

WORKSHOP SUMMARY

Background

The Ministry of Environment of Cambodia, in collaboration with the Institute for Global Environmental Strategies (IGES) of Japan, organized a 2-day Training Workshop on "**Project Design Document (PDD) for the Clean Development Mechanism (CDM)**" on 17-18 January 2005 in Phnom Penh, Cambodia. The training workshop aims at providing participants with the methodology to develop a CDM Project Design Document and to identify and analyze problems to overcome the process of formulating CDM project in Cambodia. About 50 participants from relevant government ministries/agencies, academic and research institutions, non-governmental organization, and the private sector participated in this training workshop.

Session 1: Opening Session

In his welcoming remarks, Mr. Keisuke Iyadomi, Country Officer of IGES, made a brief introduction on the importance of the PDD training workshop. He informed participants that this is the second training workshop organized in Cambodia within fiscal year 2004, as one of a series of activities under the Integrated Capacity Strengthening for the Clean Development Mechanism (ICS-CDM). He briefly highlighted the main objectives of the ICS-CDM, which are: providing information and raising awareness on CDM in both public and private sectors; supporting institutional framework; training of human resources to operationalise CDM projects; and supporting CDM project identification, development and implementation activities.

H.E. Prach Sun, Secretary of State of the Ministry of Environment, welcomed participants to the workshop and thanked IGES for continuing supporting Cambodia through the implementation of the Integrated Capacity Strengthening for the Clean Development of Mechanism Project. He pointed out that CDM projects can help developing countries like Cambodia achieving its sustainable development goals through technology transfer, financial resources, and environmental enhancement; especially they can contribute to poverty reduction via job creation and income generation. He expressed his view that this training workshop is an excellent opportunity to build capacity of Cambodian local project developers and stakeholders on methodologies how to develop PDDs for CDM projects.

Mr. Ouk Navann, Project Assistant from the Ministry of Environment, gave a detail presentation on the development of CDM project and carbon markets. He pointed out that stakeholders in the CDM project development comprise of project developers, Designated National Authority (DNA), Designated Operational Entity (DOE) and CDM Executive Board (EB). He mentioned that the role of the project developer is to design, implement, and monitor the project, while the Designated National Authority (DNA) of a host country plays an important role in assessing the project against the sustainable development criteria. The Operational Entity is responsible for project validation, verification and certification of carbon reduction; and the Executive Board is responsible for issuance of Certified Emission Reductions (CERs). In addition, he explained the CDM approval process of Cambodia and the roles of Cambodian Climate Change Office (CCCCO) as the national contact point for CDM activities in Cambodia. He pointed out that CCCCO can provide assistances to project developers in preparing a CDM project, and introduce project developers to potential CER buyers. Finally, he gave an overview and example of worldwide demands of emission reduction and carbon buyers from different sources, such as World Bank (Prototype Carbon Fund, Community Development Carbon Fund, Bio Carbon Fund), Japan Carbon Fund, German Carbon Fund, etc.

Session 2: Guideline for PDD development and its case study

In the first part of his presentation, Mr. Keisuke Iyadomi, Country Officer of IGES, gave an instruction for group discussion. The objectives of the group discussion are to: (1) make an exercise on PDD development with specific projects in Cambodia, (2) find out the difficulties in converting the three PIN of identified projects to PDD format, and (3) discuss additional information or activities required for finalizing PDD preparation. In the second part of the presentation, Mr. Iyadomi introduced the definition of Small Scale CDM Projects and their simplified baseline and monitoring methodologies. He mentioned that a Small Scale Project is a simple project, in which its PDD requires fewer items to fill out. These will provide benefits to project developers in term of time saving and administration fee to develop PDD. Finally, he explained the main contents of the PDD as indicated in the PDD template.

The floor was opened for questions and comments.

Questions/Comments	Responses
1. How to verify whether ODA has been diverted to CDM projects (Mr. Tin Ponlok).	Mr. Yuji Mizuno will present this issue in the next session (Mr. Iyadomi).
2. Regarding to EIA in section F and stakeholders comments in section G of the Marubeni's PDD model case, how will the project developer assess trans-boundary impacts? (Mr. Sam Chamroeun).	For trans-boundary impacts, we have to identify in baseline methodology and in monitoring plan. So when we use small scale CDM activities, there is a statement on how to identify the boundary for GHG emission in which you can refer from appendix B. Relating to the definition of trans-boundary emission in small scale CDM activities, you can identify who will be the stakeholders (Mr. Iyadomi).

