

**Ministry of Environment & National Development Unit  
(Environment Division)**  
*in collaboration with*  
**UNEP Risoe Centre**

**Capacity Development for the  
Clean Development Mechanism (CD4CDM)**

**First National Workshop**  
23-24 January 2008



# **WORKSHOP PROCEEDINGS**

**Swami Vivekananda International Convention  
Centre, Pailles, Mauritius**



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# CD4CDM National Workshop Proceedings

23-24<sup>th</sup> January 2008  
Swami Vivekananda International Centre,  
Pailles,  
Mauritius

## 1.0 INTRODUCTION

The Ministry of Environment & National Development Unit (MoE), the implementing agency for the Capacity Development for the Clean Development Mechanism (CD4CDM) project in Mauritius, funded by the Netherlands Government and implemented by UNEP's UNEP RISOE Centre (URC) in Denmark along with further technical support from SouthSouth North, the Regional Team in South Africa, organized the first National Workshop on CD4CDM from 23-24 January 2008 at the Swami Vivekananda International Centre, Pailles, Mauritius. Seventy-nine participants attended the workshop out of eighty-two who were invited to attend the workshop. The participants were from varied professional fields, which included representatives from stakeholder Ministries, parastatal bodies, academia / research Institutes, financial institutions, Engineers, Architects, Managers, Power Producers (CEB and Independent Power Producers), Industries including hotels, NGOs, as well as local experts and consultants. (The list of participants along with contact details is at **Appendix I**).

## 2.0 Workshop Objectives

The objectives of the first national workshop were to –

- (i) give an overall introduction to the CDM concept and benefits, as well as generate support from local institutions for participating in the CDM;
- (ii) identify a national portfolio of CDM projects; and
- (iii) design Sustainable Development Criteria against which CDM projects would be assessed prior towards getting approval from the Designated National Authority.

Presentation materials and handouts were circulated to participants during the workshop.

## 3.0 OPENING SESSION

**3.1 Mr S. Seebaluck, Permanent Secretary of the Ministry of Environment & NDU**, welcomed distinguished guests and participants. He recalled the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) and explained that the CDM was one of the three flexibility mechanisms within the Kyoto Protocol, which allowed industrialized countries to lower the overall costs of achieving their emission targets. In his address, he stated that the developing countries, including Small Island Developing States (SIDS), were thus being offered an opportunity to mobilize additional funds for the implementation of projects that help mitigate climate change and at the same time advance sustainable development.

He pointed out that the MoE was the focal point of the Kyoto Protocol and underlined the lack of local expertise, which had hindered active participation within the global carbon market. He hoped that that the strategic National Workshops would bridge the gap between the actual CDM requirements and the expected ones so that Mauritius is propelled as a key CDM investment destination. He concluded by thanking the Government of Netherlands for providing the required financial support as well as UNEP RISOE Center and SouthSouth North for their technical assistance.

A copy of Mr Seebaluck's Address is at **Appendix II**.

**3.2 Hon. A.K. Bachoo, Minister of Environment & NDU**, in his address, reiterated his appreciation on behalf of the Government of Mauritius to the Government of Netherlands for its financial support towards the realization of the CD4CDM project. He stressed that low-lying island states, such as Mauritius, will be faced with increased risks of severe climate change impacts. He pointed out that the MoE had initiated works to protect the coast from the effects of sea level rise through coastal protection works, mangrove propagation programmes as well as through continuous monitoring and protection of coral reefs. He added that an "Integrated Coastal Zone Management Framework for Mauritius" had already been initiated and that the MoE was in negotiations with UNDP in order to seek financing for the project "Adapting Coastal Zone Management to Address the Impacts of Climate Change".

He stressed that the CDM had provided uneven benefits for different developing nations, with China supplying up to 61 % of emission credits purchased since 2002 due to relatively low costs of emissions abatement, while Africa and still less SIDS, have gained little from technological transfer to kick start development activities. He

highlighted that such a situation could also be explained by a lack of capacity and by the complexity of the mechanism.

He stated that the MoE had, to date, approved and issued host country letter of approval for two projects, a bagasse-based energy project and a waste-to-energy project. He further pointed out that the MoE had initiated actions with the UNDP for charting out a CDM National Strategy.

He finally extended special thanks to the workshop facilitators and declared the workshop open.

A copy of Hon. Minister's Address is at **Appendix III**.

## **4.0 WORKSHOP DAY 1**

The Workshop agenda and proposed opening address by Mr Glenn Hodes can be found at **Appendix IV** and **V** respectively.

### **4.1 PRESENTATION 1 - THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) & KYOTO PROTOCOL and WORKSHOP OBJECTIVES and EXPECTATIONS - Mrs D. Lan-NG, Director, Department of Environment**

**Mrs D. Lan-NG, Director, Department of Environment**, recalled climate change as a consequence of global warming and briefly explained the scientific basis of the greenhouse effect. She listed the global as well as the local impacts of climate change and underlined the guiding principles, major provisions and status of implementation of the UNFCCC and the Kyoto Protocol.

She highlighted the objectives of the CD4CDM project as being:

- to improve institutional preparedness for hosting CDM projects,
- to undertake capacity building of local experts and relevant institutions,
- to promote Mauritius as a CDM investment destination, and
- to support the development of a pipeline of actual Project Idea Notes (PINs) and Project Design Documents (PDDs) for the CarbonExpo which is held annually in Bonn.

