

Dang Thi Hanh

**Working Paper**

## Assessment of CDM Capacity Building Activities in Cambodia, Lao PDR and Vietnam: Lessons Learned

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**Assessment of CDM  
Capacity Building Activities  
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and Vietnam –  
Lessons Learned**

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# **HWWA Discussion Paper**

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**Dang Hanh**

HWWA Discussion Paper 351

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## **Assessment of CDM Capacity Building Activities in Cambodia, Lao PDR and Vietnam – Lessons Learned**

### **ABSTRACT**

Since the adoption of the United Nations Framework Convention on Climate Change (UNFCCC), in Rio de Janeiro, Brazil, in 1992, developing countries have continuously emphasized that assistance and capacity building are essential for them to implement the Convention effectively. The entry into force of the Kyoto Protocol of the UNFCCC in February 2005 has increased interests and activities in the Clean Development Mechanism (CDM) in developing countries and made the need for capacity building in these countries even more urgent.

So far ASEAN region has been targeted by a high number of capacity building programmes. This is due to the fact that the countries offer a high CDM potential and are generally perceived to have a relatively high education level, meaning that initial capacity building efforts would readily be disseminated.

Cambodia, Lao PDR and Vietnam are the three low-income countries (LICs) in this region. Among the three countries, Vietnam takes a lead in attracting donors for financial assistance and capacity building projects until now. As a least developed country (LDC), Cambodia is deemed quite successful in being involved in several regional capacity building programmes. Lao PDR lags far behind these two countries with regard to general CDM activities and capacity building particularly.

This study reviews the past and on-going activities in order to assess how far these activities have contributed to addressing the capacity needs of Cambodia, Lao PDR and Vietnam in promoting CDM activities in these countries.

Through the lessons and experience learned from the three countries, we endeavor to provide recommendations for future capacity building to meet the CDM capacity building needs not only in these countries but also for other host countries in general.

**Keywords:** CDM, ASEAN, institutions

**JEL classification:** Q540, Q580

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## **I. INTRODUCTION**

Since the adoption of the United Nations Framework Convention on Climate Change (UNFCCC), in Rio de Janeiro, Brazil, in 1992, developing countries have continuously emphasized the assistance and capacity building is the essential for them to implement the Convention effectively. The entry into force of the Kyoto Protocol of the UNFCCC in February 2005 has increased interests and activities in the Clean Development Mechanism (CDM) in developing countries and made the need for capacity building in these countries even more urgent.

Host countries will have to compete intensively for CDM investments. Thus the development of effective institutions is crucial to reap benefits from this market. Countries should develop approval criteria and sectoral priorities in a broad stakeholder consultation (Michaelowa, 2003). To do this, capacity building of local actors, information exchange as well as marketing is required. Given the fact that the CDM is still a new concept and not on the top priority development agenda of developing countries, it is obvious that almost no country has sufficient resources to finance and implement such capacity building activities by itself. Hence, developing countries will have to embark in a race for capacity building assistance from foreign donors. Experience from several countries shows that clear competencies and strong commitments from governments are crucial to get investor confidence (Michaelowa, 2003).

The Marrakech Accords allocate tasks within the CDM project cycle to different players. The tasks and different actors involved in the CDM project cycle do constitute a maze that challenges the majority of stakeholders in a host country. Mastering each step in the CDM project cycle requires specialisation. A host country that wants to be a competitive provider of CERs should build competence to master all steps to avoid costly outsourcing to service providers from industrialised countries (Michaelowa, 2005). Obviously, this task will be a challenge for Cambodia, Lao PDR and Vietnam those have less experience in competing for FDI in general and monitoring ODA in particular than that in most of other ASEAN countries. According to the World Bank

report, in the ASEAN region<sup>1</sup>, only Cambodia, Lao PDR and Vietnam are classified as low-income countries (LICs).

So far ASEAN has been targeted by a high number of capacity building programmes. This is due to the fact that the countries offer a high CDM potential and are generally perceived to have a relatively high education level, meaning that initial capacity building efforts would readily be disseminated.

Among the three LICs, Vietnam takes a lead in attracting donors for financial assistance and capacity building projects. As a least developed country (LDC), Cambodia is deemed quite successful in being involved in several regional capacity building programme. Lao PDR is lag far behind these two countries with regard to general CDM activities and capacity building particularly.

The CDM at the end is a matter of number projects registered, and volume and quantity of CERs generated from those projects. For this reason, this assessment will firstly provide the actual status of CDM projects that have been developed in the three countries and submitted to the UNFCCC in the context of the ASEAN region.

Besides, the current institution with regard to the CDM in each country is also important background for any capacity building, especially those aims at institutional strengthening. Therefore, this report briefly summarises and evaluates the strengths and weakness of DNA structure of each country before going into details of assessment of capacity building efforts in the three countries.

It is not the intention of this report to do the assessment for each capacity building activity in the three countries, rather we review the past and on-going activities in order to assess how far these activities have contributed to addressing the capacity needs of Cambodia, Lao PDR and Vietnam. From these assessments, we attempt to elicit:

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<sup>1</sup> Only seven ASEAN countries (Cambodia, Indonesia, Lao PDR, Malaysia, the Phillipines, Thailand and Vietnam) are included in this assessment because few CDM activities taken place in Brunei, Singapore, and Myanmar so far.



- The most important gaps in existing capacity building efforts and the appropriate approaches for filling them.
- The critical target audiences for future capacity building in each country.
- The most needed tools, skills, or competencies that, if reinforced through international collaborative efforts, would strengthen national competence in mastering CDM activities.

