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IS THE CLEAN DEVELOPMENT MECHANISM SUSTAINABLE? SOME CRITICAL ASPECTS

by Dr. Christina Voigt*

INTRODUCTION

The Clean Development Mechanism (“CDM”) is rapidly developing as an important element in international climate policy by providing a cost-effective means of complying with the requirements of the Kyoto Protocol. Defined in Article 12 of the Kyoto Protocol, the CDM provides for Annex I Parties to implement project activities that reduce emissions of greenhouse gases (“GHGs”) in non-Annex I Parties, in return for certified emission reductions (“CERs”).¹ The CERs generated by such project activities can be used by Annex I Parties to help meet their emissions targets under the Kyoto Protocol and can be traded on the international emissions trading market. Article 12 also stresses that CDM projects should assist the developing country host Parties (non-Annex I Parties) in achieving sustainable development and in contributing to the ultimate objective of the United Nations Framework Convention on Climate Change (“UNFCCC”).²

There are currently more than 900 registered CDM projects in forty-nine developing countries, and about another 2,000 projects in the project registration pipeline. The registered projects have resulted in 117,394,796 issued CERs.³ The CDM is expected to generate more than 2.6 billion CERs, each equivalent to one tonne of carbon dioxide, by the time the first commitment period of the Kyoto Protocol ends in 2012.⁴

Therefore, the CDM is not only an innovative mechanism that builds a bridge over the ‘North/South’ gap in the Kyoto Scheme, but it also brings together private economic interests and public climate policy by helping to channel private sector investment toward climate-friendly projects that otherwise might not have taken place. A CDM project attracts substantial transfers in financial and technological services to developing countries while promoting climate protection and diminishing the extent of national climate change mitigation in developed countries.

Thus, it is crucial that a CDM project delivers real climate benefits without causing other environmental damages, and therefore upholds environmental integrity. Yet, how to ensure the CDM’s environmental integrity is a legal challenge that remains. Environmental impacts of the CDM have already led buyers of carbon credits to increasingly try to protect them-

selves from liability for environmental damage caused by GHG projects.⁵

LEGAL CHALLENGES

The CDM is unique among the flexibility mechanisms of the Kyoto Protocol in that it allows Annex I Parties to increase their accumulated caps by obtaining emission credits generated by investments in a CDM project in an uncapped, developing (non-Annex I) Party. Each CER is an additional carbon tonne which will entitle an Annex I, “investor,” Party to an equivalent increase in emissions from its territory, while remaining in compliance.⁶

However, the lack of quantitative mitigation commitments in CDM host countries and an interest in a maximal number of CERs resulting from a CDM project create incentives for both sides, CER-buyers/investors and host states, involved in a CDM project to inflate the amount of CERs claimed.⁷ Therefore, the more successful the CDM is at generating CERs, the more an

Annex I Party can use those CERs to increase its territorial emissions above its cap, and the more important it is that each CER corresponds to real, long-term, measurable emission reduction. Apparently, with increasing volumes of CERs, the environmental performance of the entire Kyoto System depends upon the environmental performance of the CDM. Environmental performance of the CDM depends on the demonstrated ability of the CDM system to support the objective of the UNFCCC: to stabilize greenhouse gas concentration in the atmosphere at safe levels.⁸ This ability of the CDM, coupled with avoiding other environmental damages is usually referred to as “environmental integrity.”⁹

The importance of environmental integrity has been made obvious by the 2005 Meeting of the Parties (“MOP”) 1 when adopting the Marrakech Accords (now titled *Kyoto Rule Book*). In decision 2/CMP.1, “Principles, nature and scope of the mech-

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anisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol,” the Parties emphasize that “environmental integrity is to be achieved through sound modalities, rules and guidelines for the mechanisms, sound and strong principles and rules governing land use, land use change and forestry activities, and a strong compliance regime.”¹⁰

In this Article, I will try to explore what this passage implies for the CDM and attempt to highlight some aspects of the current design of the CDM that raise concerns about environmental integrity.

DEFINITION OF ENVIRONMENTAL INTEGRITY

Environmental integrity in general refers to the ability of an environmental measure to reach its objective and purpose. It therefore relates to the quality of the regime, its instruments, and its institutions. In the context of the climate regime, the extent to which the means are able to achieve the ultimate objective of the UNFCCC, as stated in Article 2, is essential in considering the environmental integrity of the entire regime.

With regard to the flexibility mechanisms, environmental integrity will depend on their capacity to ensure that the Parties included in Annex I do not exceed their assigned amounts. Emissions, reductions, and removals need, therefore, not only be quantifiable by using the same standard worldwide, but also real, complete, accurate, long-term, environmentally conservative, comparable, and verifiable.

Particularly in the climate regime, environmental integrity is a requirement for the promotion of sustainable development by a climate measure. The long-term, significant reduction of GHGs is a necessary condition for sustainable development. In other words, no development is sustainable if the issue of tackling climate change is left unsolved.

