



CLEAN DEVELOPMENT  
MECHANISM

COUNTRY REPORT

MALAYSIA

# **COUNTRY REPORT - MALAYSIA**

Malaysia is situated in the central part of South-East Asia region. Malaysia lies between the Longitudes 100 degrees and 120 degrees East and Latitudes formed by the Equator and 7 degrees North. To the north of Malaysia is Thailand, to the South is Singapore and Indonesia and to the east are the Philippines Islands.

Malaysia is comprised of the Peninsular Malaysia and Sabah and Sarawak across the South China Sea on the northern part of the island of Borneo. The combined total land area is 329, 758 sq. kilometers.

Malaysia is a multiracial country with the population of approximately 25 million people.

## **Energy Overview**

Energy is a key component in Malaysia's economy, as the development and utilization of energy resources have contributed and will continue to contribute to the industrialization of the economy, the socio-economic welfare of the people, as well as exports earnings. This, in part, is a direct result of the rich energy resource base. Malaysia is well endowed with conventional energy resources such as oil, gas and coal, as well as renewables such as hydro, biomass and solar energy. The main energy resources are oil, gas, coal and hydropower.

## **Malaysia - Forest Management Overview**

Malaysia has relatively large tracts of rich and highly diverse natural tropical forests that cover about 19.54 million hectares or 59.5% of the country's total land area. These valuable renewable assets have for decades help to sustain the nation's rapid growing economy and development. In 2003, the forestry sector contributed to more than RM14 billion in export earnings. The forestry sector is expected to continue playing a significant role in this socio-economic development process for many years to come. At the same time, the forests have also been recognized for its important protective roles such as the protection of soil and water resources, conservation of biological diversity and stabilising of the local and global climate conditions. It is thus towards Malaysia's own interest to manage its forest resources on a sustainable basis to ensure she continues to enjoy the myriad of benefits in perpetuity. Subsequently, Malaysia has stepped up efforts in conservation and management of forests by improving its management practices, skills and capacities, research and development, and corporation in regional and global efforts and multilateral environmental agreements.

Malaysia recognises that forests play an important role in the climate system. Forests have been acknowledged as a major reservoir of carbon, containing some 80% of all the carbon stored in land vegetation, and about 40% of the carbon residing in soils. Forests contain vast quantities of carbon and act as sinks by absorbing carbon from the air, while forests whose carbon flows are in balance thus act as reservoirs. On the other hand deforestation, degradation and forest fires can emit large quantities of carbon into the atmosphere.

Sustainable forest management can generate forest biomass as renewable energy resource. Some of this biomass can be substituted for fossil fuels; this approach has a greater long-term potential for reducing net emissions than does growing trees to store carbon. Establishing forests on degraded or non-forested lands adds to the amount of carbon stored in trees and soils.

For the first commitment period from 2006-2012, only afforestation and reforestation projects are eligible under CDM. Although this somehow limits the potential of forest management activities under CDM, there would still be projects that could be eligible such as establishment of forest plantation or rubber plantation in non-forest lands.

## **1. CDM Policy and Institutional Arrangements**

Malaysia signed the United Nations Framework Convention on Climate Change (UNFCCC) on 9 June 1993 and ratified it on 17 July 1994. Ministry of Science, Technology and the Environment (MOSTE)<sup>1</sup> was made the focal point of the UNFCCC in Malaysia. Subsequently, the Government established a National Steering Committee on Climate Change (NSCCC) comprising MOSTE as Chair, and representatives from relevant sectors as members to the Committee to help meet its obligations under the Convention.

As a Party to the Convention, in accordance to the Article 4, paragraph 1, Malaysia will communicate to the Conference of Parties, through the secretariat, the following elements of information:

- (i) A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent its capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties;
- (ii) A general description of steps taken or envisaged by the Party to implement the Convention; and
- (iii) Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends.

