use and socio-economic ones. For example, in the case of abandonment of areas, natural regeneration usually occurs, while in some situations degradation takes place. The site-specific natural parameters determine the baseline to a much larger extent than for energy projects influenced by highly spatially variable natural conditions. Therefore there is a need for special treatment of baselines for AR activities as well.

Principles

When developing modalities to deal with baselines the EU is in favour of long-term, good forestry practice rather than short project lifetimes, see section on Issues related to the Crediting Period. Baselines shall be established in a transparent and conservative manner regarding key factors and additionality, and taking account of uncertainties.

Approaches

The baseline scenarios for lands where AR activities are suitable are likely to include agriculture (pasture or cropland) and abandonment (which could in some cases imply desertification and usually imply natural regrowth, unless natural regrowth is deliberately secured as a measure towards AR). Forestry and other alternative land-uses could in some cases occur as baseline scenarios. This should be in accordance with the approach to additionality, as outlined in the previous section. National forest programmes would normally provide a description of the status of the forest sector and a description of the expected future development. The corresponding modality would presumably be developed with reference to, para 45 (e) of the Annex to Decision 17/CP7[6]. However, additional provisions beyond simple *mutatis mutandis* text might be necessary. The baseline modalities for including AR activities in the CDM should, in the EU's view, reflect these scenario choices and methodological approaches explicitly.

[5] ref. para 45e, Annex to Draft Decision -/CMP.1 (*Article 12*) (FCCC/CP/2001/13/Add.2)
[6] FCCC/CP/2001/13/Add.2, p 37

Baseline methodologies should be consistent with the limitation of eligible LULUCF activities to AR activities in the first CP. Therefore, the baselines should be defined in a way that do not result in crediting avoided emissions from reduction or cessation of previous land use activities.

Leakage

Need for special treatment of AR activities

Leakage is defined as the net change of anthropogenic emissions by sources of greenhouse gases which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity. This might occur for instance, by displacing or relocating commercial forestry activities, either in the host country or in the rest of the world. In some cases natural regeneration could spread from established AR areas causing in principle a positive leakage. AR activities could also cause people to move and deforest other areas, includjng natural forest, for agriculture or dwelling places. This, in effect, could result in emissions that are greater than the uptake from the AR project during a commitment period. This is described as *leakage greater than 100%*. This magnitude of leakage is unlikely for non-LULUCF CDM projects and therefore simple *mutatis mutandis* provisions based on decision 17/CP7 might not be sufficient to deal with it.

Furthermore, leakage can vary from being rather direct to being complex, indirect and problematic to assess and quantify. For instance an increase of wood supply on the regional market could lead to changes in timber prices and subsequently lead to changing consumption patterns. AR activities may also create emissions related to energy, transport and fertiliser that are outside project boundaries. The main questions are therefore how to quantify leakage, and how far should one go with the quantification. The EU approach tries to answer these questions in a practicable manner.

Principles

Principles to be followed when considering leakage from AR activities in the CDM include, inter alia:

a) the removals as a result of the project activity shall be adjusted for leakage effects (para 50[7] of the Annex to Draft Decision -/CMP.1 (*Article 12*));

b) the leakage beyond the boundary of the project should be taken into account for adjustments.

These principles should be taken into account when addressing the issue of leakage, at both the project design, validation, monitoring and verification phases of the project.

Approaches

Normally the occurrence of leakage should not disqualify a project. The modality to be developed needs to reflect the possibility that leakage is so substantial so as to negate a very large proportion or all of the carbon benefits of the project. The proper way for a project to address leakage is either to strengthen the project's capacity to minimise leakage[8] and/or to decrease the claimed carbon benefits accordingly. Such measures could create enough incentive for project developers to address leakage at the project design stage and avoid the occurrence of leakage to the greatest extent possible.

[7] FCCC/CP/2001/13/Add.2

[8] This strengthening could be achieved by incorporating in the project design socio-economic benefits for local people, including benefits linked to agricultural and energy activities, that create incentives to maintain the project and its greenhouse gas benefits.

Taking into account the problem of the potential scale of the leakage effects and the need to ensure that leakage effects are addressed properly, the project developer should justify that leakage effects are adequately quantified and/or addressed. In view of this the modalities to be developed should include a specific requirement in the part corresponding to MA[9], that in the absence of proper calculations by the project developer the OE shall assume 100% leakage.