ENVIRONMENTAL INTEGRITY OF THE CDM

In the particular case of the CDM, environmental integrity can be defined in a wider and a narrower sense. In its narrower (or primary) sense, it is the demonstrated ability to approve projects and to certify emissions reductions that are real and additional, for example, reductions that would not have occurred in the absence of the project, and to support projects that contribute to long-term reductions in GHG concentrations in the atmosphere.¹¹ Environmental integrity in a wider (or secondary) sense means that other environmental concerns need to be taken into account and negative impact avoided. Special concerns in this respect relate to biological diversity protection connected to land use, land use change, and forestry projects.¹² In particular, these concerns exist where CO₂ sequestration projects (biomass or forest sinks) result in large-scale plantations of mono-cultural and/or non-indigenous tree species that could pose a threat to, or destroy local ecological systems.

SOME CRITICAL ASPECTS

ADDITIONALITY AND LEAKAGE

One of the key issues for the environmental integrity of CDM projects is the additionality of emission reductions or

removals.¹³ Article 12(5)(c) of the Kyoto Protocol provides that CERs shall be certified if based on reductions that are additional to any that would occur in the absence of the project.¹⁴ Additionality is a necessary requirement for making the CDM function as a mechanism to compensate for emissions that are not being reduced domestically by Annex I Parties.¹⁵ If CERs are created that represent emission reductions that would have happened anyway, then these “paper reductions” will undermine the integrity of the Kyoto Protocol.

Each project participant must demonstrate the additionality of the project in the project design document (“PDD”). Each project must describe the baseline scenario from which this additionality is measured. This baseline scenario represents the GHG emissions that would have occurred in the absence of the project. Problematic in this context is the counter-factuality of the baseline scenario: the project developer needs to investigate what would have happened if the project had not taken place. This scenario can lead to hypothetical assumptions, which help to inflate the amount of CERs.

To counter such incentives, the project must be based on a baseline and monitoring methodology applied to the project activity. The Executive Board (“EB”), which is assisted by the Panel on Guidelines for Methodologies for Baselines and Monitoring Plans (“Meth Panel”), are to approve the methodologies.¹⁶ However, the issue here is whether the EB and/or the Meth Panel are adequately equipped to carry out this task. Concerns have arisen with respect to the member’s capacity to carry this task and to the financial budget available for this kind of work.¹⁷

The PDD must further include the project boundary and any adjustments for leakage. This means that a project must calculate all GHG emissions under the control of the project participants that are significant and reasonably attributable to the project activity. These must then be adjusted for net changes of greenhouse gas emissions outside of the project boundary, which are measurable and contributable to the project activity.¹⁸

Additionality coupled with prevention of leakage helps to address concerns that investments in the CDM could displace, rather than replace, GHG-intensive activities. An example of such leakage would occur if a CDM project reduced fossil fuels where it meant to, but also resulted in increases elsewhere. The challenge, however, is how to define “project boundaries” and “emissions under the control of the project participant” in this context. “Leakage” might easily be detected if it happens in the same industrial sector or the same region, however, increases can also occur across country borders. These emissions might hardly be found to be under the control of the project developer, and thus not calculable in the baseline-scenario.

In order to survive an “environmental integrity check,” a CDM project would need to prove that its additionality does not lead to increased emissions elsewhere or slow climate change mitigation efforts. It is within the climate regime that a solution to this situation needs to be found. Therefore, the design of the CDM has to prevent projects that lead to a net increase in emissions, whether that is in the same sector, in other sectors, in other regions of the same country, or in other countries.

The additionality criterion in its present state, despite being crucial to the environmental integrity of the CDM, can create adverse policy incentives to climate change mitigation. The potential of CDM projects to generate much-needed investment flows into a host country has led some developing countries to back off from implementing more progressive energy or climate policies and the respective legislation needed. These policies and laws, if integrated into the baseline, would disqualify CDM projects that aim at meeting these new standards or thresholds because they no longer would be additional.¹⁹

In order to promote environmental integrity while encouraging progressive climate policies in these countries, a solution to, and safeguard against, this disturbing situation must be found within the climate regime.

CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

The contribution of the CDM to sustainable development needs to be seen in terms of host country development, as expressed as one of the CDM goals mentioned above. Given the reference to the objective of the Convention and the role that climate change mitigation itself plays in sustainable development,²⁰ any assessment of the CDM's contribution must also recognize the wider role projects and the mechanism itself can play as catalysts for sustainable development of host States.²¹

CDM's contribution to sustainable development was subject to considerable debate during the negotiations of the Kyoto Protocol and the Marrakesh Accords and is under improvement still.²² In particular, host countries have been concerned about their sovereignty and largely unwilling to accept externally determined sustainable development priorities imposed on them.²³ This led to only marginal references to sustainable development in the Marrakesh Accords, which leave the meaning of "sustainable development" undefined. Rather, under the climate regime, it remains the host country's sovereign prerogative to determine whether a particular CDM project helps it achieve this goal.²⁴ Thus, relatively little is achieved in terms of affecting the growth pattern of developing countries.