Finally, we endeavor to provide recommendations for future capacity building to meet the CDM capacity building needs not only in these countries but also for other host countries in general.

## **II. OVERVIEW OF CDM ACTIVITIES IN THE ASEAN REGION**

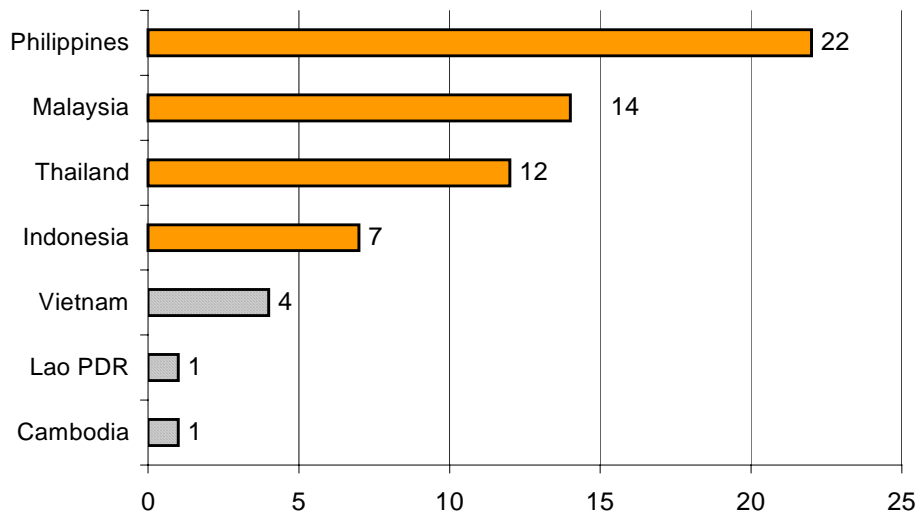
### **II.1. ASEAN CDM projects submitted to the UNFCCC by country**

With the entry into force of the Kyoto Protocol in January 2005, the CDM has seen a spectacular rise of activity. In 2004, only one project was registered. In 2005, 62 project was registered but to date of June 2006, there are more than 650 submissions with 135 registered projects that could lead to produce approximately emission reduction volume of above one million t CO<sub>2</sub> eq. by more than 740 projects in the existing CDM project pipeline until the end of the commitment period. More projects are being added to the pipeline each month.

However, many voices continue to criticize the CDM for it unequally distribution and the lack of development benefits of CDM projects. An analysis of the CDM project portfolio shows that LDCs and other LICs have so far been sidelined.

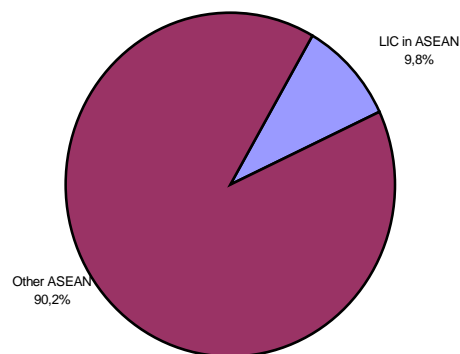
In the context of ASEAN region, to date of June 2006, the three LICs submitted 6 projects to the UNFCCC compared with a sum of 61 projects submitted by seven countries in the ASEAN region (see Fig. 1). It counts for 9.8% of total project activities submitted (Fig. 2).

Looking at the geographical spread of CDM activities within the ASEAN region, the picture is uneven. The flow of investment from the CDM is side-stepping those three LICs that need it most for the purpose of sustainable development.