Measurable adjustments for leakage, which the Annex to the existing Art 12 decision requires[10], could be obtained by setting the amount subtracted for leakage equal to, *inter alia*;

- any emissions associated with a previous land use such as agriculture that are shifted elsewhere, *plus*
- estimated reductions in AR rates elsewhere due to the project activity, for example where scarcity of land and resources would constrain AR activities elsewhere as a consequence of the project, *plus*
- estimated emissions due to changed deforestation rates resulting from the implementation of the project activity (estimates should be based on the average carbon density of local forest types).

The OE would have to check whether the issue of leakage has been dealt with adequately and a monitoring plan has been set up to monitor the potential leakage effects. Within the verification process the OE would then have to check whether the measures have been implemented, whether the monitoring plan has been implemented correctly and, if necessary, correct the leakage figures, taking into account uncertainty.

Socio-economic and environmental impacts

Need for special treatment for AR activities

The land areas involved with AR increase the significance of potential positive or negative impacts on biodiversity and on other ecosystems. Other ecological, environmental and socio-economic impacts could also be more significant, including those involving land use conflicts, e.g. with food production, possibly affecting local populations.

Principles

The IPCC Special Report on LULUCF identifies six principles to strengthen sustainability of LULUCF projects. These principles should guide the development of modalities to address socio-economic and environmental impacts. They are used as headings in the next section.

These principles should also guide the design, validation, implementation and verification of AR activities throughout the project cycle, taking account of international experience already identified.

Approaches

Socio-economic and environmental concerns should not be seen in isolation from other issues relating to AR CDM activities such as definitions, non-permanence, additionality, leakage etc. There are strong synergies and interlinkages. Suitable modalities for these items will also promote overall sustainability and facilitate socio-economic and environmental concern, e.g. by encouraging long term sustainable forest management located at sites, where it is not competing with subsistence farming or other food production.

[9] FCCC/CP/2001/13/Add.2 Section I (verification and certification), para 61- 63
[10] FCCC/CP/2001/13/Add.2, p 37, para 51

The host country shall ensure that AR CDM activities do comply with national commitments under international agreements. This should be facilitated through regular consultation between national focal points for the United Nations Framework Convention on Climatic Change (UNFCCC), the Convention on Biological Diversity (CBD), the Convention to Combat Desertification (CCD) and forest and environment related fora such as the United Nations Environment Programme (UNEP), The United Nations Forum on Forests (UNFF), the Food and Agriculture Organization (FAO) and the International Tropical Timber Organization (ITTO). Sustainability is also being addressed through the work of the International Labour Organization (ILO), the World Bank, the Centre for International Forest Research (CIFOR) and regional intergovernmental arrangements on forest issues.

This international work has produced a range of decisions and recommendations on sustainable forest practices, which AR modalities should reflect and be supportive of. All this should guide host countries in exercising their prerogative to confirm whether an AR CDM activity assists in achieving sustainable development[11] and CDM modalities should reflect this. UNFCCC Art. 6 holds provisions for public participation, access to information etc. Furthermore, the Aarhus Convention[12] and other regional instruments discuss how to include stakeholder (including public) participation in decision-making and how to ensure access to information and justice in environmental matters.

1 Consistency of project activities with international principles and criteria of sustainable development (IPCC SR chapter 2.5.2.1 and 2.5.2.4.1)

Modalities should address i) tenure and land-use rights ii) the special needs of indigenous and forest dwelling people iii) stakeholder involvement and public participation, iv) benefit-sharing, taking into consideration local communities, v) definition of responsibilities including primary stakeholders, project developers and host country authorities, vi) planning and management tools available for the project including tools for mitigating fire and pests, vii) control of any negative impacts of the project on soil and water resources, biodiversity, ecosystem integrity, and human health, including the potentially negative impacts of pesticides and fertilisers, viii) inclusion of social and human impacts and context of the project including capacity building, awareness raising and safety procedures, ix) synergy between the potential of the project to mitigate climatic change and its potential to positively impact biological diversity, landscape amenity and local living conditions.

2 Consistency of project activities with nationally defined sustainable development and/or national development goals, objectives, and policies (IPCC SR chapter 5.6.1 and 2.5.2.3)

AR CDM activities should comply with national strategies for sustainable development and relevant national policies. Where national forest programmes are available, e.g. as recommended by UNFF[13] (see the UNFF Practitioners Guide), these should also provide an operational framework for AR CDM activities.

3 Availability of sufficient institutional and technical capacity to develop and implement project guidelines and safeguards (IPCC SR. chapter 5.6.2)

The MA requests that Annex I Parties implement measures to assist other Parties, particularly least developed countries and small island states, with capacity building to facilitate participation in the CDM.

