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Legal Aspects in the Implementation of CDM Forestry Projects

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Maria Socorro Z. Manguiat, Roda Verheyen, Jens Mackensen and Gerald Scholz

IUCN Environmental Policy and Law Paper No. 59

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Foreword

The mechanisms of the Kyoto Protocol, particularly the Clean Development Mechanism (CDM), are coming to life, and the first certified emission reductions are now being issued, generated not surprisingly in renewable energy projects. Forestry projects, too, are gaining increasing attention. African countries in particular feel that carbon sequestration can offer them a chance to participate in emissions trading.

CDM afforestation and reforestation projects, commonly referred to as sink projects, have special features compared with CDM projects in the energy or industry sector. Sink projects usually involve large areas of lands, a circumstance which raises particular legal issues. These issues mainly centre around land tenure, land use rights and the subsequent ownership of certificates resulting from the CDM process.

The report presented here analyses the crucial issues and serves as a guide to project developers and policymakers in developing countries.

The four country studies conducted were very useful in the areas of land rights, access to sequestered carbon and title rights for certified emission reductions (CERs). The studies also helped identify how the framework regulations of the United Nations Framework Convention on Climate Change (UNFCCC) for sink projects can be translated into national policy and regulations.

The report includes a useful discussion about diverting official development assistance to CDM sink projects, something that the Kyoto Protocol does not permit for any CDM projects; these aspects may particularly benefit international donors and implementing agencies.

Finally, in recognition of the fact that laws are only a tool for policymakers, the report points out that "common sense" solutions are a good way to address the objectives of the CDM; they provide clear and tangible socio-economic and environmental benefits to public participants and are politically acceptable.

I would like to congratulate all those at the various participating organizations and experts in developing and developed countries on the excellent results and thank them for their efforts.

Dr Bernd Eisenblätter
Managing Director
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH.

Message

Among the various innovative instruments linked to the Kyoto Protocol is the Clean Development Mechanism (CDM). It offers developed countries a chance to offset some of their greenhouse gas emissions by funding development projects in developing countries in areas such as renewable energy and forestry.

I was delighted to see that, during 2005 and in advance of the 11th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, the first two CDM, hydroelectric, projects were approved by the mechanism's Board. They are now in the final lap of defining similar carbon credit rules or afforestation and reforestation schemes, several hundred of which are in the pipeline.

These welcome developments are a clear signal that the impact of the Kyoto Protocol will extend well beyond 2012 and a signal of continuity urgently demanded by investors in such schemes.

It is within this context that we have this excellent book on the legal requirements for CDM-related forestry projects which highlights work in Argentina, Chile, Ghana and the Philippines.

It goes without saying that the legal and institutional frameworks for CDM projects, indeed all of our work on sustainable development, need to be addressed if these efforts are to reap the maximum harvest.

UNEP is also looking closely at how market instruments and mechanisms can help us achieve other aims in areas such as freshwater conservation, biodiversity and land degradation in order to better achieve the Millennium Development Goals and overcome poverty.

The information contained in this joint publication will, I hope, play an important part in furthering the role of the CDM in delivering sustainable development and fighting climate change.

In the future we may see other legally binding instruments aimed at stabilizing the atmosphere linked with Kyoto or some other arrangement. I sincerely believe this study will be as useful for tomorrow as it is for today.

Dr Klaus Toepfer
Executive Director
United Nations Environment Programme (UNEP)

Preface

The IUCN Environmental Law Programme (ELP) welcomes this publication which caps almost two years of work by the IUCN Environmental Law Centre in the fascinating area of the Clean Development Mechanism (CDM). In this relatively short period, the rules of the CDM and those relating in particular to afforestation and reforestation have continued to evolve. With this explosion of rules has arisen a need to make sure that those who will need to use and apply these rules understand them, and fully appreciate their repercussions. It is this need which this book tries to fill.

This publication builds on the foundation created by the IUCN-UNEP initiative "LULUCF under the CDM" carried out in cooperation with the Food and Agriculture Organization of the United Nations. It takes the wealth of information available on CDM and views the subject through the lenses of legal and policy experts, but with the aim of assisting non-lawyers. The analysis spans the breadth of international, regional and national laws, and is groundtruthed by concrete examples taken from the four carefully-selected case studies.

The paper ends with the conclusion that despite the need to be on the lookout for legal issues that are often intertwined with socio-economic challenges, legal reform may not be necessary or advisable, at least not exclusively in relation to CDM afforestation and reforestation project activities. Even in the few instances when legal reform or adjustment is suggested, the paper advocates an integrated and phased approach in looking at the challenges, using the CDM AR as a possible entry point for exploring legal and policy reform, and emphasises that the law must be supported by strong institutions and close coordination among those who implement it.

The questions raised in this paper will undoubtedly be resolved as the CDM continues to evolve. It is a testament to the authors that many of the issues initially raised when this project was being designed have since been taken up by the CDM Executive Board. I am certain that the analytical framework offered by this book will remain relevant for many years. It is our hope that this book can be a small contribution to the promotion of environmentally sound and socially acceptable CDM AR project activities, in keeping with IUCN's vision for a just world that values and conserves nature.

Dr Alejandro O. Iza
Head, IUCN Environmental Law Programme
Director, IUCN Environmental Law Centre

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I. Introduction

The establishment of the Clean Development Mechanism (CDM) under the Kyoto Protocol has been greeted with mixed emotions from climate, forestry and development experts. Many methodological and generic issues about the implementation of CDM activities and its role in climate protection and national development remain unsolved – including the role of afforestation and reforestation (AR) projects as a specific part of the CDM. These, due to their nature as projects that involve land and trees, which are regulated as property, natural resources, and components of the environment, raise particular issues, including legal issues, that are unique to these types of activities, as opposed, for instance, to CDM energy project activities. Given that natural resource-related projects are also a major area of activities of official development assistance, the relationship between the latter and CDM AR also remains somewhat opaque.

Since October 2003, the Environmental Law Centre of IUCN – The World Conservation Union has been working with GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit), the German development agency for technical cooperation and UNEP on a project originally entitled "Legal Aspects of Carbon"[1] which focuses on these types of projects. The objective of the project is to identify the **national-level**[2] legal aspects arising from the implementation of AR projects under the CDM of the Kyoto Protocol, and recommend ways in which the parties to these types of projects can best address these legal aspects, thereby facilitating environmentally and socially sound projects and transactions.[3]

As a first step, the partners undertook a brainstorming exercise to preliminarily identify what was perceived to be the most pressing national-level legal issues relating to CDM AR projects. We then conducted a "Needs Assessment", asking relevant persons in the climate and forestry, as well as in the development community for suggestions on problem areas and issues. On this basis, we had legal consultants look at four different potential CDM host countries (Argentina, Chile, Ghana and the Philippines), asking them to identify and discuss how the national legal and administrative systems would deal with the various steps necessary to implement a CDM AR project. The results of these case studies are presented as Annexes to this paper.

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1 While carbon-related legal issues formed the starting point for the conception of the study, it soon became clear that other legal issues relating to the implementation of CDM AR projects also required examination. The title has thus been broadened to reflect this development.

2 "National level" here includes subnational (state or provincial level) issues, as opposed to international or regional level issues.

3 A similar study on legal aspects has been recently undertaken by FAO: "Climate Change and the Forestry Sector: Possible Legislative Responses for National and Sub-national Governments", ***[FAO legal study]*** available at ftp://ftp.fao.org/docrep/fao/007/y5647e/y5647e00.pdf. The two studies have different focuses; however, we have tried to take into account the findings of this study.

This paper synthesises the findings of the case studies and discusses other important issues that emerged during the development of this project. It has been written by a multi-disciplinary team led by lawyers, with a legal perspective, but is not aimed only at lawyers. More importantly, the paper seeks to guide policy makers in host countries in designing a CDM framework that promotes the implementation of environmentally and socially sound project activities in the afforestation and reforestation sectors.

The project's main findings, based on the case studies and other developments relating to the project are as follows:

1. More attention should be given to legal issues surrounding CDM AR to ensure that these projects will be able to reconcile development and climate aims.
2. It cannot be concluded in general that legal reform has to take place for CDM AR projects to be soundly implemented in host countries. However, without a clear legal framework designed to meet the specific needs of CDM AR projects, various legal issues are most likely to complicate and increase costs of such projects.
3. In general, it is possible to avoid legal conflicts in the implementation of CDM AR projects by carefully selecting sites over which land title and tenure are clear (thereby avoiding conflicts over land ownership) and by fitting AR projects into the framework of existing forestry policies and plans (thus avoiding conflicts with other rules of domestic law and combining CDM benefits with national sustainability and poverty reduction goals).

This paper is aimed at explaining the basis for these findings and at providing a more detailed description of legal issues to be solved and conflicts to be avoided. A step-by-step approach of setting the scene, identifying problem areas, and proposing responses to these problems has been followed, as described below:

Given that this paper is also meant for others who may not be experts in international climate change law, Chapter II provides some basics on the CDM. It focuses on the context in which a CDM AR project takes place, discussing the factual and legal preconditions for the design and implementation of CDM AR projects and thereby highlighting the legal issues that need to be considered. The chapter discusses selected problem areas that the internationally-adopted rules on CDM AR have created or left open for resolution either at international or national level.

Acknowledging the important lessons that can be learned from earlier projects, Chapter III focuses on relevant project experience under the "Activities Implemented Jointly" phase under the UN Framework Convention on Climate Change (UNFCCC), the World Bank, and other non-CDM AR projects identified in the case studies.

Chapter IV then goes on to tackle the questions relating to official development assistance and CDM activities, discussing questions such as additionality in the face of ODA funding, the role of CDM in ensuring high quality projects, and the extent to which ODA might be needed to provide the framework for CDM activities.

Chapter V then provides the synthesis and discussion of the case study findings, which are grouped into themes that mirror those raised under Chapter II and examine whether these problem areas are being adequately dealt with at national level.

Chapter VI provides the summary findings and recommendations of the paper.

II. The context – facts and legal preconditions for CDM AR projects

1. General background to the CDM and AR activities

Essentially, the CDM allows industrialized countries with emission reduction targets under Annex B of the Kyoto Protocol (often referred to as the "Annex I" countries) to invest in projects in developing countries and to use the emission reductions yielded to comply with their climate protection targets. The specific rules on the CDM operation will be provided by the Conference of the Parties serving as the meeting of the Parties (COP/MOP) to the Kyoto Protocol (which will meet for the first time in late November/early December 2005), but the rules have actually already been laid down by the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in various Decisions, subject to confirmation by the COP/MOP, which is not expected to alter these rules in any significant way.

Project participants have to select an approved baseline and monitoring methodology or develop a project-specific one, which then needs to be approved by the CDM Executive Board (EB) (the international body in charge of supervising the CDM). In parallel, they produce a "Project Design Document" (PDD) that explains and assesses the planned activity according to a given scheme and applying the methodology in practice. The PDD and methodology are then submitted to the "Designated National Authority" (DNA, which is the new domestic institution required, among other things, to implement the CDM in the host country). The DNA will issue a letter of endorsement to confirm that the project is contributing to the host country's sustainable development priorities. The correct application of the methodology and the consistency of the PDD will then be *validated* by the "Designated Operational Entity" (DOE) (i.e. auditing companies and the like) and then *registered* by the EB. The registration is the prerequisite for a project to actually produce marketable emission reductions.

The Kyoto Protocol itself makes no distinction between energy-related (i.e. emission-avoiding) and carbon sequestration or storage projects ("sinks" or "Land use, land use-change and forestry, LULUCF"[4] in climate-jargon), such as afforestation and reforestation.

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[4] This is the official jargon as used in the UNFCCC and the Kyoto Protocol. Under Article 3.3 of the Kyoto Protocol, afforestation, reforestation and deforestation activities that started on or after 1 January 1990 and before 31 December 2012 are the only LULUCF activities that can be used by an Annex I Party to meet its greenhouse gas reduction commitments. In addition, under Article 3.4 of the Kyoto Protocol, revegetation, forest management, cropland management, and grazing land management that occurred after 1990 and are human-induced can be accounted for by Annex I Parties in fixing their assigned amount units (AAUs). LULUCF activities under Articles 3.3 and 3.4 of the Kyoto Protocol can be converted into removal units (RMUs) if these activities result in a net sink. See decision 11/CP.7, land use, land-use change and forestry. AAUs and RMUs can be used to demonstrate compliance by an Annex I Party with its quantified emission limitation and reduction commitments under the Kyoto Protocol. See decision 19/CP.7, modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol.

The interest in CDM AR activities is – from the buyer's side – largely based on the assumption that such projects might be able to deliver emission reductions at significantly lower costs, in particular if compared to most national Annex I mitigation activities but also when compared to CDM energy-related activities (e.g. efficiency improvements in existing fossil fuel-power plants or the installation of new renewable energy capacity). At the same time this was also the main argument against the inclusions of sinks, based on the fear that sink options that were too cheap would impede Annex I countries from pursuing changes in their national energy policies. For many host countries with little or no industry and only their natural resources to depend on for revenue, CDM AR activities are the only way, apart from receiving support for adaptation to climate change, in which they can participate in and benefit from the flexible mechanisms, and expect to receive additional environmental benefits.

The most significant difference between CDM AR projects and energy-related CDM projects is the temporary nature of carbon storage, the so-called non-permanence of biologically sequestered carbon. While avoided emissions in energy CDM projects will not reoccur so easily[5] and are therefore considered permanently avoided emissions, carbon stored in biomass and soils can be re-emitted to the atmosphere through decomposition and mineralization, fire, pests etc. This particularity of LULUCF carbon sequestration activities required specific arrangements for the accounting of emission reductions:

While CDM energy projects produce Certified Emission Reductions (CERs), which are tradable once they are verified, CDM AR projects generate either temporary CERs (tCERs) or long-term CERs (lCERs). Both reflect the specific nature of temporary carbon storage through biomass. tCERs can only be used for compliance or traded in the Kyoto Protocol commitment period during which they were certified, hence their life-time is limited to five years,[6] after which they will have to be re-certified, which in turn increases transaction costs. Consequently their economic attractiveness is expected to be quite limited. lCERs may be valid up to 60 years, but re-verification is due every five years. Additionally, CERs from AR projects may only be used for compliance up to a cap of 1% of each Annex I country's 1990 emissions, and they are not bankable for compliance in future commitment periods.[7]

Both limitations have a few practical implications. tCERs and lCERs will be discounted by market participants for two reasons: On the one hand, the inherent project risk of losing (parts of) the carbon sequestered falls back to the credits' owner on re-verification every five years. On the other hand, their value is determined by the costs of replacing them with other emission allowances after the end of the project lifetime. These may turn out to be much higher than in the time the tCERs or lCERs were acquired. Depending on the expectations for future carbon prices, the net present value of lCERs is unpredictable. The tCER value is estimated at around 14–30% of the value of CERs from GHG source reduction projects.[8]

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5 "Saved" fossil fuel can be tapped any time if there is economic pressure to do so, so the avoidance cannot be considered absolutely permanent.

6 As an exception, CDM activities started between 2000 and 2008 may produce tCERs that can be counted towards the country commitments of the first commitment period 2008–2012.

7 Dutschke, Michael, Bernhard Schlamadinger et al. Value and risks of expiring carbon credits from afforestation and reforestation projects under the CDM. (2005) *Climate Policy 5*(1).

8 *Id.*

Moreover, to be eligible as a CDM project, activities must comply with several rules and conditions, some of which are specifically applicable to AR activities. The main COP decisions containing these rules are: decision 17/CP.7[9] on the general rules and modalities for the CDM, decision 19/CP.9[10] on modalities for CDM AR activities, and decision 14/CP.10[11] on modalities and procedures for small-scale CDM AR activities. These rules, on which the EB issues guidelines, are applicable only at the international level, i.e. will be executed by the Executive Board of the CDM and are preconditions for the usage of greenhouse gas emission reductions as CERs in the context of the Kyoto Protocol.

With respect to the types of activities imaginable, three broad categories of LULUCF projects can be distinguished: (i) emission reductions through conservation of existing carbon stocks, (ii) carbon sequestration by the increase of carbon stocks, and (iii) substitution of fossil fuel through sustainably grown biofuels.[12] Projects for all these categories have been implemented under the UNFCCC's pilot phase for Activities Implemented Jointly (AIJ; see Chapter III). However, only the second and third project categories are eligible under the CDM for the first commitment period (2008–2012; see section 3b).

Possible types of CDM AR projects include agroforestry, monocultural or mixed industrial plantations, forest landscape restoration projects on degraded or protected lands, community forest projects, and other AR projects which focus on timber production, biomass energy, and watershed management. This list shows that CDM AR activities will often be conducted to achieve other economic, i.e. harvesting aims, which might be of importance with respect to applicable domestic laws. For a more detailed explanation of these types of possible activities, see Box 1.

Box 1. Types of AR activities

Agroforestry refers to systems of mixing agricultural or horticultural crops and/or livestock with woody perennials. Integrating trees on farms into the wider agricultural landscape can improve the balance between food production, poverty alleviation and environmental management. Agroforestry is practised in temperate as well as in tropical regions, in arrangements varying from simple (e.g. scattered trees in and live fences around farmland) to complex (e.g. multi-storey home gardens). It includes silvo-pastoral systems, urban agro-forestry and crop-fallow rotations. Agroforestry is attractive to small-scale farmers, who can benefit from the income, products (fruits, vegetables, fodder, medicines, oils, nuts, fibres, fuel-wood and timber) and services (recycling of nutrients, water retention, and soil protection) that it provides.[13] According to the Intergovernmental Panel on Climate Change,

Cont.

[9] Contained in Doc. FCCC/CP/2001/13/Add.2.

[10] Contained in Doc. FCCC/CP/2003/6/Add.2. The pertinent legal text is contained in an Annex to this decision as a draft decision for the 1st Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol entitled "Annex, Modalities and Procedures for afforestation and reforestation project activities under the Clean Development Mechanism."

[11] Contained in Doc. FCCC/CP/2004/10/Add.2.

[12] Watson, Robert T., Ian R. Noble et al. (Eds). *Land Use, Land-Use Change, and Forestry: Special Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2000) ***[Watson]***.

[13] Orlando, Brett *et al. Carbon, Forests and People: Towards the integrated management of carbon sequestration, the environment and sustainable livelihoods* (Gland, Switzerland and Cambridge, UK: IUCN, 2002) ***[Orlando]***.

Box 1. Types of AR activities (cont.)
agroforestry holds the largest potential for global carbon sequestration.[14] Representative sequestration projects include the Scolel Té project in Mexico[15] and AES Care project in Guatemala.[16]

Monocultural or mixed industrial plantations are for economic reasons quite popular in developed and developing countries. They require intensive technical knowledge as well as significant up-front investments, but also feature relatively simple management schemes while offering competitive rates of return to invested capital. While in many cases plantations may represent an ecological deterioration compared to the natural ecosystem, they also often represent the only viable option for already highly degraded sites. Relevant sequestration projects include FACE Mt. Elgon project in Uganda or the Red Cross mangrove project in Vietnam.[17]

Forest landscape restoration can generate considerable environmental and socio-economic benefits. It is a framework that builds on a number of existing rural development, conservation and natural resource management principles and approaches. It helps restore many of the goods and services that enhance ecological integrity and provide tangible benefits to local people living in degraded or deforested landscapes. It differs from more conventional approaches, which tend to be limited to increasing tree cover, usually for a limited range of goods and services. Forest landscape restoration employs many technical approaches, including natural regeneration, tree planting and agro-forestry. In many settings, wood-lots, scrub, forest fragments and other natural vegetation can be restored to perform the main functions of a forest, on which households and communities rely for their livelihoods.[18] Representative projects include the Shinyanga woodland restoration project in Tanzania or the Guaraquecaba Climate Action Project in Brazil.[19]

Community forestry emphasises the social dimension of forestry and its contribution to sustainable livelihoods of rural people. It includes efforts by communities to recognise and make use of the economic, social and environmental opportunities provided by local forest resources. Technically, community forestry may include inter alia agroforestry, plantation or forest restoration measures. Community forestry projects are often, but not necessarily, small- to medium-sized.

