The Clean Development Mechanism and Africa

New Partnerships for Sustainable Development:
The Clean Development Mechanism under the Kyoto Protocol

Report from a Regional Workshop, Accra, Ghana, 21-24 September 1998.

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1 INTRODUCTION

This document presents a summary of the issues presented and discussed at the African Regional Workshop on the Clean Development Mechanism (CDM), which was held in Accra, Ghana, 21-24 September 1998. The CDM was introduced in Article 12 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). The objectives of CDM are to assist non-Annex I Parties to the UNFCCC to promote sustainable development, and to assist Annex I Parties to achieve compliance with their emission limitation and reduction commitments under the Convention.

Africa contributes a very small proportion of the world's greenhouse gas emissions. At the same time the continent is highly vulnerable to the effects of climate change which may seriously impact on countries' development efforts. In order to set the background for the workshop and the deliberations of the participants, Chapter 2 presents a brief discussion of Climate Change and Sustainable Development in Africa. Chapter 3 further defines the context, aims and format of the workshop. This is followed in Chapter 4 by a summary of the papers presented during the four days. The papers covered activities in the energy, forestry, agriculture, industry and transport sectors, and addressed issues including:

- general perspectives on the CDM
- institutions and governance of the CDM
- baselines and additionality in the CDM
- design of projects
- project finance under the CDM

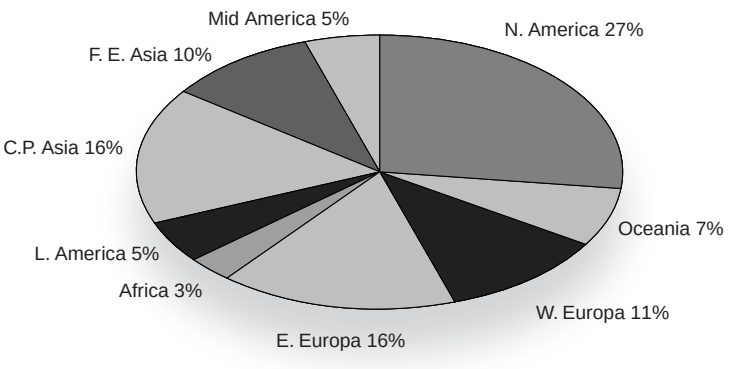
Chapter 5 presents a summary of the main issues discussed including modalities of the CDM, governance, equity, CDM projects, share of proceeds and capacity building. A number of areas of consensus emerged among workshop participants. These areas are described in Chapter 6. Finally a full list of participants is provided.

2 CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT IN AFRICA

Africa is a minor contributor of global GHG emissions, a fact clearly indicated by its share of global carbon dioxide emissions. Africa's share accounted for only 3.2% in 1992 as shown in fig.1, and its share of methane emissions, the next most important GHG is equally small, only 7.7% of the world's total in 1991. However, according to the Intergovernmental Panel on Climate Change (IPCC), Africa is one of the most vulnerable areas world-wide to the likely impacts of climate change. Thus, reductions in the already modest emissions from Africa are unlikely to make a significant impression on the potentially serious impacts of climate change on the continent. Nevertheless, there are good reasons for African countries to pursue mitigation measures, by limiting future GHG emissions, because such measures can provide opportunities to satisfy the urgent developmental needs in a sustainable way, for example by adopting modern, low-emitting technologies. At the same time all reductions of GHG emissions contribute to the overall goal of limiting climate change.

Energy and land-use sectors dominate African GHG emissions, with the former accounting for 32% and the latter 37%. The relatively low industrial activity in the continent accounts for the low industrial share of emissions as shown in fig.2. Although

Fig. 1
Regional carbon dioxide emission from energy sector and cement production 1994 total 6.2 Gt



Africa's share of global carbon emissions is very small, it has been increasing steadily, rising from 25 to 184 million metric tons of carbon between 1950 and 1991. During the same period, per capita emissions rose from 0.12 to 0.28 metric tons of carbon. Solid and liquid fuels continue to dominate carbon emissions generating about 41% and 38% in 1991, compared to 73% and 28% in 1950. Emissions from gas and cement production are very small, though increasing use of gas will change this situation in the future. In global terms emissions from the continent will continue to be low for the immediate future with the exception of South Africa, which depends significantly on coal for power production and presently accounts for about 1.4% of global GHG emissions presently.

