



IGES
Institute for
Global Environmental
Strategies

Integrated Capacity Strengthening for CDM/JI
-Finding Ways towards Effective Capacity Building in Asia-



Ministry of the Environment

March 3-4, 2005 Tokyo, Japan

1. Programme

Integrated Capacity Strengthening for CDM/JI
–Finding Ways towards Effective Capacity Building in Asia –

March 3-4, 2005 Tokyo, Japan

Organiser: Institute for Global Environmental Strategies (IGES)

TOSHI Center Hotel

2-4-1 Hirakawa-cho, Chiyoda-ku, Tokyo, 102-0093 JAPAN

Theme

Finding Ways towards Effective Capacity Building in Asia

Background

Ministry of the Environment Japan (MOEJ) launched a programme, which aims to strengthen the capacity for the Clean Development Mechanism and Joint Implementation in developing countries or economies in transition, and appointed the Institute for Global Environmental Strategies (IGES) as the implementing organisation. Integrated Capacity Strengthening for the Clean Development Mechanism and Joint Implementation Programme (ICS-CDM/JI) is a three-year programme launched in FY2003. In FY2004 the CDM programme conducted several training workshops for CDM project development in five countries; namely, India, Indonesia, the Philippines, Cambodia, and Thailand. In addition, the investigation for JI project formulation was conducted for Russia.

The programme aims to implement CDM promotion activities with a focus on biomass, waste to energy and small-scale CDM projects through:

- 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.

In FY 2004, ICS-CDM focused its activities to organise training workshops using a learning-by-doing approach for project formulation; that is, Project Idea Note (PIN), baseline and Project Design Document (PDD) formulation training workshops using one prototype project, which is under development in each host country. In addition, the programme supported publication of country-specific information for developing CDM projects in Cambodia, India, Indonesia, the Philippines and Thailand. To conclude the series of training workshops, national meetings in four countries (Cambodia, India, Indonesia, and the Philippines) were held to review this year's activities and to identify the lessons acquired from the training workshops for the further improvement of the CDM project preparation process. The national meeting was designed to help frame the next step for the capacity development in each country.

Objectives

As a conclusion of the FY2004 ICS-CDM Programme and as a precious opportunity to hold discussions among stakeholders in the programme to make meaningful contributions for the future CDM capacity building activities, a general meeting is proposed to be held in Tokyo.

The main objectives of the Tokyo Meeting are:

- To present salient findings and lessons-learnt from the FY2004 ICS-CDM programme to the programme participants;
- To facilitate interaction among those participants to share information and experiences regarding the capacity building of CDM; and
- To identify effective capacity building programmes in Asia.

The participant at the Tokyo Meeting will be diverse: 1) representatives from the host country government and non-governmental organisations engaging in the ICS-CDM programme, 2) private project developers who have been involved in the development of the CDM 'model' project, 3) international organisations which have been active in the field of capacity development to create an enabling environment, and 4) organisations working under the initiative of Ministry of the Environment Japan for project development assistance, and basic information service and support.

PROGRAMME

Day 1: Thursday, March 3

8:30-9:00 Registration

SESSION 1: Opening of the Meeting

Introduction: Mr. Kazuhisa Koakutsu (IGES CDM Programme Country Officer)

09:00-09:10 **Welcome Remarks**

Professor Akio Morishima (IGES Chair of the Board of Directors)

09:10-09:30 **Keynote Speech**

Mr. Osamu Mizuno (Office of International Strategy on Climate Change, Ministry of the Environment, Japan)

09:30-09:50 **FY 2004 ICS-CDM Programme and Lessons-learned**

Mr. Shinichi Iioka (IGES CDM Programme Manager)

09:50-10:00 Break

SESSION 2: Presentations by Host Countries

Chair: Mr. Taka Hiraishi (IGES Senior Consultant)

10:00-10:50 **INDONESIA (50 min)**

Mr. Haneda Sri Mulyanto (Ministry of Environment, Indonesia) (15)

DNA in Indonesia*

Ms. Nina Natalina (YBUL) (10)[†]

Summary of National Meeting and workshops

Dr. Ir. Upik Rosalina Wasri (CER Indonesia) (15)

CDM Country Guide for Indonesia[‡]

Q and A (10)

10:50-11:20 **CAMBODIA (30 min)**

Mr. Sum Thy (Ministry of Environment, Cambodia)

DNA in Cambodia

Mr. You Dara (Ministry of Public Works and Transport, Cambodia)

Summary of National meeting

CDM Country Guide for Cambodia

Q and A (10)

* DNA presentation Topics: 1) organisation, 2) approval process, 3) approval criteria, and 4) approved project (if any).