4 Extent and effectiveness of local community participation in project development and implementation (see also discussion in IPCC SR. chapter 5.6.3)

Transparency and involvement of stakeholders immediately affected will require all phases of project implementation to address: i) design for stakeholder participation addressing information, consultation, decision making, benefit sharing and dispute management, ii) timely availability of information for stakeholders from the EB and project developers when approving AR projects iii) accommodation of local rights and interests, aiming at local project ownership, including employment opportunities in compliance with ILO norms, iv) availability

[11] FCCC/CP/2001/13/Add.2, p20

[12] www.unece.org/env/pp/treatytext.htm

[13] www.un.org/esa/sustdev/forests.htm

to stakeholders of experience developed during the project v) establishment of procedures for involvement of stakeholders, accredited observers and parties in project review that may be undertaken by the EB.

5 Transfer and local adaptation of technology (see also IPCC SR chapter 5.6.4)

The EU believes that countries interested in hosting AR CDM activities should take the lead in expressing what innovations and technologies should be developed and applied as national priorities, in order to streamline CDM investments to sustainable development objectives.

6 Application of sound environmental and social assessment methodologies to assess sustainable development implications (see also IPCC chapter 2.5.2.5)

The application of this principle will have implications with regard to the CDM project cycle, *inter alia*:

- The project developer should be required to conduct environmental and social assessment in the project design phase.
- The project developer should provide a Social and Environmental Impact Statement, reflecting the findings of the social and environmental assessments and propose measures to monitor and remedy to the adverse impacts: this will inform the host Party designated authority, before it approves the project, on all expected impacts as well as on the compatibility of the project with its national forest policy.
- The OE should validate the Statement as an annex to the Project Design Document.
- The project developer should implement and monitor the Statement.
- The OE should verify the implementation of the Statement, including the proposed monitoring and remediation measures.
- Impacts on biological diversity should be addressed at both country and project level respectively through a Strategic Impact Assessment and an Environment Impact Assessment as outlined in Decision 7 of COP6 of the UNCBD[14]. This will enable host countries to set their key priorities on project types, activities, geographical areas and technologies to be transferred and adapted.

Uncertainties

Need for special treatment of AR activities

The word uncertainty is used for different concepts, for example the statistical uncertainty around a parameter value, the uncertainty of the potential continued existence of sequestered carbon, and uncertainties related to baseline positioning (and hence, additionality) and leakage. AR activities in the context of the CDM therefore will have uncertainties associated with the monitoring of the project, its permanence, the baseline and leakage. Project monitoring for AR is more complicated than for some carbon pools, since small changes of carbon stocks occur over a long time, which cannot be determined annually with reasonable certainty. This is a key difference from energy projects.

Approaches

The requirements for periodic monitoring associated with the EU's approach to non-permanence would make the scientific uncertainties associated with estimated emissions and removals no greater than the uncertainties associated with Art 3.3 and 3.4 activities in the inventories of Annex I Parties, and should be handled the same way, namely by applying the approaches and principles of IPCC *Good Practice Guidance on LULUCF*

[14] www.biodiv.org/decisions/default.asp?lg=0&m=cop-06&d=07

developed for the national level at the project level. This may require an appropriate breakdown of the IPCC recommendations to be applicable at the project level (e.g. for much smaller areas).

The EU believes that uncertainties related to non-permanence would be covered by the above proposal for non-permanence. This is a significant advantage of the EU's proposal for dealing with the risk of non-permanence, since other approaches could require significant discounting of credits to deal with the risk of reversal.

The uncertainties associated with estimation of the baseline specification and leakage estimates for AR activities are possibly greater than those associated with other CDM project types. The existing CDM text requires baselines to be established in a conservative manner, taking uncertainties (amongst other things) into account[15]. Because of the greater significance of leakage in the case of AR activities, the EU sees the need for introducing a modality with a parallel requirement for conservative consideration of uncertainty for leakage estimates of AR activities also.

Reporting, reviewing and accounting

The EU notes that accounting provisions under Art 7.4 are the main areas where cross-references are likely to be needed, particularly in dealing with:

1. The temporary nature of CERs generated by AR activities and the consequences for assigned amount, *and*

2. application of the rule that limits AR activities under the CDM to 1% of Annex I Party base year emissions.

The EU intends to forward additional views related to monitoring, reporting, accounting, verification and validation of AR activities under the CDM at a later stage, taking into account the ongoing work of the IPCC.