She also pointed out the scheduled activities within the CD4CDM project would include the design of a project review and approval procedure, a Mauritius National CDM website, and CDM Investors Guide as well as a series of 3 National Workshops and up to 2 sectoral workshops. She informed that local consultants would be expected to prepare a portfolio of at least 8 PINs and 2 PDDs. She stated that upon completion of National Workshop 1,

- participants would be expected to have a broad understanding of the CDM and be introduced to the drafting of PIN documents,
- a list of potential avenues for CDM in Mauritius and sustainable development criteria would have to be identified.

### **4.2 PRESENTATION 2 – INTRODUCTION TO CDM – Mr Steve Thorne, SouthSouth North**

**Mr Steve Thorne, Chemical and Energy Engineer, SouthSouth North, South Africa**, delivered an extensive presentation on CDM projects with emphasis on real case studies, followed by explanations on sustainable development and community benefits in CDM, the economics of CDM, Global Carbon Markets and Project Opportunities, Global Carbon Credit Transactions, CER purchasers, Transaction modes, Project approval and project monitoring issues, CDM project activity cycle, CDM modalities and procedures, CDM institutions and regulatory bodies

### **4.3 Questions & Answers Session 1**

#### **Issues Raised**

#### *1. Extent of Government's involvement within CDM projects*

The major role of Government is to evaluate the project based on a pre-defined set of sustainable development criteria and upon approval, issue a host country letter of approval.

However, Government may still reject the project at the Conference of Parties.

#### *2. Worst-case scenarios: Bankruptcy of company*

Penalty clauses should be included within the Emission Reduction Purchase Agreements (ERPAs)

#### *3. Relationship between price of carbon credits and risks*

When the credits are sold at an early stage within the project cycle, such as at the project design, initial registration /validation, a lower price would be obtained due to the risks involved to generate the credits.

*4. CDM – a gateway for Annex 1 countries to reduce their responsibility towards climate change.*

In industrialized countries e.g. in Japan to achieve 1 ton of CO<sub>2</sub> reduction may cost around US\$50 while in a developing state this will cost around US\$10. CDM was developed to put efficiencies in the market so that the least cost is incurred in the reduction of each ton of CO<sub>2</sub>. CDM reduction in greenhouse gas emissions is only supplemental to the domestic actions that have to be taken by Annex 1 countries.

*5. Difficulties to achieve economies of scale in Mauritius*

Project developers in Mauritius might explore possibilities such as implementing projects of similar nature and put together a programme across neighboring countries or countries in Africa. There might even be possibilities of bundling of projects, which could enable larger economies of scale.

*6. Certified Emission Rights (CERs) v/s Voluntary Emission Rights (VERs)*

CERs are credits generated under the CDM (which are bought by Annex 1 countries with a view towards reaching emission reduction targets) within the compliance market. VERs are of a poorer quality since they are generally generated under business as usual scenarios and are used to offset various things such as events, aeroplane flights, international meetings, etc

The Gold Standard is a high quality label equivalent to the CDM, coupled with further stringent requirements (such as sustainable development factors). Gold Standard CERs and Gold Standard VERs will obtain a higher premium within the compliance and voluntary markets respectively.

*7. Carbon footprints*

Carbon costs, carbon intensities or carbon profiles of various products are being monitored and published for various reasons:

With a view to negotiate lower emission targets when such GHG binding limits would apply to them, several developing countries have initiated such studies.

In some cases, companies with international standing, wanting to show benchmarking within a group of companies operating worldwide, try to identify emission intensities and identify potential opportunities for trading CERs within the group.

The procurement of goods is being influenced by the environmental attributes of that product, and with the movement towards a 'carbon constrained' planet, more and more companies are measuring the carbon footprints of their operations.

*8. Credit registries*

The Executive Board of the CDM has a registry dealing with projects involved in the compliance market while the Voluntary Market has its own registries, e.g. the Chicago Carbon Exchange Registry, the Gold Standard Registry.

*9. Projects with little or no sustainable development benefits*

A tax on the accrued CERs could be levied and placed in a special 'Sustainable Development Fund'. However, the decision lies with the DNA/Government and on the type of legislations that could be formulated to regulate such cases.

*10. Issues that could be raised with the involvement of Annex 1 companies within a CDM project*

The CERs can be used notwithstanding the company that is putting the project together or the technology used.

*11. Validation by Designated Operational Entity (DOE)*

If an EIA is required for the particular project activity as per the law of the host country then Validation cannot be completed until the EIA licence has been granted. Furthermore, a project cannot complete the Validation process until it has received a letter of approval from the DNA of the host country.

## **Lunch Break**

### **4.4 PRESENTATIONS 3 & 4 –**

- **Centrale Thermique de Savannah (CTSav) CDM Project – Mr R. Ramlugon, Societe Usiniere du Sud Ltee &**
- **Gamma Civic Waste-to-Energy (WtE) CDM Project – Mr M.A. Yadallee, MoE**

**Messrs R. Ramlugon, Safety and Environment Manager, Societe Usiniere du Sud Ltee and M.A. Yadallee, Divisional Environment Officer, MoE, presented the 2 local CDM projects having already been**

issued “Host Country Letter of Approval” on the bagasse-fired cogeneration plant and waste-to-energy projects respectively, with particular emphasis on the greenhouse gas mitigation potential and project cycles undergone.