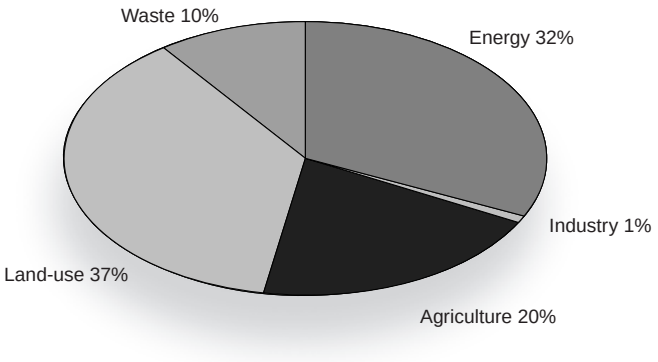
Africa has been described as the continent most vulnerable to the impacts of climate change. The relatively low capacities in African countries and high dependence on natural systems will weaken the continent's ability to respond to the likely adverse impacts of climate change. A recent IPCC report indicates that the temperature of the continent may rise by about 0.2°C per decade up to the year 2050, with the coastal zones warming more slowly than the interior, and that this warming may lead to increased open water and soil/plant evaporation. Also, a rise in sea level of around 25 cm is expected by 2050 depending on ocean currents, atmospheric pressure and natural land movements (IPCC, 1997). These changes may have profound effects on Africa's terrestrial ecosystems, hydrology and water resources, and agriculture and food security in the continent. Depending on the economic performance of countries, the impact on the socio-economic systems could be devastating. African countries need to develop adaptive strategies to reduce their vulnerability.

However, countries in African should be fully involved in mitigation strategies as well as adaptation strategies because mitigation strategies offer them opportunities to choose more environmentally friendly options for improving the overall quality of life of their citizens. Presently, Africa is the lowest consumer of high quality energy, one of the main driving forces for effective socio-economic growth. Development options for growth in the energy sector can significantly assist African countries to make major steps in supplying improved energy services for use in demand sectors such as household, transport and industry. Two areas where substantial improvements can benefit African countries significantly, are energy efficiency and renewable energy sources. Also, improvements in the agricultural sector can greatly improve food security in the region and reduce food imports. The overall economic impact of this move could be substantial. In addition, Africa's involvement in the different climate change processes can offer indirect benefits. These include improved understanding of local and regional environmental problems and opportunities for integrating environmental, development and income distribution issues, strengthening capacities in the energy, planning and economic sectors and opportunities for transferring technological and financial resources.

The challenge is for African countries to develop effective adaptation and mitigation strategies that will fulfil their development needs while satisfying the objectives of the UNFCCC. It is gratifying to note that despite political instability in a few countries, the continent as whole has sustained the economic recovery that started in the early 1990s. The overall economic growth now surpasses the population growth rate, in contrast to the situation in the 1890s and early 1990s. As an example, the economic growth rate in 1997 was just over 3% with over 40% of African countries recording more than 5%, while the population growth rate was 2.4%. The economic growth rate has been forecast at be around 4% for 1998. Improved financial management, high oil prices and improved agricultural output were singled out as the main factors driving these favourable growth rates. This trend gives room for optimism about the economic future of the continent.

Despite the low African contribution to global GHG emissions, African countries have demonstrated their interest in participating in the climate change process on many occasions. In Brazil in 1992, 38 of the 53 African countries signed the UNFCCC and 12 coun-

Fig. 2
Sectoral distribution current GHG Emissions from Africa



tries ratified it before it came into force in March 1994. At present 44 African countries have ratified the convention. A majority of the countries on the continent are currently undertaking climate change projects that are not only contributing towards slowing GHG emissions but are contributing to their sustainable development objectives. In addition, African participation in the global climate debate has been steadily increasing.

3 THE REGIONAL WORKSHOP

From September 21-24, 1998, 80 experts, officials from universities, research institutions, industries and NGOs, climate change negotiators from Africa, and experts from other global regions and international organisations met in Accra, Ghana to discuss critical methodological and implementation issues related to the 'Clean Development Mechanism' (CDM) in Africa. The CDM is proposed by article 12 of the Kyoto Protocol to the UNFCCC, adopted at COP3 in Kyoto, Japan in December 1997. The stated objectives of the CDM are to assist non-Annex I Parties to promote sustainable development and Annex I Parties meet their obligations. Many implementation and methodological issues remain, however, unresolved.