**Figure 1.** CDM projects submitted to the UNFCCC as of June 2006 by ASEAN countries

*Data source:* UNFCCC website as of June 2006

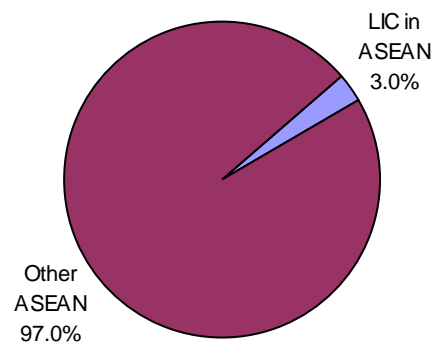


**Figure 2.** CDM projects submitted to the UNFCCC as of June 2006 by ASEAN countries – The LICs vs. others

*Data source:* UNFCCC website as of June 2006

## II.2. CER sum until 2012 by country

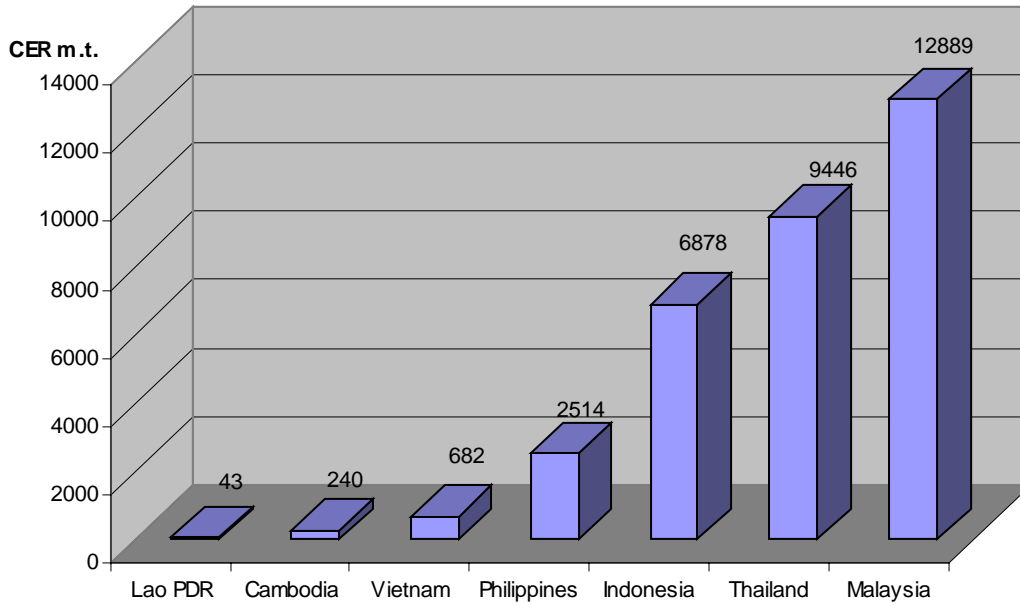
In terms of CERs generated, the total share of the three LICs among ASEAN is much more humble – only 3% CERs expected from all CDM projects submitted by the three countries of the total CERs generating from 61 projects submitted by all ASEAN (Fig. 3). The fact may explain for this stance is that only one among 6 projects submitted by Cambodia, Lao and Vietnam is non small-scale project.



**Figure 3.** CERs generated from CDM projects submitted by ASEAN countries until 2012. The LICs vs. others.

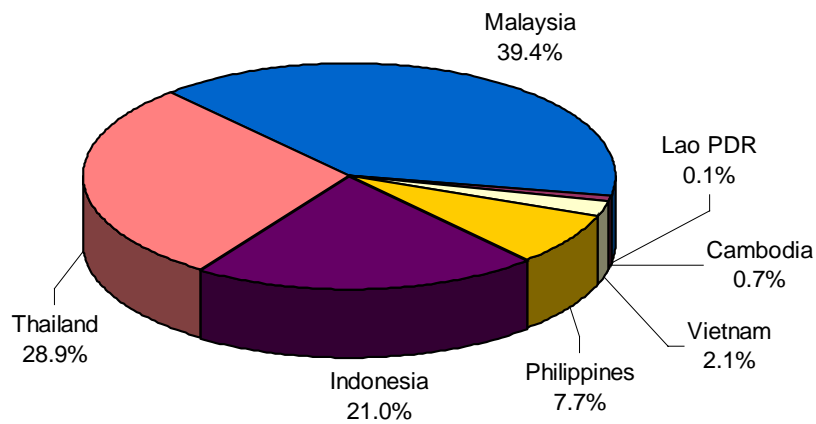
*Data source:* UNFCCC website as of June 2006

The low CER volumes of CDM projects in Vietnam, Cambodia and Lao PDR reflect consistently the total projects developed in these countries.



**Figure 4.** ASEAN CERs generated until 2012 by country

*Data source:* UNFCCC website as of June 2006



**Figure 5.** ASEAN CERs generated until 2012 by country in percentage

*Data source:* UNFCCC website as of June 2006

Ranking according to the CER generation category, one can distinguish the ASEAN region by the three groups:

- High CERs generation: Malaysia, Thailand and Indonesia
- Middle CERs generation: the Philippines and Vietnam

- Low CERs generation: Cambodia and Lao PDR

Although this list can be changed in long term if middle-ranking countries have more appropriate strategies to mobilise the CDM investment flows in their countries, the picture is likely to remain as it is recently. The real distinction of changing may be only the swapping position within the high-ranking group.

### II.3. Project activities submitted by country and sector

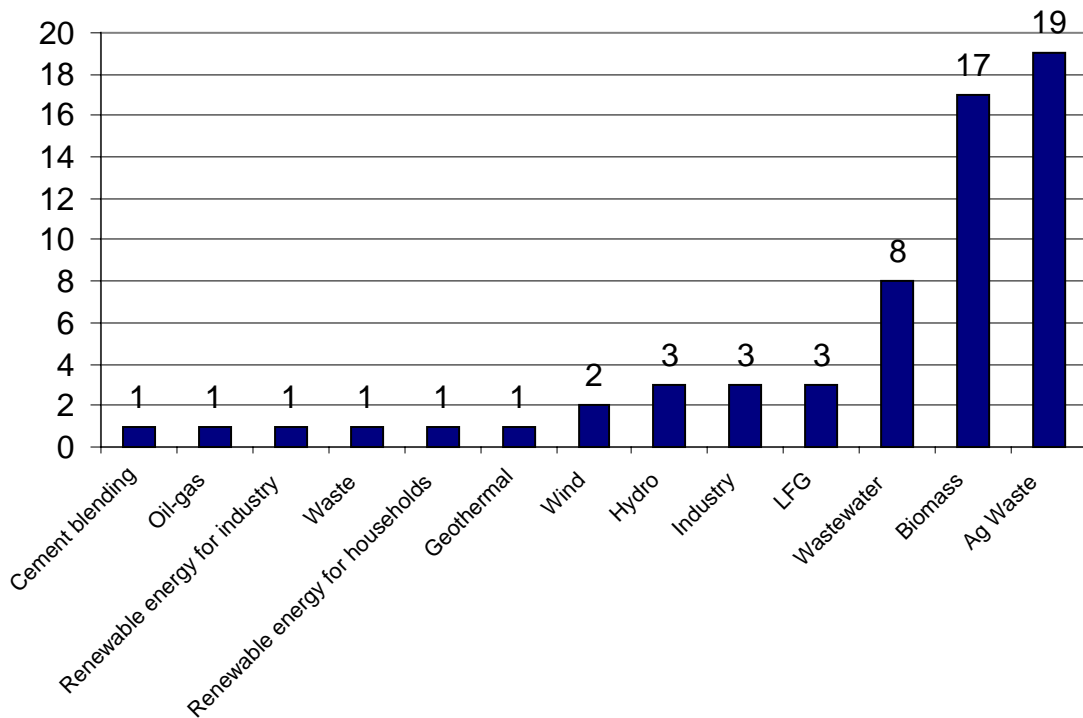
Table 1 and Fig. 6 show that a few categories concentrate most of the CDM project activities in the ASEAN region. The majority are biomass power projects and agriculture waste. This is consistent with economy structures that are based in agriculture and food processing in this region and reflects that biomass is an important source of energy in the region.