[†] Summary of National Meeting and workshops: 1) briefing on conducted workshops, 2) summary of panel discussion on strengthening CDM project development and the next step for the capacity building in each country.

[‡] CDM Country Guide presentation topics: 1) what barriers have been identified during the preparation of CDM Country Guide, 2) how CDM Country Guide could help facilitating CDM projects, and 3) how it could help addressing barriers for CDM.

11:20-12:30

INDIA (70 min)

Dr. Kalipada Chatterjee (Development Alternative) (15)

DNA in India

Ms. Ulka Kelkar (The Energy and Resource Resources Institute) (15)

Summary of National Meeting and workshops

Dr. Kalipada Chatterjee (Development Alternative), (15)

Summary of workshops

Ms. Aditi Dass (Winrock International India), (15)

Summary of workshop and CDM Country Guide for India

Q and A (10)

12:30-14:00

Lunch

SESSION 2: Presentations by Host Countries (continued)

Chair: Dr. Myung-Kyoon Lee (United Nations Environment Programme –RISØ Centre)

14:00-14:40

THE PHILIPPINES (40 min)

Ms. Joyceline Goco (Department of Environment and Natural Resources) (15)

DNA in the Philippines

Summary of National Meeting

Ms. Grace Yeneza (Preferred Energy Inc.) (15)

Mr. Alberto III Rivera Dalusung (Preferred Energy Inc.)

Summary of workshops

CDM Country Guide for the Philippines

Q and A (10)

14:40-15:10

THAILAND (30 min)

Mrs. Prasertsuk Chamornmarn (Office of the Natural Resources and Environmental Policy and Planning) (10)

CDM in Thailand

Ms. Areerat Yoohoon (Ministry of Energy) (10)

Energy Strategy and CDM in Thailand

Dr. Chaiwat Muncharoen (Energy for Environment) (10)

CDM Country Guide for Thailand

15:10-15:30

CHINA (20 min)

Ms. Liu Yingchun (Climate Change Office, Department of Planning and Legal Affairs)

CDM in China

Q and A (5)

15:30-15:45 Break

SESSION 3: CDM project development-expectations and experiences from key players

Chair: Mr. Shinich Iioka (IGES CDM Programme Manager)

15:45-16:55 **Perspectives from CDM Project Developers (70 min)**

Mr. Norio Ikejima (Marubeni Corporation) (20)

Wind Power Project in Mondulkiri Province

Mr. Koichi Mitsunari (Kajima Corporation) (20)

Bantar Gebang LFG Collection and Energy Recovery CDM Project

Ms. Mihoko Kawamura (Takuma Corporation) (20)

Biogas Power Project in Thailand

[Topics]

- Project Description
- Issues
- Expectations for capacity building programme

Q and A (10)

17:00-17:40 Summary and Discussion of FY2004 ICS-CDM Programme

18:00-20:00 **Reception**

Professor Akio Morishima (IGES Chair of the Board of Directors)

Day 2: Friday March 4

SESSION 3 (Continued): CDM project development-expectations and experiences from key players

Chair: Mr. Shinich Iioka (IGES CDM Programme Manager)

9:00-10:00

CDM/JI Programme of Ministry of the Environment Japan (50 min)

Mr. Kunihiro Ueno (Global Environmental Centre Foundation, GEC) (20)

GEC Feasibility Studies

Mr. Makoto Kato (Overseas Environmental Cooperation Center, Japan, OECC) (20)

Kyoto Mechanism Information Network

Q and A (10)

SESSION 4: Regional Co-operation in CDM Capacity Building

Chair Dr. Ancha Srinivasan (IGES Climate Policy Project, Principal Researcher and Manager)

10:00-11:15

Role of International Cooperation in CDM Capacity Building and the Next Steps for Future Collaboration