Biomass energy projects serve the production of energy in the form of electricity, solid, liquid or gaseous fuels and heat, which is based on biomass. Biomass would refer to any organic matter that is available on a renewable basis and could include agricultural crops, timber and organic waste. Fire wood is a very basic, widely spread and often highly inefficient form of biomass energy medium. Elaborated biomass energy projects include e.g. gasification of woodchips or industrial production of charcoal for purposes such as pig iron production.

[14] *Watson.*
[15] *Orlando*.
[16] *Watson*.
[17] *Orlando*.
[18] See *Orlando*.
[19] *Id*.

The UNFCCC rules give little guidance as to how AR activities are to be implemented on the ground. Still, these international rules, which are explained in greater detail in the succeeding sections, provide the general legal framework in which projects can emerge as CDM AR activities. A good understanding of them is essential to enable a host country to appreciate its role in the CDM process and to put in place the appropriate supporting framework for the CDM. Therefore, and before discussing some specific problem areas relating to these international rules, a brief discussion on the anatomy of a CDM project is presented.

2. Anatomy of a CDM project – The CDM project activity cycle[20]

With regard to the CDM rules formulated by the COP and subsequently, the COP/MOP and the EB, the following steps are involved in a CDM AR project activity:[21]

a. AR project activity design

Project participants are required to submit information on their proposed CDM AR project activity using the PDD for afforestation and reforestation project activities, which has been developed by the EB. A simplified PDD is available for small-scale (SSc) CDM AR project activities.

Prior to reaching the stage of preparing a PDD, however, crucial decisions involving legal and economic considerations are assumed to have been made regarding project participants, the type of AR project to be implemented, including the species and varieties for planting, the project location, and the delineation of the project boundary. Other stakeholders would have also been identified, and an analysis or assessment of environmental and socio-economic issue undertaken. Negotiations with project participants and other stakeholders would have presumably taken place, and agreements entered into with them. Other permits required for the project under national law would also have been considered and applied for, with the timing depending on the regulations in place and how they relate, if at all, to the DNA's certification that the project assists the host country in achieving sustainable development. Box 2 specifies some of the questions that would arise, mostly during this phase in the project cycle. These were the kinds of questions we presented the national experts with for the country studies, together with a general overview of the CDM project cycle.

[20] Information for this section was largely derived by the CDM website, http://cdm.unfccc.int

[21] For a more detailed analysis of the steps involved in the CDM project cycle, visit www.cdmguide.org. Also refer to UNEP Risø's *Legal Issues Guidebook to the Clean Development Mechanism* (2004).

Box 2. Legal and factual preconditions for a CDM AR project activity

Most of these issues are expected to emerge at the stage of project design. Going through this illustrative list is a useful way to evaluate whether a host country's laws have sufficient provisions to guide project participants in the course of the project, and to demonstrate the breadth of issues involved:

- What is the legal status of the land? Are there any particular restrictions that its legal status imposes on the project site?
- Who owns the land? Is this ownership recognised by law, and evidenced by a legal document?
- Who are the bona fide representatives of those who have a stake in the project site? Who should the project investor be negotiating with for the CERs?
- Are the occupants and/or users of the land different from those who hold legal title to the land? What rights do the occupants and users of adjacent lands have over the potential project site?
- Does the law require the present uses of the land to be incorporated into the project? If any land-use change is involved, does permission need to be sought for such changes, and will the land need to be reclassified?
- What other permits and clearances need to be obtained for the project, apart from the certification that the project assists in achieving sustainable development?

Other equally important issues are discussed in subsequent sections of the paper, and some of those that need further analysis are listed at the end of the paper.

b. Proposal for a new AR baseline and/or monitoring methodology or the use of an approved AR methodology

If new baseline and/or monitoring methodology are chosen, the proposed methodology, together with the draft PDD, is submitted by the DOE to the EB for review. If the project participants wish to use a previously approved methodology, the DOE can proceed with the validation. For SSc CDM AR, simplified methodologies for baseline determination and monitoring plans may be used.

c. Validation

The DOE then evaluates the CDM AR project activity based on the requirements set out in relevant guidelines mentioned in section 1 of this chapter.

d. Registration

Once the EB accepts the validation report submitted by the DOE, the CDM AR project activity is considered registered.

e. Monitoring

In between verification periods, project participants are expected to monitor the project in accordance with the monitoring plan that is submitted with the PDD. The results of monitoring, which will include the measurement of the reductions in anthropogenic emissions of greenhouse gases, will be essential to the verification work to be conducted by the DOE.

f. Verification

The timing of the first verification lies within the discretion of the project participants. Afterwards, every five years, the DOE will conduct a review of the monitored variations in net anthropogenic greenhouse gas (GHG) removals by sinks that have occurred as a result of the CDM AR project activity since the last verification (if lCERs are chosen for accounting) or since the project start (in the case of tCERs).

g. Certification

The DOE then certifies that a project activity achieved the net anthropogenic GHG removals as verified; this will be the basis of the amount of CERs to be issued by the CDM registry.

Two different DOEs are expected to conduct the validation on the one hand and the verification and certification on the other. In the case of SSc CDM AR however, the project proponent may use the same DOE for validation, verification and certification.

h. Issuance of CERs

The EB then authorizes the issuance of CERs that correspond with the certification provided by the DOE, authorizing their allocation among various accounts in the CDM registry in accordance with the agreement of the project participants. Box 3 outlines the CDM AR project cycle in schematic form.

Box 3. CDM AR project cycle

Project design ⇨ Validation ⇨ Registration ⇨ Monitoring ⇨ Verification/ certification ⇨ CER issuance

3. Selected problem areas

As indicated at the end of section 1, the UNFCCC rules provide only general guidance on how AR CDM activities are to be implemented on the ground. Nevertheless, the international rules are a natural starting point for identifying legal problems and options in the implementation of CDM AR project activities in host countries. Thus, this section identifies issues dealt with by the internationally-adopted rules which, in their application to the implementation of CDM AR projects at the domestic level, still need to be further elaborated.[22] The following discussion served as a background to the country studies. Thus, Chapter V proposes approaches to dealing with these problem areas based on the results of the case studies.

a. Additionality

To anyone in the climate community it is well known that to qualify as a CDM activity, a proposed project must be “additional”. The precise meaning of this term, however, is still

[22] There are other issues that might be of particular relevance for investors, such as baselines and methodologies that are not dwelt on here due to the legal focus of the analysis.

subject to debate. Decision 19/CP.9, paragraph 18 stipulates that:

> *"An afforestation or reforestation project activity under the CDM is additional if the actual net greenhouse gas removals by sinks are increased above the sum of the changes in carbon stocks in the carbon pools within the project boundary that would have occurred in the absence of the registered CDM afforestation or reforestation project activity."*

In simple terms, this means that only projects that would not have happened without the extra incentive created by the CDM component of the project can be registered as a CDM project activity and subsequently generate CERs. This definition of additionality does not expressly refer to legal requirements. Hypothetically, therefore, it is possible that while a certain land use is prescribed by law, a project aimed at restoring or establishing this legally-prescribed use would still be eligible as a CDM AR project. Such legal requirements could originate both from environmental legislation or for example general tort principles which might apply after a forest has been destroyed. Similarly, an existing forestry programme might require the afforestation of a particular area – whether and under what conditions "additionality" would still be found in such a situation is an issue we discuss in the country studies, in Chapter III with regard to the specific case of forestry projects financed by official development assistance (ODA) and in Chapter V in relation to the laws and policies of the countries where the case studies were conducted.

b. Restriction to afforestation and reforestation

In theory, any "land use or land-use change and forestry (LULUCF)" activity is capable of storing carbon, and thus, any such activity could also be the aim of a CDM project. However, the Parties to the UNFCCC decided on a general restriction of the use of land-use credits in the CDM at COP6bis in Bonn (July 2001) and reiterated this at COP7 in Marrakesh (December 2001): only afforestation and reforestation are eligible to produce CERs in the first commitment period of the Kyoto Protocol (2008–2012).[23] Forest conservation activities or activities avoiding deforestation, which would result in emission reduction through the conservation of existing carbon stocks, are not eligible at this time. Definitions of these terms are provided in an Annex to decision 11/CP.7 (Land use, land-use change and forestry).[24] Therefore, even if an activity might be regarded as afforestation or reforestation under, say, a national forestry statute this activity may still not represent an eligible CDM AR activity.

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[23] Par. 7(c), decision 17/CP.7.

[24] Contained in Doc. FCCC/CP/2001/13/Add.1.

*"**'Afforestation'** is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources;" (Par. 1(b), Annex to decision 11/CP.7)*

*"**'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 on 31 December 1989."* (Par. 1(c), Annex to decision 11/CP.7)

In addition, the annex ("Definitions, modalities, rules and guidelines relating to land use, land-use change and forestry activities under the Kyoto Protocol") to decision 11/CP.7 includes a particular definition of the term "forest".[25] Based on this definition, a host Party must select and thereafter report to the Executive Board *through the DNA*: (a) a single minimum tree crown cover value between 10 and 30 percent; (b) a single minimum land area value between 0.05 and 1 hectare: and (c) a single minimum tree height value between 2 and 5 metres. Such selection must be made and the choice conveyed to the EB before a non-Annex I Party can host CDM AR projects.[26] This means that, for the purpose of CDM AR, a host country will need to choose a definition that may be entirely different from what it has used thus far, and if this is so, then it will consequently adopt a different definition for the terms "afforestation" and "reforestation", since what it can consider as not being forested will depend on the definition of the term "forest". In host countries that have different definitions of the term "forest" (e.g., taking into account vast differences in the landscape across the country), such an election would also imply a choice to include particular types of forest within the CDM AR, and to exclude others that do not fall within this definition.

Finally, CDM AR projects are only eligible on sites that were deforested before 1990. This threshold is meant to exclude opportunities to gain from uncontrolled deforestation that might have otherwise been spurred after the greenhouse gas emission baselines were set at 1990 levels under the Kyoto Protocol.

The definition of the term "forest" adopted by the Parties to the UNFCCC is very specific. We were interested to determine how this definition compared to definitions in some countries with a long tradition in forestry, and whether these differences in definition would have any serious legal implications. We thus asked the country experts to discuss the various definitions of forest under national law and discuss the implications of the differences in Chapter V. Their findings do not indicate that insurmountable legal issues will arise from the definitional differences. However, practical problems may arise, should the existing legal definitions vary greatly from the COP-adopted definitions, since forestry-related information may only be available for what falls under the definition of "forests" under national law.

Different legal rules might exist for each type of CDM AR project in host countries, wittingly or unwittingly making certain types of CDM AR project activities more difficult/easier or cheaper/more expensive to implement. These different rules were likely to have developed independently, and perhaps even without consideration, of each other, under different circumstances, in relation to different policies, and with varying degrees of consideration, if any, for the socio-economic and environmental aspects of AR project activities.

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[25] "'Forest' is a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10–30 per cent with trees with the potential to reach a minimum height of 2–5 metres at maturity in situ. A forest may consist either of closed forest formations where trees of various storey and undergrowth cover a high proportion of the ground or open forest. Young natural stands and all plantations which have yet to reach a crown density of 10-30 per cent or tree height of 2–5 metres are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest." Par. 1(a), Annex to decision 11/CP.7.

[26] Par. 8, Annex (modalities and procedures for afforestation and reforestation project activities under the clean development mechanism) to decision 19/CP.9.

With the introduction of CDM, these different project types may now all be eligible as CDM AR project activities, but would not really be on an equal footing. It is therefore essential to consider these differences when looking at possible barriers to implementation (including the demonstration of project additionality) or the need for a distinct national legal framework. Therefore, Chapter V also takes up this issue in the context of the results of the country studies.

c. Quantitative restriction of AR credits

Decision 17/CP.7 limits the acquisition of credits from CDM AR activities by Annex I countries to 1% of the country's base year emissions[27] and thus ~424 million tonnes of carbon over the five year period until 2012 for all Annex I Parties excluding the USA. In addition, the European Union's "Linking Directive"[28] further restricts the size of the market for CERs from afforestation and reforestation project activities. Paragraph 3(b) of Article 11a of Directive 2003/87/EC[29] as amended by the "Linking Directive" provides in part that CERs from land use, land use change and forestry cannot be used under the EU's emissions trading scheme. These limitations do not translate into a needs-assessment of a particular planned CDM AR activity. Neither do they set limits on the approval of AR activities on the ground. We have therefore not expanded on this issue in this study, while acknowledging that the limitation of demand might influence host country decisions with regard to investment in legal reform.

d. General principles

Several principles govern land use, land use change and forestry in the context of the Kyoto Protocol as a whole (decision 11/CP.7). One of these is that "*the implementation of land use, land-use change and forestry activities contributes to the conservation of biodiversity and sustainable use of natural resources.*"

The legal status of this principle is unclear. Legally, one way to apply the principle is to include it among the general principles of a host country's CDM framework and then to link it to the pertinent country's definition of and criteria for ascertaining consistency with its sustainable development goals (where they exist). Decision 17/CP.7 stipulates that it is the host country's right to approve a project on the grounds that it contributes to sustainable development: Prior to registration of any project the EB is to receive "… confirmation by the host Party that the project activity assists it in achieving sustainable development" (para 40(a)). This requirement needs to be translated into approval procedures within each national DNA, procedures that require an assessment that the project activity assists the host country in achieving sustainable development. The host country may decide not to have criteria for ascertaining that a project assists it in achieving sustainable development, and instead leave this determination to the sound judgment of a previously-named decision-making authority.

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[27] See par. 7, decision 17/CP.7.

[28] Directive 2004/101/EC of the European Parliament and of the Council, amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms, 27 October 2004, Official Journal of the European Union, L 338/18, 13.11.2004.

[29] Establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC Official Journal of the European Union, L 275/32, 25.10.2003.

Even so, if the determination is questioned, the soundness of such a decision could presumably be measured against a set of principles, including the one quoted above. Pertinent forestry or biodiversity laws and elements under biodiversity-related multilateral agreements to which a host country is a Party could also be considered in testing such a decision.[30]

In the country studies, this issue is discussed in depth, and in Chapter V this question is revisited in conjunction with the issue of substantive standards.

e. Appropriate legal and institutional system to approve CDM AR projects

Decision 17/CP.7 sets minimum standards for the participation of a developing country in the CDM as a host Party. In addition to the requirements of ratifying the Kyoto Protocol, designating a national authority (DNA) responsible for CDM activities within the government structure, and making the election described in section 2(b) of this chapter with regard to the forest definition, countries must have in place a procedure to approve CDM projects at the national level.

The national approval has a threefold purpose: (i) to formally indicate that the developing country Party wishes to participate in the specific project activity; (ii) in case it is an entity other than the country Party itself that will participate in the project activity, to approve the voluntary participation[31] of this entity; and (iii) to confirm that the activity is consistent with national sustainable development goals.

While this approval is a national matter, the international legal framework provides some guidance on what should be ascertained before this approval is granted. National legal arrangements may then be necessary to ensure consistency between the national requirements and international prerequisites, as well as between requirements in different host countries.

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[30] For instance, under Action 3.4.9 of the Ramsar Strategic Plan 2003–2008 (Ramsar COP Resolution VIII.25), a Contracting Party to the Ramsar Convention must "[e]nsure that national policy responses to the implementation of the Kyoto Protocol, including revegetation and management, afforestation and reforestation do not lead to damage to the ecological character of wetlands." To carry out this action, Action 4.1.4 of the same Strategic Plan prescribes the application of the guidelines on wetland restoration adopted by Ramsar COP Resolution VIII.16, Principles and guidelines for wetland restoration.

[31] Paragraph 15(a) of the Annex (Simplified modalities and procedures for small-scale afforestation and reforestation project activities under the clean development mechanism) to UNFCCC COP decision 14/CP.10 states that before the validation report for the proposed CDM project activity is submitted to the Executive Board, the Designated Operational Entity shall have received "written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the proposed small-scale afforestation or reforestation project activity under the CDM assists it in achieving sustainable development." Similar language is used in paragraph 40(a) of the Annex (Modalities and procedures for a clean development mechanism) to decision 17/CP.7, par. 23(a) of Annex II (simplified modalities and procedures for small-scale clean development mechanism project activities) to decision 21/CP.8, and par. 15(a) of the Annex (Modalities and procedures for afforestation and reforestation project activities under the clean development mechanism) to decision 19/CP.9. Paragraph 33 of the Annex (Modalities and procedures for a clean development mechanism) to decision 17/CP.7 says that "[a] Party that *authorizes* private and/or public entities to participate in Article 12 project activities shall remain responsible for the fulfillment of its obligations under the Kyoto Protocol and shall ensure that such participation is consistent with the present annex . . . (emphasis supplied)." Some confusion is caused by the use of the term "voluntary participation", since the term does not clearly convey the idea that non-State entities can only participate in CDM project activities with the express authorization of the DNA.

For example, paragraphs 37(b) and (c) of decision 17/CP.7 require the operational entity to validate whether comments by local stakeholders have been received and considered, and whether an environmental impact assessment has been undertaken according to national procedures (see below). While no particular modalities are specified for receiving and considering comments by local stakeholders, the EB issued the following clarification at its 8th meeting:

> *"An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe a project activity in a manner which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures."*[32]

The EB has also defined who may be considered as stakeholders:

> *"Stakeholders may be the public, including individuals, groups or communities affected, or likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such activity."*[33]

The DOE will presumably be looking for nationally-applied or recognised guidelines to ensure the sufficiency of the process used for receiving and considering comments by local stakeholders. These guidelines should, for instance, indicate how stakeholder comments are to be invited and considered. For example, would it be sufficient, under the national law and its applicable regulations, to simply invite written comments, and to demonstrate that the comments have been noted, or does the law require more from project participants (e.g., the conduct of a public hearing, demonstration that the project design document has been revised to take stakeholder comments into account)? In addition, the DOE may wish to know what weight, if any, stakeholder opinion would have on the issuance of the DNA's certification. Thus, depending on the existing national laws, the international requirement for public comment could be implemented in very different ways.

The national approval[34] given by the host country pertains to the "voluntary participation" of the private and/or public entity in a CDM project activity and to the contribution by the

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[32] Annex 3 (Clarifications on Validation Requirements to be Checked by a Designated Operational Entity) to the Report of the 8th meeting of the Executive Board, 19 to 20 March 2003.

[33] Guidelines for Completing the Project Design Document (CDM-PDD), the Proposed New Methodology: Baseline (CDM-NMB) and the Proposed New Methodology: Monitoring (CDM-NMM), version 03, available at http://cdm.unfccc.int/. A corollary question is how to distinguish between the stakeholders that should participate at the domestic level and those that should participate at the international level during the period of comment provided under par. 40(c) of the Annex to decision 17/CP.7 (30 days from the submission of the validation report to the Executive Board), par. 15(c) of the Annex to decision 19/CP.9 (45 days), and par. 15(d) of the Annex to decision 14/CP.10 (30 days). All these provisions speak of Parties, *stakeholders* and UNFCCC accredited non-governmental organizations.