**Table 1. Type of ASEAN CDM projects submitted to the UNFCCC**

Project types	Total project type	No. of submitted project activities						
		Cambodia	Indonesia	LaoPDR	Malaysia	Philippines	Thailand	Vietnam
Cement blending	1	--	1	--	--	--	--	--
Oil-gas	1	--	--	--	1	--	--	--
Renewable energy for industry	1	--	--	1	--	--	--	--
Waste	1	--	--	--	--	--	--	1
Renewable energy for households	1	--	1	--	--	--	--	--
Geothermal	1	--	--	--	--	1	--	--
Wind	2	--	--	--	--	2	--	--
Hydro	3	--	--	--	--	--	--	3
Industry	3	--	--	--	3	--	--	--
LFG	3	--	--	--	1	1	1	--
Wastewater	8	--	--	--	--	1	7	--
Biomass	17	1	4	--	8	--	3	--
Ag Waste	19	--	1	--	--	17	1	--
<b>Total</b>	<b>61</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>14</b>	<b>22</b>	<b>12</b>	<b>4</b>

*Data source:* UNFCCC website as of June 2006

Fig. 6 shows the project activities submitted by sector in ASEAN as whole.



**Figure 6.** Type of ASEAN CDM projects submitted to the UNFCCC

*Data source:* UNFCCC website as of June 2006

Although renewable energy is currently the leading CDM project type worldwide when it comes to the number of projects, ASEAN countries so far only have a limited amount of renewable energy project documents in the official validation and methodology development processes. This may be due to the fact that CDM revenue is not yet taken into account by potential equity investors or loan providers despite generating free cash flow that can be readily applied to debt service obligations. For a wind project of 100 MW, equity investment needs could thus be reduced by 20% at CER prices of 7 €(CAP SD et al. 2005). Only a minority of energy developers and an even smaller percentage of bankers and equity providers are able to evaluate the CER revenue stream; thus there is a strong need for CDM capacity building in the region in general and in the three countries in particularly.

### III. CDM INSTITUTIONS

Competing for CDM investments among host countries in the CDM market is highly intensive. Thus the development of effective, competence institutions is crucial to be successful in this market.

Interestingly, regarding the notification of the DNAs to the Secretary – one of the necessary conditions to participate in the CDM, Cambodia, Lao and Vietnam are quite a head compared to other ASEAN countries (see Table 2).

In the light of CDM capacity building, this activity creates a good impression in the donors' eyes as it confirms the commitment of the government to take part in the CDM. Although this fact may say nothing about the effectiveness of the existing institutions in these three LICs.

**Table 2. CDM institutions in ASEAN**

Country	Kyoto Protocol ratified	DNA notified to UNFCCC	Published DNA procedures	Necessary CDM conditions fulfilled	Supportive CDM framework
<i>Cambodia</i>	22 Aug 2002	Nov 2003	Yes	Yes	Yes
Indonesia	3 Dec 2004	Oct 2005	Yes	Yes	Yes
<i>Lao PDR</i>	6 Feb 2003	Nov 2003	-	Yes	-
Malaysia	4 Sep 2002	May 2003	Yes	Yes	Yes
Philippines	20 Nov 2003	Sep 2004	Yes	Yes	Yes
Thailand	28 Aug 2002	Jun 2004	Yes	Yes	Yes
<i>Vietnam</i>	25 Sep 2002	Dec 2003	Yes	Yes	Yes
<b>Total ASEAN 7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>6</b>

*Source:* data from UNFCCC website, status June, 2006 and personal communication



### **III.1. Cambodia**

Despite its status as LDC, Cambodia ratified the Kyoto Protocol in August 2002 and established its Climate Change Office (CCCO) in the Ministry of Environment (MoE) in June 2003. The MoE serves as interim Designated National Authority (DNA) by decree of July 2003.

### **III.2. Lao PDR**

The Science Technology and Environment Agency (STEA) at the Prime Minister's Office has been notified as DNA in late 2004. However, the first national CDM workshop organised in Lao in November 2004 showed that this decision was taken thinking that the DNA was just another name for the climate change focal point and that no decision-making competencies would be linked to the DNA function. It has now been agreed that a formal request for "grafting" the DNA on an existing committee has to be made and that procedures need to be adopted. The main difficulty is the lack of project proposals, which prevent the DNA staff to gain experience. Main functions of Lao' DNA are still under discussion.