[15] FCCC/CP/2001/13/Add.2, p36, para 45 (b)

Issues related to the crediting period

The *crediting period* is the period of time during which any CDM project can generate credits against an agreed baseline[16]. For non-LULUCF projects this can be 10 years (not renewable) or seven years, renewable twice, subject to review and updating if necessary, making a possible maximum of 21 years.

For LULUCF projects the crediting period could be longer, for example with a number of TCERs in sequence, in order to promote more sustainable and ecologically sound forest projects.

The EU believes longer crediting periods should be possible for LULUCF projects for the following reasons:

1. Current crediting regimes would encourage fast growing plantations that are often monocultures (and possibly even monoclonal). The products (typically cellulose or biomass) of such plantations tend to have short lifetimes. These plantations can have low pest resistance and low resilience, e.g. to water stress or other climatic disturbance, and this increases the risk of reversal. On the other hand, longer crediting periods, e.g. 15- 20 years, renewable twice, increase the profitability of plantations with species that have greater carbon content in the growing stock, which, at maturity, is harvested to produce products with longer lifetimes (e.g. beams, planks, furniture, etc.). These plantations can have multiple objectives, encouraging greater biodiversity, pest resistance and resilience.

2. Management of monoculture plantations often involves use of fertile land whereas the more diverse plantations encouraged by longer crediting periods can be more suited to abandoned land. Pre-empting fertile land has, obviously, a great socio-economic impact, especially in regions with insufficient food supply, whereas the use of abandoned land is more likely to ameliorate socio-economic impact.

[16] FCCC/CP/2001/13/Add.2, p 37, para 49

PAPER NO. 9: JAPAN

JAPAN'S VIEW ON ISSUES RELATED TO DEFINITIONS AND MODALITIES FOR INCLUDING AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM

Japan submits its view in response to the invitation prescribed in FCCC/SBSTA/2002/L.8, Page 5, AGENDA FOR WORK.

I. Overview comment

The purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention (Article 12.2 of the Kyoto Protocol). Japan believes that afforestation and reforestation project activities under the CDM (AR-CDM) should be promoted in a positive manner because AR-CDM shares the same purpose as stated in Article 12.2 of the Kyoto Protocol with other types of CDM. Therefore, Japan has a firm view that rules including definitions and modalities for AR-CDM should be designed to contribute to the promotion of AR-CDM.

The annex to the decision 17/CP.7 (Modalities and procedures for a clean development mechanism) provides the rules for emission reduction projects and these rules do not always apply for AR-CDM. Therefore, an annex on modalities and procedures for AR-CDM should be developed fully reflecting the characters of AR-CDM as identified in IPCC Special Report on Land Use, Land-use Change, and Forestry (IPCC, 2000) and other relevant reports, as well as reflecting, mutatis mutandis, the existing annex for emission reduction CDM.

The schedule shown in FCCC/SBSTA/2002/L.8, Page 5, AGENDA FOR WORK, which was agreed in SBSTA 16, should be fully respected so as to decide the definitions and modalities for AR-CDM in COP9. Japan supports flexible deliberation procedure enough to allow parallel discussions of definition and modality issues, as appropriate. That means it is not necessary for SBSTA to agree upon the definitions before proceeding to the deliberation on modalities.

Japan believes that the contents of the annex for AR-CDM should be proportionate, in principle, to those of the annex for emission reduction CDM. To make it sure, the annex for AR-CDM should be developed with necessary amendments on the existing annex for emission reduction CDM only where it is not applicable for AR-CDM. It is important that the rules for AR-CDM should be comparable with those for emission reduction CDM. In this regard, modalities for AR-CDM should not be too detailed or restrictive compared with those for emission reduction CDM, and vice versa.

II. Comments on specific subjects

A. Definitions for including afforestation and reforestation project activities under the CDM

1. Definitions of forest

The current definition of forest for activities under Article 3.3 and 3.4 of the Kyoto Protocol could be applied as it stands for AR-CDM considering the coordination of Article 3 and Article 12. Host developing countries of AR-CDM should be allowed to choose the values of minimum crown cover, minimum area of land, and minimum height from the ranges specified in the definitions for Article 3.3 and 3.4 of the Kyoto Protocol according to their natural/social conditions.