- *Dr. Myung-Kyoon Lee* (United Nations Environment Programme –RISØ Centre)
- *Mr. Kamal Rijal* (United Nations Development Programme)
- *Mr. Mehmet Ferda Gelegen* (United Nations Industrial Development Organization)

[Topics]

- To review current status, identify region-specific priorities, and to exchange experiences, lessons learned and good practices in CDM capacity building;
- To identify the potential role of regional and international organizations, and ways to optimize country-wide and region-wide capacity building initiatives; and
- To explore prospects for building synergies among capacity building initiatives in the Asian region

Discussion

11:15-11:30

Break

SESSION 5: Group Work for Identifying the Next Step for the Capacity Building in Asia

Chair: Mr. Taka Hiraishi (IGES Senior Consultant)

11:30-11:35 **Introduction of Group Work**
Mr. Kazuhisa Koakutsu (IGES CDM Programme Country Officer)

11:35-12:30 **Parallel Breakout Group Discussion:**
“Identifying Effective Capacity Development Programme in Asia”
Facilitator: CDM Programme Country Officer / Pacific Consultants Co.

Technical Issue	Institutional Issue (DNA)	Regional Issue
<ul style="list-style-type: none"> • Bundling • De-bundling • Open Boundary CDM 	<ul style="list-style-type: none"> • Criteria for CDM project approval • Project evaluation process 	<ul style="list-style-type: none"> • Regional approach in Asia • Synergies in Asian countries
Mr. Keisuke Iyadomi (IGES) Mr. Yuji Mizuno (Pacific Consultants Co.)	Mr. Jun Ichihara (IGES) Mr. Tatsushi Hemmi (Pacific Consultants Co.)	Ms. Yukimi Shimura (IGES) Ms. Suzuko Tanaka (Pacific Consultants Co.)

12:30-14:00 **LUNCH**

14:00-14:45 **Group Discussion (Cont'd)**

14:45-15:00 **Break**

15:00-16:30 **Group Presentation**

- **Technical Issue**
- **Institutional Issue**
- **Regional Issue**

(Q and A)

SESSION 6: Closing of the Meeting

Mr. Kazuhisa Koakutsu (IGES CDM Programme Country Officer)

16:30-16:45 **Closing Remark**
Mr. Shinichi Iioka (IGES CDM Programme Manager)

2. List of Participants

List of PARTICIPANTS

No.	Affiliation	Position	Name
CAMBODIA			
1	Ministry of Environment, Cambodia	Secretary of State	H. E. Prach SUN
2	Ministry of Environment, Cambodia	Chief, Climate Change Office, Department of Planning and Legal Affair	Mr. Sum THY
3	Ministry of Public Works and Transport	Technical Official, Department of Road Infrastructure	Mr. You DARA
CHINA			
4	China Renewable Energy Industrial Association	Assistant to Secretary General	Ms. LIU Yingchun
INDIA			
5	Development Alternatives	Head - Climate Change Centre Global Environmental Systems Group	Dr. Kalipada CHATTERJEE
6	The Energy and Resources Institute	Associate Fellow	Ms. Ulka KELKAR
7	Winrock International India	Senior Programme Officer	Ms. Aditi DASS
INDONESIA			
8	CER Indonesia	Commisary	Dr. Upik Rosalina WASRIN
9	Ministry of the Environment The Republic of Indonesia	Staff of Climate Change Division	Mr. Dadang HILMAN
10	Ministry of the Environment The Republic of Indonesia	Head of Climate Change Mitigation Section	Mr. Haneda Sri MULYANTO
11	Yayasan Bina Usaha Lingkungan (YBUL)	Operation Director	Ms. Nina NATALINA
PHILIPPINES			
12	Department of Environment and Natural Resources	Head, Inter-agency Committee on Climate Change Secretariat, Environmental Management Bureau	Ms. Joyceline Adeva GOCO
13	Preferred Energy, Inc.	Business Development Manager	Mr. Alberto III Rivera DALUSUNG
14	Preferred Energy, Inc.	Managing Director	Ms. Grace Santibanez YENEZA
THAILAND			
15	Office of the Natural Resources and Environmental Policy and Planning (ONEP)	Senior Expert on Enviornmental Planning	Mrs. Prasertsuk CHAMORNMARN
16	Department of Alternative Energy Development and Efficiency, Ministry of Energy	Senior Scientist	Ms. Areerat YOOHOON
17	Energy for Environment Foundation (E for E)	Senior Information Officer	Dr. Chaiwat MUNCHAROEN