Nevertheless, as a non-annex 1 Party to the UNFCCC, Malaysia is not subjected to any commitments towards reducing greenhouse gases (GHG) emission under the Kyoto Protocol. However, through participation in the CDM activities under the Protocol, Malaysia could benefit from the investments in the GHG emission reduction projects, which will also contribute towards the overall improvement of the environment and to some extent bring additional economic benefits. Malaysia ratified the Kyoto Protocol on 4 September 2002. The preparation of national strategies on CDM will have to take into

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<sup>1</sup> Ministry of Natural Resources and the Environment(NRE) (the newly formed Ministry) has now taken over the role of focal point for UNFCCC replacing the Ministry of Science, Technology and the Environment which has been restructured.

account both the short and long term perspectives of the country's position with regard to climate change mitigation measures.

The success of the CDM rests on its contribution towards the national sustainable development goals, especially from the perspective of a developing country like Malaysia. As the mechanism develops, there will be greater potential for such benefits.

Projects in the energy sector especially renewable energy (RE) and energy efficiency (EE) projects have been given priority for CDM implementation in Malaysia. Besides contributing to GHG reductions, these projects are in line with the sustainable development strategies in the energy sector. In Malaysia, small-scale CDM projects can provide necessary support for Government policies to achieve sustainable goals of the energy sector in promoting the use of RE and EE. Small-scale energy projects also constitute a demonstration phase for the use of CDM and as such, form important part of background experience for developing full scale CDM implementation in Malaysia.

The national institutional arrangement for the CDM has been put in place. On 31 May 2002, the NSCCC chaired by the Secretary General of MOSTE agreed on the establishment of a two-tiered organisation for CDM implementation in Malaysia (*refer to Attachment 1*). The role of NSCCC is to formulate and implement climate change policies including mitigation of GHG emissions and adaptation to climate change.

The two-tiered institutional set-up comprises of:

- The National Committee on CDM (NCCDM); and
- Two Technical Committees.
  - The Energy Technical Committee and
  - The Forestry Technical Committee

The NCCDM is chaired by the Deputy Secretary General of NRE. The role of this committee is to evaluate and endorse recommendations made by the Technical Committees regarding CDM project proposals. In addition, this Committee provides policy direction and guidelines for implementation of CDM projects at the national level. The Terms of Reference of NCCDM are as follows:

- To develop policies, direction, strategies, criteria and guidelines for implementation of CDM projects at national level;
- To receive, evaluate and recommend CDM project proposals after obtaining comments and views from the Technical Committees;
- To monitor CDM projects and inform its status from time to time to the NSCCC; and
- To hold meetings of the NCCDM at least four times a year.

The Technical Committee for Energy is chaired by the Ministry of Energy, Water and Communications and the Technical Committee for Forestry is chaired by NRE. The roles of these committees are (i) to provide policy guidance on CDM projects in the sector concerned (ii) to ensure that the proposed CDM projects comply with national development strategies and guidelines and (iii) to recommend evaluated CDM project proposals to the NCCDM for national approval.

The Technical Committee on Energy had its first meeting on 12 September 2002 and at this meeting Pusat Tenaga Malaysia (PTM) was appointed as the Secretariat to the Committee. The Forest Research Institution of Malaysia (FRIM) has been appointed the Secretariat to the Technical Committee on Forestry.

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The main roles of PTM and FRIM as the CDM Secretariat are to assist the Technical Committees in evaluating CDM proposals, to provide policy input on CDM to the Government, to conduct CDM outreach activities, and to provide guidelines and advisory services to potential local and foreign CDM investors in the respective sectors.

## **2. CDM Project Development and Status of CDM Projects**

In May 2003, the Conservation and Environmental Management Division at MOSTE was registered with the UNFCCC secretariat as the Designated National Authority (DNA). The key function of the DNA is to receive and process the applications for the CDM project activities from the project proponents. The DNA will issue the Host Country Letter of Approval to CDM project proponents if it is satisfied that the participation of the project proponents is made on voluntary basis, conforms to the national criteria and meets the national sustainable development goal.

With the prompt start of the CDM and the rules and modalities for the CDM laid out after COP 7, implementation of the local CDM process has been taking shape. The first CDM energy project proposal was submitted for national approval in July 2002.

In August 2003 the national criteria on CDM and the national CDM criteria for small-scale energy projects were endorsed by NCCDM. At the same NCCDM meeting, three CDM projects proposals from the energy sector were recommended by the CDM Technical Committee on Energy and were given conditional approval by the NCCDM.