#### 4.5 GROUP DISCUSSIONS 1 – SUSTAINABLE DEVELOPMENT CRITERIA

The participants were then split into 4 groups and were assigned with the task of testing the CTSav and WtE projects against the sustainable development requirements of the Gold Standard. Messrs Steve Thorne and Glenn Hodes, Energy Economist, UNEP RISOE Center, Denmark facilitated the above exercise.

#### End of Workshop Day 1

### 5.0 WORKSHOP DAY 2

#### 5.1 PRESENTATIONS 5 – Group Presentation 1

A group presentation was organized whereby group leaders commented on the results of the sustainable development criteria exercise. A summary of the results is at the table below:

<b>Determination of Sustainable Development Criteria</b>			
<b>Criteria</b>	<b>CTSAV project</b>	<b>Gamma Civic</b>	
	<b>Group 1*</b>	<b>Group 3</b>	<b>Group 4</b>
<b>Local/Regional/Global Environment</b>			
<b>Water Quantity/Quality</b>	<i>Neutral</i>	<i>0 / - 1</i>	<i>neutral/+</i>
<b>Air Quality</b>	<i>+ 2</i>	<i>0 / - 1</i>	<i>-</i>
<b>Other Pollutants</b>	<i>+ 2</i>	<i>- 2</i>	<i>-</i>
<b>Soil Condition</b>	<i>+ 1</i>	<i>0 / - 1</i>	<i>neutral</i>
<b>Biodiversity</b>	<i>0</i>	<i>0</i>	<i>neutral</i>
<b>Social Sustainability &amp; Development</b>			
<b>Employment</b>	<i>0</i>	<i>0</i>	<i>neutral</i>
<b>Livelihood of the poor</b>	<i>0</i>	<i>0</i>	<i>neutral</i>
<b>Access to energy services</b>	<i>0</i>	<i>0</i>	<i>neutral</i>
<b>Human and Institutional</b>	<i>0</i>	<i>0</i>	<i>neutral</i>
<b>Economic and Technological development</b>			
<b>Employment(Number)</b>	<i>0</i>	<i>0 / - 1</i>	<i>neutral</i>
<b>Balance of Payment</b>	<i>+ 1</i>	<i>0 / - 1</i>	<i>-</i>
<b>Technological self reliance</b>	<i>0</i>	<i>0</i>	<i>-</i>
<b>Total</b>	<i>+ 6</i>	<i>0 / - 7</i>	<i>Neutral / -ve</i>

\* Group 2 did not present its findings but indicated that similar results had been obtained as for Group 1.

#### **Conclusions:**

- It was deduced that the Waste-to-Energy project would not have been approved if the Gold Standard was used by the DNA to evaluate the project, and would have, most probably, been followed by some contestation on the part of the project developers.
- Applying SDC can be very subjective, e.g. one group looked at the aspect of applying ash in plantations, and thus redefined the boundaries of the project while other groups did not consider such an aspect and restricted the boundary of the project.
- One of the interesting outcomes of the exercise was the presentation of a second baseline by one of the groups who favoured separation, reduction and recycling of waste instead of the business as usual scenario of sanitary disposal of all the wastes. However, it was unlikely that such a state of affairs could be reasonably expected to prevail as baseline scenario.
- **Robustness of the SDC**  
The Gold Standard is an internationally recognised way of evaluating projects. It can be used as such or as a guide for DNAs to approve or turn down a project based on strong reasons, which can stand up in court in case of legal issues.
- The exercise is meant to be hypothetical, but the Gold Standard is being used by some DNAs. Mauritius DNA may use the Gold Standard or decide to use some parts of it and should primarily consider what contributes to the sustainable development of Mauritius.

## **5.2 PRESENTATION 6 – INTRODUCTION TO CDM (Part 2) – Steve Thorne, SouthSouth North**

**Mr Steve Thorne**, elaborated on CDM project cycles, small scale projects, programmatic CDM, project boundaries, baselines, additionality, and project opportunities in CDM.

## **5.3 PRESENTATION 7 – CDM GOVERNANCE AND REGULATION – Mr Glenn Hodes, Energy Economist, UNEP RISOE**

**Mr Glenn Hodes, Energy Economist, UNEP RISOE Center, Denmark** further explained on the additionality concept and then elaborated on Designated National Authority Institutional Framework, Models, Operationalisation, Functions, Roles, and Approval Processes.

## **5.4 Questions & Answers Session 2**

### **Issues Raised**

#### *1. Authenticity of verifiers and certifiers*

According to Mr Glenn Hodes, the issue of verification is almost exclusively focused on the monitoring plan and whether the monitoring plan has been followed as per the proposals within the Project Design Document. The CDM instrument is a little too rigid in that respect because there is not room for deviations from the original monitoring plan. In most cases, project participants have been sloppy or negligent in terms of going through the monitoring plan that they have proposed in their PDDs.