This workshop was held as part of a series of workshops organised by IEA/UNEP with the aim of improving the understanding of CDM within the developing regions of the world and exploring ideas related to the associated methodological and implementation issues. Unresolved aspects of the CDM include its rules, procedures and governance, and a large number of methodological issues. It is expected that the next Conference of the Parties, in Buenos Aires scheduled to take place between 2-13 November 1998, will make decisions regarding some of these issues. Therefore assisting African negotiators to develop their perspectives on these issues forms part of the purpose of the Workshop.

If the CDM is properly instituted and managed, Africa and other developing regions of the world can benefit from this mechanism as they strive to improve the overall quality of life of their citizens, but this can only be achieved through participation in the forthcoming negotiations. Providing additional financial and technological resources for sustainable development for non-Annex 1 Parties as stipulated in the Protocol is crucial for the overall development of developing countries.

The main purpose of the workshop was to facilitate the engagement of African governments in the negotiation of CDM modalities through providing a forum for open discussion of key issues seen from an African perspective.

The specific objectives of the workshop were:

- to develop a common understanding of the CDM as it applies to African countries
- to identify critical political, institutional and methodological issues relating to the operation of the CDM
- to develop an African perspective on the key issues regarding the implementation of the CDM

The workshop took place over four days. It was opened by Mr J.E. Afful, the Minister for Science, Technology and the Environment, Ghana and closed by Mr Lee Ocran, the Deputy Minister for Science, Technology and the Environment, Ghana.

The first two days were spent on a series of presentations on the various aspects of CDM. Each presentation was followed by comments from a selected discussant and plenary discussions on the issues raised in the presentation. The next two days were primarily devoted to working group activities on the main issues identified by the participants. The results of the working groups were presented in the final session of the workshop.

4 PRESENTATIONS

Session I: Clean Development Mechanism – General Perspectives

- *CDM, Sustainability and the UNDP*, Ademola Salau, UNDP
- *CDM: Methodological Issues and Capacity Building Needs*, Christina Zumkeller, UNFCCC Secretariat, Bonn, Germany
- *Annex I Countries and the CDM*, Kristi Varangu, IEA, Paris, France
- *A Latin American Perspective*, Mauricio T Tolmasquim, Federal University of Rio De Janeiro, Brazil

Presentations by Ademola Salau, Christina Zumkeller and Kristi Varangu provided a context to the workshop by presenting work in progress on the CDM in UNDP, UNFCCC and IEA respectively. Mauricio T Tolmasquim of the Federal University of Rio de Janeiro, Brazil added a regional perspective from Latin America.

The workshop heard that the UNDP is doing a great deal of work in the area of sustainable development, including the possible use of sustainable development indicators in CDM. They also support a variety of climate-change and energy-related projects worldwide. The UNFCCC held a workshop on baselines and related issues in Abidjan, Côte d' Ivoire in the week prior to the Accra workshop where the issue of sustainable development indictors was also discussed, alongside various possible methodologies for baseline calculation, monitoring, verification and certification. The issue of credibility was emphasised by Ms Zumkeller. Ms Varangu of the IEA spoke of the importance of and potential for domestic action in developed countries, and emphasised that the CDM should favour "win-win" scenarios, and give a certain amount of ownership to developing countries, unlike JI. Mr Tolmasquim outlined the similarities and differences between JI and CDM, laying particular emphasis on the multilateral nature of the latter and the important role to be played by its Executive Board. He mentioned the debates in Latin America over whether sink projects should count as CDM projects and whether countries should be allowed to take commitments voluntarily.

- *Africa and the CDM: Perspectives for Growth*, Prof. Ogunlade Davidson, University of Sierra Leone, Freetown, Sierra Leone and Dr Youba Sokona, Enda Energy, Dakar, Senegal
- *The CDM: Some questions for Africans*, Dr George Manful, EPA, Accra, Ghana

Dr Youba Sokona of Enda Tiers Monde, Senegal, Prof. Ogunlade Davidson of University of Sierra Leone and Dr George Manful of EPA GHANA introduced the African perspective.