The final decision on the DNA's structure and functions was planned to be made in August 2006.

### **III.3. Vietnam**

Vietnam was one of the first countries in Asia to establish its DNA.

Official document 502/BTNMT-HTQT issued on March 24, 2003 specifies that the International Cooperation Department (ICD) of the Ministry of Natural Resources and the Environment (MONRE) is the DNA. Decision 553/QC-BTNMT of 29 April 2003 defined the CDM National Executive and Consultative Board (CNECB) with representatives of the following ministries: MONRE (three members), Ministry of Trade (MOT), Ministry of Science and Technology (MOST), Ministry of Foreign

Affairs (MOFA), Ministry of Finance (MOF), Ministry of Planning and Investment (MOP), Ministry of Agriculture and Rural Development (MARD), Ministry of Industry (MOI), Ministry of Education and Training (MOET), Vietnamese Union of Science and Technology Associations (VUSTA) which is a Government-established NGO.

CNECB meets twice a year (April and September). Ministries with a seat on the DNA will give comments to their CNECB members. CNECB decides with three-fourth majority voting. Rejected proposals can be resubmitted an unlimited number of times. A Vietnamese language document on the project cycle will be issued shortly.

The Viet Nam Prime Minister issued a Directive N<sup>o</sup> 35/2005/CT-TTg dated 17 October 2005 on the implementation of KP to the UNFCCC. It provides a good legal framework for CDM activities in the country, but only if the enforcement of the Degree is effective.

#### III.4. DNAs assessment

The status of the DNAs of the three countries is summarized in Table 3.

**Table 3. Summary of DNAs status**

Country	Date of setup	Type	Approval competence	Website (last update)	Staff	Funding source
Cambodia	2003	Govt	Environmental Ministry	Jun. 2006	3 local officials and one volunteering international consultant (only to July 2006)	Foreign donors and govt
Lao PDR	2004	Govt	STEA	Jan. 2006	2 local officials and one international consultant (only for a two year contract)	Foreign donors and govt (SNV)
Vietnam	2003	Govt	Environmental Ministry	Jun. 2006	4 local officials	Govt and foreign donors

*Source:* personal communication

The DNA structures of the three countries are quite similar. It is governmental and two-tiered model with the inter-ministerial Board, the Secretariat and technical consulting team (except for Lao).

It is presided by the environmental ministry (Cambodia and Vietnam) or the agency has equivalent functions as the environmental ministry (Lao).

The Board of each country tries to involve as many ministries/governmental agencies as possible. This may reduce the interest conflicts across ministries.

The Secretariat is one body of the host ministry/agency that has the organisational position lower than the Department level. This has implications in the independence of this Secretariat in decision-making process because the activities of the Secretariat must be approved by the Head of the Department whom it belongs to. That may make the bureaucratic weakness worse as the administrative procedures by nature in the three countries are not simple and straight.

The high numbers of ministries involved and governmental dominating roles in the DNA's structure of the three countries constitute the following strengths and weaknesses.

**Strengths:**

- relatively strong unanimous endorsement of the CDM management activities and proposed projects. The case that the approval and implementation of CDM projects is blocked due to interest conflicts is less likely to happen with this structure.
- core budget for DNA operation is more secured as it is supported by other ministries
- the efficiency of the structure and smooth cooperation inside the DNA Board depends on the strengths of the position of the host ministry in the

governmental politic system. The MONRE in Vietnam and the STEA in Lao have a relatively high position but it is not the case for the MOE of Cambodia. This can explain the long delay in assigning a permanent DNA in Cambodia.

**Weaknesses:**

- Poor involvement of other stakeholders, especially private sectors
- Bureaucratic, less flexible to the adapt to change in the CDM procedures and market
- Staff if less motivated to work than in the mixed governmental-NGO model as those in some Latin America countries

In the three modes, there are no emphases on the role of the DNA in promoting CDM projects.

The DNAs in the three countries are not ideal models but are in place and still work in progress in Cambodia and Vietnam. In Lao PDR, this year will be critical for finalising the structure and putting the DNA into function, otherwise it will be too late as the deadline for registration of CDM projects in the first commitment period is approaching.

More capacity assistance to strengthen the institutions involved in the CDM is still precious help for these countries but they should not aim at broad, general goals as they are already targeted by the past and ongoing programmes, rather address the need in specific issues, such as legal and financial issues and strengthening the involvement of private and consulting sectors as well as the interaction between these entities and the governmental bodies.

#### IV. ASSESSMENT OF PAST AND ONGOING CDM CAPACITY BUILDING IN THE THREE COUNTRIES

The summary of past and on-going CDM capacity building programmes in the three countries is given in Table 4.