#### *2. Dynamic Baselines and Multiple Baselines*

The range of alternatives to the project activity can give rise to a range of possible baselines. Project developers must analyse all possibilities and decide on the scenario that is most likely to have happened in the absence of the project.

#### *3. Range for Small scale projects*

The ceiling for small-scale projects dealing with combined heat and power is 45MW and any project below this capacity will qualify as small-scale.

#### *4. Funding micro-projects using CDM*

The avoided carbon emissions from photovoltaic cells are not enough to subsidise such undertakings. However, for micro-hydro projects, there are rural agencies working together with institutions responsible for utilities for the development of such projects, e.g. in Mozambique and South Asia

#### *5. Programmatic CDM in Mauritius*

Small, stand-alone PV projects themselves will not have enough avoided greenhouse gas emissions to be viable under CDM; Programmatic CDM rules would render such types of projects more viable but it is unclear by how much. A lot of microhydro and solar PV installations will need to be bundled to get sufficient scale to cover the high transaction costs of the CDM. In addition, programs are not always easy to implement in the short-term. Given the risk of not getting much value from carbon credits beyond 2012, this type of project probably should not be prioritized in Mauritius. A programmatic project that would likely garner more credits is bioethanol blending in the transport sector, as well as financing of Solar Water Heaters. A unique methodology for bioethanol blending exists in draft form, but has not yet been approved by the Executive Board. A unique methodology for Solar Water Heaters is also under development, but existing small-scale methodologies can also be used.

### **Lunch Break**

## **5.5 PRESENTATION 8 – PROJECT SCREENING AND IDENTIFICATION - An Overview of Project Idea Note (PIN) Development – Mr Glenn Hodes, Energy Economist, UNEP RISOE**

The presentation on “PROJECT SCREENING AND IDENTIFICATION” was delivered by **Mr Glenn Hodes** and was focused on the purpose, key elements to be included and contents within a PIN as well as buyers expectations. He briefly explained the critical elements within a PDD and concluded by giving a list of reference websites to the participants.

## **5.6 Questions & Answers Session 3**

### **Issues Raised**

#### *1. Market Demand for CERs*

Projections show that the Carbon Market will still be short of CERs, with the recent ratification of Australia to the Kyoto Protocol, there will be an increased demand for carbon credits and this may also potentially be the case for the United States of America (due to state initiatives such as California) who are making provisions for

linking up to other carbon trading systems. Even after 2012, the European Commission has given policy statements saying that they will continue the European Emission Trading Scheme.

### 2. *Price of CERs*

The price of the CERs might decrease due to the supply of CERs on the market from India and China. However, the long-term average price of CERs will correspond to long-term mitigation cost and this will be around €10 a tonne.

### 3. *Issuance of Credits*

Credits cannot be issued unless the DNA has issued the letter of approval, the project has been validated by one of the DOEs and the project is registered at the CDM EB. This process alone can take about 12-16 months. The CERs are issued after that the CDM EB has received the verification report, which generally happens on an annual basis for most projects. The auditors then verify whether the project has performed according to the monitoring plan proposed in the PDD and that the project is actually achieving the stated emission reductions. When the CDM EB receives the verification report, the CERs are finally credited to the project proponent's registry account within 30 days.

## 5.7 GROUP DISCUSSIONS 2 – IDENTIFICATION OF POTENTIAL CDM PROJECTS IN MAURITIUS

Mr Glenn Hodes stated that -

- Mauritius, being a small country and having small energy consumption, would not be as relevant or prominent as an instrument for financing some of its development project as in countries like India.
- the potential of CDM should not be ignored it is quite feasible for about a dozen projects in Mauritius to be registered before the end of Kyoto Protocol's first commitment period (that is till 2012).
- CDM will not bring in billions of dollars investment in the country but it will bring some investment. For some types of projects, the mere fact that there is a carbon finance component is leveraging other kind of finance.
- there is an incredible interest on the part of the financial community for such carbon credits which is a highly bankable commodity that actually having the CDM component in the project may bring in other investments that would not have normally occurred.

The participants then broke into 4 groups of 10-20 participants to brainstorm on potential CDM projects that are relevant to the Mauritian context.

## 5.8 PRESENTATION 9 – Group Presentation 2

A debriefing session was held whereby a list of all identified projects was drawn and is as follows:

### **IDENTIFICATION OF POTENTIAL CDM PROJECTS IN MAURITIUS:**

#### Group 1

\*Energy from biomass (coconut waste)  
Bio-diesel from coconut oil for electricity. Combined with PV  
\*PV panels for electricity in Mauritius  
Energy Efficiency in commercial and industrial building  
Seawater for air conditioning  
Bio-composting  
Solar Water Heaters (Integrated resource scheme and other green field schemes)  
Small co-op pig farm consolidation methane recovering  
\*Chillers – change of refrigerants (GTZ PIN)

#### Group 2

Reforestation 100 ha  
Growing coral reefs (underwater trees)  
Composting project  
Cogeneration throughout Mauritius (small scale)  
PV panel  
\*50 000 CFLs (in govt. building) and Street lighting LED lamps and \*Power bosses (motor controller for pumps and compressors)  
Bio-diesel (from waste sources 5% hotel chains)  
\*National blending of bio-ethanol with petrol  
Efficient energy engines for busses

#### Group 3

Energy



Increase bagasse co-generation  
Tapping of solar energy subsidizing SWHs  
\*Wind energy in Mauritius (25MW)  
2MW wind energy in Rodrigues  
Hydro 200kW + 330kW  
1 million CFLs to households

Industry  
Centralised cooling systems  
Intersector transport using biodiesel (trucks in busses)  
LPG in cars  
Smaller cars  
Mass Transit by BRT system  
Livestock waste for biogas

LULUCF  
Increase CV of bagasse?