A project is, in the absence of any alternative, considered to contribute to sustainable development if it is congruent with existing national development policies.²⁵ This "subjective" approach to sustainable development translates into curtailing and challenging the potential of the CDM. Though, there are a few concerns.

First, designing the CDM and meeting CDM project eligibility requirements present significant challenges because host countries have different economic conditions, natural resources, and development priorities. Thus, they have different perceptions about what is required to achieve sustainable development. Selecting sustainable development criteria and assessing the sustainable development impact can therefore differ significantly from one host country to another.

Despite several ideas about quality standards or indicators of sustainable development,²⁶ which provide some guidance on what should be taken into account, in the end, it is currently the host country's sovereign decision to ascertain whether a CDM project activity promotes its sustainable development targets.²⁷

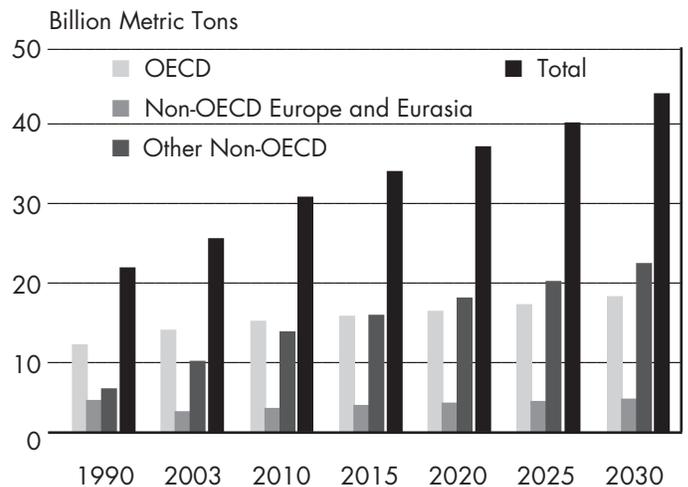
Therefore, the Designated National Authorities ("DNAs") in developing countries are tasked with issuing a Letter of Approval attesting to the project's contribution to their countries' sustainable development.²⁸ A CDM project can only be registered if such affirmation is provided to the CDM Executive Board. This leads to uncertainty and creates a disincentive for investment decisions.

Second, while there is, without a doubt, a strong potential for synergies between addressing environmental problems and national development goals,²⁹ there is also the danger that accepting congruency with existing development policies may not lead to a change of benefits to sustainable development since most existing national development policies lead to increasing GHG emissions.³⁰ Thus, the congruency requirement is not a high threshold, if any at all, in terms of sustainable development.³¹

Which Path to Follow?

From the point of sustainable development, a low energy path is, most likely, the optimal way.³² However, most development paths are likely to lead to increasing energy demands and depend on the availability of energy resources to meet these demands. It is unrealistic to assume that developing countries, or developed countries for that matter, will in the near future change to development strategies based on constant or declining levels of energy consumption. Energy is fundamental to advancing the economic and social dimensions of sustainable development.³³ However, sustainable development requires that, different from the scenario outlined in Figure 1, meeting increasing energy demand must not go along with increasing CO₂ emissions.

FIGURE 1: ENERGY-RELATED CO₂ EMISSIONS³⁴



In 1987, the World Commission of Environment and Development ("WCED") noted that it is essential that demands be met by energy sources that are dependable, safe, and environmentally sound.³⁵ In particular the latter, but arguably all three criteria for such "sustainable energy supply," require the decoupling of energy supply from increasing greenhouse gas emissions.

Achieving sustainable development in developing, and developed, countries, thus depends on more efficient energy use,

reduction of energy consumption, and, importantly, the decarbonisation of their economies. Unless the impact of the CDM spurs climate-friendly policies in developing countries, it will promote only one of the CDM's triple goals: the cost effective compliance of Annex I countries with their emission reduction commitments. However, it will not contribute to the ultimate objective of the UNFCCC, as it would not assist non-Annex I Parties in contributing to stabilizing GHG concentrations, nor contribute to the sustainable development of non-Annex I Parties in any meaningful way.

The question is whether developing countries should be accorded a privileged position when considering their sustainable development path. The WCED, in promoting the transition to a sustainable energy era, suggested that traditional fossil fuel use should be accepted in developing countries in order to realize their growth potential, while developed countries should seek to limit their uses of fossil fuel.³⁶ This recommendation is problematic. Sustainable development does not require increased fossil fuel consumption in developing countries. What it requires are equal development opportunities, however, these depend on the availability of energy resources in general, and not only fossil fuels. To grant developing countries a preferential "right" to use fossil fuels would also burden them with an obligation to reduce emissions. Rather, sustainable development requires avoiding such a burden from the outset.