**Table 4. Summary of past and on-going capacity building programmes in Cambodia, Lao PDR and Vietnam**

<b>Programme</b>	<b>Country</b>	<b>Donor</b>	<b>Duration</b>	<b>Target groups/ sectors</b>	<b>Objectives/activities</b>
National CDM/JI Strategy Studies	Vietnam	Australian Govt, coordinated by WB,	2000-2004	the central government authorities	analyze Vietnam's CDM potential develop a strategy for the development of a CDM market
CD4CDM	Cambodia Vietnam	the Dutch Govt. coordinated by UNEP Riso	2002 – 2006	Intense participation of stakeholders	<ul style="list-style-type: none"> <li>• generating in participating developing countries a broad understanding of the opportunities offered by the CDM, and developing the necessary institutional and human capabilities that allows them to formulate and implement projects under the CDM.</li> <li>• focuses on country and regional workshops</li> </ul>
Capacity building of ASEAN countries for implementation of CDM	Vietnam	UNIDO	1999 - 2001	industrial sector	Evaluation of CDM potential in industrial sector
Support for the development and Uptake of CDM projects in industrial sector	Vietnam	UNIDO	2005	industrial sector	<ul style="list-style-type: none"> <li>• facilitate development of innovative partnerships (between investor and host country institutions, business and industry) that would help to unlock the potential of CDM in industrial sector</li> </ul>

**Table 4. Summary of past and on-going capacity building programmes in Cambodia, Lao PDR and Vietnam (cont.)**

Programme	Country	Donor	Duration	Target groups/sectors	Objectives/activities
EU – Asia institutional co-operation and multinational dialogues on enabling the meaningful participation of Cambodia, Lao PDR and Vietnam in the CDM	Cambodia Lao and Vietnam	EU Pro Eco Programme, coordinated by HWWA (Germany)	2004 – 2006	the central and local government authorities, and the private sector	<ul style="list-style-type: none"> <li>• facilitate a comprehensive participation of these countries in the CDM, and to promote the development of concrete CDM projects through sectorally targeted capacity building for private sector representatives.</li> <li>• Main activities: Pre-conference study, working conferences and the EU – Asian dialogues</li> </ul>
Integrated Capacity Strengthening for CDM (ICS – CDM)	Cambodia	IGES	2003-2006	Public and private sector	Workshops outside the capital and organised by different organisations. Focus on waste management, renewable energy, and small-scale projects.
improving awareness on CDM and identifying potential CDM projects in South, West China and Vietnam	Vietnam	funded by GTZ and managed by TUV Reihland Hong Kong	2003 - 2004	Private sector	Training workshops
Technical assistance to STEA on CDM	Lao PDR	funded by SNV Netherlands Development Organisation	started 2005	the central and local government authorities	support the establishment and full operation of the DNA

*Source:* personal communication

CDM capacity building could be defined as enhancing the ability of individuals, groups and organizations to mobilize and develop resources, skills and commitments needed to develop and implement CDM activities in this country as well as to market the national CDM programme to investors.

In general and it is also true for the case of CDM capacity building, capacity building is not a “one size fits all” formula, but rather a country driven assessment of the specific needs and conditions of host countries, reflecting nationally sustainable development strategies, priorities, and initiatives. Hence the country-specific capacity needs and barriers to accomplish the certain goal are important for judging the success of capacity

building activities. In principle, the achievements of a capacity activity should be assessed against such identified needs.

To date, no comprehensive study on the CDM capacity needs for Lao PDR has been taken. In Cambodia and Vietnam, the needs for capacity development were identified by local experts under the CD4CDM project. The barriers for CDM implementation in Vietnam were identified briefly in the NSS (2005). Regarding the needs for capacity building, we can only obtain the needs elaborated for Vietnam (Phung, 2004) in Table 5.

**Table 5. Needs for capacity building in Vietnam identified under the CD4CDM project**

<p>General needs for policy makers</p>	<ul style="list-style-type: none"> <li>• Raising understanding of macro management system</li> <li>• Develop understanding of legislation in general</li> <li>• Study development plans, strategies of relevant sectors.</li> <li>• Raise methodologies of building strategies, policies:             <ul style="list-style-type: none"> <li>○ Collection of information</li> <li>○ Method of analysis</li> <li>○ Forecasting</li> <li>○ Etc.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Needs related directly to CDM activities</li> </ul>	<ul style="list-style-type: none"> <li>• Raising understanding on Kyoto protocol and CDM</li> <li>• Develop methods to make clearly             <ul style="list-style-type: none"> <li>○ Eligible projects</li> <li>○ Project criteria</li> <li>○ Project cycle for CDM</li> <li>○ Investment procedures, find out budget: One part, two parts, many parts</li> <li>○ Method of defining baseline</li> <li>○ Methods of control, of estimation, certificating CO<sub>2</sub> emission reduction.</li> <li>○ CO<sub>2</sub> market in the world and in country.</li> </ul> </li> <li>• Supply information.</li> <li>• Study for building a Ministerial decision on CDM by MONRE</li> </ul>