[34] Hence, version 3 of the Guidelines for Completing the Project Design Document (CDM-PDD), the Proposed New Methodology: Baseline (CDM-NMB) and the Proposed New Methodology: Monitoring (CDM-NMM) defined the term "approval of Parties involved" in this wise:

project activity to sustainable development. With regard to "voluntary participation", approval could include a determination of the capacity of these persons or entities to participate in the CDM AR project, since these entities will be participating in the CDM on behalf of the host Party.

The participation of an Annex I Party could range from being an active participant in the project, e.g., providing part of the capital as a direct investor or supplier of a particular technology, to simply being a buyer of the CERs generated from the project or a lender of capital, with no other links to the project activity, and other arrangements in between these two ends (e.g., being a shareholder in the nationally-organized project company). A project may also be implemented unilaterally, e.g., by the host country who, at the beginning of the project and during its operation, does not have an identified investor for the project, or buyers of the CERs. In the case of Annex I Parties, the government itself may participate, or multilateral agencies may lead the way in the development of CDM AR projects, as they have in the case of other types of CDM projects. To some extent, the choice of level of participation will depend on nationality requirements and investment regulations existing within a host country. Specifically, in approving voluntary participation, nationality requirements may apply, if forest-related activities are considered nationalized sectors. National laws or regulations would also indicate, in the case of communities and other groups, how bona fide representatives can be identified. These considerations should be factored into the legal framework for the CDM and have thus also been (in part) discussed in the country studies.

As far as contribution of the project activity to sustainable development is concerned, there is the question of *what* the DNA will look at. Will it look only at the PDD, or will it require the submission of other documents? A host country's social policies may also incline a DNA to examine not just the project description, but even the agreements among the project participants, especially if some project participants are assumed to be at a disadvantage.

Strictly speaking, the DNA is not obliged to look at compliance with all other applicable laws, rules and regulations. It appears unlikely, however, for this national approval to be issued without a determination (made formally, i.e., as embodied in law or regulations, or informally) that other relevant domestic laws have been complied with. This conclusion is supported by the "Tool for the demonstration and assessment of additionality in A/R CDM project activities" approved by the Executive Board at its 21st meeting held from 28 to 30 September 2005, which tool is explained in greater detail in section 1 of Chapter V.

"A written approval constitutes the authorization by a designated national authority (DNA) of specific entity(ies)' participation in the specific CDM project activity. . .

The DNA of a Party involved in a proposed CDM project activity shall issue a statement including the following:

- The Party has ratified the Kyoto Protocol.
- The approval of voluntary participation in the proposed CDM project activity.
- In case of Host Party(ies): statement that the proposed CDM project activity contributes to sustainable development.

The written approval shall be unconditional with respect to the above. . . "

See also, Guidelines for Completing the Simplified Project Design Document (CDM-SSC-PDD) and the Form for Submission of Methodologies for Small-Scale CDM Project Activities (F-CDM-SSC-Subm), Annex 14 to the Report of the Executive Board at its 20th meeting (8 July 2004).

If a certain level of compliance with other applicable laws, rules and regulations is expected by the DNA, then project participants will most likely be required to show other permits and clearances before it issues its national approval. Still other permits and clearances may be required before a project actually begins, and during its operations. The most appropriate sequence for obtaining these permits, and the relationship of these permits to the certification that a project assists in achieving sustainable development, will be determined by particular domestic circumstances.

Nevertheless, even if a project does not comply with domestic laws it would most probably not be possible for the EB to decline registration on this basis only, as *"it is the host Party's prerogative to confirm whether a clean development mechanism project activity assists it in achieving sustainable development."*[35] However, national laws and regulations and their enforcement will be important drivers for investment decisions.

It is unclear what effect, if any, a revocation of this national approval would have on the registration of the project, since the national approval would be given before the validation and registration of the CDM AR project activity. This question may remain in the realm of the theoretical, however, since the case studies indicate that revocation of the national approval would be unlikely. The reasons for this observation, as well as responses to other issues raised above are found in Chapter V. We discuss other permit or approval requirements for CDM AR project activities and the role of the status of the DNA, including whether the DNA could become a "one stop shop", i.e. a central permitting body for AR projects submitted in the context of the CDM, in Chapter V.

f. Land rights issues, title to carbon and the nature of CERs

In adopting the rules for CDM AR, the Parties to the UNFCCC did not assume any particular land right or usage regime for the lands on which AR activities are to be undertaken. Neither did they stipulate any particular relationship of the right to land and the right to the resulting emission reductions or removals. Judging from the experience of the "Activities Implemented Jointly" (see section 1, Chapter III) such activities could take place both on public/communal and private land.

On the basis of this experience, Parties could anticipate challenges with regard to legal title and land rights in the implementation of CDM AR projects. Recognising this issue, the pertinent PDD must include "*A description of legal title to the land, rights of access to the sequestered carbon, current land tenure and land use"*.[36] Moreover, in determining the baseline for a particular project activity, project partners must take into account *"relevant national or sectoral policies and circumstances such as historical land uses, practices and economic trends"*[37] (see subsequent discussion on additionality in section 1, Chapter V).

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[35] 4th prefatory clause, decision 17/CP.7.

[36] Decision 19/CP.9, Appendix B "Project Design Document," para. 2 (c).

[37] Decision 19/CP.9, Appendix B "Project Design Document," para. 20 (e).

In the country studies we have dedicated a considerable section to issues of land rights and title to carbon, as well as issues of access to the sequestered carbon. In fact, questions such as whether the right to land and the right to the sequestered carbon can be divided, how these rights could be legally secured or registered and how then either land or carbon might be sold were the initial drivers for the project which has culminated in this study. In particular, the legal nature of the sequestered carbon in the host country has not been much debated at the international level – probably also because this would depend very much on pre-existing laws and statutes or common law concepts in the host country.

The fact that CDM AR projects will yield marketable emission allowances, in this specific case tCERs and lCERs (see below) also limits the usefulness of any previous experiences, such as in the context of AIJ which, essentially, was a voluntary exercise in the eyes of international law. Therefore, some observations about this concept are warranted here to be able to discuss its repercussions for domestic legal systems.

The CER[38] represents a unit that can be credited towards an Annex I Party's fulfilment of its quantified emission limitation and reduction commitments (QELRCs).[39] CERs are issued by the EB, and then allocated to the respective accounts in accordance with the request of the Parties and the project participants.[40] A CER represents not only the physical presence of carbon, but a unit of verified carbon removals computed after the application of accounting rules that exclude removals resulting from certain enumerated factors. A CER, once issued by the EB, can be freely sold or exchanged and is fungible with other types of credits under the rules prescribed in decision 19/CP.7. Since the CERs arise from activities within a project site, the assumption is that, in the absence of an agreement to the contrary, they either belong to the owner of the project site or, in some cases, to the Government.[41] The owner of the project site may, however, choose to dispose of or transfer the CERs or the right to the CERs[42] as an exercise of the right of ownership.

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[38] Defined as "a unit issued pursuant to Article 12 [of the Kyoto Protocol] and requirements thereunder, as well as the relevant provisions in these modalities and procedures, and is equal to one metric tonne of carbon dioxide equivalent, calculated using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 [of the Kyoto Protocol]". Par. 1(b), Annex (Modalities and procedures for a clean development mechanism) to decision 17/CP.7.

[39] The Kyoto Protocol seeks to take the first step in achieving the objective of the UNFCCC (stabilization of greenhouse gas concentrations in the atmosphere) by requiring a group of Parties to the UNFCCC, listed in Annex B to the Protocol, to collectively reduce their greenhouse gas emissions by at least 5% from 1990 levels from 2008 to 2012, known as the first commitment period. The actual emission reduction commitments of each Party vary, as set out in Annex B, and need not be effected entirely through domestic means. The so-called flexibility mechanisms allow an Annex B country to benefit from the emission reduction credits generated from activities occurring outside its territory. The CDM, defined under Article 12 of the Kyoto Protocol, is the only flexibility mechanism that allows developing country Parties to participate in this system through hosting projects that are expected to generate certified emission reductions.

[40] Decision 17/CP.7.

[41] The latter interpretation arises from an extension of the Regalian Doctrine, under which the State is presumed to own all land and the fruits of the land, unless it has granted the right to someone else. Although the State may have granted ownership of the land to someone else, it may have done so without the intention of giving away all the fruits on the land, especially those whose existence it had not contemplated at the time of the grant, e.g., the CERs or the rights to the CERs. As demonstrated in subsequent discussions, however, this line of reasoning is not particularly conducive to promoting investment in CDM AR.

[42] This right to benefit from any potential gain arising out of the conversion of the certified emission reductions in

As already mentioned, temporary and long-term CERs (tCERs and lCERs) are subcategories of CERs that have been created to take into account the temporary nature of carbon sequestration, as opposed to carbon emissions avoidance. To date, no developing (non-Annex I) country has defined a tCER or lCER in its national legislation or provided formally for the possibility of registration (in parallel to the registration of land title). The temporary nature and the limit on lCERs and tCERs that may be acquired (discussed in section 3, Chapter II) are additional factors in determining the characterization to be given to these rights and the advisability of enacting legislation to characterize these rights nationally. Moreover, any system established to register ownership of tCERs and lCERs nationally, or the right to these types of CERs, would have to weigh their relatively temporary nature against the costs to both the owner and the State of the system of registration contemplated.

Allocation of the CERs into different accounts in the CDM registry after they have been issued by the Executive Board assumes that there is a pre-agreed basis for the allocation of CERs among the Parties, project participants, and in some cases, with other stakeholders. The basis for this allocation must be rooted in national law and ideally spelled out in a specific contract[43] or arrived at through the direct application of laws on this matter.[44] The contract or law would have to address such issues as responsibility for any shortfall in expected tCERs/lCERs and the exact consequences of shortfalls (e.g., payment of a penalty or the purchase of equivalent credits) and conversely, rights to receive any surplus credits.

Spelling out the legal relationships evolving around the right to CERs has thus far been largely within the domain of contracts. Exploring this issue, as well as the possible conflicts and solutions and domestic legal responses was one of the tasks set to the country experts. Their merits are discussed further in Chapter V.

As pointed out before, it is unlikely for CERs to be the only economic benefit arising from a CDM AR project. For example, timber harvesting is expected to be undertaken in most cases. Apart from timber, AR projects inherently involve other potential benefits such as fruits from the trees and firewood. The costs of running a CDM AR project may also make it impractical to depend solely on the revenues to be derived from CERs to cover all costs relating to the project. It is also possible for non-CER credits to be generated from the same project, e.g., in the case of excess removals from SSc CDM AR (see subsequent discussion in subsection (i)). Benefit sharing and issues of ownership, which are discussed in greater detail below, are thus unlikely to be straightforward.

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a project activity to the freely-tradable CERs under the Kyoto Protocol is referred to in this paper *as the right to* CERs.

[43] Even a purely contractual agreement must be based on a definition of the right under the law of the host country or any other law that the parties to the contract have expressly chosen to govern their agreement.

[44] For instance, if the owner of the land is not the same as the owner of the trees standing on the land, it is unlikely that the CERs can be attributed only to the owner of the land or the owner of the trees. In this case, property law would have to guide these owners in deciding on how they will divide the CERs and the right to the CERs.

g. Social and environmental impacts – Requirement to assess

The Parties to the UNFCCC devoted much discussion to social and environmental impacts of CDM AR projects, in particular because environmental and indigenous peoples' NGOs anticipated that large plantations would affect traditional land rights and usage and degrade biodiversity. Therefore, decision 19/CP.9 contains a requirement to assess such impacts.

A potential CDM AR activity is only to be validated by the DOE on the basis of the PDD and thus forwarded to the EB for registration of the project **if** *(inter alia):*

> *"project participants have submitted to the designated operational entity documentation on the analysis of the socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary of the proposed afforestation or reforestation project activity under the CDM. If any negative impact is considered significant by the project participants or the host Party, project participants have undertaken a socio-economic impact assessment and/or an environmental impact assessment in accordance with the procedures required by the host Party. Project participants shall submit a statement that confirms that they have undertaken such an assessment in accordance with the procedures required by the host Party and include a description of the planned monitoring and remedial measures to address them;"*[45]

This requirement is different from and stricter than the rules for non-AR CDM projects. For small-scale non-AR CDM project activities a host country may even choose not to require an environmental impact analysis, and a socio-economic impact analysis is not required at all.[46] For non-AR CDM projects that do not fall within the definition of "small scale" found under paragraph 6(c) of decision 17/CP.7, only an environmental impact analysis or assessment is required, as the case may be, and no socio-economic assessment or description of remedial measures needs to be provided.[47]

The abovequoted provision has an important trigger function for the application of national law and policy to CDM AR projects. As the text refers to the procedures "required by the host Party" and assumes that such procedures exist or will be developed in a timely manner in the host country, no international standard for conducting socio-economic or environmental impact assessments is required to be applied, although a host country may choose to apply such standards voluntarily, or because it is obliged to do so under other international environmental law obligations.[48] We have therefore studied the conditions of relevant legislation in host countries and the country experts have described the current practice applicable to AR projects in particular.

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[45] Decision 19/CP.9, para. 12(c).

[46] Decision 21/CP, 8, paragraph 22(e), Annex I.

[47] See paragraph 2(e) of Appendix B to decision 17/CP.7.

[48] For instance, under Article 14 of the Convention on Biological Diversity (CBD) and the Guidelines for Incorporating Biodiversity-related Issues into Environmental Impact Assessment Legislation and/or Processes and in Strategic Environmental Impact Assessment adopted by the CBD COP through CBD decision VI/7A.

It should be noted, however, that the international requirements set out for the PDD complement and shape the way in which such assessments must be conducted:

- The project design document must ("shall") include "*A description of the present environmental conditions of the area including a description of climate, hydrology, soils, ecosystems, and the possible presence of rare or endangered species and their habitats."*[49]

- On the environmental impacts of the project activity the following information must be given:

  "(i) Documentation on the analysis of the environmental impacts, including impacts on biodiversity, natural ecosystems, and impacts outside the project boundary of the proposed afforestation or reforestation project activity under the CDM. This analysis should include, where applicable, information on, inter alia*, hydrology, soils, risk of fires, pests and diseases;*[50]

- And on the socio-economic impacts of the project activity the following documentation is required:

  "(i) Documentation on the analysis of the socio-economic impacts, including impacts outside the project boundary of the proposed afforestation or reforestation project activity under the CDM. This analysis should include, where applicable, information on, inter alia, local communities, indigenous peoples, land tenure, local employment, food production, cultural and religious sites, access to fuelwood and other forest products;[51]

These requirements could trigger or possibly alter and modify any existing national legal procedures for the purpose of CDM AR projects, as the international rules talk of an analysis in case the threshold of "significant negative impacts" is not met, and an assessment if this criterion is triggered. As crafted, the rules also imply that an analysis would be less extensive that an assessment. Moreover, the international rules provide that it is the project participants or the host party who determines if "any negative impacts" are "significant".[52] No definition of the term "significant" is given. In case the host Party Government does not intervene or has no national standards or laws with which to judge if the negative impacts are significant, the determination of whether the threshold has been reached appears to be the prerogative of the project participants, as indicated above. Therefore, the country studies have looked at ways in which this threshold could be defined and in Chapter V we discuss whether there are any significant differences or problems relating to how the assessment or analysis is to be carried out.

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[49] Decision 19/CP.9, Appendix B "Project Design Document," para. 2(b).

[50] Decision 19/CP.9, Appendix B "Project Design Document," para. 2(j).

[51] Decision 19/CP.9, Appendix B "Project Design Document", para. 2.

[52] See paragraphs 2(j) and (k) of Appendix B to decision 19/CP.9 and paragraphs 1(k) and (l) of Appendix A to decision 14/CP.10 on small-scale CDM AR projects.

h. Social and environmental impacts – substantive standards

With regard to substantive rules for the implementation of AR activities, the international legal rules for CDM AR activities make no reference to any international or regional safeguards, criteria or standards for forestry activities, such as sets provided by CIFOR (Center for International Forestry Research), FSC (Forest Stewardship Council), the Convention on Biological Diversity (CBD) or the World Bank Operational Policy for Forests (OP 4.36) or Natural Habitats (OP 4.04). Even a reference to the 1992 UN Forest Principles was avoided. Rather, decisions regarding which substantive rules to use are left entirely to the host Government.

For example, the use of genetically modified plants or saplings is not excluded by UNFCCC COP decisions. The choice to use or not to use genetically modified plants of saplings is left to the host country, which is expected to evaluate their potential risks.[53] Similarly, host countries are mandated to "evaluate" the risks associated with the use of potentially invasive (non-native) species for CDM AR activities.[54] The international community thus assumes that adequate standards and processes are in place for making such choices. While there is no direct requirement to demonstrate that such standards and processes are available, the environmental impact analysis or assessment to be undertaken may necessitate such risk evaluation.

Generally, decision 17/CP.7 affords powers to the COP/MOP and the EB to add to the existing rules as they might see fit. Still the EB, without a clear mandate from the COP, cannot reject CDM projects on substantive grounds that are not explicitly included in decision 17/CP.7, 19/CP.9 or 14/CP.10. Even if this is not stated in the Decisions, this follows from the strong opposition of non Annex I countries against such discretion during the negotiations.

Against this "void" at the international level, the country experts analysed the standards and criteria applicable under domestic law to potential AR projects (e.g., as elements of existing national forestry policies), and discussed the possibility of introducing additional standards and requirements. In Chapter V we return to this issue and explore whether and how such standards might be needed and form an element of a specific legal framework for CDM AR activities.

i. Small-scale AR activities

A specific type of CDM AR projects, small-scale activities, has received special attention, spurred in part by the concern that the market for CDM AR projects would be dominated by industrial entities or persons with access to vast tracts of land, an observation made in several of our case studies. Simplified modalities and procedures adopted for this special type of CDM AR project aim both to facilitate the implementation of such projects and to simultaneously ensure socio-economic benefits.

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[53] Decision 19/CP.9, preamble, para. 9. The prefatory paragraph, however, used the following vague phrase: "Recognizing that host Parties evaluate, in accordance with their national laws, potential risks associated with the use of genetically modified organisms by afforestation and reforestation project activities . . ."

[54] Decision 19/CP.9, preamble, para. 8.

Small-scale afforestation and reforestation activities under the CDM (SSc CDM AR) are defined as:

> "*those that are expected to result in net anthropogenic greenhouse gas removals by sinks of less than 8 kilotonnes of CO_2 per year and are developed or implemented by low-income communities and individuals as determined by the host Party. If a small-scale afforestation or reforestation project activity under the CDM results in net anthropogenic greenhouse gas removals greater than 8 kilotonnes of CO_2 per year, the excess removals will not be eligible for the issuance of tCERs or lCERs*."[55]

To confirm that a SSc CDM AR is developed or implemented by low-income communities and individuals, a DOE must receive "a written declaration that the proposed small-scale afforestation or reforestation project activity under the CDM is developed or implemented by low-income communities and individuals *as determined by the host Party* (italics supplied)."[56] Thus, while the requirement to involve low-income communities and individuals has been imposed internationally, the determination of who falls within this category is to be made domestically. The other question is what it means for a project activity to be "developed" or "implemented" by these low-income communities and individuals, as there are no internationally-accepted definitions for these terms in the context of the CDM. There will also be some expectation that the simplification of modalities and procedures for SSc CDM AR at the international level will be mirrored at the national level.