Mr. Yuji Mizuno of Pacific Consultants Co., Ltd. made a presentation on PDD Development. He emphasized the key issues of the PDD development, including public funding of the project activity, project additionality, crediting period, monitoring methodology and plan, environmental impacts, and stakeholders comments. He mentioned that new ODA can be used for CDM project, but diversion of existing ODA is prohibited. However, he pointed out that Annex I countries shall provide an affirmation that funding does not result in a diversion of ODA, while host country has right to reject the project funded by ODA by not providing an approval letter. For choosing the crediting period, he suggested that it is better to choose renewal crediting period of 7 years for a project starts from now. As the environmental impacts concerned, Mr. Mizuno explained that even if the host country dose not require EIA, it is better to explain environmental impacts other than GHG emissions.

The floor was opened for questions and comments.

Questions/Comments	Responses
1. What is the advantage and disadvantage of choosing different timeframe either 7 or 10 years in crediting period? (Mr. Sum Thy).	The advantage and disadvantage of choosing crediting time vary according to the project's starting date. Since the CDM credit available from the year 2000 and the Marrakech Accord was agreed in 2001, so there will be advantages to choose 10-year crediting period for the project which started from 2001 or 2002 previously. In that case, project developers can get credit until 2011. Although

	<p>they can not get credit on 2012 but there is less risk for them as baseline may be lower after 7 years if they chose 7 years crediting period.</p> <p>For the 7-year crediting period when the project started from 2001, the first renewable period will be in 2008. However, there is a risk that the baseline will be lower compared between 2001 and 2008. It is now 2005 and from now on I would recommend choosing the crediting period of 7 years and I won't recommend choosing this 7 year crediting period when it was in year 2001 or 2002. It depends on how you can assume the baseline emission in the future (Mr. Yuji Mizuno).</p>
<p>2. A baseline can be changeable, so do we have to prepare PDD again or not when the crediting period has been renewed? (Mr. Va Chanmakaravuth).</p>	<p>My simple answer is that the CDM-EB did not determine yet on what we should do when renewing the crediting period even though there are lots of uncertainties that the project developers take great risk to choose 7-year renewable period (Mr. Yuji Mizuno).</p>
<p>3. Slide number 18 is presenting the calculation of CO₂ baseline emission, we calculate CO₂ emission by taking energy output multiplied by emission factors. In this case, it seems that we do not take into account the efficiency of machine. I think that between old and new machines, there will be different efficiency. In slide 15, the baseline emission can reduce upon employing new technology. In Cambodia, we understand that there won't be any change in technology within the period of 7 years. In contrast, we believe that the efficiency of machine will reduce and consequently it will lead to an increase of emission. Can you clarify this matter? (Ms. Va Dany).</p>	<p>Slide number 18 of baseline emission is just for the first 7-year crediting period. As you know, baseline emission of next renewable crediting period is not decided at all. So the story is completely different. In small scale CDM this YY (emission factors for the first crediting period) is a fixed figure. Once again, it has not been determine yet whether this small scale CDM baseline might be changed for next 7 years later. The risk is that the baseline may be lower for the next renewable crediting period but at the same time there is a possibility that you will have the same baseline. It is impossible in baseline concept that baseline will increase when the machine getting older. You should know that CDM must contribute to GHG emission reduction by giving credit to CDM developer. The purpose of baseline calculation is to determine the GHG emissions (Mr. Yuji Mizuno).</p>
<p>4. What type of contract will be signed between carbon buyers and project developers? You have mentioned that the commitment period will end in 2012 and people are not sure what will happen after year 2012. So I guess the choice in baseline may impact on short contract, when project developers signed with the carbon buyers. Do you know</p>	<p>As far as I understand, there are both cases, but almost all contracts are about to make before 2012. Lots of carbon funds will buy the Kyoto credits until 2012. So there is a great risk for project developers because project lifetime unusually more than 7 or 10 years. For example, the Photovoltaic one is more than 30 years. Although the project lifetime is very long but they can not</p>

<p>whether the carbon buyers will sign a contract beyond 2012 or they only signed a contract to buy carbon during the first commitment? (Ms. Bridget McIntosh)</p>	<p>guarantee to get additional incomes, only till 2012. So profitability gets lower and sellers want to sell or agree on contract beyond 2013. For example, the carbon fund of the World Bank will buy credit from (AR) afforestation/reforestation or they will buy CER credit that is not defined by the Kyoto Protocol. So you may know that the crediting period of sink afforestation/reforestation activities are 60 years. In afforestation/reforestation CDM case, they tend to agree in getting credit more than the year 2013, maybe 20 or 35 years (Mr. Yuji Mizuno).</p>
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Dr. Takahashi of Kanso Technos, presented the model PDD of Marubeni Cooperation, which is located in Mondol Kiri Province, Cambodia. He pointed out that the project comprises 115 small hybrid power systems with a total capacity of 1.4 MW. These wind power generators will be constructed in 21 communes and 90 villages in Mondul Kiri Province and will be operated 24 hours/day for a total of 8,760 hours/year. The electricity generated from renewable energy by the project will replace electricity generated from diesel-powered mini-grids. Baseline methodology of project type (I.A) has been used to calculate the baseline emission. The reduction of CO₂ emissions is estimated at 2,759 t CO₂ per year for the duration of the project. The project developer decided to use a renewable crediting period of 7 years, which start from 1 April 2005. He noted that as the capacity of project is below 5 MW, there is no need to conduct Environmental Impact Assessment (EIA). However, he described the possible contamination of local drinking water caused by used battery disposal.