The national criteria for small-scale energy projects were developed and endorsed to fast-track the implementation of RE and EE CDM projects in Malaysia. In the 8<sup>th</sup> Malaysia Plan (2001-2005), renewable energy (RE) was introduced as the fifth fuel where 5% target of grid-connected electricity generation utilising renewable energy by 2005 was set by the Government of Malaysia to further promote the utilisation of renewable energy resources. To date, three small-scale renewable energy projects have received conditional approval from the DNA. The DNA will issue the final letter of

approval once the Designated Operational Entity has validated the Project Design Document.

The three energy projects, which received conditional approval from the DNA are projects below 15 MW utilising palm oil residues for heat and power generation. Two of these projects are grid-connected and have received approval under the Small Renewable Energy Power Programme (SREP).

The Government of Malaysia announces the launching of the SREP on 11<sup>th</sup> May 2001. The launch of the Programme is among the steps taken by the Government to encourage and intensify the utilization of RE in power generation. This is in line with the Government's decision to intensify the development of RE as the fifth fuel resource under the Fuel Diversification Policy, as stipulated in the objectives of the Third Outline Perspective Plan for 2001-2010 (OPP3) and the Eighth Malaysia Plan.

In order to coordinate the implementation of the Government's strategy to intensify the development of RE as the country's fifth fuel resource, a Special Committee on Renewable Energy (SCORE) has been set up under the Ministry of Energy, Water and Communications.

To date, there are 114 applications received under SREP. SCORE has given approval to 60 projects and issued 3 licensees with the Renewable Energy Power Purchase Agreement (REPPA) signed with the power utility company. Hence, there are already projects on the pipeline waiting for CDM implementation.

The CDM Secretariat has also received and evaluated 2 Project Idea Note comprising the methane abatement project and gas recovery from landfills projects. The Pre-Screening reports for both projects have been presented to the NCCDM.

### **3. CDM Capacity Building Projects and Results**

PTM is the implementing agency for a seven man-month CDM Capacity Building Project co-funded by Malaysia Government and DANIDA. This Project ended in January 2004. The objective of this Project is to *'strengthen the institutional capacity of PTM as a one-stop agency for the CDM energy projects, including dissemination of information to the public and private sector on CDM'*.

#### **Capacity Building Results**

The Project has been very successful in meeting its objectives in establishing robust systems for the secretariat functions for example, the administrative guidelines and criteria for small-scale renewable energy projects, which have been implemented for the CDM approval process. The Project has done initial work to draft sustainable development criteria to be applied to other projects apart from small-scale energy projects.

The Project has also contributed sufficiently in the development of skills at the Secretariat. The Secretariat's knowledge on the CDM and its international rules and procedures has improved considerably during the course of the Project and the staff's

network with the key-stakeholders in Malaysia, project developers and CDM network in the region has indeed gained momentum.

The outputs of the activities carried out in this Project are described in Table 1 below

**Table 1: Completion of Tasks**

<b>Task</b>	<b>Main Deliveries</b>
<b>Task 1</b> Using the CDM to promote small-scale Bio-energy projects – Opportunities and Constraints	Prefeasibility study summarised in a paper for the International Palm Oil Conference Financial Terms, discussion paper Simple Financial Model
<b>Task 2</b> Finalisation of Guidelines and Criteria for Screening and Endorsement of Small-Scale CDM projects	Review of legislations, policies and guidelines Unilateral versus bilateral projects, discussion paper CDM and Technology Transfer, discussion paper Interpretation of "Best Available Technologies", discussion paper is implemented by PTM for project evaluation Proposed national criteria for small-scale CDM energy projects.  Approved by NCCDM and implemented by PTM for project evaluation
<b>Task 3</b> CDM Institutional and Approval Process Review	Review of approval process
<b>Task 4</b> Hands-on Experience in Project Evaluation and Developing of Administrative Guidelines for Handling of Applications for CDM Approval within the DNA	CDM Administrative Guidelines Manual incl. - Admin Checklist - PIN template - Sample Project Screening Report  CDM Administrative Guidelines will be implemented by PTM and NRE for evaluating projects and processing applications
<b>Task 5</b> Development of CDM Registry for Energy Projects	Structure of CDM registry is implemented by PTM
<b>Task 6</b> Draft National CDM Energy Strategy	Draft Strategy CDM Potential Beijing Mission Report
<b>Task 7</b> Outreach strategies for CDM implementation in Malaysia	Series of colloquia (5) Website structure and content Draft CDM Handbook
<b>Task 8</b> CDM Baseline Methodologies	Working paper for Peninsular Malaysia, Sabah and Sarawak
<b>Task 9</b> Sustainability Criteria	Discussion paper