Appendix B of decision 14/CP.10 lists the types of SSc CDM AR that the EB has been asked to develop simplified baseline methodologies for, namely:

- Grassland to forested land;
- Cropland to forested land;
- Wetland to forested land; and
- Settlement to forested land.

These categories indicate possible land use conflicts that may arise from the implementation of CDM AR projects. At the time that the case studies were being undertaken, rules on SSc CDM AR had not yet been agreed on. Hence, no questions on SSc CDM AR were

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[55] Annex (modalities and procedures for afforestation and reforestation project activities under the clean development mechanism) to decision 19/CP.9, modalities and procedures for afforestation and reforestation project activities under the clean development mechanism in the first commitment period of the Kyoto Protocol. Decision 14/CP.10 subsequently clarified the meaning of the phrase "less than 8 kilotonnes of CO_2 per year": The 8 kilotonne figure would be derived by dividing the projected net anthropogenic greenhouse gas removals by sinks by the number of years between each verification period (par 1(b)). This threshold would be the *ex ante* criterion for allowing an SSc CDM AR to benefit from the simplified modalities and procedures and from the measures to facilitate their implementation. At the point of crediting, an *ex post* rule would apply, i.e., if the actual removals exceed the projected removals of 8 kilotonnes of carbon dioxide per year, the excess removals would not be eligible for the issuance of temporary certified emission reductions (tCERs) and long-term certified emission reductions (lCERs; par. 1(c)). Conceivably, other types of credits not linked to the CDM could then be issued for any excess removals.

[56] Par. 15(b) of the annex (simplified modalities and procedures for small-scale afforestation and reforestation project activities under the clean development mechanism) to decision 14/CP.10.

included in the consultants' questionnaire. This did not prevent the consultants from discussing small-scale afforestation and reforestation project activities, demonstrating the importance attached to such types of CDM AR project activities. The possible domestic implications of the points raised above, including these classifications, are described in Chapter V.

4. Some conclusions

As demonstrated above, many legal and practical issues can arise when considering the implementation of CDM AR activities. To effectively address legal aspects on the domestic level, it is necessary to be clear about what the international CDM rules provide and to appreciate that the absence of international guidance in some areas is a result of a combination of a deliberate political choice not to create rules for some issues, and of an inability to agree on some rules because of the great variety of possible permutations at the domestic level and the impossibility of foreseeing all the ramifications of adopted policies. The overview has shown that the international framework really only represents a *framework* with many gaps to fill by national law and policy.

While many of the legal issues revolve around forestry law, land use, land tenure, environmental and contractual laws and policies, other areas of the law are also brought into the picture. Thus, in analysing possible approaches to these problem areas, the questionnaire developed for the case studies did not immediately zero in on the specific issues outlined above, but also explored issues such as the administrative and regulatory set-up, and the institutional and policy aspects of the forestry, land and environment sectors. The importance of these aspects were highlighted, *inter alia*, by past experience and therefore, the country experts, where appropriate, were also asked to explore lessons learned from earlier "sink" projects in their countries and regions. While we found that there are limits to the comparability, we also considered that it is worth looking afresh at former experience with AR activities (see Chapter III) in the context of national implementation in particular.

Moreover, in designing the framework for the country studies we tried to take into account the development assistance aspect of forestry and natural resource development, as the close link between CDM AR projects and ongoing and planned ODA programmes cannot be in doubt. We found that this particular relationship, which forms an additional layer to the international rules described above was quite opaque, which is why Chapter IV briefly explains the various issues involved, in particular for the issue of additionality already discussed above as well as other possible implications for national level implementation.

III. Previous activities: Lessons for implementing CDM AR activities

Internationally there is so far only comparatively little project-based experience with carbon sequestration projects. Some of these experiences are based on the AIJ projects, others mainly from voluntary, so-called non-CDM AR projects. However, domestic schemes such as the Social Forestry Program in India[57] and some AR projects identified in the country case studies also hold valuable lessons for future AR CDM projects.

1. Relevant AIJ project experience

The AIJ programme was established in 1995[58] at the 1st session of the Conference of the Parties to the UNFCCC. It was designed in response to the fact that Article 4.2 of the UNFCCC explicitly allows for "joint" action to reduce emissions and enhance sinks and to enable countries to gain experience in the field of greenhouse gas reductions "abroad", including in developing countries. It is now an important precursor to the project-based mechanisms in the Kyoto Protocol (CDM and joint implementation or JI). Experiences were expected to be gained mainly for methodological issues, such as determination of baselines, monitoring and certification issues.[59] As the subsequent discussions will show, valuable information on a number of legal and managerial issues relevant to future CDM and JI activities can also be obtained from AIJ projects. To date, over 150 projects have been registered under AIJ, only 10 of which incorporated significant elements of AR in their objectives.

Thirteen projects (see Table 1) have been reviewed by means of questionnaires and existing project reports. These include 10 AIJ projects relevant to the AR sector and three additional projects that were not registered as AIJ, but initiated with a similar purpose, i.e., to gain experience in the area of carbon sequestration projects in developing countries under the framework of the UNFCCC. The main areas of concern that emerged from this review related to land use and land use change, land tenure, institutional and policy aspects in project host countries and the social dimension in AR projects.

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[57] The Indian Social Forestry Program, started during the 1980s, involved large-scale afforestation of communal land which was undertaken in cooperation with the Forest Department and multilateral donors. Major lessons learnt include (Watson): unsolved questions regarding land tenure rights between different Federal Departments (Forestry and Revenue) and the village itself caused impediment of community project activities; community participation was hampered or stopped by failure to define, establish, and publicize the rights for marketing and allocating of project benefits to the community; and inappropriate equity consideration affected more than 80% of low-status people adversely by closure of community land.

[58] Activities Implemented Jointly, established by decision 5/CP.1 allowed Parties to undertake emission reduction or sequestration projects in developing countries and economies in transition. These projects were undertaken mostly for publicity reasons, as the credits generated cannot be used against any binding emission targets of Annex I countries.

[59] FCCC/SB/1998/2, Mechanisms for Cooperative Implementation.

Table 1. Reviewed projects [60]

Project and host country	AIJ	Dominant activity	Project information	Area (ha)	Estimated lifetime Co_2 benefits (000 t C)	Estimated Co_2 benefits per hectare (t C ha^{-1})[b]
FACE Krkonose and Sumava National Parks, Czech Republic	Yes	Reforestation regeneration	99; 1992; The Netherlands	14,000	2,682	191
RUSAFOR, Russian Federation	Yes	Afforestation plantation	49 (2 sites), 60 (2 sites); 1993; USA	900 EPA, AWM	80	89
Klinki Forestry, Costa Rica	Yes	Agroforestry, afforestation	46; 1997; USA	Phase I:100 Total: 6,000	1,970	328
Costa Rica / Norway Reforestation and Forest Conservation Project	Yes	Reforestation (i), Forest Conservation (ii)	25; 1997; Norway	1,000 (i)3,000 (ii)	231	75 (i)2 - 67 (ii)
Rio Bermejo Carbon Sequestration Project	Yes	Plantations, forest management and enrichment	30; 1999; USA	70,000	4,345	15 - 147
SIF Carbon Sequestration Project	Yes	Afforestation	51; 1999; Chile/USA	7,000	385	55
Commercial Reforestation in the Chiriqui Province	Yes	Reforestation	25; 1998; USA	500	16	31
Community Silviculture in the Sierra Norte de Oaxaca	Yes	Agroforestry, reforestation	30; - ; USA	49,027	840	-
FACE Profafor, Ecuador	Yes	Small farmer plantations	1993; The Netherlands	75,000	9,660	129
Scolel Té, Mexico	Yes	Agroforestry, reforestation, management	30; 1997; UK, France	Phase I:50 Total: 2,000 within 13,000	Phase I:15Total 330	26
INFAPRO: FACE Foundation, Malaysia	No	Enrichment planting	25 implemented, 99 total; 1992; The Netherlands	14,000	3,000	170
FACE Netherlands, The Netherlands	No	Urban forest afforestation	1992; The Netherlands	5,000	885	177
FACE Elgon/Kibale, Uganda	No	Forest rehabilitation	1994; The Netherlands	27,000	707	26

[a] Project lifetime (in years); date initiated; investor country.

[b] Estimated CO2 benefits per hectare and totals for projects are generally reported by project developers, do not use standardized or consistent GHG accounting methods, generally only report CO2 (not other GHGs), and have not been independently reviewed. The wide range of estimates for conservation/protection projects results from the type of activity (e.g., avoided logging or avoided deforestation) and from a large project area with only a fraction affected by the activity per year.

[60] Sources: UNFCCC website, AIJ projects under the pilot phase, list of reported projects (http://unfccc.int/program/coop/aij/aijproj.html); Watson, pages 298–300. See also OECD, Forestry Projects: lessons learned and implications for CDM modalities, COM/ENV/EPOC/IEA/SLT(2003), Paris 2003.

While the provision of sustained technical assistance, long-term commitment of all parties, comprehensive stakeholder involvement at all project stages and the creation of financial benefits and incentives for the partners implementing AR measures were identified as elements for success in the reviewed projects, these AIJ projects have certain limitations concerning their comparability to expected CDM and JI activities. Firstly, the absence of the very core characteristic of CDM and JI, namely the generation of tradable CERs, significantly distinguishes AIJ from the Kyoto mechanisms. AIJ is not a market-based mechanism. Other major limitations relate to the different regulatory frameworks, to transparency, monitoring and verification requirements, which are mostly absent in the AIJ framework. Although AIJ projects were designed to meet the principal criteria of CDM and JI (to the extent these criteria were already agreed), such as measurable and additional environmental benefits relating to the mitigation of climate change, the rules and procedures under AIJ are generally limited and less transparent. This is due to the fact that AIJ projects were purely voluntary and therefore often not subjected to external assessment and auditing. For instance, the issue of transaction costs in AIJ projects cannot provide an example for transaction costs in the CDM.[61]

Despite these limitations, some issues are especially relevant at the early planning stages of CDM AR projects and can provide project managers with valuable insights. These are:

- Issues of land tenure and contracts in AIJ;
- Land use and land-use change in AIJ project areas;
- Financial aspects of AIJ projects;
- Institutional aspects and national development and environmental priorities; and
- The social dimension in AIJ.

These issues are discussed below.

a. Land tenure/ownership and related contractual issues

AIJ pilot projects with an AR objective were mostly implemented in co-operation with farmers working on small- and medium-scale farms of 10 to 100 hectares, often in subsistence economies. The generation of employment and income as well as the restoration of degraded land were the main direct impacts benefiting the local population. Many projects also contributed to the conservation of natural resources, mainly soil and biodiversity. One question is whether the choice of CDM project locations will be influenced in a similar way to meet the social and development requirements, given the market value of t/lCERs generated. An aspect favouring the cooperation with farmers might be that it is often not

[61] The described limitations are mirrored in a study of Canada's CDM&JI Office on the potential of cost-effective conversion of AIJ into CDM/JI. It is legally possible to convert AIJ projects that have started as early as 01.01.2000 into CDM or JI projects as long as they were not financed with official development aid. The set of rules and procedures applicable to AIJ would need to be upgraded, specified and amended by the specific requirements of CDM and JI. The costs for this kind of project conversion are – with minor exceptions – prohibitive, because the adaptation of the regulatory framework would exceed the profits expected to originate from future CER production. Canada's Clean Development Mechanism & Joint Implementation Office (CDM & JI Office), 2003. Study: Review of Activities Implemented Jointly (AIJ) Projects - The Potential for Cost-effective Conversion to Joint Implementation or the Clean Development Mechanism. Prepared by Econoler International, weblink: www.dfait-maeci.gc.ca/cdm-ji/review_aij-en.asp

feasible for foreign and even domestic corporations to acquire the ownership over the extensive areas of land needed to enable substantial carbon sequestration.

Property rights of project land in the reviewed activities were mostly directly held by local farmers or by communities. Only few projects were realized in national parks or on other types of land that were not privately-owned.[62] The typical project form in AIJ was a cooperative venture between the Annex I country Parties, for example research centres or non-governmental organizations, and the respective rural communities or individual farmers. In case projects involved territory designated as a protected area, contractual agreements were also concluded with national or local authorities of the host country.

Most reviewed contracts had a *term of one timber harvest cycle*, which in tropical and subtropical regions is typically between 20 and 25 years depending on the species grown and certain environmental conditions. After the harvest, replanting is assumed in many contracts, even though the contract ceases at this point and all land use rights (including the rights to use/sell the emission reductions generated) go back to the farmers. Many projects assume an independent continuation of the measures by the farmers themselves after the positive experiences in the first run. The Dutch FACE Foundation took a different approach by concluding contracts with Uganda Wildlife Authority and locals running for 99 years to legally ensure the long-term survival of projects realized in national parks.

All reviewed contracts maintained the original ownership, access rights and principally the pre-existing right of land use. The main purpose of the agreements was the legal determination of the intended future land *use* during the contract term and after the contract had ended. This was complemented by a set of obligations and specific restrictions to ensure compliance with the objective of carbon sequestration. Plantation maintenance, replanting of seedlings that had died off, harvest modalities, issues of risk (*force majeure*, i.e. in particular forest pests and fires) and the financial details were essential components of all contracts. In some projects, the terms of the contract were tied to the land independently of ownership to secure the realization of the project in case of transfer of ownership.[63]

b. Land use and land-use change

AIJ projects were generally implemented on land of marginal economical value, such as degraded agricultural land with low or extremely low productivity, fallow land and unimproved pasture. The main land use types implemented through the projects were reforestation, afforestation and agroforestry. Projects in national parks and other unused areas did not require a conversion of the land use systems, which probably simplified and accelerated the planning process. In those areas afforestation and enrichment plantations (plantations to enhance the natural regeneration of forests) were implemented without any commercial purpose but carbon offset.

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[62] The Dutch FACE Foundation administered projects in national parks in Uganda and in the Czech Republic. The project RUSAFOR in the Russian Federation was partly realized in protected areas.

[63] Report from Klinki Forestry Project, Costa Rica, and personal communication with Dr Herster Barres, project administrator.

Including the local population in the decision on future land uses proved to be a crucial component to secure implementation. Without their participation in the project planning process the successful realization of tree plantations and their maintenance would have been put at stake.

All project measures created a variety of positive environmental effects, which were not financially recognised. The main benefits were improvement of natural habitats, especially for birds, a general increase of biodiversity in the project area, the restoration of degraded soils and erosion control, all of which enhanced the value of the property.

c. Financial aspects

In bi- and multilateral projects, as in the reviewed AIJ projects, *investment costs and financial risks* were largely borne by the developed country parties.[64] The sources of project funding were mostly governmental or non-governmental organizations, which provided payments to farmers (e.g. for planting and maintenance but also to cover harvesting shortfalls) usually as grants – not as loans. This practice is not compatible with the nature of CDM as a market mechanism, as the award of grants is not part of normal market practice.

The SIF Carbon Sequestration Project in Chile is an interesting exception in this context, because project funding is not dependent on any non-market source.[65] *Financial self-sufficiency* is created through a long-term bond instrument based on forest assets, which are sold to private investors in the Chilean capital market. This source produces the cash flow required to cover all investment costs, the expenses during the growth cycle and annual payments to farmers. The harvest revenues are used to pay off the investors and just a percentage goes to the farmers.

The investment by UNFCCC Annex I Parties into AIJ should be additional to their *official development assistance* and other obligations made under UNFCCC[66] – this criterion was also adopted in the pertinent CDM decisions (see Chapter IV). This aspect of financial additionality of AIJ projects is hardly recognised in any of the official project reports submitted to the UNFCCC secretariat.

The aspect of *transaction costs* in AR projects needs to be especially considered in the further formulation of specific modalities for small-scale CDM projects. A major issue of concern expressed by AIJ project managers are the extensive requirements in the certification and documentation process under the CDM, which might result in prohibitively high costs in

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[64] One likely obstacle for unilateral CDM projects are the high initial investment costs, especially since the first significant revenues from timber sales can not be expected to be made earlier than 15 to 25 years from the planting date onwards. Additional maintenance costs for AR and other forms of plantations vary strongly with the selected species and local labour costs. In total, the required investment can exceed several thousand US$ per hectare of which the major part needs to be spent during the first 3 to 5 years. This amount exceeds by far the financial ability of small and medium farmers and also of many national budgets assigned to forestry and environment in Non-Annex I Parties.

[65] SIF Carbon Sequestration Project report, as submitted to the UNFCCC, http://unfccc.int/program/coop/aij/aijproj.html

[66] Par. 1 (e), decision 5/CP.1, Activities implemented jointly under the pilot phase.

case of projects generating just few marketable CERs. A common cost reduction measure in AIJ projects involving many individual farmers was the use of a group certification and monitoring approach instead of separately undergoing numerous procedures.

The important issue of whether *temporary or permanent emission reductions* would be created through the plantations was often not specifically addressed in AIJ project reports. Some projects aim at a specialized marketing of their harvested timber exclusively for the purpose of producing furniture and packaging materials to ensure carbon sequestration of at least 100 years.

d. Institutional issues and national development policies

Among the AIJ investor countries, Norway, The Netherlands and the USA were especially active in the area of AR. Host countries for AIJ projects are found mainly in South and Central America.

It was found to be important that AIJ projects are in line with national development and environmental strategies, but also often naturally correspond to economic goals such as augmenting the country's renewable energy supply, internalizing costs of environmental services and selling of goods in which the country has natural comparative advantages, such as cost-effective CERs and timber.[67]

AIJ project reports often quote the *integration of local authorities* as being a crucial contribution to project success. Their involvement in the project design process, such as decision making on land use strategies, project locations and implementation steps ensured compliance with their preferences and prevented institutional obstacles from the outset. Constant communication with and involvement of national and federal authorities was also reported to be important, even though their cooperation might have been occasionally hesitant in some project regions.[68]

e. The social dimension

The problems often encountered by AIJ managers in the on-site project implementation at communal level were characterized by poor education, high unemployment, poverty and degraded natural resources, lack of technical support and little experience in the commercialization of products.[69] Main responses to make projects work under such conditions consisted of the provision of sustained technical assistance, contractual long-term commitment of all parties, the creation of direct financial incentives and community involvement in planning processes and project monitoring.

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[67] Costa Rica/Norway Reforestation and Forest Conservation Project report, as submitted to the UNFCCC (http://unfccc.int/program/coop/aij/aijproj.html).

[68] FACE Foundation project experiences, personal communication with Hans Verweij, Director of FACE.

[69] Rio Bermejo Carbon Sequestration Project report, as submitted to the UNFCCC (http://unfccc.int/program/coop/aij/aijproj.html).

The encouragement of participatory and democratic decision making and the strengthening of the planning and technical capacity of local organizations have been crucial elements of support given to farmers and communities in AIJ. In particular the involvement of all local stakeholders in decisions about the on-site project objectives is described to be an essential step to achieve compatibility with the goals of the community for economic development, socio-economic and environmental priorities.[70] Other areas of technical support included training sessions on tree planting and plantation maintenance, creation of tree nurseries and on the environmental and social requirements related to sound carbon sequestration activities.