Solid waste  
\*LFG powered electricity generation

#### Group 4

Afforestation/Reforestation of marginal sugar plantation land on Mauritius (or oil plants)  
Solar passive design for housing  
Wind and solar fuel switching from HFO in textile plants  
Energy efficiency in hotels  
Biogas from cattle

The facilitators then requested feedback from the participants on those projects that they consider would be most viable and where some actions had already been initiated and project participants already identified.

Following discussions, the following projects were identified as the most viable CDM projects for Mauritius:

- ♣ Energy from biomass (coconut waste)
- ♣ PV panels for electricity in Mauritius
- ♣ Chillers - change of refrigerants
- ♣ 50 000 Compact Fluorescent Lamps (CFLs) in Government buildings and Street lighting LED lamps and Power bosses (motor controller for pumps and compressors)
- ♣ National blending of bio-ethanol with petrol
- ♣ Wind energy on Mauritius (25MW)
- ♣ 1 million CFLs to households
- ♣ Energy efficiency in hotels
- ♣ Biogas from cattle
- ♣ Afforestation/Reforestation of marginal sugar plantation land on Mauritius (or oil plants)
- ♣ Mass Transit system

## **6.0 CONCLUSION & CLOSING REMARKS**

**Mr Glenn Hodes** cautioned that for some of the small-scale energy projects such as the micro-hydro or solar PV projects, a large amount of emission reductions would be required in order to make the CDM worthwhile and such projects would be better suited for the Voluntary Carbon Market. Tourists coming to Mauritius could also be very much interested in the opportunity to offset their emissions during their travel through very small renewable energy projects in Mauritius. There is a market for such projects and the CDM compliance market may not be the best option. He remarked that the biofuel opportunities, the packaged energy efficiency opportunities and the large scale wind project opportunities seemed the most viable options to pursue.

However, he stated that it was still not clear who will drive some of the projects identified or who would champion the projects.

Two additional national workshops would be organised whereby more learning-by-doing methods would be developed.

The next workshop would be even more focused on the project development process and on how to develop PDDs, understanding the Validation Process – how the auditors work together with project developers to establish the eligibility of CDM projects, looking more closely at financing issues – how do you do some of the

analysis of projects to determine whether the carbon credit can or cannot make a difference to the project, looking into some of the legal aspects that you have to consider when engaging in CDM projects

The last workshop would basically be focusing on more sophisticated issues like how to negotiate the Emission Reduction Purchase Agreement with some role playing exercises being carried out in this respect, Verification procedures and monitoring procedures for the DOEs.

In the meantime, the participants, especially **potential project participants/ developers and project champions** were requested to hold meetings and brainstorming session with other potential project participants to put their project ideas on paper and share these ideas with concerned ministries including the Mauritius DNA, so that the latter could start a dialogue of potentially supporting these projects under the CD4CDM project with some additional assistance from UNEP RISOE and SouthSouthNorth.

**Mrs Ng** also encouraged the project developers to submit PINs or draft PINs that could be finalised with technical assistance from UNEP RISOE.

The next workshop would be scheduled by end of March 2008.

## 7.0 Appendix

### 7.1 APPENDIX I: List of Participants

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7.2 **APPENDIX II:**

**WELCOME ADDRESS BY PERMANENT SECRETARY, MR S. SEEBALUCK**

Honourable Anil Kumar Bachoo, Minister of Environment & NDU  
Mr Steve Thorne from South South North  
Ms. Dominique Ng, Director of Environment  
Distinguished Guests,  
Ladies and gentlemen

Good morning.

On behalf of the Ministry of Environment and NDU and on my own behalf, I am pleased to welcome you all to this First National Workshop under the Capacity Development for Clean Development Mechanism Project, CD4CDM.

The Kyoto Protocol broke new grounds by defining three innovative “flexible mechanisms” to lower the overall costs of achieving its emissions targets. These mechanisms enable Parties to benefit from cost-effective opportunities to reduce emissions, including through investment in climate friendly projects other countries. The Clean Development Mechanism (CDM) is one of these three flexible mechanisms along with Joint Implementation and Emissions Trading. The CDM is an arrangement under the Kyoto Protocol allowing industrialised countries with greenhouse gas reduction commitments to invest in emission reducing projects in developing countries. The resulting reduction can be shared between the two parties concerned.

The CDM offers an opportunity to mobilize additional resources for the implementation of projects in developing countries that help mitigate climate change while promoting sustainable development.

The Ministry of Environment & NDU is the Designated National Authority (DNA) for the CDM. The CDM Office has been attributed the task of assessing potential CDM projects to determine whether they will assist the country in achieving its sustainable development goals and of issuing formal host country approval where this is the case. However, as in most countries, access to the CDM is found to be complex, lengthy and not user friendly. This is why we have sought the assistance of UNEP and UNDP to provide the necessary training to all stakeholders in order to enable the country to benefit from the CDM.