#### **4. Main Players and Target Groups For Project**

The high level of political interest in CDM has contributed significantly to create a conducive environment for the project. The same is true of the significant interest in the CDM shown by potential project developers from the private sector. This has proved that the intervention was highly relevant and had a positive bearing on the motivation of the project team to perform at its best.

The location of the Project at PTM was in many ways beneficial to the Project since the institution and their staff has been very much engaged in the implementation of the Project. During the course of the Project, PTM has also been providing highly qualified counterpart staff for the Project. The analytical parts of the Project have benefited from the competencies of the PTM in most aspects of the energy sector in Malaysia.

The major downside of the project location at PTM is that the institution has only indirect influence on the policy formulation in Malaysia. This difficulty has been overcome by including the relevant Government organizations such as NRE, MEWC and EPU (Energy Section) as members of the Project Management Group. This group has been very efficient in providing continuous policy recommendations in the Project and also provided a forum for more informal talks among the key-stakeholders on the development of CDM in Malaysia.

At present, the main players in the CDM energy are:

- a) Ministry of Natural Resources and Environment (Designated National Authority for CDM)
- b) Ministry of Energy, Water and Communications (Technical Committee for Energy CDM)
- c) Pusat Tenaga Malaysia (CDM Energy Secretariat)
- d) Economic Planning Unit (Energy Section)
- e) Energy Commission
- f) Financial institutions
- g) Local universities and academic institutions
- h) Federation of Malaysian Manufacturers (FMM)
- i) Non-governmental organisations (NGOs)

## 5. Main National CDM Events in 2004

CDM Phase II project, which is co-funded by the Malaysian Government and Danish Government, will be the continuation of the project “Capacity Building for CDM” conducted from March 2003 to January 2004. The CDM Phase II for the Secretariat aims at transforming the present situation into a future state. The underlying assumption is that the Malaysian Government would like to take a proactive role in the development of CDM in Malaysia and the CDM Energy Secretariat will play a pivotal role in such a development.

The CDM Phase II project will comprise the RE/EE component to integrate CDM into the policy formulation in the energy sector in Malaysia. In most countries, CDM has been an activity separated from sector policy activities. However, in Malaysia, this project will result in strong integration between energy sector policy analysis and CDM analysis. This synergy should be harvested to the highest possible degree in the implementation of the CDM.

Besides the CDM Phase II project, there are a number of CDM events occurring in 2004;

a) The CDM Energy Secretariat has been invited to give a talk on the developments of Clean Development Mechanisms in Malaysia by Malaysian International Chamber of Commerce (MICCI). MICCI is a trade organisation representing the majority of international corporations operating in Malaysia. The Chamber has a number of standing committees, which look into matters concerning the business community, and one of the committees is the Environment Committee.