2. Definitions of reforestation

It is hard for developing countries to demonstrate objectively that the land of the project does not contain forest on 31 December 1989 (base-year) because land use registry as of 31 December 1989 sometimes does not exist. If we strictly apply the

definition of reforestation for Article 3, which is prescribed in Decision 11/CP.7, ANNEX paragraph 1(c), to the definition for AR-CDM many potential AR-CDM projects could not demonstrate their eligibility due to the unavailability of data on 31 December 1989. Therefore, the base-year for reforestation-CDM should not be fixed to 31 December 1989, and some flexibility should be allowed in its selection considering the above situation in developing countries. Possible examples of practical methods for base-year selection may include selection of the year in which satellite images are available or of the year in which interview studies from reliable sources are available.

B. Modalities for including afforestation and reforestation project activities under the CDM

1. Baseline

Baseline for AR-CDM would be the annual carbon sequestration in a project area by the biomass that would have occurred in the absence of the project. In addition to project-specific baseline for emission reduction CDM, a common baseline for an area of common natural conditions based on existing data and information should be included since natural conditions determine the types of biomass.

2. Crediting period

Project period for AR-CDM is sometimes over several decades depending on the growth rate of species, especially in a case of plantation in semi-arid area or plantation of local species with low growth rate. If crediting periods for AR-CDM were limited to the same as those for emission reduction CDM (between 10 and 21 years), it would not provide incentive to implement a project using low growth rate species and might encourage using fast growing species in unsuitable areas. Therefore, AR-CDM should be allowed to select longer crediting period than emission reduction CDM.

3. Non-permanence, additionality, leakage, uncertainty, socio-economic and environmental impacts

(a) Non-permanence

Issue of non-permanence is peculiar to AR-CDM. Focussed discussion is needed based on existing scientific/technical reports such as IPCC Special Report on Land Use, Land-use Change, and Forestry (IPCC, 2000) and Forestry projects: permanence, credit accounting and lifetime (OECD and IEA, 2001).

These reports show appropriate designs of accounting methods can address this issue and illustrate examples of such accounting methods. With reference to these examples, the annex for AR-CDM should include some options of accounting methods that can address non-permanent issue.

An estimation using the data obtained through a model study on reforestation in Indonesia conducted by Ministry of the Environment of Japan, indicates that delayed crediting methods often do not provide incentive for project participant even if a price of carbon credit is as high as 100 U.S. dollars per one ton-carbon from the viewpoint of cost/benefit. Such incentive for the participants should be considered in developing accounting options.

(b) Additionality

If a project baseline in AR-CDM is designed properly and additional carbon is sequestered by the implementation of the project compared with the baseline, that activity should be judged to meet the requirement of additionality. The existing Annex for emission reduction CDM project interprets additionality in

paragraph 37(d), 43, etc. The annex for AR-CDM should also include the same interpretations in corresponding paragraphs.

(c) Leakage

All CDM projects have the issues of leakage in common. The existing annex for emission reduction CDM project interprets leakage in paragraph 50, 51, etc. The annex for AR-CDM should include the same interpretations in corresponding paragraphs.

(d) Uncertainty

Uncertainty issue for AR-CDM is being studied in IPCC Good Practice Guidance on LULUCF and it should be written in annex for AR-CDM that uncertainty issue should be addressed based on the IPCC Good Practice Guidance. In addition, a practical measure to deal with issue of uncertainty due to pest or forest fire could be proposed as follows. First, an annual rate of forest loss caused by pest or forest fire is estimated by existing data or field survey. Then, an annual rate of carbon sequestration of the project or baseline is discounted by the annual rate of forest loss. For instance, if an annual growth rate of tree is 0.32 t-C/ha and an annual rate of forest loss is 0.025, resulting baseline could be discounted as 0.32 x 0.975 = 0.31 t-C/ha.

(e) Socio-economic and environmental impacts

All CDM projects have the issues of socio-economic and environmental impacts in common. The environmental impacts of emission reduction CDM project are interpreted in paragraph 2(e) of the appendix B to the decision 17/CP.12 etc. The annex for AR-CDM should include the same interpretations in corresponding paragraphs. In addition, forests provide multiple benefits such as the preservation of biodiversity, conservation of land and water resources, and provision of forest products. It should be written at the section of Project Design Document in the annex for AR-CDM that an AR-CDM project should be designed so as to provide these multiple benefits through afforestation or reforestation activities.

4. Small scale CDM

A Small scale AR-CDM project implemented with an agreement of local society has less possibility of leakage and negative socio-economic/environmental impacts. Therefore, simplified modalities and procedures should be applied to small scale AR-CDM like in the case of small scale emission reduction CDM project.