It is in this context that we are holding this workshop which is one in a series of three national workshops that we are organizing in collaboration with UNEP. We hope that at the end of the two days we shall become conversant with CDM requirements and that gradually we become a key CDM investment destination.

To conclude I would like to thank the Government of Netherlands for providing the required financial support for the realization of this project. Our appreciation also goes to the United Nations Environment Programme (UNEP), more specifically the UNEP RISOE Centre (URC) in Denmark and South South North, the Regional Team in South Africa, which are providing the necessary technical assistance to implement the CD4CDM project in Mauritius. As facilitator for this workshop we have with us Mr Steve Thorne, from South South North. We also have Mr Glenn Hodes from the UNEP RISOE Centre in Denmark who will join us later during the course of the workshop. On behalf of the Ministry of Environment and NDU, I would like to extend a very warm welcome to you, Mr. Thorne, and would like to thank you and UNEP for your useful collaboration.

Thank you very much for your attention.

Ladies and Gentlemen, I now like to invite Mr Steve Thorne to say a few words.

**7.3 APPENDIX III: ADDRESS BY HON. MINISTER**

**Speech by Honorable A.K. Bachoo, Minister of Environment & National Development Unit**

Mr Steve Thorne, Resource Person from SouthSouthNorth,  
Mr S. Seebaluck, Permanent Secretary,  
Mrs Ng, Director Department of Environment,  
Distinguished Guests,  
Ladies and gentlemen,

It is indeed a great pleasure for me to be among your midst this morning for the opening of the First National Workshop under the “Capacity Development for Clean Development Mechanism” project commonly referred to as the CD4CDM project.

I would like on behalf of the Government of the Republic of Mauritius to express my appreciation to the Government of Netherlands for its financial support towards the realization of this project.

In affirming our commitment to economic and social development, we need to respond firmly to the findings of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. This implies that if we delay emission reductions, we would be faced with increased risks of severe climate change impacts. More particularly, in the case of low-lying island states like Mauritius we have to face the serious challenges posed by sea level rise.

Our strategic response thus need to be two fold, one characterised by “Adaptation’ where we need to develop ways to protect our people and infrastructure by reducing their vulnerability to climate change impacts and the second one through “Mitigation” where we can lower our greenhouse gases emissions in the atmosphere so as to slow down the process of global climate change

My Ministry has already initiated works to protect our coast from the effects of sea level rise through coastal protection works at the most affected sites, mangrove propagation programmes and continuous monitoring and protection of coral reefs. We have also initiated a project for the development of an Integrated Coastal Zone Management Framework (ICZM) for the Republic of Mauritius. The ultimate objective of this project will be to promote sustainable use and development of our coastal zone through the elaboration of an ICZM strategy and an appropriate policy and regulatory framework for the coastal zone.

Concurrently, my Ministry is working in collaboration with the UNDP to seek financing under the Special Climate Change Fund to implement the project “Adapting Coastal Zone Management to Address the Impacts of Climate Change”. The objective of this project is to enhance local capacities to incorporate risks associated with climate change and variability into coastal management strategies, policies and plans.

As I mentioned earlier, our second response to climate change can be through mitigation - that is, lowering our greenhouse gas emissions. This is in spite of the fact that as a small island developing state our greenhouse gas emissions are negligible. In fact, all small island developing states of the world contribute only about 1% of the global GHG emissions. But we firmly believe that every action counts as we are running out of time.

The Kyoto Protocol established the first global mechanisms for the trading of carbon credits, so that reductions in emissions could occur where they are more economically efficient. Poor nations are exempt from the Protocol’s binding limits but are able to participate in the global project of emissions reductions by hosting projects under the Protocol’s Clean Development Mechanism.

The CDM is infact a project-based approach to reducing emissions, with new credits continuously being created as new projects are approved. It was intended from the beginning that the CDM would create sustainable development benefits for developing nations.

Many developing nations saw the opportunity to bring substantial investments and new technology into their nations. Indeed, the Kyoto Protocol mandates a dual goal of the CDM for both emissions reductions and sustainable development.

CDM projects are being conducted in more than 40 countries where about 825 CDM project activities have been registered with a total of about 85 billion of certified emission reduction (CERs) issued, each equivalent to one tonne of carbon dioxide, the main greenhouse gas responsible for global warming.

However, the CDM has provided uneven benefits for different developing nations. For example, China is the world’s second largest emitter after the US and forecasts are that China will capture the majority of projects, supplying up to 61 percent of emissions credits purchased since 2002 projects in the CDM market due to the relatively low cost of emissions abatement in China. On the other hand, Africa and still less SIDS have gained little from technology transfer to kick start development activities. The main reasons being lack of capacity and the complexity of the mechanism. While we are calling for the simplification of the CDM process at the

Meeting of the Parties Level, capacity needs to be developed in these countries to enable access to the mechanism.

### **Ladies and gentlemen**

To date, my Ministry, as Designated National Authority and focal point for the Kyoto protocol, has approved and issued host country letter of approval for two projects for consideration by the CDM Executive Board: the Compagnie Thermique de Savannah Ltée (CTSav) bagasse-based energy project and the Waste-to-Energy project from Gamma Civic.