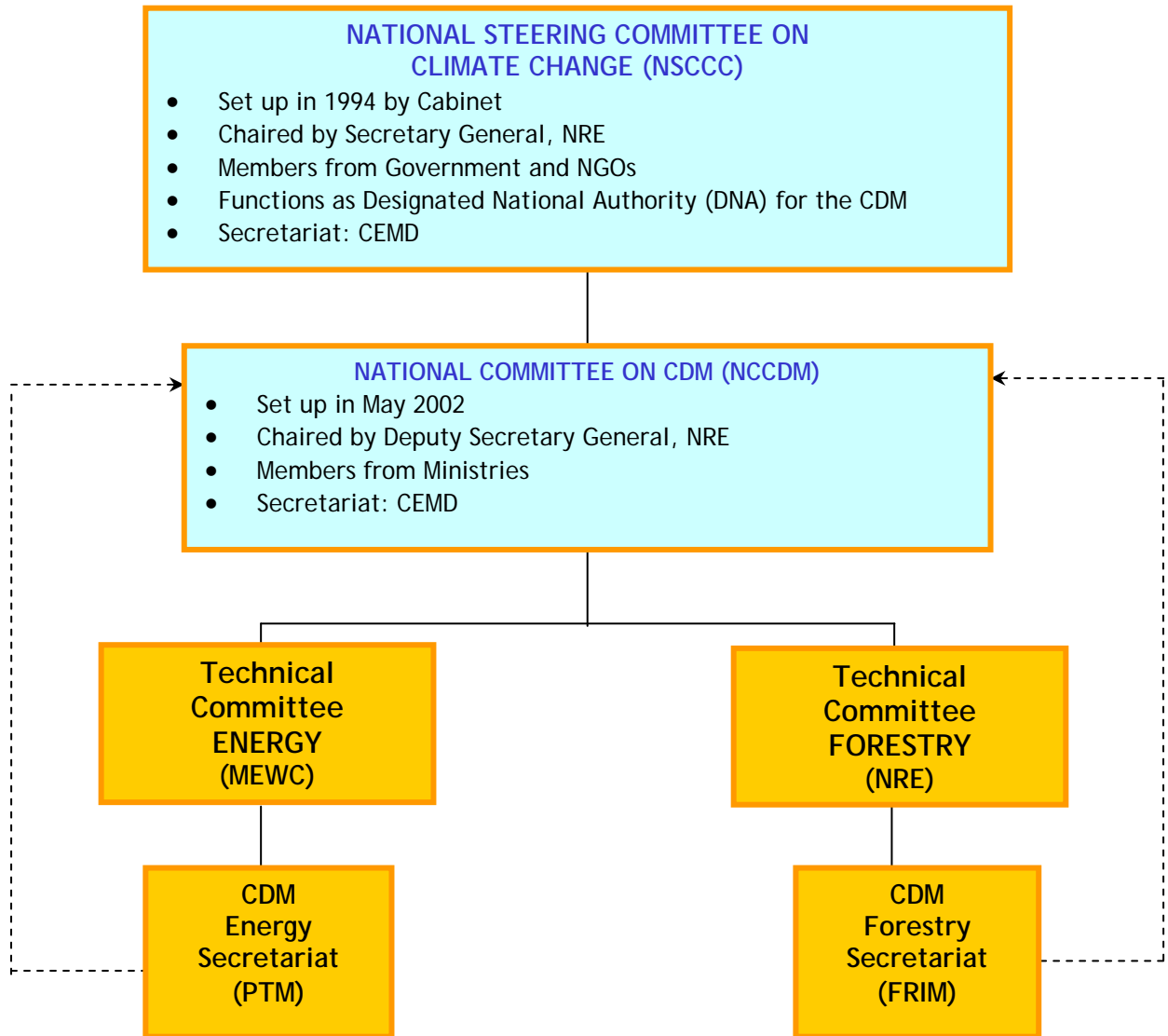
b) In conjunction with the Malaysian Cogeneration Week 2004, SIRIM Berhad and EC-ASEAN COGEN Programme (COGEN 3) has organised a National Cogeneration Forum 2004 and Seminar on Cogeneration and Sustainable Energy. One of the objectives of the Forum is to enhance the awareness of the Malaysian energy sector pertaining to the current status of prospects of CDM. The organisers have invited the CDM Energy Secretariat to present a paper entitled “The Current Status of CDM in the Malaysia Energy Sector”.

c) The CDM Energy Secretariat has been invited to give a talk on Renewable Energy Policy and Clean Development Mechanism. Information for the Commercialisation of Renewables in ASEAN (ICRA) is supported by The ASEAN Centre for Energy (ACE) through the EC – ASEAN Energy Facility with objectives in updating and expanding ACE RE resources database and sharing European experience and approaches in the fields of renewable energy, solar energy, biomass technologies and carbon credits.

d) Business Council for Sustainable Development Malaysia in collaboration with FMM, has invited CDM Energy Secretariat to give a presentation with a title “How to get CDM Credits (Roadmap)” at the Workshop on “Your Ecology, Your Energy, Your Money” which will be held on 1 September 2004.