PAPER NO. 10: MEXICO

MEXICO'S VIEWS ON ISSUES RELATED TO MODALITIES FOR THE INCLUSION OF AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM IN THE FIRST COMMITMENT PERIOD

Aware of decisions 11/CP.7 (Land Use, Land Use Change and Forestry), 17/CP.7 (Modalities and Procedures for a Clean Development Mechanism) and other relevant decisions;

Recalling the purpose of the Clean Development Mechanism (CDM), and in particular its aim of assisting Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention;

Recognizing that small landholders represent a considerable share of the potential available land for carbon sequestration project activities in developing countries;

Acknowledging that small landholders commonly represent one of the lowest income sectors of developing countries and therefore recognizing the potential for small-scale afforestation and reforestation CDM project activities to promote sustainable development, technology transfer and poverty eradication in those countries;

Bearing in mind that high transaction costs related to the establishment of baselines, monitoring plans, validation of project activities, monitoring procedures, calculation of leakage and verification and certification of carbon sequestration may significantly limit the economic feasibility of small-scale afforestation and reforestation CDM project activities;

Mexico proposes the development of simplified modalities and procedures for small-scale afforestation and reforestation CDM project activities during the first commitment period referred to in Art. 3.7 of the Kyoto Protocol.

Small-scale afforestation and reforestation CDM project activities shall be defined by quantitative limits (given in hectares, tons of carbon sequestered per year or another measure considered adequate) to be determined ensuring the environmental integrity of such projects as well as taking into account their economic feasibility.

The Baselines and Monitoring Panel of the CDM Executive Board (CDM Meth Panel) could propose such quantitative limits, as well as simplified modalities and procedures, and assess the possibility of applying them to single and bundled project activities.

Relevant work by the SBSTA and the IPCC shall be taken into account in developing simplified modalities and procedures for small-scale afforestation and reforestation CDM project activities.

The work by the CDM Meth Panel on CDM emissions reduction project activities could be adapted, where applicable, for small-scale afforestation and reforestation CDM project activities.

PAPER NO. 11: UNITED STATES OF AMERICA

VIEWS FROM THE UNITED STATES ON ISSUES RELATED TO MODALITIES FOR THE INCLUSION OF AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM IN THE FIRST COMMITMENT PERIOD

The United States is pleased to provide the following preliminary views on the modalities for including afforestation and reforestation project activities under Article 12. Although we will not become a Party to the Kyoto Protocol, the United States believes that afforestation and reforestation activities will be important components of climate change mitigation strategies for all countries. Therefore, the United States has a continuing interest in assuring that both the modalities and methodological guidance for afforestation and reforestation projects reflect the best available scientific and technical information. They should also be designed to effectively advance climate change goals through greenhouse gas accounting that is as comprehensive as possible, and to address key technical issues like additionality, leakage, socio-economic and environmental impacts, and non-permanence. Furthermore, modalities and methodological guidance for all types of project-based mitigation activities should consistently reflect these concerns.

The United States considers that modalities and activity definitions should be as uniform and consistent as possible for all sectors, sources, and sinks. Additional modalities and special provisions for afforestation and reforestation projects should be avoided because, in most cases, they are unnecessary and would impose an extra burden on activities that are widely agreed to offer significant greenhouse gas emission reductions, uptake, and non-greenhouse gas benefits. Given that modalities and procedures for the Clean Development Mechanism have already been developed in decision 17/CP.7, and continue to evolve through the Clean Development Mechanism Executive Board and its Panels, the process of developing any additional modalities and methodological guidance for afforestation and reforestation projects should reflect and be consistent with the Clean Development Mechanism process. Any new modalities and guidelines should be consistent with and assure parity in reporting requirements (such as the level of detail and level of stringency) with other project types.

As outlined in our 22 February 2002 submission regarding our views on the organization of a workshop, terms of reference, and an agenda for work relating to afforestation and reforestation activities under the Clean Development Mechanism, afforestation and reforestation projects involve issues similar to energy projects. For example, although additionality arguments have several different components and are based on multiple sources of information, most additionality problems apply equally to all types of projects, including those in the energy sector. Similarly, we believe that guidance on leakage should be developed consistently for all types of Clean Development Mechanism projects because there are forms of leakage that occur in project types and sectors other than Land Use, Land Use Change, and Forestry activities.

Many types of greenhouse gas mitigation projects, including afforestation and reforestation, can offer significant local and national environmental and socioeconomic benefits. Like most greenhouse gas mitigation projects, there is some concern that improperly designed or implemented afforestation and reforestation projects may have unforeseen consequences, and hence consideration of these ancillary aspects can contribute to better project design, operation and cost effectiveness. The experience of the United States through the U.S. Initiative on Joint Implementation is that environmental and socio-economic considerations are important and can best be addressed at the domestic level with the involvement of pertinent stakeholders.