Side by side my Ministry has already initiated actions with the UNDP for charting out a CDM National Strategy. This would be a major breakthrough in the overall CDM process, as the national strategy would enable us to identify key CDM investment thrusts that would promote our country as an important CDM investment destination. The strategy will also give us clear direction on the type of manpower that will be required together with its correlated education and training areas. We have now to re-focus ourselves on how CDM can be used to attract Foreign Direct Investment. This scenario would no doubt create a new business outlook where companies would be encouraged to provide appropriate and cleaner technologies. In our economic struggle of boosting up Foreign Direct Investment we have to seize the potential opportunities that would be offered to us through the CDM process to reshape our country's industrial bases with a view to attaining economic, social and environmental sustainability.

As rightly pointed out by Mr de Boer, the UNFCCC Executive Secretary; "Market mechanisms, such as the CDM and emissions trading, are essential to stimulate the green investment required to tackle climate change and move to a low-carbon economy".

May I express confidence that the CD4CDM Workshop will look into all the necessary aspects so as to make Mauritius an attractive CDM investment destination through the creation of CDM-friendly regulatory and business environments. I also informed that a website for CDM is presently under construction and will be shortly launched. This website will no doubt provide useful information to investors and would act as a key enabler in promoting CDM investment.

Finally I would seize this opportunity to extend my special thanks to the workshop facilitators, Messrs Steve Thorne and Glenn Hodes.

With these words, ladies and gentlemen, I have the pleasure to declare this workshop open and wish all participants fruitful deliberations.

Thank you.

7.4 APPENDIX IV: WORKSHOP AGENDA  
 23-24 January 2008  
 Swami Vivekananda Conference Centre – PORT LOUIS

Agenda

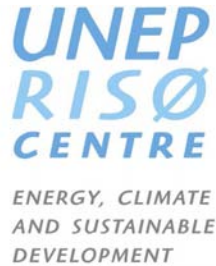
**DAY 1 - Wednesday, 23 January 2008**

Time	Programme	
08:45	Registration of Participants	
09:15	Welcome Address	Permanent Secretary, Ministry of Environment & NDU
09:20	Address by SSN / UNEP RISOE	Steve Thorne, SSN
09:25	Address by Minister of Environment	Hon. A. K. Bachoo, Minister of Environment & NDU
09:35	Tea Break	
10:00	<ul style="list-style-type: none"> <li>➤ UNFCCC and Kyoto Protocol</li> <li>➤ Workshop objectives and expectations</li> </ul>	Mrs D. Lan-NG, DNA Mauritius
10:20	<ul style="list-style-type: none"> <li>➤ Sustainable Development and Community Benefits in CDM</li> <li>➤ The Economics of CDM</li> <li>➤ Introduction to Global Carbon Markets and Project Opportunities</li> <li>➤ Project Approval and Project Monitoring Issues</li> <li>➤ CDM Modalities and Procedures</li> <li>➤ CDM Institutions &amp; Regulatory Bodies</li> </ul>	Steve Thorne, SSN
	Questions & Answers	
12:30	Lunch Break	
13:30	Presentations of Local CDM Projects Questions & Answers	<ul style="list-style-type: none"> <li>➤ Centrale Thermique de Savanne – Mr R. Ramlugon, SUDS Ltee</li> <li>➤ Gamma Civic Waste to Energy Project – Mr M.A. Yadallee, MoE</li> </ul>
14:30	Sustainable Development Criteria	Steve Thorne, SSN
15:00	Group Work: Developing a Set of Sustainable Development Criteria for Mauritius CDM sector	Facilitated by Steve Thorne, SSN
16:00	Tea	

**DAY 2 - Thursday, 24 January 2008**

Time	Programme	
09:00	<ul style="list-style-type: none"> <li>➤ CDM Project Cycle</li> <li>➤ Project size – small scale projects</li> <li>➤ Programmatic CDM</li> <li>➤ Project boundaries</li> <li>➤ Project baselines and additionality</li> <li>➤ Public participation</li> <li>➤ Project Opportunities in CDM</li> </ul>	Steve Thorne, SSN and Glenn Hodes, UNEP RISOE
10:30	Tea Break	
10:45	Introduction to project concept identification and description of possible project concepts in Mauritius	Glenn Hodes, UNEP RISOE
11:30	Elements of Project Appraisal Pre-feasibility tests of concepts Technical and Financial Risks  Questions and discussions	
12:30	Lunch Break	
13:30	Group work: Case Study and Identification of potential CDM projects in Mauritius	Facilitated by Steve Thorne, SSN and Glenn Hodes, UNEP RISOE
14:30	Group presentation	
15:00	Elements to be considered in the development of PINs	Steve Thorne, SSN and Glenn Hodes, UNEP RISOE
15:30	Concluding remarks and way forward	Steve Thorne, SSN, Glenn Hodes, UNEP RISOE and Mrs D. Lan-NG, DNA Mauritius
15:45	Closing of workshop 1	
16:00	Tea	

## 7.5 APPENDIX V: OPENING ADDRESS BY MR GLENN HODES



### Capacity Development for the Clean Development Mechanism (CD4CDM) Project

Premier Atelier National du 23-25 Janvier 2008  
Pailles, Maurice

#### Discours d'ouverture par Glenn Hodes, Économiste d'Énergie Associé au Programme des Nations Unies pour l'Environnement (PNUE) – Centre PNUE de Risoe

« Votre Excellence Monsieur le Ministre de l'Environnement, Madame la Représentante du Programme des Nations Unies pour le Développement, chers participants des ministères, des organisations non gouvernementales, des secteurs privés et financiers du Maurice.