The floor was opened for questions and comments.

Questions/Comments	Responses
<p>1. Your project is a hybrid system, which has the total capacity of 1.4MW. Do you know how much electricity generated from wind turbine and solar system, separately? (Mr. Sum Thy).</p>	<p>One complete system consists of one wind mill and one solar panel. However, we can calculate the energy output of our hybrid system differently. One complete system has the total capacity of 300W. It is depending on wind and sunlight condition and we expected to have more electricity output from wind turbine than from solar panel (Dr. Takahashi).</p>
<p>2. We would like to know if the wind system can be used widely throughout Cambodia (Dr. U Sirita Chief of EIA office, MAFF).</p>	<p>Of course, this wind turbine could be used anywhere especially when you do not have strong wind. For example, in Japan, we installed these systems on top of buildings in the central of city. So you could implement this system everywhere within Cambodia as well. (Dr. Takahashi)</p>
<p>3. First, JICA has conducted a wind energy survey in Mondulkiri and the villagers said that the wind is available only for 3 months for each year. This will not be sufficient for wind energy development. JICA has installed 3 small hydro powers with total capacity output of 200 KWh and installed a diesel</p>	<p>In our project, we are not going to put a huge wind turbine to generate electricity to supply thousands of households. Even the wind speed is low, we still can use micro wind turbine to cope with the condition. Since there is a river running near the village. We are also thinking of the possibility to combine micro hydro power and wind turbine (Dr. Takahashi).</p>

<p>engine (Mr. Mony from MIME).</p>	<p>There is no thorough research on wind speed in Cambodia. So far, JICA has installed a wind meter on Chiso mountain on a site that is not suitable due to mountainous obstruction. A Belgium company has installed another wind meter in Kampong Som. However, the result is still not sufficient. According to satellite image Mondulkiri is still the best site and the wind turbine of Marubeni is very sensitive even though the wind speed is very low (Comment by Dr. Tin Ponlok).</p>
<p>4. Can you explain more about the minimum and maximum capacity of wind speed in Mondulkiri? (Dr. Urisita).</p>	<p>The capacity of the system we have installed last November in Potrou village of Mondulkiri is 300W. So we can only produce electricity of 300W and the power can not exceed this maximum capacity (Dr. Takahashi).</p>
<p>5. Can you provide definition of leakage emission and why the leakage in the Marubeni's project equal zero? What formula has been used for leakage calculation? (Mr. Va Chanmakaravuth).</p>	<p>Leakage is defined as GHG emission outside your project boundary. So this hybrid system should have no leakage because we are using solar and wind power for generating electricity and no fossil fuel will be used. If your project is a biomass power generation project, for example, agriculture wastes, such as biomass, the leakage should be considered even you are working on a small scale CDM project. That is the typical example of leakage for biomass project. But in our case, we only use natural resources of solar and wind so this should be no leakage (Dr. Takahashi).</p>
<p>6. In stakeholders meeting, were the local people satisfied or dissatisfied with the proposed project? Whether we should incorporate those comments in our stakeholders comment section or not? (Miss. Va Dany).</p>	<p>We welcome all comments and concerns from stakeholders during the meeting because in this environmental stage, we are willing to improve social welfare by providing lighting to schools and residencies, and reduce poverty of the local people. During the meetings with stakeholders, we only got positive and encouragement comments from local villagers and stakeholders for implementing this kind of project (Dr. Takahashi).</p>
<p>7. In your stakeholders meetings, did you received complains from local villages on proposed project? How will project developers settle the problems in preparing PDD? (Miss. Va Dany).</p>	<p>When you have negative comments on your project from stakeholders, of course, you have to deal with them by consulting with all local stakeholders and government institutions involved in the project. Otherwise we can not start the project because this is a CDM project not an ordinary one. That will take lots of times and if we could start the project then we could get carbon credit which is the reward (Dr. Takahashi).</p>

Before closing the first day, Mr. Keisuke Iyadomi summarized the discussions and outcomes of the training session, saying that participants had gained useful information. He satisfied with the presentations made by each speaker as well as questions and comments raised by participants.

To start the session of the second day, Mr. Sum Thy briefly summarized the presentations in the first day and introduced the agenda of the second day. He proceeded to instruction for group discussion, by showing the group members, time and projects to be discussed.