Remaining work should focus on addressing modalities that are specific to afforestation and reforestation project activities and that are not adequately addressed by the existing implementation rules for Article 12. Specifically, the issues surrounding non-permanence are not well addressed in the existing annex on the Clean Development Mechanism. In this case, modalities should ensure that methodologies for afforestation and reforestation projects are credited in a manner that is equivalent to crediting of other projects. We believe there are multiple approaches that will achieve this objective – the approach in the Colombian proposal and the purchase of insurance are just two examples of these approaches. To the extent possible, project developers should be given flexibility in meeting a standard of equivalence with greenhouse gas reduction projects. This flexibility will enhance the viability of projects without sacrificing their integrity. The significance of duration issues should be placed in context, because afforestation and reforestation projects can have lifetimes of 40 to 100 years. According to the Intergovernmental Panel on Climate Change Special Report on Land Use, Land Use Change, and Forestry, Chapter 5, the average length of an afforestation and reforestation project is 61 years.

Lastly, to maintain scientific credibility, Clean Development Mechanism project-activity greenhouse gas accounting should be comprehensive. Because afforestation and reforestation projects can provide significant reductions of pressure for harvest of natural forests by providing sources of fuelwood, timber and other services, off-site carbon fluxes should also be included. As a practical matter, projects with multiple components that include afforestation and reforestation should be considered within the modalities of the Clean Development Mechanism.

PAPER NO. 12: URUGUAY

Proposal of the Government of Uruguay on the issues related with the definitions and modalities for the inclusion of activities of afforestation and reforestation (A&R) project activities in the Clean Development Mechanism (CDM), in the first period of commitment. (Document FCCC/SBSTA/2002/L.8, annex, paragraph 2 (b) (i)).

I. DEFINITIONS

For the purpose of establishing definitions for the inclusion of A&R in the CDM it is proposed to consider the following elements:

1. The definitions of "forest", "afforestation" and "reforestation" used in the CDM during the first period of commitment should be the same ones that were adopted for the article 3.3 of the Kyoto Protocol as they are stated in the annex to decision 11/CP.7.

2. As it is pointed out in the document FCCC/SBSTA/2002/INF.11, "addicionality" and "leakage" are defined in the annex to decision 17/CP.7 (paragraphs 43 and 51, respectively). There are not definitions for non permanence, uncertainties and socio-economic and environmental impacts.

3. In the glossary to Summary of the Special Report of the IPCC on LULUCF the "permanence" is defined as: "Longevity of a carbon pool and the stability of its stocks, given the management and disturbance environment in which it occurs". With this antecedent, it is proposed to define the "non permanence" as: "The reversible condition of the carbon retained in a carbon pool, caused by direct and indirect human-induce activities, or by natural causes."

4. It is proposed to define "uncertainty" in afforestation and reforestation projects in the CDM as: "The lack of security or certainty in the estimate and measuring of the volume of the absorption of CO_2 carried out by a sink in a certain period of time, in accordance with the approved methodologies."

It is useful to distinguish uncertainty from risk, reserving the term risk to describe the probability of reversion of the sequestered carbon by natural causes or by not planned anthropogenic activities.

5. It is proposed to define "environmental impacts" as "The positive or negative alterations of the biotic or non biotic characteristics of the natural and intervened systems that are reasonably attributable to the A&F project activities in their influence area, taking into account the approaches accepted by the Convention on Biological Diversity."

6. It is proposed to define "socioeconomic impacts" as "The changes in social and economic conditions that are reasonably attributable to the A&R project activities in their influence area, and that can affect in positive or negative form the human well-being".

II MODALITIES

1. Non permanence

d) Participants in A&R projects could include preventive measures to minimize the effects of anticipated reversions of the sequestered carbon. Among these measures, it could be considered to establish insurance expressed in CER on the credited captures, similar to the insurance against forest fires.

e) Crediting regimes should be developed (in consistency with the Marrakech Accords) to assure that CER are assigned on the base of measured and verified captures, that stimulate long-term captures, and also facilitate the development of an attractive market for the investors. Among the options to accept would be the regime of renewable Temporary CER for preset periods (e.g. 5 years), and the regime of CER emitted on the base of average storage. The liability of the host countries on the carbon retained during the lifetime of the project is considered a desirable contribution to add confidence in the CER. In these ways, it would be avoided the need of establishing security factors or buffers by default, that could not reflect the specific characteristics of the projects.

f) To promote long-term carbon sequestration, A&R project activities should contemplate crediting periods longer than those approved for projects that reduce emissions by sources in the CDM (a maximum of seven years which may be renewed at most two times, or a maximum of ten years with no option of renewal, as it is established in paragraph 49 of the annex to decision 17/CP.7). It is proposed that the A&R projects, according to their specific characteristics, could last **up to 50 years or more.** Carbon storage in harvested wood products is an important way to stimulate long-term sequestration, and should be incorporated as soon as the Marrakech Accords permit.