Mesdames et Messieurs,

Je vous souhaite la bienvenue au premier atelier national du Programme CD4CDM pour la Promotion du Mécanisme de Développement Propre (ou MDP) au Maurice.

La nécessité de bien comprendre et maîtriser les mécanismes de financement de projets de développement propre (MDP) ayant un potentiel de diminution d'émission de gaz à effet de serre fait de plus en plus pressante. Cette initiative est lancée à un moment où le nombre de projets MDP enregistrés après 9 ans de croissance dynamique a franchi la barre de 890, c'est à dire qu'on estime 2,500 mega-tonnes d'émissions de CO<sub>2</sub> évitées avant 2012 - grâce à des projets qui remplacent ou améliorent des activités ou technologies émettrices. Alors que les opportunités du Financement Carbone augmentent chaque année avec des transactions financières qui ont atteint un volume de 30 milliards de dollars en 2006, l'Afrique ne bénéficie que de manière marginale de ces revenus additionnels. Ce contournement de l'Afrique doit prendre fin le plus rapidement possible, car il s'oppose à l'esprit fondateur du MDP, l'esprit de partage. L'Afrique est le continent qui pollue le moins, et en même temps, l'Afrique est le continent le plus vulnérable aux changements climatiques causés par les pays du nord.

Les pays industrialisés, principaux responsables du changement climatique, doivent donc s'engager. Ils doivent s'assurer que la croissance économique de l'Afrique, qui est un besoin urgent, ne suive pas leur mauvais exemple : Celui d'une croissance qui consomme les ressources limitées de la terre à une vitesse qui ne cesse de croître.

Bien que le continent ne soit pas laissé pour compte, car environ une vingtaine de projets industriels ou semi publics sont actuellement répertoriés, beaucoup reste à faire. La première étape de ce devoir important est d'aider l'Afrique à créer l'infrastructure institutionnelle



nécessaire pour participer au MDP et d'aider à informer et sensibiliser toutes les parties prenantes. Ceci est l'objectif principal du projet initié aujourd'hui.

Pour atteindre cet objectif, et avec le soutien du gouvernement néerlandais (DGIS), le PNUE poursuit une approche pratique en aidant les pays visés à accomplir les premières transactions MDP. En autres objectifs, cet événement va permettre aux participants de pouvoir comprendre les différentes options disponibles du Financement Carbone, et ainsi offrir l'occasion de pouvoir analyser la pertinence de la valeur ajoutée d'un revenu additionnel Carbone.

Cette conférence réunissant tous les acteurs clef du pays, constitue la plateforme idéale pour comprendre et discuter des modalités techniques et financières de la finance carbone. Le public cible comprend d'une part à la fois les responsables des institutions chargés des études et financements pour des projets publics et privés et d'autres part les porteurs de projets. Les participants pourront prendre part à des discussions de groupe et des travaux pratiques en atelier basés sur des études de cas portant sur le montage de projets MDP. Les travaux de la conférence s'appuieront sur différents documents de travail, comme les guides développés par PNUE-Risoe

Le Centre Risoe du PNUE, basé au Danemark, est devenu depuis des années le leader du développement des capacités pour le MDP avec des initiatives importantes en Afrique, en Asie et en Amérique Latine. Le PNUE était aussi un des fondateurs/champions d'une initiative conjointe avec autre agences multilatérales – le "Nairobi Framework" –visant spécifiquement à permettre la réalisation de projets MDP en Afrique. C'est une initiative sous lequel le PNUE travaillerait ensemble avec le Programme des Nations Unies pour le Développement (PNUD) dans six pays de l'Afrique de l'Est/Sud-Est, y compris le Maurice. Ce projet régional complémentaire de CD4CDM d'une valeur de \$1.5 million s'est en train d'être démarrée.

Aussi importants de noter sont nos experts internationaux et locaux choisis de façon compétitive pour leur expertise et leur savoir faire en termes de formation et de développement de projets MDP. Pour les experts internationaux, il s'agit de South South-North et ECON Analysis.

Bien que ce projet vienne assez tard, heureusement il arrive à un moment favorable où une quantité considérable de projets a déjà été approuvée, et les méthodologies et les procédures du Kyoto sont beaucoup mieux établis qu'auparavant.

Dans mon pays on aime bien la ponctualité, peut-être même un peu trop. Mais dans ce contexte, il y a un proverbe que j'aime bien. D'après ce proverbe, « le meilleur moyen de prendre un train à l'heure, c'est de s'arranger pour rater le précédent. »

Mesdames, Messieurs : On est arrivé sur le quai de la gare, et le second train est devant nous. Travaillons ensemble pour ne pas le rater !

Merci, et bonne continuation. »