Participation and communal cooperation were realized in all cases by sustained regular financial flows from investors to the project implementers. It has to be considered that tree plantations under the CDM compete with other forms of land-use in the traditional agricultural systems, which might not be economically beneficial in the long run, but are, firstly, deeply rooted in the cultural environment in which CDM is realized and secondly, will provide apparently more direct benefits through the production of food and fibre. The payments realized in AIJ projects were either related to extension of reforested area and realized work or calculated directly according to the carbon sequestered – the latter benefit will arise in CDM projects through selling of t/lCERs (see subsection 1(c) on financial aspects). As another economic factor, the monitoring required for the external certification of timber production and carbon sequestration was carried out or complemented by locals in many projects. This approach constitutes another form of direct community involvement and furthermore creates additional employment in the area.

2. The World Bank experience

Through its carbon finance initiatives such as the Prototype Carbon Fund (PCF), the World Bank has gained a wealth of experience in designing and contracting greenhouse gas emission reduction projects in many countries of the world. Only two projects of the PCF relate to land use change and forestry, both of which would qualify as JI and not CDM projects: The Moldova Soil Conservation project (afforestation of degraded and eroded state-owned and communal agricultural lands throughout Moldova) and the Romania Afforestation of Degraded Agricultural Land Project.

The Bank also administers international funds such as the Netherlands or Italian Carbon Funds and has a special "Community Development Fund" which could sponsor forestry-related projects which resemble CDM projects. In addition, a new fund was set up to specifically cover these types of projects (forest and land-use projects): The BioCarbon Fund.[71] The setup and preparations for the BioCarbon Fund projects yield interesting insights:

- BioCarbon Fund projects will have to comply with, inter alia, the World Bank Operational Policies on Environmental Assessment (OP 4.01), Natural Habitats (OP 4.04), Pest Management (OP 4.09), Cultural Property (OP 4.11), Involuntary

[70] Community Silviculture in the Sierra Norte de Oaxaca project report, as submitted to the UNFCCC (http://unfccc.int/program/coop/aij/aijproj.html).

[71] http://carbonfinance.org/biocarbon/router.cfm?Page=Projects

Resettlement (OP 4.12), Indigenous Peoples (OP 4.20), Forests (OP 4.36), as well as the Policy on Disclosure of Information. Thus, projects will have to comply with both substantive and procedural standards, while the CDM UNFCCC projects – from an international law point of view – must only meet procedural requirements (socio-economic impact and environmental impact assessment);

- the BioCarbon Fund is not restricted to afforestation and reforestation and might thus produce important examples for possible future phases of the CDM;

- procedurally, the cycle is comparable to the procedures of CDM projects: interested parties will have to submit a Project Idea Note or PIN which should include information on: the type and size of the project; its location; the anticipated total amount of Greenhouse Gas (GHG) reduction compared to the "business-as-usual" scenario, the suggested crediting life time; the suggested Certified Emission Reductions (CER)/Emission Reduction Units (ERU) or verified Emission Reduction (vER) price in US$ or € /ton CO2e reduced; the financial structuring (indicating which parties are expected to provide the project's financing); the project's other socio-economic or environmental effects/benefits; and

- the main legal issues as identified by the BioCarbon Fund are: how to separate legal ownership of the carbon, identification of legal rights and interests in the land, forestry rights and ownership of the timber and how to manage the permanence risk.[72]

Acknowledging that rights to land and forests will have a significant impact on rights to carbon, and that few of the countries in question will have pertinent legislation in place, the World Bank places particular emphasis on developing adequate contractual arrangements. For instance, in the case of the Kenya/Tanzania Small Group and Tree Planting project,[73] "Small Groups" that are responsible for maintaining the trees sign a covenant indicating the participation requirements and a greenhouse gas contract that spells out their obligations. In the Colombia San Nicholas project[74] contracts with landowners that will be clear and easy to understand seek to avoid potential risks relating to land tenure. The sharing of benefits, which will be directly distributed to landowners, will be based on the surface brought to the project by each landowner. In the Colombia Silvopastoral Rehabilitation project[75] every farmer involved in the project will sign a contract to formalize his commitment to manage the plantation properly during the lifetime of the project.

From these, it is clear that a transparent and secure position of title to land will effect security of emission reductions and will therefore represent an important plus for a project proposal. This is in line with the findings of this study based on the four country examples.

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[72] "How do you get (and continue to have) what you think you've got? Land use, Land-use change and Forestry projects" by Robert O'Sullivan (Carbon Finance, Cofinancing and Project Finance Legal Department, World Bank), presentation held at Carbon Expo, Cologne, Germany, May 12, 2005.

[73] http://carbonfinance.org/biocarbon/router.cfm?Page=html/TanzaniaSmallGroupandTreePlanting.htm

[74] http://carbonfinance.org/biocarbon/router.cfm?Page=html/ColombiaSanNicolasAgroforestry.htm

[75] http://carbonfinance.org/biocarbon/router.cfm?Page=html/ColombiaSilvopastoralRehabilitation.htm

In addition, although many of the projects making up the portfolio of the first tranche of the BioCarbon Fund are in their infancy and cannot as yet provide experience for the CDM, some features of these projects relevant to this study should be noted:

- the Mexico Seawater Agroforestry project[76] demonstrates the potential economic viability of having a managed forest in non-productive desert land, whose financial risk is lowered by the sale of emission reductions.
- the Colombia Silvopastoral project features an outreach component that is aimed at encouraging the replication of the systems used in the project.
- the Madagascar Andasibe-Mantadia Biodiversity Corridor project[77] demonstrates possible tradeoffs between biological feasibility with social acceptability. As stated in the thematic information available on the project, simple restoration of the natural forest would have been biologically feasible. However, livelihood considerations called for the inclusion of non-native species. In this regard, non-native species that have no historically demonstrated threat to the environment are proposed to be used in other BioCarbon Fund projects such as the Colombia Silvopastoral Rehabilitation project, the Albania Assisted Regeneration project[78] and the Nicaragua Precious Woods project.[79]
- the Nicaragua Precious Woods project will use the FSC monitoring and controlling procedures for monitoring the environmental risks of the project. The Kenya/Tanzania Small Group and Tree Planting project uses the FAO "Conservation Farming Handbook" in developing local best practices and conservation farming methods. The socio-economic impacts of the Andasibe-Mantadia project in Madagascar will be monitored using human well-being indicators developed at local authority level and by measures specific to the project.

3. Learning from projects discussed in the case studies

Afforestation and reforestation projects existed in the countries subject to the case studies (Argentina, Chile, Ghana, the Philippines) long before the CDM rules were agreed to, and lessons from these projects could thus not be ignored in designing a CDM framework. We therefore asked the consultants to look at what lessons could be learned from these other projects.

Previous AR projects in Argentina stressed the need for meaningful stakeholder involvement at an early stage and improving the general awareness among the population regarding CDM, a lesson echoed in the Philippine examples. The Argentinean projects also highlighted the difficulties that any project involving native and often slow-growing species face.

[76] http://carbonfinance.org/biocarbon/router.cfm?Page=html/MexicoSeawaterAgroforestry.htm

[77] http://carbonfinance.org/biocarbon/router.cfm?Page=html/MadagascarBiodiversityCorridor.htm

[78] http://carbonfinance.org/biocarbon/router.cfm?Page=html/AlbaniaAssistedRegeneration.htm

[79] http://carbonfinance.org/biocarbon/router.cfm?Page=html/NicaraguaPreciousWoodsReforestation.htm

One important lesson learned in Chile was that of correct timing, as one project that tried to obtain CERs failed because the project was implemented before COP 9 and could thereafter no longer adjust to the rules and procedures adopted in Milan on CDM AR.

The information generated from Philippine-based AR projects is expected to improve data on carbon sequestration potentials, one of the major challenges for CDM AR projects. Initial information generated from these projects seems to point to the higher carbon sequestration and storage potential of community-based forestry management areas compared to those of the timber license agreements and industrialized forest management areas. The projects also showed the multiple potential economic and social benefits for communities that could contribute to ongoing discussions on and refinement of the sustainable development indicators of such projects. They also demonstrated the great potential of hybrid projects.

4. Conclusions

Even with the acknowledged differences between CDM AR projects and the projects reviewed above, there are important lessons to be learned from past experience. The BioCarbon Fund projects also offer relevant insights even at this early stage.

While, as shown in the AIJ examples, it is often not feasible for an investor to acquire ownership of the land required for carbon sequestration, this does not diminish the importance of clear and stable title to land, which is the foundation for stable rights to CERs, as indicated by the World Bank's experience. AIJ also offers important lessons on how costs can be reduced when dealing with multiple stakeholders. While CDM could not fully adopt the financial structures used in AIJ, allowing the project participants to benefit from the up-front payment of some of their costs, it is possible to find a mid-way between this scenario and the prospect of receiving all revenues only once the CERs are generated. The BioCarbon Fund projects provide models for stakeholder organization and contractual arrangements with project participants. Finally, the existence of other types of AR projects that will not disappear simply because of the arrival of the CDM indicates what types of alternatives and competing uses exist, as well as the context in which CDM AR projects can be developed.

IV. The development context – ODA and CDM

During the negotiation phase of the Kyoto Protocol and of the specific rules on the operation of the CDM, the relationship between CDM activities in general and official development assistance (ODA[80]) activities was perceived as problematic. A major objective for developing countries and NGOs was to prevent the diversion of ODA funds into CDM projects as this would not be in line with the belief that climate activities must be supplemental to those funds already flowing between Annex I and non Annex I countries. A more technical issue was how CDM activities could be seen as "additional" in the sense of Article 12.5(c) of the Kyoto Protocol if they might have been funded without the intervention of foreign investors through ODA channels. From the point of view of development assistance several questions are being contemplated, such as to what extent ODA activities might be needed to provide the framework for CDM activities in practice and how ODA can be used to ensure high quality CDM projects. Similarly, some have criticised the CDM because its climate-drivenness might diffuse the general objectives of ODA such as poverty alleviation and because it will have little to no influence on carbon sequestration opportunities in developing countries. This section intends to explore these questions in brief, because they are of importance for strategic choices to be made by host country Governments and Annex I Parties alike.

1. Impact of CDM AR activities on existing/planned development-related forestry activities

The actual impact of the CDM on forestry-related activities compared to "traditional" ODA financed activities is seen to be relatively small, a perception shared by the consultants who undertook the country case studies.

By way of example, and taking a look at the state of the world's forest, the plantation area in developing countries (non Annex I countries) in the year 2000 amounted to approximately 120 million ha.[81] While ODA in recent years has concentrated on community-led projects focusing on sustainable land-use and resource-use patterns, institutions such as development banks still finance (including via grants) large-scale afforestation programmes. Accordingly, a large proportion of these reforestation schemes have been supported by ODA, especially in China and India.

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[80] **ODA** is the OECD term for aid to developing countries that is used in Development Assistance Committee (DAC) statistics. To qualify as ODA, an official expenditure must: have "as its main objective" the promotion of the economic development and welfare of developing countries and be concessional, i.e. either a grant or a concessional loan. The main focus of GTZ in international cooperation is on so-called Technical Cooperation. Far from being centred on transferring technical knowledge, this involves primarily communicating knowledge that enables people to shape their present and future on their own. For this, GTZ strengthens individual initiative and the capabilities of people and organizations, and lays the basis for stable development – for future generations as well. In this context, the CDM as a market-based mechanism is interesting as it might provide income for communities for long time spans.

[81] Africa: approximately 8 million hectares, Asia: approximately 100 million hectares, where China (45 million

Development/forestry experts have stated that, compared to this total area of about 120 million ha the area which can be covered through CDM AR might be negligible. The reasons for this statement vary from lack of additionality (large-scale afforestation projects are often an integral part of regular economically viable national afforestation schemes and may therefore not qualify as additional), to the fact (supported by experience) that transaction costs for small scale afforestation projects are high and therefore, in the context of the CDM, possibly prohibitive.

Moreover, the real challenge seen by development experts and climate community alike is to halt deforestation in tropical areas. These figures are well known: Brazil, having a plantation area of 5 million ha, is reporting a loss of forest cover of 23 million ha in the ten year period 1990–2000. Taking into account that for one hectare of a mature tropical forest, which is destroyed within one year, it will take a one hectare plantation some 100 years or more to sequester the amount of carbon which has been lost through deforestation, the impact of the CDM in its current format will be small and in no way replace the necessary efforts in forest conservation/halting deforestation from the development assistance side as well as from the Governments in developing countries.

2. Diversion of ODA

Decision 17/CP.7 clearly states that **"***public funding for clean development mechanism projects from Parties in Annex I is not to result in the diversion of official development assistance and is to be separate from and not counted towards the financial obligations of Parties included in Annex I*".

First it should be noted that there is no mechanism to prove that no diversion is taking place *in fact*. Given that ODA funding is voluntary and, even if the official 0,7% UN target remains on the agenda, no benchmarks exist against which to evaluate this "supplementarity".[82]

Therefore, to ensure credibility of the international climate regime's decisions, Governments needed to ensure that CDM funds would at least not be "labelled" ODA. Therefore, to ensure transparency and the credibility of OECD statistics (which aims to provide reliable data on ODA flows), the OECD Development Assistance Committee (DAC) has decided that public funds that finance "normal" CDM projects can be called ODA. In other words, concessional public expenditures on CDM activities can be reported as ODA, but with a deduction for the donor funds used to purchase CERs. If instead of receiving CERs a donor donates them to the host country, no deduction would be necessary, and thus the full

hectares) and India (32.5 million hectares), alone constitute 77% of the total and Indonesia (10 million hectares), and Thailand (5 million hectares) take this up to 92 % of the total; Central America: negligible on a global scale; South America: approximately 10.5 million hectares with Brazil (5 million hectares) and Chile (2 million hectares) taking the lead (FAO (2001) FRA 2000 Chapter 3; FAO Forestry Papers, 140).

[82] Documentation of this must be provided by the project participants. According to decision 17/CP.7 – Appendix B the project design document "shall" contain "*information on sources of public funding for the project activity from Parties included in Annex I which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties*".

amount of project finance will be counted as ODA.[83] This agreement also means that, in a situation where a project is financed by ODA and a CER purchase agreement exists (i.e. the donor Government pays for the CERs generated by the project it initially financed), the initial project costs will be registered as ODA.

It should be noted that monies used to provide appropriate CDM frameworks (technical assistance such as capacity building) can be counted as ODA[84] and there is no possibility of ruling out that these might have otherwise been used differently. In essence however it seems that "diversion of ODA" only occurs if the CERs generated through project development and implementation flow directly to the donor country. In contrast, if the donor buys the CERs generated at market prices from the host country, this might (pending an OECD decision on technicalities) be qualified as ODA as this will be seen as non-diversion (Dutschke and Michaelowa 2006).

3. Additionality

The issue of additionality is different from the one discussed above, regarding diversion of ODA for CDM purposes. Additionality in the sense of Article 12 of the Kyoto Protocol as it relates to development assistance means: Can a project that might have been financed via ODA become a CDM project, i.e. satisfy the additionality criterion? This question is still subject to debate.

Some argue that, given that the need for ODA reflects the non-viability of a project in an economic or institutional sense or indicates a lack of capacity, ODA eligibility of a given project cannot render it ineligible as CDM project: Technical and financial assistance for AR projects is provided only when and if the host country is not in the position to carry out such project of a specific quality on its own. The "barriers" which exist to project implementation may be of a financial or institutional nature, but may also be due to insufficient technical know how. Usually, AR projects supported by technical and financial assistance have a "model or pilot" character. These models or pilot projects should later be replicated and scaled up by the host country, when the financial conditions and the capacity of the implementing institutions have improved. Thus, ODA-financed projects will not be "business-as-usual" given these barriers. This position is supported by the "Tool for the demonstration and assessment of additionality in A/R CDM project activities"[85] recommended by the CDM Executive Board's AR Working Group and approved by the CDM Executive Board at its 21st meeting (see Chapter V for further details). Others argue that this definition of additionality is not covered by the text of the various COP decisions, especially decision 19/CP.9 which, in defining additionality only refers to the baseline carbon scenario and not to the financial situation etc. This issue is discussed further in Chapter V.

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[83] DAC/CHAIR(2004)4/FINAL (Appendix) and OECD CDC/DAC/2004/17. The principles were endorsed by the DAC High Level Meeting, see DCD/DAC/A(2004)5.

[84] The DAC considered that support for "generic" CDM-related capacity development, which is not tied to a particular CDM project and which would not in itself result in the generation of CERs can be reported as ODA. It was also emphasised that in some cases there may be ambiguity as to what constitutes "generic capacity development" and what should be considered as part of the CER-generating investment.

[85] Annex 16 to the Report of the 21st meeting of the Executive Board of the Clean Development Mechanism held from 28 to 30 September 2005, available at http://cdm.unfccc.int/EB/Meetings/021/eb21repan16.pdf

4. The role of the CDM for development assistance and vice versa

While many development agencies are not active in the field of implementing AR projects as they are defined for CDM purposes, the CDM might serve as a motor and additional incentive for conceptualizing such projects. Any agency could design a particular portfolio, combining climate aims with development objectives, to attract public funding.

For Governments this could be particularly interesting as ongoing or planned forestry projects influence policy in the partner countries. For example, while there are normally no or few substantive standards, development cooperation projects will tend to adopt standards such as CCBA ("Climate, Community and Biodiversity Alliance"),[86] FSC or CIFOR. Thus, foreign financing sometimes means that distinct legal frameworks must be adopted to accommodate the desired operation of the project. The CDM itself does not set any substantive standards of this kind and combining ODA with CDM purposes might thus be useful.

Moreover, technical assistance for CDM AR projects (as it has been extensively provided in the past years for the establishment of DNAs etc) is useful and would fit into the general objectives of development cooperation as an enabling mechanism. If such assistance projects show how high quality CDM AR projects can be implemented in an effective and efficient way, taking into consideration social and environmental aspects, it can be expected that the private sector will replicate such projects, or they would be scaled up by the host country without external assistance (unilateral CDM).

[86] See www.climate-standards.org/

V. Synthesis and discussion of country study findings

As mentioned in the Introduction to this paper, four case studies in Argentina, Chile, Ghana and the Philippines were conducted by regional consultants. The countries were chosen based on interests of regional balance, presence of the collaborating organizations in these countries, and also the availability of English-speaking legal experts in these countries. The objective was to determine how previously identified legal issues such as those mentioned in Chapter II to IV would play out in different jurisdictions under varying circumstances and legal traditions.

To ensure that the consultants would look at a similar set of issues, a questionnaire was developed on the basis of the results of the brainstorming and needs assessment described in the Introduction. This questionnaire consisted of seven pages and was divided into general questions, questions relating to the CDM project cycle, and conclusions and recommendations.[87]

Case studies were carried out from May 2004 and finalized in April 2005. The preliminary findings of the case studies were presented to participants at a side event at COP 10 in Buenos Aires, Argentina in December 2004. On the basis of the preparatory work and the discussions at the side event, this paper took shape and the case studies were finalized. These were meant to be desk studies, but in fact, all of the consultants conducted some degree of informal consultation with governmental and nongovernmental experts to respond fully to the questions posed to them.

The subsequent discussion is based on the findings presented in the case studies, which are annexed to this paper in the form of a CD. Findings are grouped according to the themes used in section 3 of Chapter II. Updates and additional analysis have also been provided with regard to issues that were not fully discussed in the case studies.