List of PARTICIPANTS

No.	Affiliation	Position	Name
JAPAN			
18	Ministry of the Environment, Japan (MOEJ)	Director, Climate Change Policy Division, Global Environment Bureau	Mr. Osamu MIZUNO
19	Ministry of the Environment, Japan (MOEJ)	Deputy Director, Climate Change Policy Division, Global Environment Bureau	Mr. Hiroaki TAKIGUCHI
20	Ministry of the Environment, Japan (MOEJ)	Climate Change Policy Division, Global Environment Bureau	Dr. Yasushi NINOMIYA
21	Institute for Global Environmental Strategies (IGES)	Chair, Board of Directors	Prof. Akio MORISHIMA
22	Institute for Global Environmental Strategies (IGES)	Senior Consultant and Member, Board of Directors	Mr. Taka HIRAISHI
23	Institute for Global Environmental Strategies (IGES)	Secretary General	Mr. Hiroyasu TOKUDA
24	Institute for Global Environmental Strategies (IGES)	CDM Programme Manager	Mr. Shinichi IIOKA
25	Institute for Global Environmental Strategies (IGES)	Country Officer (China, Russia and South Pacific), CDM Programme	Dr. Kayo IKEDA
26	Institute for Global Environmental Strategies (IGES)	Country Officer (India and Thailand), CDM Programme	Ms. Yukimi SHIMURA
27	Institute for Global Environmental Strategies (IGES)	Country Officer (Indonesia), CDM Programme	Mr. Jun ICHIHARA
28	Institute for Global Environmental Strategies (IGES)	Country Officer (Philippines), CDM Programme	Mr. Kazuhisa KOAKUTSU
29	Institute for Global Environmental Strategies (IGES)	Country Officer (Cambodia), CDM Programme	Mr. Keisuke IYADOMI
30	Institute for Global Environmental Strategies (IGES)	Assistant, CDM Programme	Ms. Sakae SEKI
31	Institute for Global Environmental Strategies (IGES)	Server Administrator/Webmaster	Mr. Toru MATSUMOTO
32	Institute for Global Environmental Strategies (IGES)	Project Leader, Climate Policy Project	Dr. Tae Yong JUNG
33	Institute for Global Environmental Strategies (IGES)	Project Manager, Climate Policy Project	Dr. Ancha SRINIVASAN
34	Institute for Global Environmental Strategies (IGES)	Visiting Researcher, Climate Policy Project	Mr. Seung Hwan OH
35	Ministry of Economy, Trade and Industry (METI)	Director for Environmental Affairs, Minister's Secretariat	Dr. Hiroshi YAMAGATA
36	Ministry of Economy, Trade and Industry (METI)	Chief Administrator, Global Environmental Affairs Office	Mr. Tomoyoshi HISAMORI
37	Ministry of Foreign Affairs (MOFA)	Climate Change Division, Global Issues Department	Ms. Kaori MIZUNO

List of PARTICIPANTS

No.	Affiliation	Position	Name
JAPAN (Continued)			
38	Global Environment Centre Foundation (GEC)	Assistant Manager for Research and Coordination and Project Division	Mr. Kunihiro UENO
39	Global Environment Centre Foundation (GEC)	Research and Coordination and Project Division	Ms. Mari NISHIKI
40	Overseas Environmental Cooperation Center (OECC)	Researcher	Mr. Makoto KATO
41	Overseas Environmental Cooperation Center (OECC)	Research Associate	Mr. Satoshi IEMOTO
42	Pacific Consultants Co., Ltd	Manager, Senior Consultant, Global Environment Department	Mr. Yuji MIZUNO
43	Pacific Consultants Co., Ltd	Consultant, Global Environment Department	Mr. Tatsushi HEMMI
44	Pacific Consultants Co., Ltd	Consultant, Global Environment Department	Ms. Suzuko TANAKA
45	Pacific Consultants Co., Ltd	Consultant, Global Environment Department	Mr. Kenjiro SUZUKI
46	Kajima Corporation	Senior Engineer	Mr. Koichi MITSUNARI
47	Marubeni Corporation	Assistant General Manager	Mr. Norio IKEJIMA
48	Takuma Co., Ltd.	Administration Section, International Operations Division	Ms. Mihoko KAWAMURA
INTERNATIONAL ORGANIZATION			
49	United Nations Development Programme, Regional Centre in Bangkok (UNDP-RCB)	Sustainable Energy Policy Advisor	Dr. Kamal RIJAL
50	United Nations Environment Programme Risoe Centre on Energy, Climate and Sustainable Development (URC)	Climate Coordinator / Senior Economist	Dr. Myung-Kyoon LEE
51	United Nations Industrial Development Organization Investment and Technology Promotion Office (UNIDO-ITPO)	Industrial Development Officer	Mr. Mehmet Ferda GELEGEN
52	United Nations Industrial Development Organization Investment and Technology Promotion Office (UNIDO-ITPO)	Deputy Head/Industrial Development Officer	Mr. Jun NISHIDA