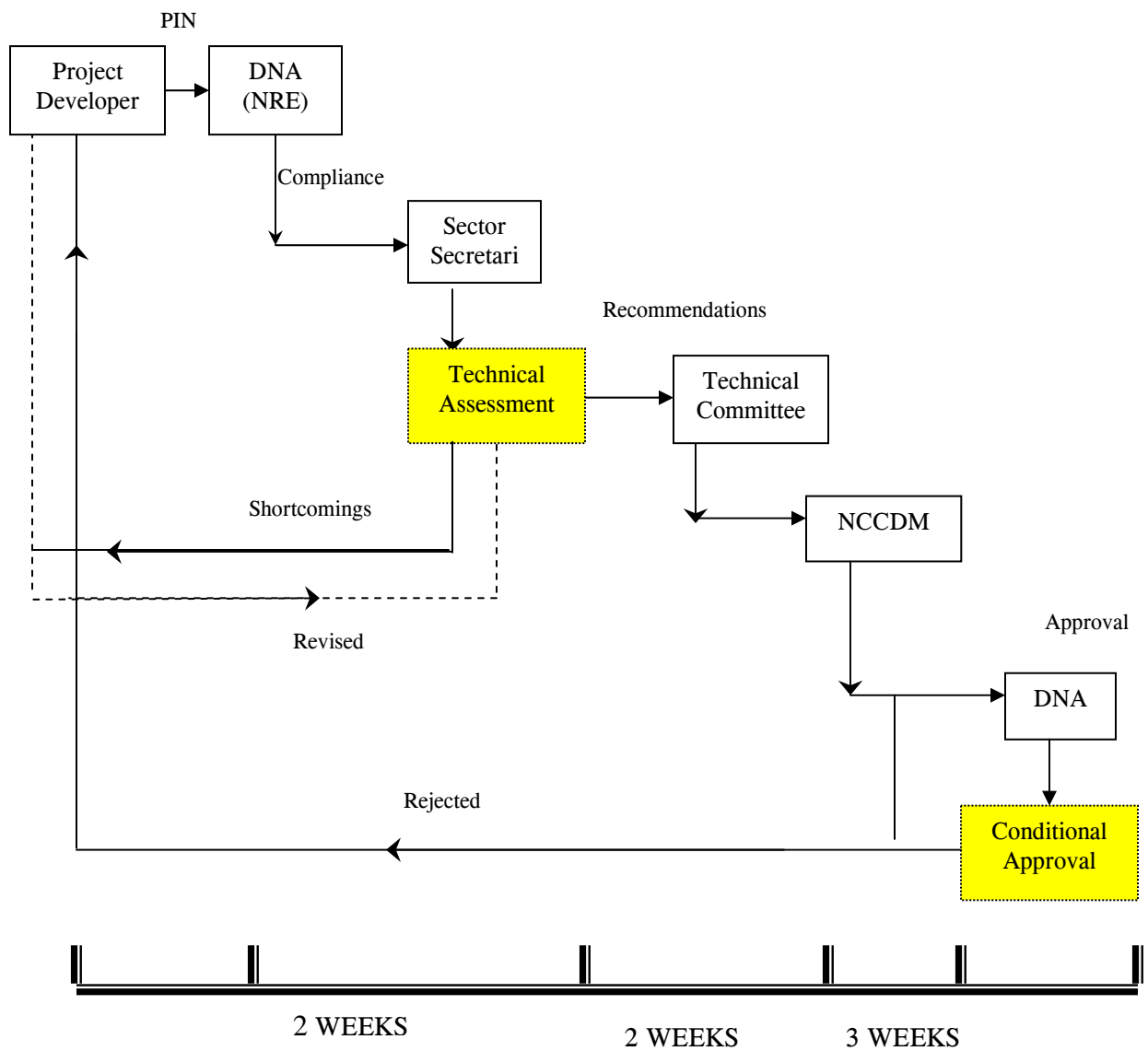
e) Creation of a network to advance practical CDM investments in ASEAN, in particular, from Private Sector – Brainstorming Session, October 2004 (organized by RIET, Singapore).