1. The many faces of additionality

Both in the needs assessment described in the Introduction and the country studies we encountered questions about CDM project additionality as required by the Kyoto Protocol in a situation where a country already employs nationally binding afforestation policies and/or has enacted/adopted forestry plans and related incentive systems.[88] Will CDM AR projects still be found to be additional if they are in fact implementing existing plans or policies?

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[87] This questionnaire can be found at the beginning of the case studies.

[88] Such incentive schemes (e.g. subsidies for afforestation operations) exist because forests are perceived as public good which benefit the general public as well as the operator. The CDM is a special type of incentive, rendering the carbon sequestration potential a marketable good. A Government could however, also with the CDM, retain

Examples of **binding** afforestation policies can be found in Ghana and the Philippines:

Under Ghana's Timber Resources Management (Amendment Act), 2002 (Act 617), parties to a Timber Utilization Contract (TUC) with the government must execute an undertaking to design a reforestation or afforestation plan of at least 10 hectares for each square kilometre of the contract area during the period of the contract to the satisfaction of the Chief Conservator of Forest. While the implementation of the AR plan in this case is a legal precondition for a harvesting concession, the consultant argues that reforestation or afforestation projects that fulfil this legal obligation could still fall under the CDM AR if the TUC holder does not otherwise have the means to fully carry out this obligation.

In the Philippines, the holder of an industrial forest management agreement (IFMA) has the responsibility to reforest open/denuded lands found within areas classified as protected forest lands and within 20m strips from both sides of river banks. Holders of forest land grazing management agreements must reforest at least 10% of the leased area. Would a demonstrated inability to carry out this obligation due to identified barriers prove that a proposed CDM AR project within the IFMA framework could still be additional, as is argued in the Ghanaian case?

In Chile there is a voluntary incentive programme established by Law Decree 701, the Statute of Forestry Promotion (1974, modified in 1993 by Law 19.561) which establishes a differentiated system of bonuses and tax exemptions for forestry activities developed on certain lands. Chile has been foresting and reforesting approximately 100,000 hectares for the last 15 years, so it might be generally difficult to prove that CDM AR projects would not have happened in the absence of CERs.

With regard to incentive systems, in Argentina, there is the Forestry Promotion Law, Law No. 25.080 which created an incentive regime for all new forestry activities and the expansion of existing plantations.

In Ghana, the Forestry Plantation Development Fund seeks to encourage small-scale and private sector commercial plantation developers and public sector institutions to embark on a sustained programme for afforestation and reforestation that will rehabilitate degraded forest lands and increase timber production. The consultants have argued that the CDM would only constitute another incentive for the enforcement of AR policies and thus, additionality should be assumed.

How can these assertions and situations be tested, and EB decisions on the matter of additionality reasonably predicted, if at all? For this we must turn to the COP's and the EB's guidelines on additionality.

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its incentive systems as the many other services forests provide, apart from carbon, remain separate public goods. Or a Government may even choose to support management of forests for carbon sequestration by payment of subsidies, such as in Costa Rica, where forest landowners are paid directly for management that promotes carbon sequestration. Subsidies could come in the form of lump sum cash payments, tax deductions or tax credits. (See FAO legal study, pages 31 and 51). This is when the additionality issue must be seriously considered.

According to the Marrakesh Accords, 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."*[89]

The additionality test is part of the baseline methodology, together with the formulae and parameters for estimating baseline emissions and the description of leakage sources (see Report of 10th CDM Executive Board (EB) meeting[90]). At its 15th meeting the EB adopted "Tools for Demonstration of Additionality" (Annex 3 to the report). This document was amended at the EB's 16th meeting and further amended at its 17th meeting. These tools are intended for use for all potential CDM projects, not only for AR activities.[91] Essentially, this "Tools-Document" establishes a step-wise approach to assess additionality.

To fit the particular issues relating to AR activities, the EB has approved a "Tool for the demonstration and assessment of additionality in A/R CDM project activities" (AR tools document) at its 21st meeting held from 28 to 30 September 2005. Like the general Tools-Document, the AR tools document suggests steps to show that an AR activity is additional:

- Identification of alternatives to the A/R project activity (the possible baselines);
- Investment analysis to determine that the proposed project activity is not the most economically or financially attractive; or barriers analysis; and
- Impact of registration of the proposed afforestation or reforestation (A/R) project activity as an A/R CDM project activity.

Both documents provide only a general framework for interested parties and will not replace the need for justification of the specific baseline methodologies.

In terms of national level implementation it is interesting to note that according to the AR tools document, all of the proposed alternatives:

> "*shall be in compliance with all applicable legal and regulatory requirements, even if these laws and regulations have objectives other than land-use and related regulations, e.g. conservation of biodiversity, soil and water resources protection/conservation, tax and investment regulations, mitigation of air pollution.*"

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89 Dec. 17/CP.7 Annex, para. 43

90 All CDM EB documents can be obtained on: http://cdm.unfccc.int

91 Decision 12/CP.10, Guidance relating to the clean development mechanism points out, in paragraph 9, that as indicated by the Executive Board in par. 3 of the "Tool for the demonstration and assessment of additionality" (Annex I of the Report of the Executive Board on its 16th meeting), said tool is not mandatory for project participants. This is a policy repeated in the AR tools document, which states that project participants may also propose other tools for the demonstration of additionality to the Executive Board for its consideration. However, given the cost of developing and using alternative tools, we think it is likely for project participants to continue to rely primarily on the EB-developed tools and therefore use it as a basis for our analysis.

This implies that the planned CDM AR activity should indeed also comply with these regulations, even if such a requirement is not included in the existing decisions of the COP, draft decisions of the COP/MOP or decisions of the EB. Indeed, this is clear from paragraph 5 of sub-step 1b of the AR tools document which says:

> *"[i]f the proposed project activity is the only alternative amongst the ones considered by the project participants that is in compliance with all regulations with which there is general compliance, then the proposed A/R CDM project activity is not additional."*

Given the insufficient enforcement of environmental laws and regulations in many potential CDM host countries, a situation which has also been highlighted in the country studies it is worth noting that this test shall **not** apply if the policies are *"clearly not enforced"*. This could lead to a situation where, for example, illegal logging practices could be used as an alternative scenario, potentially making large areas of land qualified for CDM AR activities.

According to paragraph 4 of sub-step 1b of the AR tools document, an objectively illegal alternative will only be eligible for comparison with the planned CDM activity if project partners can show that:

> *"based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced."*

From the evidence given in the country studies it seems possible that the implementation of CDM AR will effectively only lead to the enforcement of already existing land- or environment-related legislation, and by branding these project activities as CDM AR, we assume that the activity can pass the ensuing investment or barrier tests.

With respect to the forestry plans and programmes identified in the country studies as being potentially problematic in relation to the additionality requirement, applying the AR tools document would, in our opinion, mean that a proposed project activity that would simply fulfil legal obligations attached to timber harvesting concessions should not be eligible under the CDM, as the alternative scenario would imply a breach of law.

Yet, as we have seen from our country studies, forestry plans and programmes are mostly declaratory or voluntary, due in part, perhaps, to the acknowledged insufficiency of government or domestic resources to fully implement these plans and programmes. In most cases, as our consultants have noted, the mere existence of these plans and systems does not mean that specific land areas will be afforested or reforested. Sometimes (like in the case of Ghana and Argentina) Governments will establish an incentive system to encourage implementation by the private or non-governmental sector. Also, as in the case of Ghana, loans or grants are received for the implementation of certain schemes, such as the Community Forest Management Project (CFMP) which is executed under the Forestry Development Master Plan (1996–2020). Similarly, in the Philippines, afforestation and reforestation activities under the community-based forest management system and other community projects have largely been donor-driven.

The AR tools document explicitly only applies the described test to **legally binding** national laws and regulations. But judging from the existing rule on regulations and laws, it would seem that the execution of a project included in a non-binding forestry plan or programme which would not be otherwise economically feasible or attractive (economic additionality) would not pre-empt additionality – rather, compliance with such a plan or programme could enable the project participants to make a strong initial case for the compliance of the project with the host country's sustainable development goals, i.e. in compliance with Article 12 of the Kyoto Protocol.

Such a conclusion is, however, only an informed prediction of how the EB would deal with such cases.[92] In particular cases where the Government upheld incentive schemes which operate alongside the CDM, the EB will have to make a case-by-case decision.

An idea for CDM host countries to resolve such uncertainty comes from Argentina which has stipulated explicitly that any benefits paid under its Law 25.080 (on forestry promotion) to forestry projects designed with the sole or complementary purpose of acting as carbon sinks are to be reimbursed to the State from the proceeds of future sales of carbon credits in accordance with the schedule to be established by the regulatory authorities (article 19 of Regulatory Decree 133/99).

If the possibility of demonstrating additionality arises, however, from the non-binding nature of the policies, it is reasonable to wonder whether the AR tools document would not, in fact, hinder the development of legally-binding policies, as such policies would raise the bar and make it more difficult for the host country to demonstrate additionality. In the case of Argentina, for example, the consultant points to the concern that the existence of guidelines that are too strictly worded or specific may end up ruling out the viability of certain projects because of their failure to meet the additionality test. Paragraph 3 under sub-step 1b of the AR tools document appears to partially address this question by providing that "*[t]his sub-step does not consider national and local policies that have been implemented since the adoption of the Modalities and Procedures for the CDM,"* i.e., 11 November 2001.

However, paragraph 4 of the recently adopted "Clarifications on Procedures and Documentation which need to be Used for the Renewal of a Crediting Period"[93] provides that:

> *"[a] change in the relevant national and/or sectoral regulations between two crediting periods has to be examined at the start of the new crediting period . . . If the new regulation applies to existing CDM project activities, the baseline has to be reviewed and, if the regulation is binding, the baseline for the project activity should take this into account."*

In the case of updating the baseline, project participants are required to assess and incorporate the impact of new regulations on baseline emissions.[94] It seems therefore, that the various

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[92] We note in this regard that the EB still needs to develop guidance on national and sectoral policies.

[93] Annex 7 to the report of the Executive Board on its 20th meeting (8 July 2005).

[94] *Id.*, par. 7.

additionality rules could have a chilling effect on progressive policies and legislation, unless the EB clarifies the general rule incorporated in the AR tools document.

With respect to incentive schemes that might apply to SSc CDM AR projects such as the one in Ghana described above, it is unclear how the various possible types of incentives would impact on additionality. Would direct subsidies imply a clearer case of non-additionality than would tax breaks or credits, on the theory that while there is a "gain" in both instances, only in the case of a direct subsidy is something actually given out? On a macro level this question might be impossible to resolve. It is clear, however, that the specific CDM incentive must not act as disincentive to other schemes that benefit natural resource protection, development and poverty alleviation.

As to existing or planned projects funded through development grants, the AR tools document is silent. It must be noted that the OECD rules adopted by the DAC in April 2004 on ODA and CDM will not automatically be applied by the EB.[95] Roughly applying the AR tools document, no CDM funds flowing into a development grant-funded project would be regarded as business as usual (and thus be considered additional) because the CDM activity would not be financially attractive. Thus, even if a forestry plan could be funded in part or full by ODA or other sources (development banks, etc.) additionality could be shown as long as the project would not have been conducted on the basis of economic feasibility.

2. Restriction to afforestation and reforestation

The difference in the definitions of the terms forest, afforestation and reforestation under the COP decisions and in the case study countries are not anticipated to pose any serious legal obstacle to the implementation of CDM AR projects in these countries. One reason is that the term "forest" is already defined in different ways for different purposes in some of these countries (e.g., the Philippines). Another reason is that necessary adjustments, if any, to the definitions could very well be encompassed within regulations to be issued for the DNA and will not necessarily entail legislative amendments, since no land reclassification would be involved in the countries studied so far. However, as pointed out in subsection 3(b) of Chapter II, the election of a particular value within the range given under the official definition of the term "forest" under the CDM rules would imply a further restriction of the afforestation and reforestation project activities that the DNA could approve.

Since afforestation and reforestation activities existed long before the development of the CDM, the different types of AR projects in the case study countries are governed by different set of laws, rules and regulations. These variations can affect the types of CDM AR project

[95] DAC/CHAIR(2004)4/FINAL. This document deals with the requirement that CDM activities be additional to ODA and not simply divert ODA. The general rule is that ODA can be used to finance CDM projects, as long as the generated CERs are not transferred to the donor Government, but retained by the host Government to be marketed. Otherwise, CERs resulting from ODA-financed CDM projects will be considered as a return to the donor and give rise to a deduction from ODA flows. See also Dutschke, M. and Michaelowa, A., *Development assistance and the CDM – how to interpret "financial additionality"* (2006) Environment and Development Economics (accepted).

that are implemented in the host country. In the Chilean context, for instance, Law Decree No. 701 for Forestry Promotion establishes a differentiated system of bonuses and tax exemptions that depend on the land on which the forestry activities are developed. Premium benefits are given to AR conducted on fragile soils or areas in the process of desertification, AR on degraded lands and activities to restore the lands, and AR undertaken by small farmers on land preferentially suitable for forestry[96] or on degraded lands.

3. Appropriate legal and institutional system to approve CDM AR projects

With regard to the certificate of approval issued by the DNA, we asked the consultants to look at whether such a certification could be revoked, especially if it was found that any of the conditions for its issuance no longer existed. While theoretically, this certificate may be revoked, the country studies indicate that this is unlikely to happen under present conditions.

Institutionally more important is the fact (as the case studies show) that CDM AR projects will be subject to a host of other laws and thus often also permits. Thus, an important question to be resolved is how these permits relate to each other, both at the substantive and the procedural levels.

For Argentina, a forestry investment or related project would need to obtain permits not only from the national government, but also from the provincial government. Article 4 of Decree 133/99 of Argentina's Forestry Promotion Law authorizes provincial authorities to recommend the approval of forestry projects involving afforestation in native forest areas only if proof of the sustainability of the project as regards the natural resources involved, maintenance of biological diversity, and an increase in the social benefits derived from the project can be demonstrated. For some provinces, this process would involve going through an environmental impact assessment and developing a forest management plan, while in others no formal permitting will be required. Sale of forest products, transportation of timber or cutting or thinning of forests would also be subject to a host of regulations.

In Chile, the Statute of Forestry Promotion, a voluntary incentive programme, acts as the central permitting system for AR projects. The law regulates the most important forestry activities. At the centre of this system is a management plan that needs to be approved by CONAF, the National Forestry Corporation. Otherwise, the general rule in Chile is to allow the development of AR activities without requiring any permit or management plan. All the sectoral permits that have an environmental content are assessed and given through the EIA system. Consequently, the environmental impact study or declaration includes a section that demonstrates the project fulfils the environmental requirements of all the sectoral permits legally applicable to the project.

[96] Defined under the Forestry Law of 1931 as "all grounds that due to climate and soil conditions should not be plowed permanently, independently of whether they are covered by vegetation or not, excluding those grounds that might be used for intensive agriculture, fruit growing, or cattle ranching without suffering degradation."

In Ghana, any project that involves forest needs to be submitted to the Forestry Commission (FC) for assessment. If the application is in respect of timber rights, the Minister's approval will be in the form of a Timber Utilization Contract. In addition, a proponent of an AR project is required to undertake a study that will enable him to prepare and submit a reforestation plan to the FC, as well as an assessment of the likely environmental effect of the project and proposed programme to redress any such effects. The Government of Ghana is currently working to put in place a "one-stop shop" for investors interested in forest plantation development, to facilitate the effort of applicants/investors to secure various approvals and permits required by the laws of Ghana.

In the Philippines, the process for many permits for or involving AR begins with an application at the local level of the Department of Environment and Natural Resources, the Community Environment and Natural Resources Office. Local government permits are also likely to be required, as is an environmental impact assessment. In addition, projects in ancestral domain or land will require additional special permits.

Another related aspect that came out in the country studies is the inevitable interaction between the DNA and the local governments. This interaction is particularly imperative in a country such as Argentina, which follows the federal system of government and in the Philippines, where decentralization and devolution of authority to the local governments is taking place, but also in Ghana and Chile where the local government has authority over forestry and natural resource-related aspects of CDM AR. In the particular case of Argentina, prior to the approval of any CDM project activity, applications are sent to the province where the project activity will take place, and the provincial authorities given 10 days to comment on the application. Vertical integration is, therefore, as much a concern as horizontal integration.

This allows the general conclusion that obtaining permits will, both for non-CDM and CDM AR projects, be more complicated in countries with federal systems, but that CDM projects will not be more regulated than other AR projects and possibly even favoured if "one-stop shops" are established. However, CDM activities will not, in all cases, mirror existing forestry activities aimed at harvesting, which is why information on the experience of timber corporations with national approval processes will not necessarily assist CDM AR project developers.

These findings also point to another important role that DNAs could play, i.e., to guide project participants not only through the DNA's requirements, but also through related requirements that would ultimately impact on the project's contribution to sustainable development. Different requirements will, however, be applied at different stages of the project's lifetime, and the DNA should therefore be prepared to extend such assistance even after a favourable certification has been given. The DNA should also be in a position to advise project developers regarding when its approval should be sought in relation to other documents and approvals required. This assumes that the DNA appreciates and fully understands which rules and regulations apply to and are related to CDM AR project activities, which in turn would depend, among other things, on how clear the policies and laws are and how closely different agencies work and communicate with each other. In playing this role, the DNA could also promote investment in the types of CDM AR projects into which

investments would not otherwise flow, if not for the added incentive provided by the CDM. Another way in which a DNA could help direct CDM investment into particular types of projects is through imposing a differentiated system of fees and levies. Examples of such priority project activities are described in section 1(a) of Chapter VI.

4. Land rights issues, title to carbon and the nature of CERs

Land rights issues appear to be potentially complicated, not only because of the requirements of the law, but because of the lack of a proper registration system for title relating to land in many areas in the case study countries.

Ghana is the country which appears to have the most elaborate system of land ownership. Land is administered by both customary law rules and practices on one hand and enacted legislation on the other. No CDM project can ignore subsisting traditional customary rights, since most of the lands to be used for CDM AR projects (78%) will come from customary lands. While there is a strong tradition of benefit-sharing schemes, these are being implemented as policy measures without direct legislative basis.

As pointed out before, the international concept of t/lCERs will in the case of CDM AR projects be an added complication to land ownership issues. CERs from CDM afforestation and reforestation projects appeared to us to be particularly challenging to characterize because of their link to the land and the trees standing on the land. The consultants were asked to explore whether the concept needs to be incorporated and defined in the national legal systems to enable the implementation of CDM AR projects and how the right to the land on which the CDM activity takes place will relate legally to the CERs generated.

Would CERs and the right to CERs be treated as immovables because of their close association to land and trees, and would they be classified as natural resources? Equally important, would transfers of ownership or possession of the land that occurred before the decision to engage in CDM AR project include the transfer of the right to the CERs resulting from such projects, if this concept did not yet exist when the transfer was made? The answers to these questions will naturally vary from jurisdiction to jurisdiction, but the country studies afforded an opportunity to see how these issues would be tackled under particular legal systems. While the results demonstrate the importance of resolving them at the national level, e.g., due to its implications on the laws of property, taxation, and natural resource utilization, it appears that in the short term (i.e., at least in the next two years), host countries will be able to accommodate CDM AR projects in the midst of trying to resolve legal issues.