Dr Sokona spoke of the unique situation held by Africa with regard to the CDM. African countries have regarded climate change as environmental rather than developmental to date and were virtually excluded from the AIJ pilot phase. The reasons given for this exclusion include lack of emission reductions, infrastructural deficiencies and a weak private sector. Dr Sokona stressed that it is important to examine how the CDM will affect the other financial mechanisms now in place: GEF, ODA, FDI and so on. The drive for development objectives should take priority in CDM project development in Africa. Emission reductions must be seen in the perspective of future avoidance of emissions. For African countries with low emissions and high vulnerability to climate change, the option of adaptation must be a priority. In the view of this, Dr Sokona suggested that region-based quotas should be integrated in the interests of equity and Africa should focus on large-scale infrastructural projects and regional co-operation.

Prof. Davidson examined Africa's exclusion from AIJ more closely. He noted that there is a bias towards countries that already receive a considerable amount of ODA and FDI, and emphasised that the market base of CDM meant a huge opportunity for increased financial flows, technology transfer and private sector stimulation. However this would only take place in Africa if the correct enabling environment were nurtured. This must include effective financial and legal structures, and a well-educated workforce. Therefore the issue of capacity building was of particular importance for African countries. Dr Manful posed a series of questions with regard to African participation in the CDM. They included the following: Do we have reliable national data? Do we know what kind of baseline we can use? Are we conversant with the different types of baseline? Do we have national environmental action plans? What is the difference between the bilateral and multilateral approaches? In addition he raised the issues of credit sharing and banking, adaptation costs – a significant issue in Africa, leakage and supplementarity.

Session II: Institutions and Governance of the CDM

- *Participatory Implementation and Governance of the CDM*, Paul Opoku-Mensah, John Hopkins University, Baltimore, USA

- *Good Governance in the CDM*,
  Prof. M.Mwandosya and Hubert Meena,
  CEEST, Tanzania

Paul Opoku-Mensah made a strong case for the participation of all stakeholders in the various aspects of the CDM: project development and implementation, baseline calculation, monitoring, verification and certification. He outlined the following potential stakeholders: Annex I public and private agencies; public and/or private agencies from Africa; local (project) communities in Africa; multilateral and regional development banks; interest groups and academic institutions, who would provide expertise in areas such as for baseline calculation. In his words, "the success of the CDM will depend on its ability to attract and incorporate stakeholders whose interests will keep it going."

Hubert Meena's paper was prepared with Prof. Mark Mwandosya and considered the requirements for good governance in the CDM. These requirements include: clear definitions of sustainable development, vulnerability and adaptation, baselines and certification, avoidance of bureaucracy; clear determination of additionality; a strong approach to equity and the enhancement of North-South / South-South co-operation. The composition of the Executive Board was highlighted as an important issue, as was the need for African entities to manage and verify projects. The issues of certification, creation and management of an adaptation fund, financing the CDM and sharing of the proceeds were all given weight in his presentation.

Session III:
Baselines and Additionality in the CDM

- *Baselines and Additionality in the CDM: Is an African Baseline possible*?,
  Dr R.S. Maya, SCEE, Harare, Zimbabwe and
  John Turkson, UNEP-RISOE, Denmark

Dr. Turkson opened the session by posing the question: What should be our input to the CDM process? He outlined a number of conceptual issues to be addressed by Africans – development criteria; equity issues; and the rate of implementation. He stressed that lack of preparedness by African countries may lead to marginalisation of these countries. Should baselines be regional, sub-regional, national, or project specific? CDM issues, he remarked, have to be discussed within the economic context of the region.

Dr R.S. Maya's presentation addressed the baseline issue, illustrating the problems that would be generated in Africa were a number of projects to accumulate without reliable national or regional baseline information to monitor. He warned against relying solely on project-specific data, as this would make it difficult to track regional growth. He posited an "S-curve" for "CDM-forced" development in the region – emissions would rise in the medium term and then reduce in the long term to avoid the natural-growth development path that would be unsustainable to the global environment. This, he said, could form a basis for African negotiation. National baselines were problematic for two reasons: there is not enough data and they would tend to curb development if applied strictly. However, in the long term they are vital. Dr Maya further noted that services were becoming the drivers of development elsewhere and this would have to be considered in Africa. R&D are major issues in the region. It was noted that infrastructural development in non-emitting areas such as telecommunications would have a reducing effect on the transport-sector and it was asked whether this factor could be accounted for in the CDM?