Sustainable development in developing countries means enabling them to achieve higher levels of economic development with much reduced levels of greenhouse gas emissions and environmental damage. Copying the negative example of industrialized nations is certainly not sustainable.

Former UN Secretary-General Kofi Annan pointed out the inconvenient truth that, "energy security cannot be achieved without recognition of the environmental consequences of energy consumption, 'especially our currently overwhelming and deeply entrenched reliance on fossil fuels.'"³⁷ He said "the need to increase energy supplies in order to fight poverty could entail a vicious circle but added that this does not need to happen" because energy supplies do not depend on fossil fuels only.³⁸

In order to move toward sustainable development, developing countries also must systematically decrease the carbon intensity of their economic development through renewable energy systems, enhanced energy efficiency, and introduction of clean technologies, with the financial and technological assistance of industrialized countries. Thus, with respect to developing countries, the purpose of the CDM can be understood as assisting in the transformation of their economies. Therefore, the CDM is a crucially important global financial vehicle to catalyze national transitions toward sustainable development in host countries

by increasing "green investment" flows into energy supplies, transportation, and other industrial sectors.³⁹ In this sense, it is evident, as the acting head of the UN Climate Change Secretariat stated, "that the Kyoto Protocol is making a significant contribution towards sustainable development of developing countries."⁴⁰

Reality

The reality of CDM projects has so far been quite different from their initial conception.⁴¹ As has been noted, almost all proposed and approved projects to date have primarily focused on maximizing the generation of CERs instead of focusing on sustainable development.⁴² Thus, three contentious issues related to carbon dioxide capture and storage ("CCS"), HFC-23 projects, and forest conservation, arose.⁴³

First, including CCS projects aimed at capturing CO₂ emissions from industrial sources and subsequently storing the gas underground or in the sub-seabed of the oceans in the scope of the CDM raises not only complicated technological questions with regard to ensuring permanence and monitoring, but also legal questions as to whether the injection of CO₂

in geological formations should count as a non-emission, emission reduction, or carbon sequestration.⁴⁴ It also raises more fundamental points as to the contribution to sustainable development of such projects. Critics allege that this kind of technological advance channels substantial research and development into end-of-pipe technological fixes without contributing to long-term benefits to low-carbon intensive technological development. Though in fact, it might actually delay the transition from fossil fuels to more sustainable energy systems.⁴⁵ The Member States of the Kyoto Protocol confirmed that

carbon dioxide capture and storage in geological formations should lead to the transfer of environmentally safe and sound technology and know-how, Noting that the Intergovernmental Panel on Climate Change special report on carbon dioxide capture and storage provides a comprehensive assessment of the scientific, technical, environmental, economic and social aspects of carbon dioxide capture and storage technologies as mitigation options.⁴⁶

However, it was also recognized that "there remain a number of unresolved technical, methodological, legal and policy issues relating to carbon dioxide capture and storage activities under the clean development mechanism" and "that there is a need for capacity-building on carbon dioxide capture and storage technologies and their applications."⁴⁷ It is therefore timely and necessary to place a wider assessment of CCS and sustainable development on the research agendas.

Second, another challenge to the promotion of sustainable development by the CDM concerns the proposed inclusion of

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HFC-23 projects. HFC-23, a greenhouse gas listed in Annex A of the Kyoto Protocol, is a by-product in the production of Hydrochlorofluorocarbons (HCFC-22), an ozone-depleting gas regulated under the Montreal Protocol. Incineration of HFC-23 at existing production sites is already an accepted and practiced CDM project, generating low cost CERs (\$0.50 per tonne of CO₂ equiv.). Expanding the scope of CDM projects to new incineration sites could create the perverse incentive to increase the production of HCFC-22 to generate larger amounts of HFC-23. Sustainable development is further undermined by the fact that HFC-23 projects provide no technology transfer to developing countries and the low cost CERs from these projects could actually lead to outpacing other high-quality projects. Again, no final decision has been taken on this issue and the MOP1 asked the Subsidiary Body for Scientific and Technological Advice (“SBSTA”) for further elaborations.⁴⁸ Also, it is recommended that the discussions around this issue seriously consider the impacts on sustainable development due to the extension of such projects.

Third, one of the major omissions of the current design of the climate regime is a plan for reducing emissions from deforestation in developing countries and accounting for forest conservation activities. A proposal by Papua New Guinea and Costa Rica submitted to the 11th Conference of Parties (“COP”)/MOP1 in 2005 seeks to include forest conservation activities under the CDM or, alternatively, suggests elaborating an optional Protocol to the Climate Convention. Yet, at COP13/MOP3 held in Bali, there was still no final decision made regarding the role for avoided deforestation in the CDM. Thus, forest conservation, avoided deforestation, and accounting for both will be dealt with as part of the post-2012 package. Still, the inclusion of forest conservation projects could bring about the win-win situation envisaged by sustainable development, where economic value is attached to the protection of ecological assets. For developing countries, CDM benefits from “avoided deforestation” could bring about social and economic improvements via the transfer of environmentally sound technologies, in this case ones not directly linked to the project, as well as wider environmental benefits, such as biodiversity protection.