No potential host country among the case study countries has yet defined the legal nature of a CER and in some legal systems this does not seem to pose a problem. The case studies show that at least theoretically, contractual and existing statutory arrangements will be sufficient, for the moment, for the legal design and implementation of a CDM AR project activity. Yet, there might be a lack of security with respect to the ownership of ER/CERs generated, given that this concept is not specifically defined in the host countries' legal systems. For example, a host country could decide to claim ownership over CERs because of their potential nature as a natural resource, following the doctrine that all land originally

belongs to the State (e.g. the Philippines). Given this risk and in the interest of stability in CDM AR related transactions, the consultants were also asked to explore the long-term prospects for characterizing CERs and the right to CERs in their countries.

The country studies indicate that current laws on property and contract and existing classifications of property may be able to accommodate the concept of CERs and the right to CERs. For example in Ghana, the right to CERs is potentially recognisable as a right/interest in or over land capable of being registered in the register of the Land Title Registry. In Chile, the right to a CER may be recognisable as a private property right. Under the Argentinean Civil Code, the right could conceivably be characterized as a civil or industrial "fruit." As a fruit, the CER would belong to the owner of the source of the fruit, in the absence of an agreement to the contrary. In the Philippines, it may be possible to characterize a CER as a forest resource, and the right to a CER as immovable property. As a forest resource, CERs could be transferred not only to Philippine nationals, but foreigners as well, and as an immovable property, the interest in the right could be more securely protected than if the CERs were treated as movable property.

Given the lack of specific legislation in host countries, it was worth examining the current possibilities of sharing of CERs among project participants, the transferability of CERs (who is presumed to own them, who can sell or transfer CERs or the rights to CERs, and who can acquire CERs and the rights to CERs), and the sharing of risk in case the actual CERs generated do not match the projected amount. Existing or draft Emission Reduction Purchase Agreements (ERPAs) simply stipulate that the rights to ERs or CERs is assumed to be transferred from project participants to the purchaser (e.g. the World Bank PCF) at a particular moment in time (e.g. payment), without attaching any significance to the characterization of a CER under national law or bothering about public registration or the title to the land. Such (model) ERPAs essentially assume either i) that, while there is no distinct property right over ER/CERs, the owner of the land can contractually promise to manage the property in ways to increase the carbon potential or ii) that the right to CER is a separate alienable right which the owner of the land can convey to others without conveying the whole property ownership.

The latter seems to be the case in the Indian context, as a recent proposed Project Design Document (PDD) for a unilateral CDM forestry project demonstrates (see Box 4).

Conversely, some legal systems such as in the Philippines and Argentina actually vest the ownership of all forests or timber and other natural resources in the State/Provinces. Arguably, any ER/CERs generated would then also, on its face, be vested in the State and not belong to the land owner.

Therefore, an *ad hoc* approach runs the risk of eroding the security of the CERs and the right to CERs, since such characterizations would at best be legal interpretations that could be disputed. For instance, an attempt to register the right to a CER on the document demonstrating title to a particular parcel of land could be refused by a register of deeds who does not agree with such characterization.

Box 4. Example from a draft PDD, proposed AR project in India/Bagepalli (Project Participant: Women for Sustainable Development, Karnataka, India)
The farmers have legal title deeds to their lands with survey numbers. Copies of *panis* (entry copy from the land registry) are available from the tahsildars – the local government representative at the taluk level who is also the local land registrar. Revenue land and forest land is listed with the tahsildar and with the range forest officer. Copies of these *panis* are also provided by the Tahsildar. Rights to use the forest land are given by the social forestry officer, and entries in forest department land registry with details of time period for which the land use is granted, and the lease amount if any, that was paid, is registered with the tahsildar. A copy of the deed is given to the landless farmer or group of farmers or landless families who receive the right to occupy the community and forestry land. The rights to the sequestered carbon are either with the private farmer, in the case of planting on private lands, or with farmer group, in the case of revenue land or forest department land and can also be ascertained from the *pani* copy. The carbon is usufruct, and the forest department transfers the right to the usufruct to the farmers in a deed of transfer, stating the period and other contractual details.

Hence, in looking at the long-term prospects, the fact that most of the case studies admit a less than stable land tenure and system of registration must be taken into account. Among the countries, Argentina seems to be most amenable to creating a new legal concept for CERs and the right to CERs, taking after Law 25.509 (the Law on Surface Rights for Forestry) which created a new and specific property right over a land surface dedicated to forestry investment.

There are two important precedents in Chilean legislation regarding the right to CERs. One is the offset programme based on the 1992 emission standard for particulate matter, which allows one emission source to increase its emissions above the standard if there is another source that is reducing its level of emissions at the same time under an agreement entered into by both sources. The second is a system of tradable emission permits that is very similar to the concept of CERs, except that the credits under the Chilean system apply only to a locally demarcated basin. For a specific pollutant to be included under the law, a specific regulation needs to be created. The legal definitions contained in this Bill of Law are, to the mind of the consultants, antecedents that permit interpreting the legal status of CERs in Chile.

The Philippine Clean Air Act, which opened the door to emissions trading by Philippine companies without discussion of the nature of emission quotas or credits, could also be used as a model for the development of a law defining CERs in the domestic context.

Against the risk of legal insecurity must be weighed the need to gain further experience in hosting CDM projects in general, as further experience may also lead to a better appreciation of the legal nature of CERs and the right to CERs. Thus, the Argentinean case study argues against defining this right too quickly. Similarly, an Indian project participant cautioned against legislative action in this area: The direct transfer suggested in the above quoted PDD is supported by Indian experience from past generation of voluntary emission reductions (VERs) where generation and transfers of VERs could happen without any Government involvement. The Philippine case study, on the other hand, points to the persuasive nature of any initial characterization of CERs and the right to CERs that the Philippine DNA could

make. In any case, it seems that the situation, where different legal systems define and protect the right to t/lCERs in various ways and to various degrees might in fact prevail for years since it seems unlikely that any of the countries studied will pass legislation to define the legal nature of a CER and the right to receive such t/lCERs in the near future.

5. Social and environmental impacts and requirements to assess and substantive standards

As presented in Chapter II, the issue of substantive environmental and socio-economic standards for CDM AR projects was very contentious during the negotiations that led to the Marrakesh Accords. In the end, Parties agreed to only prescribe procedural standards, such as participation and impact analysis/assessment requirements, depending on a showing of "significant impact" (decision 17/CP.7, paragraphs 37 b and c) as well as on re-emphasising that CDM projects should contribute to sustainable development in host countries.

There are thus at least three layers to discuss: one, what substantive legal standards will apply to CDM AR projects if any and are they necessary to ensure that the project enhances sustainable development; two, who has decision making power regarding the contribution to sustainable development and on what basis (criteria); and three, to what extent might the assessment obligations set by the international rules conflict with or need to be complemented by domestic legislation. We asked the consultants to discuss all of these issues.

a. Substantive standards

Since Article 12 of the Kyoto Protocol speaks of enhancing sustainable development in host countries via CDM projects, making sure that these projects do not have adverse environmental and social impacts has always been a target of attention in UNFCCC negotiations. The provisions of Annex B to decision 17/CP.7 assume that national legislation dealing with the environmental and socio-economic aspects of CDM AR projects will be sufficient and adhere to international or regional obligations of the host country with regard to environmental and social impact analysis and assessment. Hence, Annex B does not provide for any default standards in case of the absence of adequate legislation. Such legislation would, for example, require forest management plans, prohibit certain (non-native) species or genetically modified organisms to be introduced, and require project participants to share benefits with traditional users of the land.

Our country studies show however, that present substantive and procedural environmental and socio-economic standards at the national level are not automatically translatable or convertible into those required under the CDM AR rules and their application as such may cause great disparities in the quality of CDM AR projects. In some cases (Chile),[97] the substantive standards would be more relaxed than the requirements under current CDM AR rules while in others (the Philippines), the requirements appear to be much more detailed than

[97] AR projects in Chile are not subject to environmental impact assessment, unless the project proponents wish to receive incentives under DL (Decreto Ley or Law Decree) No. 701 on forestry promotion. In addition, there is no established methodology for assessing social impacts of projects, so that there is more flexibility in their reporting.

that required under the CDM AR rules. We also note that the incentive systems in some countries add a second tier of environmental standards. For instance, in the case of Chile, registration to receive the benefits under DL 701 triggers the requirement for a forest management plan.

The sections of our country studies on benefit sharing intended to identify ways in which CDM participants could ensure that benefits are shared and thus no adverse socio-economic impacts result from a particular project. As we have seen from the Philippine example on the consideration of indigenous people or the Ghanaian Community Forest Management Project, CDM developers might be able to use the current national practice in forest development as a role model for their project design.

In Ghana, laws on prevention and control of pests and diseases of plants (including plant quarantine) and regulations on the importation of plants and seeds (certification standards) will be applicable in determining whether or not to allow the introduction of alien species in AR projects.

Despite the intention not to regulate on the level of implementation, decision 19/CP.7 suggests that no significant negative socio-economic or environmental impacts should result from any AR activities. It **requires** project participants to describe remedial measures in cases where significant negative impacts are expected (decision 19/CP.9, para. 12(c)). This will have to be taken into account by project participants submitting a PDD to the AR Working Group of the EB and might in fact require legislative action in countries where no laws exist on which to base an obligation to take remedial measures, or a process against which to test whether remedial measures planned to be taken will be sufficient.

The country consultants were of the opinion that additional substantive standards will most probably not be set on the domestic level. So, can – in case the need manifests itself – the COP/MOP stipulate certain substantive rules to be applied on a project basis, or the EB reject projects that actually have adverse environmental effects? Theoretically they can, given the broad mandate of the EB and COP/MOP. But as mentioned in Section 3(b) of Chapter II, without a clear mandate from the COP/MOP, the EB cannot currently reject projects on substantive grounds that are not explicitly included in decision 17/CP.7, 19/CP.9 or 14/CP.10. Even if this is not stated in the Decisions, this follows from the strong opposition of non Annex I countries against such discretion during the negotiations. On the basis of the country studies it does not seem desirable to revisit this discussion on the international level, but rather encourage the host countries and CDM partners to work on sound rules on the national level.

b. Contribution to sustainable development

The international rules clearly require that CDM AR projects contribute to sustainable development in the host country. This in fact is the only "substantive standard" set by international law but cannot, of course, be compared with concrete requirements regarding forest management, plantable species, benefit sharing, etc. The current rules leave the decision of whether this requirement is fulfilled to the host country alone, which begs the question of how to remedy the relative void with respect to substantive standards and requirements. As the country studies have shown, there are sets of national criteria that the host countries can rely on.

For instance, Argentina has sustainable development criteria for natural resources management. Chile has CERTFOR, the national forest certification system, which incorporates nine principles in its sustainability standard that are verified before the certification is granted. Chile regards forestry projects as being intrinsically good. It also assumes that a CDM AR project that receives a favourable environmental qualification after going through the environmental impact assessment system assists the country in achieving sustainable development, and vice versa.

The Ghanaian Ministry of Lands and Forestry's Mission Statement stipulates that it exists to ensure the sustainable management and judicious utilization of the nation's lands, forestry and wildlife resources for socio-economic development and equitable growth in Ghana. A document listing a selection of sustainable development indicators for Ghana has also been submitted to the Cabinet for consideration and approval. These could be starting points for the development of criteria for sustainable development. Philippine Executive Order No. 318, issued in 2004, points to certain principles that can be used as a basis for defining sustainable forestry management and its criteria. Thus, criteria for sustainable forestry management are currently being devised and may later be incorporated into the process of issuing a letter of approval for CDM AR.

In any case, in the absence of standards for determining compliance with sustainable development, as a first step, a host country should use compliance with all the legal requirements as a minimum basis for certifying that a project assists a host country in achieving sustainable development, if these legal requirements are clear and there is a high level of enforcement of these requirements. This would also be in line with the additionality requirements introduced by the AR tools document. In fact, country experts suggested that CDM projects could help to enforce existing legal requirements in host countries, because through the PDD both the legal requirements and enforcement practice would become transparent. It remains to be seen whether this is true – certainly the concrete impact assessment requirements described below will be enforced as they form part of the eligibility test applied by the EB.

c. Requirement to assess impacts

As mentioned, the procedural requirements set on the international level closely link into the existing national laws. But will the interplay work? For example, none of the countries have a definition of the term "significant negative impact." In countries (such as the Philippines and Chile) where there are parallels to the impact analysis-impact assessment dichotomy under the international CDM rules, a different trigger is provided. As long as this alternative standard results in a requirement for impact analysis in the case of some projects, and impact assessment in the case of other projects that are perceived to have more significant impacts, the absence of such a definition should pose no serious difficulties. A problem may arise, however, when there is no difference between environmental impact assessment and analysis, as this may imply that projects with significant environmental and/or socio-economic impact will be subjected to insufficient impact analysis, or that projects with minimal environmental and/or socio-economic impact would have to undergo overly stringent procedures.

Moreover, none of the countries studied have systems for socio-economic analysis or assessment that were separate from the environmental impact analysis or assessment. In the

Philippine example, the EIA regulations provide guidelines for both environmental and social impact assessments within its Environmental Impact Statement (EIS) system and it is assumed, based on these regulations and additional sector-specific guidelines, that social impacts are considered when the EIA is conducted. This is not necessarily a problem, and may be consistent with the idea of environmental, economic and social integration under the concept of sustainable development, as long as there are clear socio-economic indicators within the EIA system. Thus, in Chile, although there is no established system for socio-economic impact assessment, many environmental impact reports include sections discussing socio-economic impacts of potential projects. Moreover, the resolution of socio-economic issues has been an important element in the negotiation of certain important projects. This is in line with Chilean environmental legislation, which is based on a wide concept of the environment that includes socio-economic elements.

In sum, however, the issue of whether CDM AR projects will in fact contribute to sustainable development, and be based on sound substantive standards/legal rules which are also enforced, remains contentious and open, not only because of the sovereignty interest of host countries and the fact that two countries might understand "sustainable development" differently, but also because the existing legal requirements attached to forestry projects will differ greatly from country to country, if they are existent at all. We learned from our country studies that this issue must be monitored for future consideration by Parties.

6. Small-scale CDM AR

It is clear from the case studies that the host country policies afford much importance to what will constitute "small-scale" afforestation and reforestation projects. For instance, in Chile, afforestation and reforestation done by farmers on land preferentially suitable for forestry or on degraded land is one of the most important categories of activities that benefit from the subsidy or bonus under the Law Decree 701, the Statute of Forestry Promotion (1974, modified in 1993). Land titles for the owners of small and medium-sized parcels of land may not, however, be properly recognised. In Ghana, a Forest Plantation Development Fund was created, among other things, to encourage small-scale commercial plantation developers to embark on a sustained programme of afforestation and reforestation that will rehabilitate degraded forest lands and increase forest production. In the Philippines, community-based forestry management agreements (CBFMAs) are entered into with local communities. Members of the local community will be eligible if they are actually tilling portions of the area to be awarded, have been traditionally using the resource for all or a substantial portion of their livelihood, or are residing in or adjacent to the areas to be awarded.

In Argentina, CDM AR may provide a niche for small community or NGO-led forestry projects with tangible co-benefits, such as watershed protection, biodiversity conservation or diversification of production. The fiduciary structure contemplated under the Law on Fiduciary Trusts (Law 24.441), which is already in widespread use for forestry investments, can be used by project participants to a SSc CDM AR for pooling their resources to set up a Forest Trust to administer the project and market the CERs. This could set a practical example for other host countries as well.

Since the rules on SSc CDM had not yet been adopted at the time the case studies were

being conducted, the consultants did not factor them into their case studies. We therefore add a brief analysis of some of its implications for host countries in recognition of the significance of SSc CDM AR to the overall project objective.

a. Low-income communities and individuals

While determining who belongs to low-income communities, or who is a low-income individual, does not necessarily need be the DNA's responsibility, there may be practical reasons for including this determination within the scope of the DNA's power to authorize the voluntary participation of project participants and confirm that the project activity assists in sustainable development. For one, the need to go to a different office to obtain such a certification, e.g., a separate agency dealing with forestry projects or one in charge of low-income communities and individuals, would add another regulatory requirement.

More importantly, the participation of or implementation by said low-income communities and individuals of the small-scale afforestation or reforestation project activity may even be considered by the DNA as one indicator that the project activity is consistent with sustainable development, due to its poverty alleviation potential. In any case, it is clear from UNFCCC COP decisions that the criteria for determining who are low-income communities and individuals should be provided by the host country Party. As discussions of this criterion during the negotiations for this decision indicate, an acceptable definition of the term "low-income communities or individuals" will depend on which country, or even which part of a country, one is talking about.

It is reasonable to conclude that the low-income community or individuals or their authorized representatives would have to be registered as project participants in the PDD, and authorized to participate as such by the relevant DNA. This is the interpretation that is consistent with the objectives of CDM in general, and of the SSc CDM AR in particular. Otherwise, other project participants could claim that the SSc CDM AR is developed or implemented by low-income communities and individuals, even if most of the benefits would accrue to the registered project participants, who may have no clear ties to the low-income communities and individuals, other than a contractual agreement with them. As an alternative, i.e., if others were allowed to participate in SSc CDM AR, the DNA would have to require full transparency of the arrangements between the low-income communities and individuals and the registered project participants.

In determining whether low-income communities and individuals have actually developed or are implementing the SSc CDM AR, the DNA may, on the one hand, choose to apply stringent standards for determining the level of involvement of a low-income community or individual in a project, or, in the other extreme, simply rely on their certification to this effect, or choose a host of options in between these two extremes. A thorough verification of compliance with this requirement appears to be the most consistent with the objectives of the CDM and SSc CDM AR, but imposing such a requirement may run counter to expectations that simplified modalities and procedures will be applied by SSc CDM AR, and that measures to facilitate their implementation will be put in place. On this basis and at this point, it seems that the implementation of SSc could be managed very differently across host countries, which might not be in line with the general idea of Parties.

If a low-income community is involved in the CDM AR project activity, there will be the challenge of dealing with more project participants than a "regular" CDM AR project activity. Not all of these project participants may have the same kind, or quality, of title over their portions of the land, further complicating the transactions with them. However, acting through a designated representative, who could be given ample authority to act on their behalf, may ease some of the problems. The social impacts of the project may also be multiplied by having to deal with a community, although theoretically, these social impacts would be positive.

With regard to low-income project participants in general, their involvement in the project may open doors to the DNA or other host country Party authorities in taking a more active role in project approval and monitoring, under the theory that these persons require more protection under the law, since they are not negotiating with purchasers of the tCERs or lCERs on equal footing.

Thus, although none of the case studies indicate that the DNAs in those countries intend to look at the terms of the contracts between project participants, they may make an exception in the case of low-income communities and individuals.[98]

b. Simplified modalities and procedures

As mentioned in subsection 3(i) of Chapter II, there will be some expectation that the simplification of modalities procedures for SSc CDM AR at the international level will be mirrored at the national level. At the first instance, the simplification may be seen to apply only to the procedure for obtaining DNA approval, but in the long-term, this simplification may be expected to extend to other related permitting and regulatory procedures for the project activity, not only as part of the simplification, but as part of the broader measures to facilitate the implementation of these types of project activities. Although there was strong resistance to the inclusion of language inviting Parties to promote national measures to facilitate the implementation of these SSc CDM AR, it is highly probable that host countries will work towards initiating such measures, recognising that simplified modalities and procedures will not be sufficient to drive down the transaction costs for these project activities.