3. Opening of the Meeting

Welcome Remarks

Professor Akio Morishima
IGES Chair of the Board of Directors
March 3, 2005

Distinguished participants,

It is indeed a great pleasure for me to welcome all of you on behalf of the Institute for Global Environmental Strategies to this workshop on CDM Capacity Building in Asia.

IGES is an internationally oriented policy think tank established by the Japanese Government in 1998 to conduct strategic research on selected themes such as climate policy, urban environmental management, forest conservation, business for sustainable society, freshwater resources management, and long term perspectives and policy integration. Besides policy research, IGES encourages multi-stakeholder dialogues and contributes to the capacity building of different stakeholders. While the outlook of IGES is global, its focus is the Asia-Pacific region.

CDM is an innovative initiative that has been internationally negotiated over a long time and it is the only flexible mechanism to reduce GHG emissions while promoting sustainable development in developing countries. After the Kyoto Protocol entered into force last month, establishing the operational environment for CDM implementation has become a pressing issue for both developed and developing countries. However, there still exist many barriers such as complexity of the CDM approval process, high transaction costs, lack of finance and appropriate institutional infrastructure, and lack of human resources in developing countries. Accordingly, both Annex I countries and host countries still have many difficulties to overcome in realising the CDM projects. The lack of institutional and human capacity has been identified as one of the major barriers limiting CDM implementation in Asia.

IGES launched the Integrated Capacity Strengthening for CDM/JI under the auspices of the Japanese Ministry of the Environment in October 2003. In the first six months, we conducted field surveys and awareness-raising workshops in order to strengthen both institutional and human capacities for CDM implementation in selected countries such

as Cambodia, Indonesia, India and the Philippines. Through such experience, we realised that additional practical training and real examples of CDM project development are necessary.

In FY 2004, therefore, we conducted training workshops using a learning-by-doing approach for project formulation, and provided training materials including the preparation of a country-specific CDM guide for selected countries. Through such efforts, we hope to support activities that enable establishing an appropriate institutional framework for smooth information dissemination on CDM and to build capacity necessary to develop the identified projects in each country.

I am pleased to know that you will spend the next two days not only to review the progress achieved during this fiscal year but also to identify specific follow-up activities necessary for effective implementation of CDM in Asia in general, and in each participating country in particular. I am sure the workshop agenda gives each of you many opportunities to frankly exchange views on the most effective ways to develop and implement suitable CDM projects that contribute to sustainable development of the region. I also hope this workshop will provide a forum to discuss the key constraints and challenges in CDM capacity building, share lessons and experiences in the design and implementation of policies to overcome such constraints, and explore ways in which various organizations could partner with the Governments and businesses in the region.

I would like to thank and congratulate all those who have contributed to the preparation of this workshop. I also thank other participants from various domestic and international organizations attending this important workshop.

As I conclude my remarks, I would like to welcome all of you to this workshop and to wish you good and fruitful deliberations.

Thank you.