Session IV:
Designing Projects for the CDM: Energy, Transport, Industry

- *The CDM: Energy Projects for Africa*,
  Khorommbi Matebi, EDRC, Cape Town,
  South Africa
- *Designing Energy Projects in Africa for the CDM*,
  John Abeeku Brew-Hammond, KITE, Kumasi,
  Ghana
- *The CDM as a Tool for Enhancing Sustainable Development*,
  Prof. Francis Yamba, CEEEZ, Lusaka, Zambia

Both Khorommbi Matebi and John Abeeku Brew-Hammond spoke of potential large-scale CDM projects that could be designed in the African context. The energy and transport sectors were highlighted by Mr Matebi, who pointed out that Africa's energy priorities – performance enhancement, efficient technologies, regional inter-connection, rural decentralisation – fall within the scope of CDM projects. Specific energy projects include end-use efficiency projects; transmission system enhancement, fuel substitution, renewable energy diffusion and energy supply technology upgrading. In the transport sector, efficiency and fuel switching are priority areas for consideration. Regional projects, an area, which is already under exploration in Southern Africa through SADC and the Southern African Power Pool (SAPP) show particular potential. Large-scale regional projects were also emphasised in Abeeku Brew-Hammond's paper. Existing projects include the Manantali Dam, and a gas pipeline extending from Nigeria to Côte d'Ivoire is under development. Inter-country and regional grids could also be extended or created under the CDM. Many successful rural decentralisation and renewable energy projects could

be further developed under the CDM. Examples of such projects include bio-diesel (in Mali) and biogas and biomass (in Ghana).

Prof. Yamba began with the assertion that the sustainability of a CDM project must be measurable. He outlined a five-point criteria system for achieving this: financial, economic, environmental, technological and social sustainability must all be integrated into and measured in a CDM project. This has the added advantage of integrating the aims of investor and host parties. The CDM is a market-based mechanism; and Africa must use it to strengthen its markets.

Sustainability criteria should be based on a country's emissions and sinks potential. In Zambia, existing projects that are viable CDM projects fall within the areas of forest management, household energy improvement (electric and improved charcoal stoves), and ethanol production from sugar cane. The latter scores particularly highly on the five-point criteria system proposed by Prof. Yamba.

Session V: Designing Projects for the CDM: Agriculture and Forestry

- *Rural Development in Africa - Beyond the myths and towards the limits*,
  Moussa Seck, Enda SYSPRO, Dakar, Senegal.
- *The Case for Including Forestry Projects in the CDM*,
  Timothy Afful-Koomson, WRI,
  Washington DC, USA

Moussa Seck gave a demonstration of Enda SYSPRO's "agricultural production systems of the third generation". The systems which have been used in Senegal for over 10 years are based on close studies of Senegal's agricultural sector. Mr Seck concluded that it was a myth that agriculture is impossible in the Sahel. SYSPRO's agricultural systems do not simply preserve the environment: they produce it. The project transforms large areas of the Sahel into plots of vegetable-producing land surrounded by trees. The project provides employment, creates exportable produce and provides sinks in Senegal. This is a project that can be considered for the CDM.

Timothy Afful-Koomson took up the debate over whether forestry and other sequestration projects should be included in the CDM. He pointed out that such projects would have to be additional to any environmental plans of host countries, but improvements and extensions of existing national forestry parks can be considered "additional". Mr Afful-Koomson further examined the cost effectiveness and potential of sequestration projects in a number of African countries and projected a credit value of $10/tonne Carbon. It was suggested aggregate baselines could be constructed for these projects.

- *How the CDM might work in Zimbabwe*,
  R.S. Maya, SCEE, Zimbabwe

Dr Maya traced the hypothetical development path of a potential CDM project in Zimbabwe. He presented preliminary results from a project in which four potential CDM projects were pinpointed in Zimbabwe. These examples raise a multitude of issues concerning CDM in Zimbabwe and Africa in general. Important issues revealed by the case studies include the initialisation of CDM projects, domestic government involvement, the scale of CDM projects, risk and additionality. Dr Maya proposed the following sequence: project initialisation (conceptualisation, team building, formalisation, packaging); external marketing; project brokering; official/ stakeholder negotiations; measurement for certification; project development, monitoring and verification.