2. Addicionality

d) Following Decision 17/CP.7 (annex, paragraph 43) a CDM A&R a project activity is additional if anthropogenic greenhouse gas removals by sinks are enhanced over those that would have occurred in the absence of the registered CDM project activity. Modalities and norms should be developed to assure that projects accepted in the CDM are additional. Baselines should be developed using reliable methodologies that combine historical precedents, consider early actions, legal aspects, and tendencies expected in absence of the project.

e) Modalities to estimate addicionality should take into account the eligibility of projects with high socioeconomic impact that promote sustainable development.

f) A&R project activities in the CDM should offer an opportunity for Non Annex I countries to reinforce their programs of forest development and national policies of sustainable development.

3. Uncertainties

e) Paragraphs related to uncertainties, indicated in table 2 of the document FCCC/SBSTA/2002/INF.11, could apply to A&R project activities in the CDM, adding the sentence "and removals by sinks" following "anthropogenic emissions of greenhouse gas by sources."

f) Uncertainties refer to the atmosphere benefits quantification of the carbon sequestration forecast (*ex ante*) as well as its *ex post* measurement and the determination of greenhouse gas net emissions in the baseline.

g) Modalities to cover uncertainties should reaffirm the principle of the Convention that lack of scientific certainty should not be used as a reason for postponing measures of climate change mitigation. In most ecosystems and biomes, uncertainty can be properly managed using conservative approaches and statistical tools, as confidence intervals. Uncertainties can be reduced minimizing or avoiding the use of default values. Non Annex 1 countries should strengthen, with the necessary cooperation, their national research programas to develop quality data to estimate carbon sequestration.

h) Measurement and monitoring methodologies of GHG should promote an optimum combination of the most advanced techniques of fliedwork, use of models and remote perception. However the methods proposed should be practical and competitive.

4. Leakage

d) Paragraphs related with leakage, indicated in table 2 of the document FCCC/SBSTA/2002/INF.11, could apply to the GHG removals by sinks of the A&R project activities in the CDM.

e) Criteria to define project boundaries should be development to implement monitoring process as agreed in decision 17/CP.7 (paragraph 53 of the annex). It should be useful to develop indicators to identify and assess leakage for displacement of activities. Project boundaries should include all the processes and activities that cause net changes in GHG emissions, that are measurable and reasonably attributable to project activities. Boundaries should consider listings of activities and processes to be monitored in a geographical area in a defined period.

f) Modalities to develop A&R projects in the CDM should contemplate cases that do not represent an important risk of negative leakage, when developed on lands with very scarce or null arboreal vegetation or no possibilities of displacements of activities.

5. Socio-economic and environmental impacts

a) Paragraphs related with socio-economic and environment impacts, indicated in table 2 of the document FCCC/SBSTA/2002/INF.11, could apply to the GHG removals by sinks of the A&R project activities in the CDM.

b) Countries should, sovereignly, define principles and guidelines to assess and maximise positive socio-economic impacts of A&R project activities and to assure that A&R projects do not have negative social impacts.

c) Participation of stakeholders should be incorporated in the national assessment processes. Clear and transparent information should be available for stakeholders to give their opinions.

d) CDM shall give importance to A&R projects that fulfil one or more of the following conditions: (I) restoration of degraded lands, (ii) control of erosion processes, (iii) use of native species, (iv) promotion of agroforestry, (v) involve small farmers in associative ways, and (vi) promote the substitution of fossil fuels.

e) Environmental impacts should be supported by certification under accepted standards related to sustainable forests and natural resources management. Rules and procedures referred to best practices should be developed.

f) Countries should adopt principles and modalities to evaluate biodiversity in the situation "without project" and adopt best practices for its adequate management in the situation "with project". Protection of biodiversity should be an objective of A&R projects, according with the purposes of the Convention on Biological Diversity. Projects that substitute indigenous forests should explicitly be excluded of the CDM.

- - - - -