Considering, however, that the scope of the DNA's review and the regulatory reach of the host country is, at least theoretically, more limited than that of the CDM Board (focusing as it does on the pre-validation stage), there may be less leeway for simplification of procedures, apart from a shortening of the processing time for the DNA approval. To what extent this may be done, without compromising a determination that the project participants possess the necessary qualifications to be authorized to participate in the project activity, and that the project contributes to sustainable development, will be a significant challenge. It may be more

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[98] The latter statement is purely an informed guess as this question was not directly put to the legal consultants. Moreover, as indicated in Part B (Glossary of A/R CDM Terms) of the Clean Development Mechanism Guidelines for Completing the Project Design Document for A/R (CDM-AR-PDD), the Proposed New Methodology for A/R: Baseline (CDM-AR-NMB), and the Proposed New Methodology for A/R: Monitoring (CDM-AR-NMM) under the definition of "project participants," ". . . the decision on the distribution of CERs from an A/R CDM project activity shall be taken exclusively by project participants." See Annex 19 to the report of the CDM Executive Board at its 21st meeting held from 28 to 30 September 2005.

appropriate in this case to focus on facilitative measures, e.g., ensuring that in designing the system for protecting the right to lCERs or tCERs, requirements are not overly burdensome for low-income communities and individuals.

Another issue that the DNA will need to address is how to incorporate rules on determining the occurrence of debundling, i.e., the fragmentation of a large project activity into smaller parts,[99] into rules for the approval of CDM A/R project activities that it will adopt, whether simplified or not.

c. Categories of SSc CDM AR

With regard to the categories of SSc CDM AR listed in Appendix B of decision 14/CP.19 and mentioned in subsection 3(i) of Chapter II,[100] it is to be noted that all these categories involve a transformation of the use of the land and, depending on the land use policy and classification system in the country, may require a legal reclassification of land. The activity of converting the land may, in addition, increase administrative costs and trigger special requirements under environmental impact assessment legislation. They may also require the design of a compensation scheme to pay those who previously owned the land.

[99] See Appendix C, criteria for determining the occurrence of debundling. decision 14/CP.10.

[100] Namely, grassland to forested land, cropland to forested land, wetland to forested land, and settlement to forested land.

VI. Summary findings and recommendations

Having looked in detail at the various problem areas, we attempt in the following discussion to briefly summarise our findings and, where appropriate, suggest ways forward. However, any recommendation must be based on some general, more (macro-) economic observations which were only partially subject of consideration by the individual country experts but which form an essential background for policy as well as legal suggestions:

1. Contextualizing recommendations: Some observations

a. Size of the CDM AR market

All country studies indicate that AR project activities will not be the most attractive CDM projects in their countries, at least in the first commitment period. For example, the Argentinean case study noted the relatively limited demand for CERs from forestry projects, in comparison to energy projects, citing this as a consideration in determining the advisability of legal reform. Thus, any recommendations for legislative or regulatory reform and adjustment should take this trend into consideration and aim towards applying such reforms and adjustments to all kinds of CDM project activities, as well as projects that go beyond the CDM (e.g., AR projects in general or to ODA-funded AR activities).

The CDM is expected to be a driver of AR in most of the host countries studied, especially for strengthened monitoring and enforcement of existing laws and regulations (see above). At the same time, financial costs of the CDM are seen as a strong disincentive, especially for small-scale initiatives. Of all the countries, Chile has the strongest tradition of afforestation and reforestation, causing the consultant to surmise that CDM will not make a huge impact on AR activities. Even so, all the country studies indicate that the CDM has potential in promoting certain types of projects that would not be sufficiently boosted by existing incentive systems, such as the reforestation of existing forestlands in the Chilean Patagonia which were burned in the early 20th century and which have not yet been reforested to date. CDM may also act as a pivot for the establishment of forest plantations that are as close to the natural state as possible and plantations based on forestry systems other than monocultures, if the policy is well-guided by Chilean forestry authorities.

Such expectations need to be tempered by the prognosis of the CDM AR's share of the CDM market, as well as regional differences in attracting CDM AR projects that arise from natural growth conditions in a region[101] and the "capacity" to host CDM AR projects.[102] On the other hand, the objective situation will also have to be balanced by the political weight and profile that CDM AR projects may have.

[101] For instance, trees in the Sahel (Africa) grow very slowly and are therefore expected to have very low amounts of sequestered carbon, making them less attractive for CDM AR project development.

[102] This capacity is influenced by, among others, the state of forestry administration, which would include aspects of good governance, political stability, and a secure land tenure situation.

b. Investor involvement

In line with other projections, an OECD paper[103] indicates that of the more than $800 million earmarked for CDM expenditure to date (based on a review of 130+ CDM projects under development), the focus is on **buying** emission credits rather than **investing** in emission-reduction projects. While very few CDM AR project activities under development were reviewed, this observation corresponds with trends noted in the project.

Direct investor involvement in CDM AR projects appears unlikely due, among other things, to the complicated interplay between the laws and regulations dealing with the environment, land and forestry, as well as any other related laws that will come into play in a CDM AR project, all of which appear to be a disincentive to direct investment. As discussed in detail in the country studies, there appears to be a lack of institutional and legal clarity with regard to:

- property rights and interests in the land to be used for the CDM AR project activity;
- necessary permits to be obtained for implementing a larger-scale CDM AR project activity;
- preconditions for business activities of foreign individuals and entities; and
- the applicability of bidding rules to public land that will be used for CDM AR.

While lack of direct involvement does not indicate that the same or similar substantive standards will not be embodied in contracts between project participants, it does indicate possible directions for the design of the CDM framework. For instance, it may be useful to focus on developing substantive standards that project participants should be required to include in the provisions of their contracts, or that would be read into such contracts, i.e., assumed to form part of the contract even if these standards are not mentioned, or even developing standard clauses for inclusion in such contracts. Regulations relating to project participants would also need to be crafted in light of recent clarifications made by the EB on the acceptability of unilateral CDM projects[104] and a perceived trend towards the prevalence and prominence of unilateral CDM projects. Thus, foreign investment considerations may not play a significant role at the stage of approving a CDM project activity.

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[103] Ellis, Jane, Jan Corfee-Morlotand and Harald Winkler. "Taking Stock of Progress under the Clean Development Mechanism (CDM)" COM/ENV/EPOC/IEA/SLT(2004)4/FINAL.

[104] See the definition of the term "Approval by Parties involved" found on pages 5 and 6 of Annex 14 (Revised Guidelines for Completing the Forms CDM-PDD, CDM-NMB and CDM-NMM) of the Report of the Executive Board of the Clean Development Mechanism at its Nineteenth Meeting (11 to 13 May 2005) and p. 6 of Annex 14 (Simplified Project Design Document for Small-Scale CDM Project Activities and its Guidelines) of the Report of the Executive Board of the Clean Development Mechanism at is Twentieth Meeting (6 to 8 July 2005). The penultimate paragraph of the definition states:

> "The Board agreed that the registration of a CDM project activity can take place *without an Annex I Party being involved at the stage of registration*. Before an Annex I Party acquires certified emission reductions from such a project activity from an account within the CDM Registry, it shall submit a letter of approval to the Board in order for the CDM Registry administrator to be able to forward CERs from the CDM Registry to the national registry of the Annex I Party" (italics supplied).

For example, the Chilean consultants expect most CDM AR projects in their country to be implemented unilaterally, with most of them being performed by traditional big firms planting mostly pine or eucalyptus. They will, however, not be necessarily planting on their own land, but entering into agreements with small and medium-scale farmers.

At the practical level, a lack of direct investor involvement with CDM AR may pose an additional challenge to the implementation of small-scale CDM AR project activities which, more than any other type of CDM AR activities, would need up-front payments for some costs, if they are truly implemented by low-income communities and individuals. It will thus be necessary to consider alternative funding models to provide support to CDM AR project developers. This is an area that the development community could explore, while it considers the impact of the additionality rules on any role it may plan to play.

c. Differences in national standards and procedures

The international CDM rules, as structured, allow each host country to adopt and develop its own substantive and procedural standards. Will differences among host countries eventually lead to a convergence towards generally accepted international principles, or will it provide an opportunity for investors to find host countries with laws, policies and standards that are most compatible with their interests? Even if the trend should move towards unilateral CDM projects, cost considerations will push standards and procedures towards a certain degree of convergence, given the pressure to have competitive projects. Our initial findings indicate that accessibility and clarity of CDM requirements will count more than whether one country's standards are more stringent than another's. Moreover, the perception of uncertainty and unpredictability can be as strong a disincentive to direct project involvement. Finally, if investors are more likely to be interested in buying CERs in the open market, then laws defining the link between the project activity and CERs to be derived from them may turn out to be much more important to the ordinary investor than the actual standards.

2. Summary

The promotion of CDM AR projects that are environmentally sound and socially equitable would benefit from a streamlining of CDM project activity cycle procedures by the EB. The issue of transaction costs clearly came out as a concern in the case studies and was pointed out as one of the major differences between AIJ and CDM projects that makes many of the lessons learned and the benefits derived from AIJ projects inapplicable to CDM project activities. As the discussion on additionality indicates, clearer guidance on the rules for determining additionality, especially with regard to domestic laws and policies, would indicate what effect these rules would have on the enactment of forestry related policies, laws and regulations. If the issue of reduced transaction costs cannot be addressed in this commitment period, this matter should be prioritized in the second commitment period, which we are assuming, for the purposes of analysis, will continue to include AR project activities.

Although forestry has been an important part of developing country policies for many years, CDM AR project activities add many new dimensions to forestry projects, dimensions that can be most effectively tested through the use of strategic pilot projects. Policies, laws and regulations, including those at the international level, will have to properly recognise the value of such pioneer projects that will often have to pay the "price" of being the first to have a go at such policies, laws and regulations. For these types of projects, government's role may not just be in promoting CDM involvement, but also in being an investor, especially in the "frontier" areas identified in the case studies, as these projects may make no sense from the purely economic viewpoint. One such area would be the promotion of forests that are as close

to their natural state as possible. These are, however, often slow-growing and would therefore not be automatically considered for use in a CDM AR project.

One clear message coming out of the case studies and the analysis of AIJ projects is the benefit of strengthening public participation in CDM AR projects. While the legal requirement for comment by local stakeholders on the CDM AR project does not necessarily require a public hearing, any alternative to public hearing would have to give local stakeholders the sense that their comments are being given serious consideration, the element which ultimately makes the greater difference. Public participation should, however, be seen to extend beyond soliciting comments on the project activity, and should encompass the different stages of the project cycle. The extent of public participation could be considered in drawing up sustainable development criteria. In addition, public participation should be tied not only to particular projects, but to the CDM as a whole. Increased level of understanding of what the CDM is and is not will enhance the overall success of CDM in a host country. The private sector should also be seen as a crucial partner in the development of the CDM operational framework, given that private sector investment is expected to far outstrip public sector investment, as it has done in the area of forestry as a whole.

Since land on which CDM AR projects will be implemented may have occupants who will not necessarily be project participants, or may provide ecosystem services to nearby groups or communities, benefit sharing is one dimension of CDM AR projects that deserves close attention and which appears not to be currently well regulated in host countries. Division of CERs among different stakeholders may not be the most practical way to share benefits. Moreover, other co-benefits are expected to arise from CDM AR projects, such as watershed protection, biodiversity protection, and diversification of production. These benefits, if properly valuated, could be factored into benefit-sharing schemes. Clarity of benefit-sharing schemes will not only avoid legal difficulties but will improve the chances of project success, thereby directly and indirectly boosting its social and environmental benefits. An evaluation of benefit-sharing schemes for similar and related projects should form part of a government's activities preparatory to hosting CDM AR projects.

If CDM AR projects are to deliver on their promised benefits, small-scale project activities that deliver real and measurable benefits to low-income communities and individuals will have to be promoted, to the extent that they can be made economically viable. If present conditions do not make their development economically attractive, then legal or regulatory reform, if planned, should consider the removal of barriers to these types of project activities as well as facilitation measures for their promotion. When in doubt, gaps in the rules on SSc CDM AR should be interpreted in favour of consistency with the CDM's purpose of assisting host country Parties in achieving sustainable development.

It is clear from the foregoing chapters that more attention should be given to legal issues surrounding CDM AR to be sure that these projects will be able to reconcile development and climate aims. While other types of issues, e.g., financial and technical abound, the resolution of these issues depends to a great extent on how legal issues are dealt with. Therefore, a proper appreciation of them is essential in carrying out or hosting CDM AR project activities. These legal issues, which have been discussed at length in this paper, can be resolved either through the application of existing legislation if they are clear and being implemented, the use

of default solutions that apply in the absence of clear legal provisions and options, or the enactment or adjustment of new legislation. Actors involved in CDM AR must be particularly aware of the default solutions that might kick in if there are no clear legal answers to issues raised.

Based on the case studies, it cannot be concluded in general that legal reform has to take place for CDM AR projects to be soundly implemented in host countries. The minimum requirement is, however, to have a clear legal framework designed to meet the specific needs of CDM AR projects. Otherwise, various legal issues are most likely to complicate and increase costs of such projects. Clarity in a host country's legal framework may not necessarily entail new laws, rules and regulations; a re-examination of existing laws to see how they would be interpreted if applied to CDM AR project activities may be sufficient as a first step, to be coupled with steps to clearly communicate how these various laws, rules and regulations relate to each other. Such a re-examination presumes, however, that those who are looking at these laws have a basic appreciation of the nature of the CDM in general, and CDM AR in particular, as it may not always be instantly obvious what the links of particular laws, rules and regulations would be with CDM AR. If the re-examination indicates that certain issues can only be resolved through the enactment of new legal instruments, then an incremental approach could be taken to ensure that a host country does not take on too much in relation to its capacity.

Another reason why legal reform does not necessarily have to take place is that in general, it is possible to avoid most legal conflicts in the implementation of CDM AR projects by carefully selecting sites on which to implement CDM AR project activities (e.g., choosing land whose owner is clearly identifiable and whose title is undisputable) and by fitting AR projects into the framework of existing forestry policies and plans, thus avoiding conflicts with other rules of domestic law and combining CDM benefits with national sustainability and poverty reduction goals. Such measures presume the conduct of adequate due diligence in the process of project design and planning, taking into account issues such as those listed in Box 2 in Chapter II. If legal issues cannot be avoided through the means suggested above, then this is an indication of a clear need for legal reform, and, at the practical level, of the fact that very few CDM AR project activities may take place in such a country.

While CDM AR itself may not be enough of a driver for legal reform, preparations to host CDM AR project activities, and CDM projects in general, should be used by host countries as an opportunity to re-evaluate its policies, laws and regulations. While reform may not, and ought not to be justified on the sole basis of CDM AR, or even CDM itself, it should at least provide a starting point for thinking about reform of particular policies, laws and regulations. At the very least, the examination of legal issues should identify, and hopefully influence, the type of expertise to be made available to the DNA, and alert the government to the extent of institutional coordination that needs to take place.

With regard to the relationship between the certification issued by the DNA and other documents that need to be obtained by project participants from the host country before being able to register a CDM project with the Executive Board and/or commence operations, there are both institutional and substantive questions.

At the institutional level, there is a need to ensure that the certification provided by the DNA is not just another layer to the often already bureaucratic system. Given the existence of extensive permitting systems for most CDM projects, it would be worthwhile to analyse which regulatory or approval systems the CDM process could build on, and determine how the certification system can be harmonized with other related systems. Of these processes, the EIA seems to be most closely related in most instances, since often the EIA already incorporates the concept of sustainable development. It needs to be pointed out, however, that not all CDM AR projects are required to undergo an EIA. This does not preclude authorities from adopting elements of the EIA system that are suitable to the case of CDM AR. Moreover, if CDM AR projects are not currently covered by a host country's EIA system, the approval process must include clear means by which the environmental and socio-economic impacts of the proposed CDM AR project can be analysed or assessed, and the results communicated clearly to stakeholders.

3. Questions for further study

In the entire process of developing the questions for the case studies and the project as a whole, there were several questions that were not asked, or not answered which might be worth taking up again in another context:

No questions were devoted to the issue of **bidding**, which came up repeatedly in relation to questions on concessions that could be obtained for publicly-owned land. It is therefore not clear whether public land on which CDM AR project activities are sought to be implemented would be exempted from bidding requirements, if applicants for rights to these land would have otherwise been required to bid for the right to use the land. If the right to use the land on which the CDM AR is to be implemented will be bid out, documentation on the suitability of the bidders to be project participants could also be used for the process leading up to the approval of voluntary participation in the CDM AR project activity. On the other hand, if the bidding rules are waived in the case of CDM AR, the scrutiny leading up to approval of the voluntary participation of a project participant and the certification that the project contributes to sustainable development may be said to replace the examination that would have been conducted in the bidding process. Exemptions would, however, raise the question of whether the proposed CDM AR project is truly additional in relation to other alternative uses of the land that would have required bidding. Future analysis on additionality and policies could include such a question.

Consultants for the case studies were not required to discuss **taxation** issues involved in the CDM AR projects, although the Argentinean and Philippine case studies made reference to them in the analysis of CERs. The manner in which a host country chooses to characterize CERs will have implications on the taxability of projects involving the generation of CERs and their transfer. In addition, the host government may decide to impose levies on CDM AR projects based on, among other things, the original ownership by the State of the source of the CERs or the privilege of allowing the private entity to participate in the CDM. Nor were these issues discussed at length in this paper, not because they were deemed to be unimportant, but because of their highly complex nature which requires specialized competence. Further studies on this issue need to be undertaken, since the tax consequences of CDM AR projects will influence their actual cost and may act as an incentive or disincentive to investment in

this area. Closely related to this issue is the setting of fees and other charges by the DNA that could be influenced not only by the cost of actually administering the CDM approval process, but also by policies to promote particular types of CDM projects.

The possibility that participation in the CDM can help host countries in meeting commitments under **other conventions** was not directly raised in the case study questionnaire and not tackled here because its discussion could potentially take the paper on a different, although equally important, course. Multilateral Environmental Agreements (MEAs), if at all mentioned, were referred to in very general terms rather than in relation to specific standards or actions required under these MEAs. The Philippine and Ghanaian case studies have pointed out, however, that this potential of a CDM AR project may be one indication that the project contributes to sustainable development. Clearly there is a need to examine the links between the standards in these other agreements and the CDM in a more detailed fashion, but that goes beyond the scope of this current study. Consultations on the project have also raised the question of how the synergistic quality of a project would reflect on a determination of additionality. On its face, it appears that the fact that an action is justifiable under other obligations of a host country would argue against its additionality, since the project activities could have been undertaken in relation to these other obligations. However, if it can be demonstrated that the project activity would not have taken place *in fact*, then there may still be a chance that the project activity would pass the additionality test.

4. Final words

Ironic as it may seem, despite the legal and related issues identified in the case studies and in this paper, ultimate choices relating to policy, law and regulations will very much depend on political factors, rather than legal reasoning. Nevertheless, such political choices can still be guided by an awareness of the key socio-economic and environmental considerations, the broad parameters provided by international rules, the trends in similar jurisdictions and the legal context within each host country. In the end, it is important to find, as the Argentinean case study says, “common sense” solutions that address the objectives of the CDM, provide clear and tangible socio-economic and environmental benefits to public participants, and are politically acceptable. The law is, after all, only a tool available to policy makers to achieve policy objectives (within the framework set in most countries by the various Constitutions). These objectives, in turn, should be clear on the basis of Article 2 of the UNFCCC (prevent dangerous climate change), Article 12 of the Kyoto Protocol on the CDM and the general aims of sustainable development and poverty alleviation enshrined in the Millennium Development Goals.

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