Session VI: Project Finance for the CDM

- *Financing CDM projects: The Perspective of a Multilateral Bank*,
  Johannes Heister, World Bank,
  Washington DC, USA
- *A Potential Modus Operandi for the CDM*,
  Steve Lennon, ESKOM, South Africa

Johannes Heister began with an account of the World Bank's involvement in the climate change issue to date and noted that they will be working with JI and CDM but not IET. He gave an outline of existing World Bank financed AIJ projects including that in Burkina Faso. There are two proposed World Bank products for JI and CDM: the Strategy Studies Program and the Prototype Carbon Fund (PCF). The first of these is an assessment of the UNFCCC process and existing international and national reports on the national GHG offset potential of a client country, the international GHG offset market, and the capacity building needs of that country with a view to project development. The PCF is an experimental model for financing CDM projects which aims to be fully consistent with the UNFCCC and the Kyoto Protocol. It will allow investors to buy credits from the World Bank which will channel the funds into projects in host countries to generate the credits. Advantages for developing countries include credit sharing and market position.

Dr Lennon proposed a model for operating CDM based on the following principles.

- a common currency of Carbon Emission Reductions (CERs) which become Emission Reduction Units (ERUs) when applied against QELROs; involvement of any entity – private, govt, etc.;
- a seed fund for CDM agencies and adaptation projects;
- developing countries can initiate and fund their own CDM projects to accrue CERs;
- a percentage of all CERs go to the CDM agency;
- market prices for ERUs will determine what projects will be financed.
- operating systems are to be defined first;
- an equitable and balanced representation of countries;
- common criteria to apply to JI and IET;
- AIJ/JI projects from before 2000 can be used.

Dr Lennon pointed out that adaptation is a crucial issue for African countries since they are amongst the most vulnerable in the world, and since the negative effects of climate change will outweigh the positive effects of mitigation projects. He proposed the following division of credits: 50% to the developed country partner; 20% to the developing country partner; 20% to developing country government; 4% to the adaptation fund; 1% to the CDM agency. He concluded that "CDM is a new and exciting mechanism which can create a platform for sustainable development internationally. The mechanism as proposed meets the needs of both public and private sectors of both developed and developing countries."

5 ISSUES DISCUSSED

The participants were divided into three working groups that considered the following aspects of the establishment and operation of CDM in Africa.

Governance of the CDM

The Executive Board: The existence of an Executive Board of CDM was seen as one of the aspects that distinguish the CDM from AIJ/JI. Participants also considered that the Executive Board could be used as a guarantor for improved transparency in the operations of CDM. All participants expressed the need for a well-defined role for the Executive Board with a minimum of bureaucracy. The executive board should not only ensure the credibility of emission reduction credits but also that the development objectives of host countries are achieved. The composition of the Board was discussed and participants suggested that it should have 11 members, of which at least six should be from developing countries.

African CDM focal points: There was disagreement as to whether African countries should begin to establish CDM agencies or focal points, and if so, how it should be done. Members pointed out that focal points were often inefficient at the national level, and the complicated practicalities of regional focal points may make it difficult to develop. Some participants held the view, in general, a small number of dedicated individuals can achieve more in disseminating information and developing projects than an ascribed focal point. However, others thought that a focal point is important and can play a vital role in the future of CDM activities.

Modalities of CDM

Baselines: The discussions focused on the types of baseline that are appropriate in project development, and sector and national development in Africa. Also discussed was the idea of having regional and sub-regional baselines. However, the major barrier to determining baselines in Africa is the lack of precise and reliable data. Furthermore, appropriate emission factors are not yet available in most African countries and this is also seen as an obstacle to the determination of accurate emission baselines. Many participants were of the opinion that regionally agreed emission factors would be more appropriate than national emission factors as a start in the CDM process. For the medium and short terms, participants thought that regional and sub-regional baselines may not prove useful in the African context because of the disparities within the region. Hence, participants were of the view that a combination of national and project-specific baselines will be required for CDM projects in Africa. However, national baselines should fully reflect the national objectives for development, sustainability and equity.