Safeguards

Sustainable development must be clearly defined, and seriously and actively pursued through the CDM. Ensuring the integrity of the CDM with regard to the sustainable development paths of host countries, demands strong safeguards. However, no such safeguards exist for ensuring sustainable development. Despite the above-proposed relatively straightforward definition of sustainable development in a climate context, for example, where economic growth is decoupled from GHG emission growth, the climate regime has yet to embrace this understanding.

To meet the requirements of sustainability, a CDM project with adverse trade ramifications will need to demonstrate an ability to overcome the still existing obstacles and shortcomings of the Kyoto/Marrakech system.

The legal review of CDM projects, whether it takes place under the compliance system of the Kyoto Protocol,⁴⁹ an international arbitral tribunal,⁵⁰ or the WTO Dispute System, will supposedly establish a definition of sustainable development requirements under the CDM. Regardless, it is important that climate law and practice construe a coherent understanding of sustainable development. While searching for the conceptualization and definition of sustainable development as an external tributary into international climate law, the converse normative flow might be at least as valid and probable, and perhaps more significant in the long run.⁵¹

If sustainable development is to be seriously pursued, CDM projects will need to go beyond more immediate impacts and provide “long-term benefits” as required by Article 12(5) of the Kyoto Protocol. However, those immediate benefits are equally necessary. No long-term benefits can be attributed to the CDM if it does not lead to real, measurable, and additional emission reductions.⁵²

The benefits generated by CDM projects may lessen reliance on carbon-intensive development. An analysis of sustainable development benefits accruing from CDM projects has identified the following advantageous impacts: direct financial incentives for proving the competitiveness of new technologies for energy reduction, renewable energy generation, and increase of energy efficiency, such as sustainable energy technologies; development of supporting policy initiatives; increased understanding and acceptance of the importance and application of sustainable energy technologies; dissemination of best-practice techniques; strengthening of local institutional, financial and technological capacity; increased and sustainable foreign investment; and increased access to sustainable energy services.⁵³

Arguably, the most sophisticated analytical methodology for identifying sustainable CDM projects is the proposed Gold Standard, though other approaches exist.⁵⁴ The Gold Standard aims to ensure that CDM projects deliver real emissions reductions and clear contributions to sustainable development. The criteria established are divided into three screens: the project type, additionality and baselines, and sustainable development. In regards to the latter particularly, the Gold Standard creates a sustainability matrix, in addition to an environmental impact assessment and stakeholder consultation. The matrix aims at assessing a project’s contribution to sustainable development based on its environmental, social, and economic impacts.⁵⁵ The key variables are assessed on the basis of on-site measurement, existing data, and stakeholder consultation, and can score nega-

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tive or positive. If the overall contribution is positive and non-negative in all key components, then a project is considered as contributing to sustainable development.

While the Gold Standard certainly is laudable, its success will depend on its acceptance by project developers, host and investor countries, and the multilateral climate regime, particularly the Executive Board. So far, it has acquired a closer and more specific understanding of sustainable development. The Gold Standard, together with other approaches to identifying “sustainable” CDM projects,⁵⁶ helps to clarify the substance of sustainable development not only in the particular context of CDM projects, but also beyond this mechanism. The identified criteria and components, if they are accepted and used to guide further project development, would reflect the understanding of the international community, both North and South, of sustainable development. This understanding could be decisive if compliance with WTO norms were at stake.

PROCEDURALS

Additionally, procedural safeguards of direct contribution of CDM projects to sustainable development in developing countries, more specific requirements on sustainable impact assessment, public consultation and participation, and benefit sharing⁵⁷ have yet to be included in the CDM regime.⁵⁸

Impact Assessment

As with the response to sustainable development indicators, the idea of a mandatory environmental and sustainable impact assessment for all CDM projects was seen as an infringement on the sovereignty of potential host States. As a result, the final language of the agreement is weak, requiring nothing more than an analysis of environmental impacts only if the host country makes it mandatory for the project to be approved.⁵⁹ The CDM Modalities and Procedures do not provide for a situation where the host country does not have any laws on environmental impact assessment. However, if stakeholders have concerns about the local environment or the social impact of a CDM project, then the project should be evaluated under the highest international environmental and social assessment procedures and standards.⁶⁰

However, the more stringent the rules on environmental and sustainable impact assessment are, the more costly CDM projects might become. Since a host country benefits from a CDM project, the absence of harmonized international rules may create an incentive for the host country to refrain from insisting on a thorough impact assessment, in order to make its own market attractive for CDM projects. “The CDM’s geographical flexibility,” warn Meijer and Werksman, “should not become a means of channelling projects to host countries with the lowest environmental standard.”⁶¹

Internationally harmonized rules on environmental and sustainable impact assessment of a CDM project would counter such a perverse incentive. In order for a CDM project to pass a sustainability test, they might, indeed, be necessary. Still, such a test would evaluate the circumstances of a particular CDM project. In this case, it needs to be shown that the environmental and sustainable impacts were thoroughly assessed.