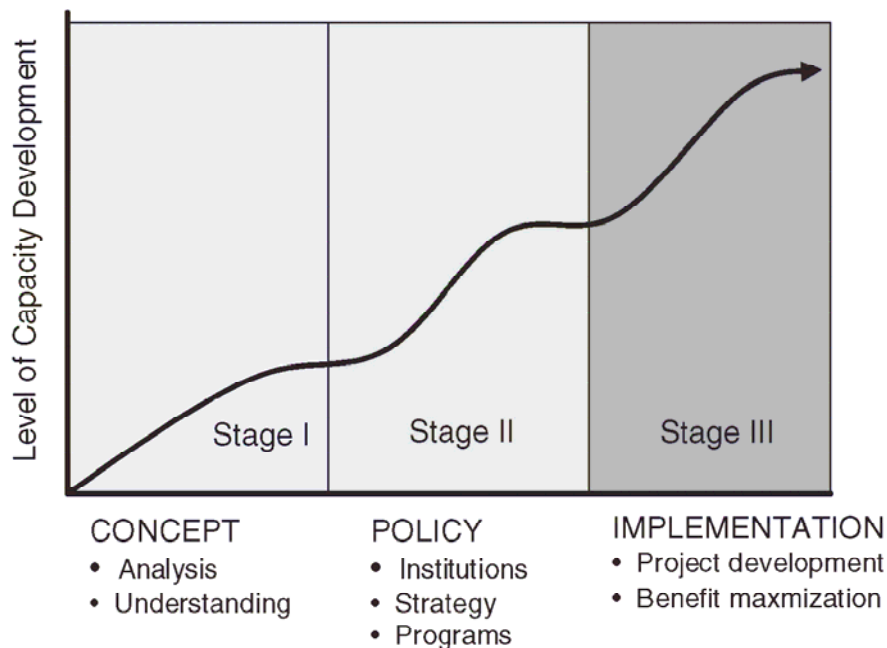
*Source:* Phung, 2004

Unfortunately, this list does sound informative and well-structured enough to be used as criteria for the assessment of a capacity building programme.

Given the fact that either details of capacity needs identified by country-specific are not available and/or the poor quality of details provided that can be used as appraisal criteria, we try to combine the best available information regarding the needs for capacity building in the three countries with the needs identified by surveys in other global studies (see UNITAR, 2001; Nondek L and Niederberger A A. 2005; and Wees M and Rooijen S. 2005). The overall assessment of capacity building in these countries will be conducted first. Further assessments for capacity building projects of these countries will be carried out based on the “Key areas and levels for capacity building”, “Key target audiences for capacity building” and “capacity building tools” aspects.

#### IV.1. General assessment

The World Bank has developed a schematic NSS capacity development model (World Bank, 2003), which illustrates the growing level of advancement/readiness of host countries over time (Fig. 7).



**Figure 7.** Capacity development phase



According to this diagram, three phases of capacity development can be distinguished:

**Phase I:** Understanding CDM/JI concepts/methods and preliminary analysis

**Phase II:** Establishment of Kyoto mechanism policy, strategy and institutional prerequisites

**Phase III:** Implementation of CDM/JI projects.

Against this background, most of the capacity programmes in the three countries only address activities up to Stage II, especially the current activities in Lao PDR are in the very beginning of Stage I. A couple of activities in Cambodia and Vietnam aim partly to the “project development” of Stage III.

#### **IV.2. Key areas and levels for capacity building**

This section gives overview on how far the past and on-going activities in the three countries deal with the key CDM-related activities. A list of the key areas and levels for CDM capacity building may never be completed.

Based on UNITAR (2001); Nondek L and Niederberger A A. (2005); and Phung (2004), we try to sort out some important areas that are essential to make CDM work in short term and promote CDM projects in a longer future in the three host countries. The analysis is presented in Table 6.

Table 6 indicates that the basic functions and structure of a DNA has been addressed adequately in Cambodia and Vietnam. Since they published the DNAs structures earlier than others the two countries even create an advantage compared with other ASEAN nations in this term. This can explain why to date Cambodia and Vietnam were selected as a destination for several international/regional capacity building programmes, such as CD4CDM and IGES (for details see Table 4). The case of Lao is a good illustration for the unequal distribution in the CDM market as well as capacity building finance

throughout the developing world due to the less attractiveness of the host country in terms of the CDM potential and also the weak institutional supports.

**Table 6. Assessments of capacity building activities against the term of “key areas and levels for capacity building”**

<b>Activities</b>	<b>Cambodia</b>	<b>Lao</b>	<b>Vietnam</b>
<b>Establishing and functioning the DNA</b>			
o DNA structure	accomplished	under development	accomplished
o CDM project approval procedures and criteria	workable but not yet accomplished	under development	workable but not yet accomplished
<b>CDM advocacy and public awareness raising</b>	intensively implemented	started	intensively implemented
<b>CDM project formulation and development – technical aspects (baseline, additionality)</b>	addressed but not intensively	started	addressed but not intensively
<b>Modifying legal and regulatory frameworks to permit efficient functioning of CDM</b>	addressed but not intrusively	not yet addressed	addressed but enforcement and implementation is still questionable
<b>Project finance and risk management</b>	not yet addressed	not yet addressed	not yet addressed
<b>CDM project verification monitoring &amp; evaluation</b>	not yet addressed	not yet addressed	not yet addressed
<b>Research/ analysis of sectoral/sub-sectoral CDM potential that can provide reliable sources for investors</b>	a couple of sectors only	not yet addressed	some sectors but not deeply

### **IV.3. Key target audiences for capacity building**

The surveys in developing countries under the research of UNITAR (2001) indicate that all sectors (Government/Public, Business/Industry / Private Sector and Research/

Academic/NGOs) are in need of additional capacity to implement climate change activities, especially the Kyoto Protocol and the CDM.

Of course, not all capacity building programmes can target all these audiences groups. The target audiences for a capacity building activity rather depend on the aims of this activity and the available of resources provided by the donor such as total budget and time frame.

In Table 7, we evaluate the status of different audience groups that have been targeted in different capacity programmes in the three countries.