Japan's approach towards CDM/JI implementation

3rd March 2005

Osamu MIZUNO

Director,

Office of International Strategy on Climate Change

Ministry of the Environment

Government of Japan

Japan's policy for CDM/JI (1)

- Kyoto mechanisms are necessary for Japan to achieve the commitment of the Kyoto Protocol in cost-effective manner. (cf. supplemental to domestic measures)
- CDM/JI are preferable mechanisms
- Because ...
 - ✓ CDM/JI are based on concrete GHG emission reduction projects
 - ✓ CDM/JI can directly contribute to Sustainable Development in host countries

Japan's policy for CDM/JI (2)

- Liaison Committee for Utilisation of CDM/JI (Cabinet Secretariat, MOE, METI, MOFA, MAFF, MLIT) was established as a DNA (Designated National Authority) of Japan in 2002
- Guidelines for Approving CDM/JI Projects was stipulated in Oct, 2002
As to date, 16 projects have been approved by Japanese DNA

CDM/JI projects approved by the Japan's DNA (as of 3/3/05)

	Data of Approval	CDM/JI	Applicants	Country	Project Name	Outline of the Project
16	28/2/2005	CDM	Shimizu Corporation	Armenia	Nubarahen LFG capture and power generation project	Collecting landfill gas from landfill site in Yerevan, and to burn methane, a combustible LFG in a gas engine generator (GEG) with to generate electricity
15	12/1/2005	CDM	Kajima Corporation	Malaysia	Krubong Melaka LFG capture and electricity generation	Collection of LFG from landfill site and electricity generation (2MW)
14	12/1/2005	CDM	NEDO	Vietnam	Energy conservation project in a brewery	The project aims to realise reduction of comprehensive energy consumption at Hanoi Beer Alcohol Beverages Corporation
13	12/1/2004	CDM	Showa Shell Sekiyu K.K.	Brazil	Salvador da Bahia LFG management	The project improves efficiency of methane capture and destruction with enclosed flaring with controlled burning condition.

CDM/JI projects approved by the Japan's DNA(Cont.)

	Date of Approval	CDM/ JI	Applicants	Country	Project Name	Outline of the Project
12	01/10/2004	CDM	The Tokyo Electric Power Company, Incorporated	Chile	Methane capture and combustion of swine manure treatment for Pocillas and La Estrella	Transforming methane produced in the swine digesting process in the anaerobic digester into CO2 by flaring it
11	01/10/2004	CDM	The Tokyo Electric Power Company, Incorporated	Chile	Methane capture and combustion of swine manure treatment for Corneche and Los Guindos	Transforming methane produced in the swine digesting process in the anaerobic digester into CO2 by flaring it
10	01/10/2004	CDM	The Tokyo Electric Power Company, Incorporated	Chile	Methane capture and combustion of swine manure treatment for Peralillo	Transforming methane produced in the swine digesting process in the anaerobic digester into CO2 by flaring it
9	22/07/2004	CDM	Electric Power Development Co.,Ltd.	Chile	Graneros Plant Fuel Switching Project	Replacing more carbon intensive fuels (coal and petroleum fuels) by natural gas
8	29/06/2004	CDM	Chubu Electric Power Co., Inc	Thailand	A.T.Biopower Rice Husk Power Project in Pichit, Thailand	22MW Biomass Power Plant using rice husk
7	19/05/2004	CDM	Sumitomo corporation	India	Thermal Oxidation of HFC23 in Gujarat	Collection and thermal oxidation of HFC23, which is strong GHG with a GWP of 11,700 at HCFC22 production site

Registered as
CDM by CDM-EB

CDM/JI projects approved by the Japan's DNA (cont.)

	Date of Approval	CDM/ JI	Applicants	Country	Project Name	Outline of the Project
6	03/12/2003	CDM	Japan Vietnam Petroleum Company	Vietnam	Rang Dong Oil Field Associated Gas Recovery and Utilization Project	Recovering associated gas as a by-product of crude oil production at Oil Field
5	29/07/2003	CDM	Kansai Electric Power Co.,Inc.	Bhutan	e7 Bhuran Micro Hydro Power CDM Project	70 kW Micro Hydro Power Plant for electrification of small village in Bhutan
4	Registered as CDM by CDM-EB 15/07/2003	CDM	INEOS Fluor Japan Limited	South Korea	HFC Decomposition Project in Ulsan	Decomposition of HFC23, as a by-product from HCFC22, in Chemical Company in Ulsan
3	22/05/2003	CDM	Electric Power Development Co.,Ltd.	Thailand	Rubber Wood Residue Power Plant Project in Yala	23MW Biomass Power Plant using rubber wood residue
2	12/12/2002	CDM	Toyota Tsusho Corporation	Brazil	V&M Tubes do Brasil Fuel Switch	Use charcoal for the production of steel instead of using cokes Alter the design of existing carbonization kilns
1	12/12/2002	JI	NEDO	Kazakhstan	The Model Project for Increasing the Efficient Use of Energy Using a Gas Turbine Cogeneration System	Replace the existing low efficiency boiler and steam turbine with a Gas Turbine Cogeneration System (GTCS)