Public Participation

Involvement of stakeholders, defined as “the public, including individuals, groups or communities affected or likely to be affected” by the CDM project,⁶² gives an opportunity to a wider circle to comment on CDM projects at various stages of the project cycle. The modalities of the CDM require certain types of information to be made public. Public participation could lead to benefits in regards to environmental integrity and sustainable development. Local communities and NGOs could influence project design as their knowledge of local conditions might be of particular value, thus making it easier for project developers to recognize community needs and gain public support, and to avoid delays, financial risks, local unrest, or legal action.

So far, stakeholder involvement requirements are only of a procedural character. Comments from the public must be invited and compiled and form an official input as part of the validation and registration process of a project. However, the concerns of stakeholders are not required to be substantially reflected in the project development. Again, these restrictions on direct public involvement resulted from the unwillingness of countries with different approaches to public participation to agree on harmonized standards.⁶³

However, the requirements of environmental integrity and sustainable development may demand a stronger commitment to stricter and harmonized standards for and more direct influence of public involvement.⁶⁴ The reference to international standards for public participation would prevent a “race to the bottom” toward countries with low or no regulation on public involvement.

IN SUM

Despite the fact that it is the stated goal of the CDM to achieve the ultimate objective of the UNFCCC and to assist non-Annex I countries in developing sustainability, the present regulatory framework remains somewhat rudimentary in setting up and standardizing essential substantial and procedural requirements for meeting these goals. Therefore, the rather pragmatic and fragmented approach taken so far to ensure the CDM’s environmental and sustainable integrity will need to be replaced by a stronger, harmonized regulatory framework.

CONCLUSION

Whether the CDM will provide a basis for future multilateral climate policy depends on the willingness of nations to commit themselves to the deeper emission cuts that, as scientific evidence suggests, are necessary.⁶⁵ Discussions about the CDM during the negotiations of COP13/MOP3 in Bali in December 2007 signified the considerable potential of the CDM to bring about consensus on the terms of global climate policy at some point in the future.

UNFCCC Executive Secretary, Yvo de Boer, noted at this event:

The CDM has been the focus of intense scrutiny, and rightly so, by those who wish to ensure the mechanism’s environmental integrity and contribution to sustainable development, as well by those who want

to ensure cost effectiveness. The conclusion that we can draw, looking back from this milestone, is that the CDM is delivering what it was meant to deliver—emission reductions and development. What’s more, it has shown that it can evolve, adapt and improve.⁶⁶

This positive conclusion will also be subject to scrutiny and criticism in the future. Despite the achievements, much still needs to be done in order to secure sound environmental outcomes of the CDM.

Whether the CDM is going to play an important role in any post-2012 agreement will depend on the CDM’s ability to meet its triple goals: to assist non-Annex I Parties in achieving sustainable development, to contribute to the ultimate objective of the Convention, and to help Parties included in Annex I achieve compliance with their quantified emission limitation and reduction commitments.⁶⁷

Still, the increasing interest in the CDM has spread to non-Kyoto countries as well. The Regional Greenhouse Gas Initiative of seven U.S. states, for example, envisages a cap-and-trade system to be in place by 2009. The plants covered by the scheme will presumably be allowed to use “offset credits,” emissions reductions achieved outside the electricity sector. Such credits could be “born in the USA” following similar rules as those from projects generating emissions reduction under the CDM. However, the plan envisages that under certain conditions, they may also stem directly from CDM projects.

The implications for the environmental integrity of the CDM should non-Kyoto Parties be allowed to receive CERs are yet to be assessed. While the interest in the CDM is steadily increasing, so are the challenges to ensuring its environmental integrity and its contribution to sustainable development.



Endnotes: Is the Clean Development Mechanism Sustainable?

¹ Kyoto Protocol to the United Nations Framework Convention on Climate Change art.12, Dec. 11, 1997, 37 I.L.M. 22 [hereinafter Kyoto Protocol].

² Kyoto Protocol, *id.*

³ CDM Statistics—Issuance, United Nations Framework Convention on Climate Change website, <http://cdm.unfccc.int/Statistics/Issuance/CERsRequestedIssuedBarChart.html> (last visited Feb. 16, 2008).

⁴ CDM Statistics, United Nations Framework Convention on Climate Change, <http://cdm.unfccc.int/Statistics/index.html> [hereinafter CDM Statistics] (last visited Feb. 16, 2008).

⁵ Press Release, Point Carbon, Buyers seek to insure against CDM project liability (Jan. 17, 2008), available at www.pointcarbon.com (access restricted to paying subscribers).

⁶ Erstein Meijer & Jacob Werksman, *Keeping it Clean—Safeguarding the Environmental Integrity of the CDM*, in LEGAL ASPECTS OF IMPLEMENTING THE KYOTO PROTOCOL MECHANISMS MAKING KYOTO WORK 192 (David Freestone & Charlotte Streck eds. 2005).