## ATTACHMENT 1

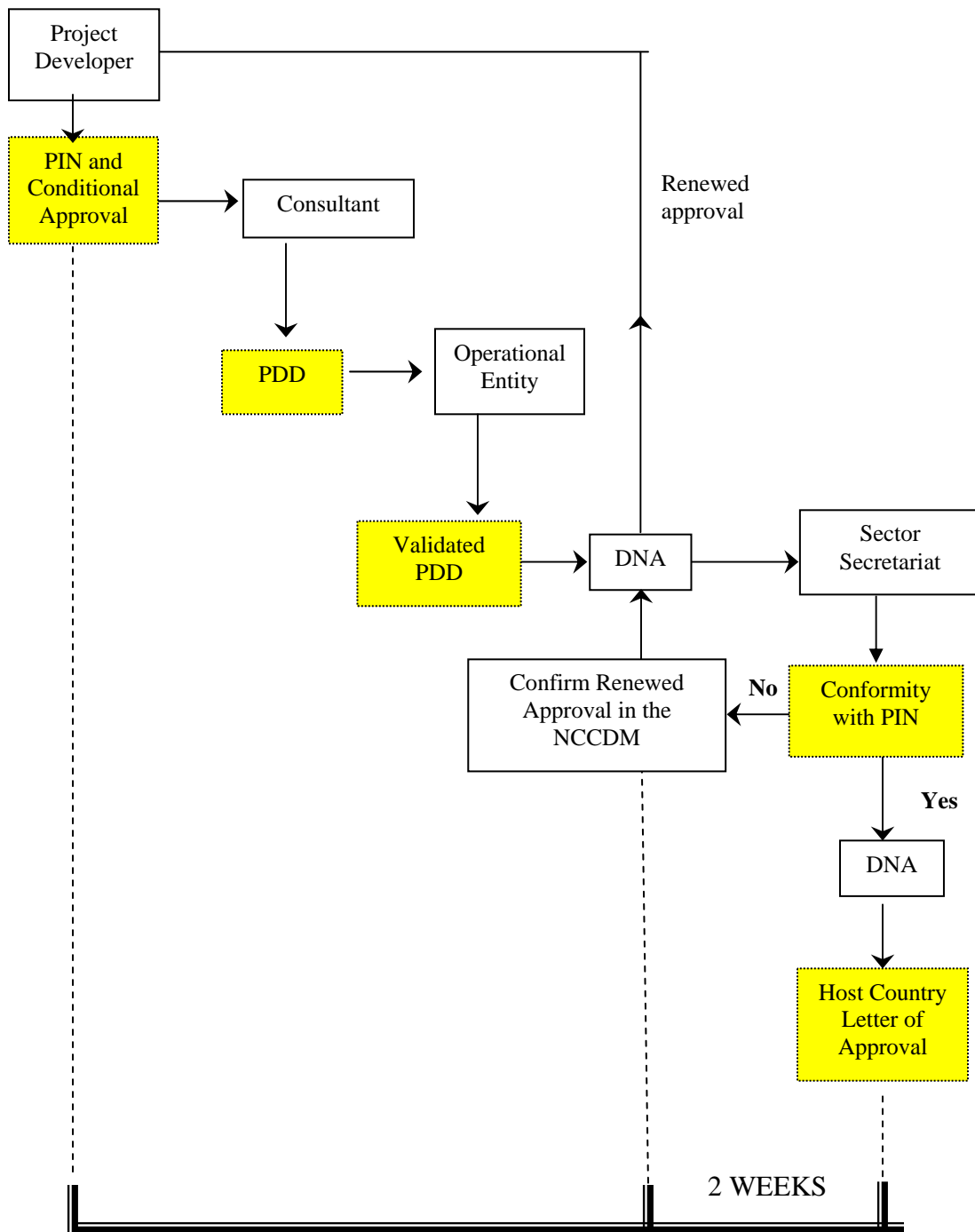


- NRE : Ministry of Natural Resources and Environment  
 CEMD : Conservation and Environmental Management Division, NRE  
 MEWC : Ministry of Energy, Water and Communications  
 PTM : Pusat Tenaga Malaysia (Malaysia Energy Centre)  
 FRIM : Forest Research Institute Malaysia

**Figure 1: National Institutional Arrangement for CDM Implementation**



**Figure 2: National Approval Process (Phase I)**



**Figure 3: National Approval Process (Phase II)**