Japan's policy for CDM/JI (3)

- MOE and METI have worked jointly to establish and maintain the National Registry since 2002
- 16th Feb 2005, Japan officially starts operation of the National Registry for Japanese legal entities to ensure accurate accounting of the holding, transfer, acquisition of Kyoto Units.
- Please visit Japanese national registry Website; <http://www.registry.go.jp/>

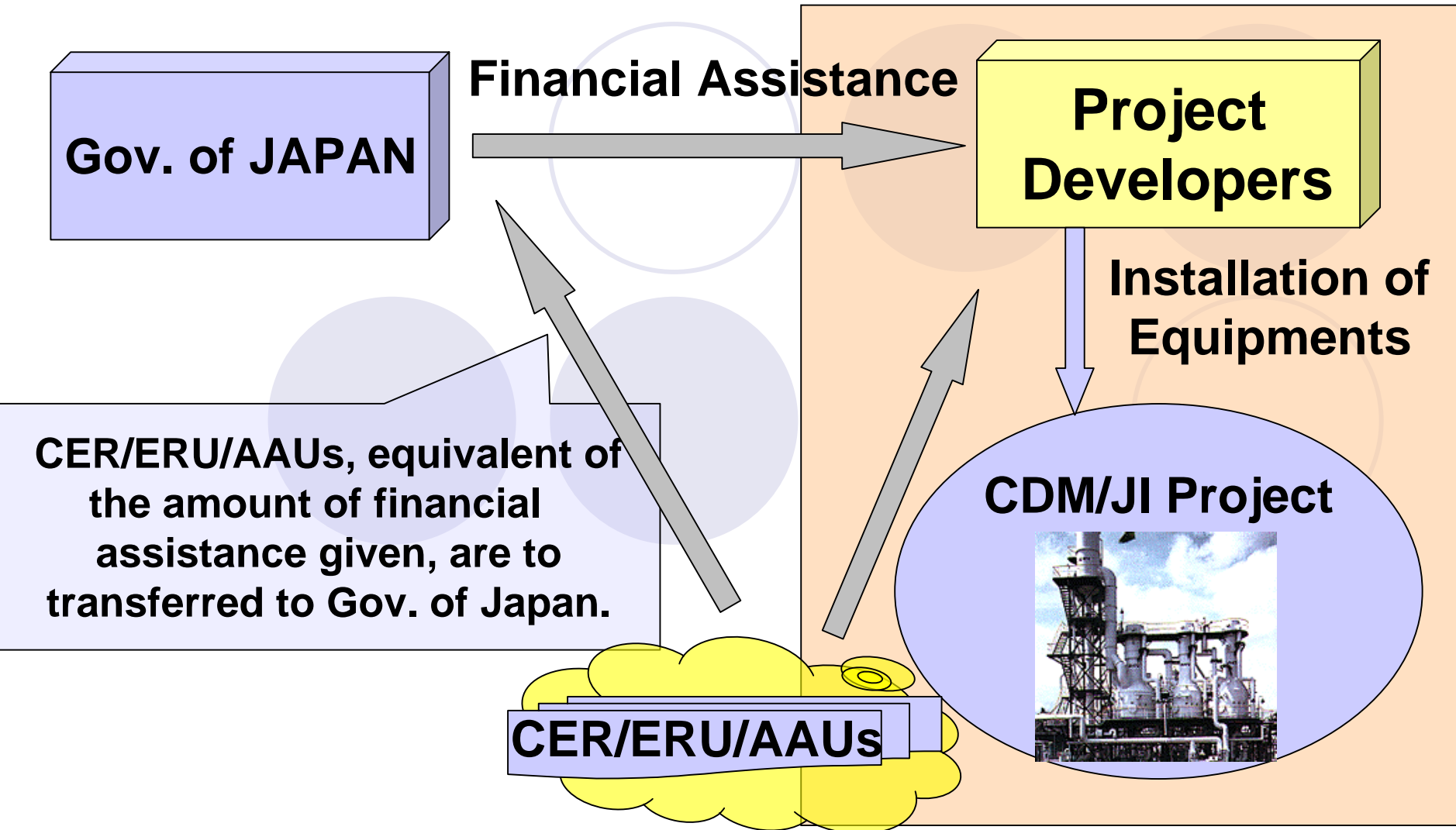
For acceleration of CDM/JI Project

- (1) Assistance to CDM/JI Project formulation**
- (2) Host Country's Capacity Building**
- (3) Provision of Information on CDM/JI Activities**
- (4) Financial Assistance to CDM/JI Projects**

MOE's Programmes to Support CDM/JI Projects

- CDM/JI feasibility studies supported by MOE (1999~) (via GEC)
- CDM/JI Capacity Building Programme in Host Countries (2003~) (via IGES)
- Kyoto Mechanism Information Platform (2003~) (via OECC)
- Upfront Payment Program for CDM/JI Projects (2005~)
 - ✓ Trial project with subsidy started (2004~)

Upfront Payment Program for CDM/JI Projects



Upfront Payment Program (Trial Project with Subsidy) for CDM/JI Projects

First project approved (as of Jan. 2005); CERs will be transferred to Gov. of Japan

Applicants for subsidy (project participants)	Country	Project	Estimated CERs	CERs to Gov. of Japan
A.T. Biopower (Thailand-base affiliate) & Chubu Electric Power Co., Inc.	Thailand (Nakhon Pathom)	A.T. Biopower rice husk power project	About 434,201 ton-CO ₂ e (2006 ~ 2012)	About 18,500 ton-CO ₂ e (2006 ~ 2012)

Upfront Payment Program for CDM/JI projects(1)

- Japanese government is almost ready for “Upfront Payment Program for GHG emission reduction project under Kyoto Mechanism”.
- Budget Scale (FY2005) is 5.7 - 8.0 billion yen (approx. 54 - 76 million US dollars)
 - Now under review by the Parliament

Objective of the Program:

- To promote GHG emission reduction project under Kyoto Mechanism
- To purchase Emission Reductions (CERs, ERUs, AAUs) valid for Kyoto compliance

Administrator of the Program :