⁷ Axel Michaelowa, *Creating the Foundations for Host Country Participation in the CDM: Experiences and Challenges in CDM Capacity Building*, in CLIMATE CHANGE AND CARBON MARKETS: A HANDBOOK OF EMISSION REDUCTION MECHANISMS 305 (Farhana Yamin ed., Earthscan 2005), available at http://www.hm-treasury.gov.uk/media/C/A/Michaelowa_Creating_the_foundations.pdf (last visited Feb. 25, 2008).

⁸ United Nations Framework Convention on Climate Change art. 2, May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

⁹ This applies to the CDM as well as to the other flexibility mechanisms: international emissions trading and joint implementation.

¹⁰ UNFCCC, *Report of the Conference of the Parties serving as the meeting of the parties to the Kyoto Protocol on its first session, held at Montreal from 28 November to 10 December 2005* [Montreal COP 2005], *Principle, Nature, and Scope of the Mechanisms Pursuant to Article 6, 12, and 17 of the Kyoto Protocol*, FCCC/KP/CMP/2005/8/Add.1, 4 (Mar. 30, 2006), available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a01.pdf> (last visited Feb. 18, 2008) [hereinafter UNFCCC Montreal COP 2005].

¹¹ Kyoto Protocol, *supra* note 1, art. 12(2).

¹² Carbon Sequestration, CDM Investment Newsletter (BEA International & the Climate Business Network), Nr.3/2004, available at http://www.joanneum.at/encofor/publication/CBNet_newsletter_3_04_with_ENCOFOR_policy_brief.pdf (last visited Feb. 18, 2008).

¹³ See Meijer & Werksman, *supra* note 6, at 197-203 (explaining that other “safeguards” for environmental integrity are the determination of baselines,

their methodology and modalities to avoid “leakage,” the increase of GHG emissions elsewhere).

¹⁴ Kyoto Protocol, *supra* note 1, art. 12(5)(c).

¹⁵ Mark Kenber, *The Clean Development Mechanism: A Tool for Promoting Long-Term Climate Protection and Sustainable Development?*, in CLIMATE CHANGE AND CARBON MARKETS: A HANDBOOK OF EMISSION REDUCTION MECHANISMS 263, 269 (Farhana Yamin ed., Earthscan 2005).

¹⁶ UNFCCC, Montreal COP 2005, Implementation of Article 6 of the Kyoto Protocol, FCCC/KP/CMP/2005/8/Add.2, para. 4(a) (Mar. 30, 2006), available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf> (last visited Feb. 25, 2008).

¹⁷ See, e.g., Axel Michaelowa, *Untergräbt der Clean Development Mechanism den internationalen Klimaschutz?*, Die Volkswirtschaft. Das Magazin für Wirtschaftspolitik (Aug. 2007).

¹⁸ UNFCCC, *Report of the Conference of the Parties on its Seventh Session, Held at Marrakesh from 29 October to November 2001* [Marrakesh Accords], *Modalities and procedures for a clean development mechanism as defined in Article 12 of the Kyoto Protocol*, Decision 17/CP.7, annex, paras. 51, 52 (Jan. 21, 2002), available at <http://unfccc.int/resource/docs/cop7/13a02.pdf> (last visited Feb. 18, 2008) [hereinafter UNFCCC Decision 17/CP.7].

¹⁹ See, e.g., Christina Figueres, *Sectoral CDM: Opening the CDM to the Yet Unrealized Goal of Sustainable Development*, 2 MCGILL INT’L J. OF SUSTAINABLE DEV. L. & POL’Y 1, 5-26 (2006). One should, however, bear in mind that such safeguards might increase the cost of CDM projects. In this context, it has to be remembered that CDM was included to provide Annex I countries with a cost-effective means of complying with their obligations. If the cost of reducing GHG emission in developing countries grows, the incentive to ‘cheaply mitigate abroad,’ which was criticized by a significant number of Member States, might sharply diminish. While domestic emissions reductions by Annex I Parties are surely positive, the fading financial stream into developing countries reduces their capacity to meet their own proactive policies and laws. Increasing emissions reduction costs in developing countries brings CDM into disrepute, thus additional measures must be introduced to help developing countries with their financial and technical needs.

²⁰ Intergovernmental Panel on Climate Change, *Fourth Assessment Report, Climate Change 2007: Mitigation of Climate Change*, ch. 12, Sustainable Development and Mitigation (2007), available at <http://www.ipcc.ch/ipccreports/ar4-wg3.htm> (last visited Feb. 18, 2008).