Additionality: Emission reductions in CDM projects are to be additional to those reductions that would have occurred in the normal course of events. Participants were keen to point out that in most African countries emissions were currently negligible in global terms. With increased flow of CDM projects, overall emissions will rise in the short and medium terms before stabilising at a later stage. Hence, the workshop participants

were of the opinion that Annex 1 Parties should undertake domestic reductions during this period for the ultimate objective of the Convention to be achieved. In terms of financial additionality, the view was expressed that CDM should be additional to other financial mechanisms. In Africa the emission reduction component of a project can improve the overall viability and attractiveness of the project to an investor.

Monitoring, Verification and Certification: It was widely agreed that sustainable development objectives should be incorporated in the processes of monitoring, verification and certification. The lack of competence to carry out these activities in African countries was of concern to participants. This was seen as an important capacity building objective in relation to the CDM in Africa. Also discussed was the establishment of sub-regional bodies in existing organisations for undertaking verification and certification of CDM projects.

Equity Issues

Equity concerns were raised by many participants who thought that Africa has been marginalised in many international mechanisms in the past. It was asserted that there should be equity not only between developing countries and the developed world, but also among the different developing countries and regions. To this end, participants suggested that the Executive Board could adopt a type of regional quota system for approving CDM projects. Concerns about the marginalisation of Africa were based primarily on the continent's comparatively weak private-sector infrastructure. The relatively small potential for emission reductions and the weak international negotiating power of the continent were also raised. However, it was noted that Africa is very vulnerable to the effects of climate change although its contribution to the problem is minimal. Therefore, demands for emission targets for African countries are not relevant at the present time.

Getting Started

Pilot Phase: The idea that some sort of pilot phase should be established to examine the efficacy and detailed operation of the CDM was suggested by many participants. As there has been only one AIJ project in Africa since the inception of that program, participants expressed their concern that the continent might have limited experience in the operation of such projects, which may prove useful in the operation of CDM. It was therefore the opinion of participants that a seed fund to assist the development of creditable projects in the continent will help to build confidence and improve the overall understanding of the potential of the CDM in Africa.

Seed Funding: The idea of establishing a seed funding to enable African countries to fully participate in CDM was deliberated upon because several participants expressed that there is limited capacity within these countries to operate effectively in a market environment. This funding could be used for the following:

- Development of regional, sub-regional and national institutional mechanisms/Agencies
- Development of adaptation strategies based on country studies
- Development of project portfolios at national, sub-regional and regional levels
- Development of local capacity for CDM projects
- Support of targeted R&D and Demonstration programmes

CDM Projects

Participants were of the opinion that all CDM projects should satisfy the purpose of establishing the CDM as stated in the protocol. However, participants expressed their desire to include sustained economic growth, poverty reduction, transfer of technology and capacity building as part of the sustainable development objectives of CDM projects.

Also, support was expressed for the development of clear guidelines for project formulation and development. All necessary steps should be taken to minimise the transaction costs of projects because these are usually very high for projects undertaken in Africa. Participants were concerned that many African countries would not be able to attract CDM projects by themselves because of the relatively low GHG reduction potential of the individual projects. However, projects of a more significant potential could be arrived at through regional or sub-regional pooling and packaging of projects, enabling more African countries to access the CDM possibility.

Share of the Proceeds

Adaptation: Reference in the Protocol text to a "share of the proceeds" to be used to cover adaptation programmes in vulnerable areas was seen as a very positive element for vulnerable countries in the continent. Participants thought that more discussion is needed in this area, as it deserves serious consideration. This is particularly true for the particularly vulnerable arid and semi-arid zones of Africa, which are not in a position to attract a large number of projects. An adaptation fund could be established, and it needs not be limited to funding gained from CDM projects. Four per cent was proposed as a reasonable share of CDM proceeds to be used for adaptation purposes.

Credit-sharing: It was widely agreed that credits should be shared among involved parties in the CDM project. Credits gained by non-Annex 1 countries could be banked for future use against possible future commitments, or sold in the emissions credit market. However it was also argued that holding or banking credits was a first step towards accepting targets. There was disagreement as to whether credit sharing should be written into the CDM rules, and if so on what basis. Some participants felt it should be part of the project negotiation process.

Capacity Building

***Capacity building requirements for CDM*:** A range of capacity building requirements were mentioned in order to better prepare African countries for participating in CDM. These include: stimulating the private sector; raising awareness about the CDM and climate change in governments, the private sector and the general public; building capacity in baseline calculation, monitoring, verification and certification; research and development of technology and the creation of institutions at the national, sub-regional and regional levels to channel CDM activity.