Session 3: Group discussion for PDD development

Participants were divided into three group discussions, based on the projects identified during the PIN training workshop. The purpose of this discussion is to convert the previous PINs to PDD formats. These PINs are: (1) Mekong Wood Waste Energy Cogeneration, (2) Electricity Production from Agricultural Residue, and (3) Piggery Methane Capture and Combustion. In addition, the meeting also discussed the constraints and problems in developing the PDDs. The three PDDs could not be completed well enough, due to time constraint, lack of information and data for baseline calculation, project additionality, monitoring, and leakage, and insufficient capacity of the participants.

Mr. Doung Samkeat, Chief of the Planning Office of the MoE Department of Environmental Impact Assessment (EIA), presented the Environment Impact Assessment Process in Cambodia. He mentioned that the objective of EIA is to analyze potential environmental impacts of a proposed project in order to minimize negative effects. He also explained the concepts of general principles of EIA, legislation, EIA process in Cambodia, general IEIA/IEE or EIA guidelines, role and responsibility of MoE, role of stakeholders in EIA process, and EIA requirement for a particular project.

The floor was opened for questions and comments.

Questions/Comments	Responses
<p>1. EIA Department of MoE has its responsibility to review EIA report. For project owners, do they have to compile EIA reports themselves or hire other consultants to prepare EIA reports for them? I would like to know if there are some consultancy companies conducting EIA in Cambodia.</p>	<p>1. Project owner is responsible for preparing EIA report and the EIA Department of MoE assists in providing advices. In this case, some companies prepare EIA reports by themselves, if they have experiences. Some companies who have no experiences in preparation of EIA can hire consultancy firms to prepare for them. However, those consultancy firms must register with the Ministry of Commerce (MoC) to be eligible for conducting EIA.</p>
<p>2. What qualifications should a consultancy firms have to be eligible for preparing EIA report? What are the required mechanisms to ensure the information provided in EIA reports are correct and acceptable?</p>	<p>2. There are three EIA guideline samples from MoE. WB and JICA guidelines are also available. Some consultancy firms have not followed the three guidelines when preparing EIA reports. This makes difficulty in review the process.</p>
<p>3. How many EIA report reviewed by EIA Department so far? To what extend that the project owners conducted their business following their EIA reports?</p>	<p>3. To date, there is almost no company poses problems for us as they normally follow the recommendations of the EIA reports. In addition we have our monitoring group to verify their compliance with the recommendations.</p>

<p>4. How to ensure the information provided in EIA report is correct if the EIA report prepared by a private company? (Miss. Va Dany).</p>	<p>4. Project owners need to submitted EIA reports to MoE prior starting the projects. So we do not only review in our office, but we also go out to check in the field to control the existing environmental conditions. In some cases, we need resubmission for the whole EIA reports. We also closely cooperate with all concerned institutions to ensure that EIA reports are acceptable (Mr. Duong Samkeat).</p>
<p>5. In Appendix B of UNFCCC, there will be no EIA for all small scale CDM projects with the capacities less than 15MW. However, slide 7/10 on EIA process in Cambodia noted that all power plants and hydropower plants with capacity more than 5MW and 1MW respectively would require EIA reports. We can see the contrary point between these two institutions. According to Appendix B of UNFCCC, there will be no EIA process required but the EIA process in Cambodia is necessary. So, how would all concern institutions make a compromise in order to facilitate the potential investment? (Mr. Ouk Navann)</p>	<p>Of course, there are some contrary points in appendix B of UNFCCC and EIA requirement in Cambodia in conducting EIA process. My understanding is that CDM project is to ensure sustainable development in the host country. So the project must abide by the law of the host country (Mr. Duong Samkeat).</p> <p>I would like to clarify that in appendix B of UNFCCC is not the international rule, it is just a simplified methodology. So, if the proposed CDM projects require conducting EIA, then the project owner must comply with the host country's requirement. Then DNA will request EIA report for approval process (Mr. Sum Thy).</p>

Closing session

Mr. Keisuke Iyadomi summarized the workshop outputs and said that the training workshop is very fruitful and constructive. He thanked participants for active participation and he informed them that the National Meeting would be held in January 2005 to discuss the lessons learned and achievements of the ICS-CDM. He hoped that some participants will come to the National Meeting.

H.E. Lonh Heal, Technical Director General of MoE, appreciated the active participation of all participants and the efforts made by all the presenters and experts from IGES, Pacific Consultants, Marubeni Corporation, national experts of CCCO and MoE Department of EIA. He said that the technical presentations are relatively difficult to understand, however, the detailed explanations from the experts helped make the topic clear and understandable to participants. He finally thanked IGES and workshop organizers for making this training workshop successful.