Endnotes: Is the Clean Development Mechanism Sustainable?
continued on page 82

²¹ See Kenber, *supra* note 15, at 265; see also CHRISTOPH SUTTER, SUSTAINABILITY CHECK-UP FOR CDM PROJECTS – HOW TO ASSESS THE SUSTAINABILITY OF INTERNATIONAL PROJECTS UNDER THE KYOTO PROTOCOL 3 (Wissenschaftlicher Verlag 2003); Duncan French, *Climate Change Law: Narrowing the Focus, Broadening the Debate*, in SUSTAINABLE JUSTICE: RECONCILING ECONOMIC, SOCIAL AND ENVIRONMENTAL LAW 273 (Marie-Claire, Cordonier-Segger & Christopher Gregory Weeramantry eds., Martinus Nijhoff Publishers 2005).

²² See UNFCCC, *Further guidance relating to the clean development mechanism*, FCCC/KP/CMP/2007/L.3 (Dec. 3–14, 2007), available at <http://unfccc.int/resource/docs/2007/cmp3/eng/103.pdf> (last visited Feb. 18, 2008).

²³ Figueres, *supra* note 19, at 2.

²⁴ UNFCCC, *Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on its Second Session, held at Nairobi from 6 to 17 November 2006*, FCCC/KP/CMP/2006/10/Add.1 (Mar. 2, 2007), available at <http://unfccc.int/resource/docs/2006/cmp2/eng/10a01.pdf> (last visited Feb. 18, 2008) (“affirming that it is the host Party’s prerogative to confirm whether a clean development mechanism project activity assists it in achieving sustainable development”) [hereinafter UNFCCC 2006 COP/MOP Report]; see also United Nations Environmental Programme [UNEP], *Legal Issues Guidebook to the Clean Development Mechanism*, 49 (June 2004), available at <http://cd4cdm.org/Publications/CDM%20Legal%20Issues%20Guidebook.pdf> (last visited Feb. 18, 2008) [hereinafter UNEP CDM Guidebook].

²⁵ See CHRISTINA FIGUERES, INTERAMERICAN DEVELOPMENT BANK, INSTITUTIONAL CAPACITY TO INTEGRATE ECONOMIC DEVELOPMENT AND CLIMATE CHANGE CONSIDERATIONS: AN ASSESSMENT OF DNA’S IN LATIN AMERICA AND THE CARIBBEAN (2004).

²⁶ See, e.g., Steve Thorne & Emilio Lèbre La Rovere, Helio International, *Criteria and Indicators for Appraising Clean Development Mechanism (CDM) Projects* (Oct. 1999), available at www.pelangi.or.id/database/Artikel/CriteriaPaper.doc (last visited Feb. 19, 2008); WWF International, *The Gold Standard: Quality Standards for CDM and JI Projects* (2003); see UNEP, *CDM Information and Guidebook*, 16–28 (2d ed. 2004), available at <http://cd4cdm.org/Publications/cdm%20guideline%202nd%20edition.pdf> (last visited Feb. 18, 2008) [hereinafter UNEP CDM Information and Guidebook] (provid-

ing examples of major sustainability indicators that can be used in relation to CDM projects).

²⁷ The rationale behind this requirement is that the host State is free to explore the main linkages between the CDM projects and impacts on social, environmental, and economic dimensions of their national policies. Thus, host countries can select CDM projects that bring about the largest developmental benefits.

²⁸ UNFCCC, Marrakesh Accords, *Modalities and Procedures for a Clean Development Mechanism, as defined in Article 12 of the Kyoto Protocol*, FCCC/CP/2001/13/Add.2 (Jan. 21, 2002), available at <http://unfccc.int/resource/docs/cop7/13a02.pdf> (last visited Feb. 18, 2008) [hereinafter CDM Modalities & Procedures]; see also CDM Modalities & Procedures, *id.* annex, para. 40(a).

²⁹ See, e.g., UNEP CDM Information and Guidebook, *supra* note 26, at 15 (suggesting a range of co-benefits, such as reduction in air and water pollution through reduced fossil fuel use, extended water availability, reduced soil erosion, and protected biodiversity, creation of employment opportunities in target regions or income groups, promotion of local energy self-sufficiency); see also CATHLEEN KELLY & NED HELME, CTR. FOR CLEAN AIR POLICY, ENSURING CDM PROJECT COMPATIBILITY WITH SUSTAINABLE DEVELOPMENT GOALS (2000) (quoting Costa Rica’s national definition of CDM Projects that: CDM projects should be compatible with and supportive of Costa Rica’s national environmental and developmental priorities and strategies, including biodiversity conservation, reforestation and forest preservation, sustainable land use, watershed protection, air and water pollution reduction, reduction of fossil fuel consumption, increased utilization of renewable resources and enhanced energy efficiency. Projects should enhance the income opportunities and quality of life for rural people, transfer technological know-how, and minimize adverse consequences).

³⁰ See Figueres, *supra* note 19, at 2.

³¹ See Kenber, *supra* note 15, 266 (noting that in practice it is unlikely that projects will be made subject to stringent approval criteria as governments, especially countries short of foreign investment, will be reluctant to risk losing inflow of funds and the opportunity to build a portfolio of projects).