**Table 7. Assessments of capacity building activities against the term of “key target audience for capacity building”**

<b>Target groups</b>	<b>Cambodia</b>	<b>Lao</b>	<b>Vietnam</b>
<b>Government</b>			
o DNA	sufficiently addressed	basically addressed	sufficiently addressed
o Other ministerial/central authorities	sufficiently addressed	basically addressed	sufficiently addressed
o Local authorities and communities	basically addressed	poorly addressed	basically addressed
<b>Project developers</b>			
o Industry	reasonably addressed but not deeply	poorly addressed	reasonably addressed but not deeply
o Private sector	addressed modestly but not deeply	poorly addressed	addressed modestly but not deeply
<b>Financing sector</b>	very poorly addressed	not yet addressed	very poorly addressed
<b>Research/academic</b>	addressed modestly	not yet addressed	addressed modestly
<b>NGOs</b>	addressed modestly	not yet addressed	addressed modestly

#### **IV.4. Capacity building tools**

The survey ranking of those activities that have successfully contributed to capacity building done by UNITAR (2001) finds that the greatest number of organizations participated in the survey, approximately 64% believes that workshops and stakeholder dialogues as a useful form of capacity building in the past. This may explain the fact that a common feature of all capacity programmes in Cambodia, Lao PDR and Vietnam is the holding of general CDM workshops although they differ in objectives, beneficiaries, scope, available resources and duration.

For some target groups in Cambodia and Vietnam, such as governmental audiences, the further participation in general public training events in future is deemed overwhelming. Thus, given the law of diminishing marginal returns, the benefits obtained by continuing to holding similar training workshops will be likely outweighed by costs.

The writing of studies is the second popular tool employed in these programmes. However, these studies are constrained mostly around the national level that can provide a good overview and framework for decision making but are not really informative for project developers at sectoral level. Furthermore, the broad dissemination of the studies' outcomes to public and particular interest groups is still limited. This definitely reduces the benefits offered by these studies.

Publishing and disseminating CDM manual is considered as one tool to improve public awareness under the capacity building activities in Cambodia and Vietnam. More than 10 and 15 booklets and brochures have been published in local languages in Cambodia and Vietnam, respectively. Only one brochure on CDM has been published in Laotian. Such publications usually contain general introduction about the climate change issues, the UNFCCC and Kyoto Protocol, basic information regarding CDM modalities and rules, and activities taken place in the country so far. The needs for separating target readers then compiling appropriate contents for different demands and degrees of understanding have not dealt with properly under the past and on-going programmes. For instance, publications with the purpose to develop know-how and expertise in

project development should be differentiated from ones aim at promoting CDM in the international market.

Another problem with such material is that it becomes obsolete very quickly and users are not aware of that (Michaelowa, 2005). In his opinion, a web-based manual that is constantly updated and could also be shared by different capacity building initiatives would be much more efficient in terms of cost saving and spreading information. Each DNA runs its own web-site on CDM. However information is not well updated and comprehensive enough.

However, one should also keep in mind that this web-based manual definitely is not completely substitute for printed awareness material in these countries given the low access rate to Internet of local authorities and other stakeholders in there.

## **V. COMMENTS AND SUGGESTIONS**

Cambodia and Vietnam have been quite successful in attracting international and bilateral donors for CDM capacity building projects. These projects have significantly contributed to establishing CDM institutions in these two countries, especially to the operational of the two DNAs as well as building capacity with project developers.

As emphasized by the UNFCCC that capacity building is a continuous, progressive and iterative process, the progress achieved in Cambodia and Vietnam in a number aspects of CDM can only keep on track if further capacity building assistance will be provided via international and bilateral programmes.

However, our assessment provides hints for some options for improvement of future assistance efforts. The non-exclusive recommendations are as follow:

- Avoid replicate in scope and content addressed already by the past and ongoing capacity building projects.
- Link sufficiently with the results of previous projects.
- The target groups should be specific enough and focus on groups are poorly involved in the past and ongoing activities such as private sectors and financial sectors.
- Capacity building should start by raising on the general issue on climate change as most people have very limited knowledge on the issue, then relate it to the more specific CDM issues.
- Workshops aiming at general public awareness should be restrained, rather more on-the-job/sectoral trainings to transfer skills should be introduced.

- Conduct more sectoral research that can provide reliable information regarding the CDM potential assessments and “state of the art” technologies for project developers

So far, only one capacity building project (EU Pro Eco) is going to finish in Lao PDR. The design of structure and operation of DNA are not yet accomplishing. Notwithstanding, this programme plays an essential role in improving the basic understanding of governmental authorities in CDM and fully operationalising the DNA in this country. There are more rooms for capacity building in Lao PDR. But lessons learned from Cambodia and Vietnam are indeed helpful for Lao in order to spend resources more efficiently and to catch up the levels have been reached by other countries having similar circumstances like Cambodia.

Regarding the recommendation made by the UNFCCC (2005) that the implementation of capacity building should be based on the priorities of developing countries, from the lessons of the three countries, we would like to emphasise that the assessments of professional needs and barriers should be an initially crucial step in any CDM capacity development effort.

For instance, quantitative indicators for the assessment of readiness of countries to engage in CDM should be developed that will allow objective benchmarking of countries in relation to:

- institutional prerequisites
- human capacity to identify and implement projects
- the attractiveness of countries and sectors to foreign investors.

Quantitative indicators for identifying major barriers for participating and benefiting from the CDM in a host country include:

- Country risks (e.g. investment climate; corruption)

- Lack of development of international Kyoto markets (e.g., Protocol ratification; anticipated low international carbon market prices; accreditation of operational entities)
- Existing domestic legal/institutional frameworks and lack of domestic legal/institutional framework to support CDM project formulation and implementation
- Lack of local/regional financing sources to execute CDM projects

In the countries like Cambodia and Vietnam now, more detailed assessments on the specific needs of different target sectors and audiences will be important for any future capacity building activity.



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