Other financial mechanisms: It was repeatedly expressed that CDM should not impact adversely on existing financial mechanisms. GEF's role of creating an enabling environment should be quite separate from that of the CDM but GEF may need to be restructured in order to create an environment to compliment CDM activities. Furthermore, CDM should not have an impact on ODA. However, participants were of the opinion that ODA may be channelled towards those development activities, which do not have an associated emission reduction component. The stimulation of Foreign Investment should be an explicit goal of CDM activities. Informing and preparing the African private sector is a priority.

Development Criteria

To ensure the sustainable development criteria of the CDM, certain objectives need to be formulated. It was often stated that the term "sustainable development" is notoriously difficult to define and this could hinder rather than advance the cause of development. Some disagreement surrounded the question of which criteria should be foremost in sustainable development objectives – should it continue to focus on the overwhelming (but essential) task of "poverty alleviation" or should it focus on more short-term objectives such as improving infrastructure or job-creation?

6 AREAS OF CONSENSUS

The workshop was described as a success by all participants, who benefited greatly from interaction with many other experts in the field from around the continent. The workshop provided an opportunity for discussing both the potential and the problems of CDM in Africa. The developmental and environmental aspects of the climate change debate were debated extensively. An understanding of the basic elements of the CDM debate was shared, and the outlines of a common African perspective were developed. A list of suggested recommendations for African negotiators at COP4 in Buenos Aires is as follows:

Functioning of the CDM

- ***Quota System (Regional Basis)***: To the extent possible, the CDM should operate through the market. Given that Africa cannot compete with other developing regions, projects should be allocated according to regions, at least on an interim basis.
- ***Principle of Inclusion*:** As a mechanism aimed at the attainment of sustainable development in developing countries, the CDM should ensure the participation of all major stakeholders to ensure the success of the process. Since the CDM is market-based, the participation of the private sector is particularly important in its success.
- ***CDM and other existing mechanisms***: CDM must not be used as a substitute for other mechanisms such as ODA and GEF. However, CDM can operate in combination with GEF and other funding mechanisms. Furthermore, CDM can complement Foreign Direct Investments.
- ***Sharing of credits***: It is recommended that a part of the total credits generated in a CDM project be allocated to the host partner and the host country government, with 4% retained for an adaptation fund and 1% for administration of the CDM.

Governance of the CDM

- ***Composition of Executive Board***: The composition of the Executive Board should be based on equal geographical representation, which is a well-established UN practice.

Baselines

- ***Determination of Baselines***: Project and sector baselines for emission reductions must be inline with national baselines. All CDM projects must be inline with the national development, sustainability and equity objectives of the host African country.
- ***Improvement of Baseline Methodology***: Efforts should be made to improve capacities in African countries in areas of data collection and analysis, so as to improve the accuracy and reliability of project, sector and national baselines.

Monitoring, Verification and Certification

- ***Linkage between Sustainable Development and GHG Emissions:*** The national sustainable development objectives, together with the GHG emission reductions of African countries, must be accounted for at each stage of project development, monitoring and verification.
- ***Capacity Building:*** African countries need to strengthen local and regional capacities for effective monitoring and verification of sustainable objectives and emission reductions. The possibility of utilising GEF funds for this activity should be explored.

CDM Projects

- ***Linkage between Certification, Monitoring and Verification, and Project development:*** Suitable mechanisms should be instituted to ensure that the various activities that lead to the certification, monitoring and verification of projects are properly harmonised with the project development cycle.
- ***Type of Projects:*** For Africa to gain maximum benefit from CDM, infrastructure, energy and transport projects were seen as priorities. In this context, it is recommended that regional and sub-regional projects (involving the pooling or packaging of country projects together) should be considered.
- ***Creation of Adaptation Fund:*** An adaptation fund for the poor and most vulnerable countries must be established within the CDM. However, this fund should have contributions from other flexible mechanisms of the Protocol of the Convention.

Seed Fund

Creation of Seed Fund: It is recommended that the CDM should start with a seed fund to assist African countries to better prepare for this mechanism especially since they had very little or no AIJ experience. Areas for such assistance can include:

- Regional and Institutional development
- Information exchange
- Training
- Targeted Research, Development and Demonstration
- Public awareness creation at all levels
- Capacities for certification, monitoring and verification of CDM projects

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