- Ministry of Economy , Trade and Industry (METI) and New Energy and Industrial Technology Development Organization (NEDO) / Ministry of the Environment (MoE)

Scheme:

- Administrator of the Program provide financial assistance (=advance against ERs) for project activity / up to 50% of the project cost
- Project participants have to transfer the ERs to Administrator of the Program
- “financial assistance (advance against ERs)” = “credit price” × “ total amount of ERs promised to transfer to Administrator of the Program”

* Further details about the Program is under constructing.

Upfront Payment Program for CDM/JI projects(2)

Coverage of the Program:

- 1)project cost: project development cost (PDD, Validation etc.) , equipment , construction cost etc.
- 2)project type : energy efficiency improvement , renewable energy use , methane capture and energy use , HFC decomposition , N2O reduction ,etc./ except sink project

Credit Price:

- Fair price (To be decided on project-by-project basis , in view of project risk , delivery risk and market price etc.)

Timing of Payment :

- Upfront payment in principal , at the time construction or equipment installation finishes

Eligibility for Application:

- Foreign entities can also apply for the program, but Japanese partner is necessary

Start of the Program :

- End of March , 2005

* Further details about the Program is under constructing.

Application for Upfront Payment Program is greatly welcome!

- Upfront Payment Program for CDM/JI Projects is waiting for more applications.
- Find your Japanese partner and apply for the program.
- The more your projects are cost effective, the more likely they are to be adopted.

Start of the Program :

End of March , 2005

Contact :

METI:kyomecha@meti.go.jp / NEDO:cdmji@nedo.go.jp
MoE:kyotomecha@env.go.jp



Thank you for
listening!

If you have any questions
please contact...

osamu_mizuno@env.go.jp

***Integrated Capacity
Strengthening for CDM/JI
Programme***
**- FY 2004 Activities and
Lessons Learned -**

Shinichi Iioka
CDM Programme Manager
Institute for Global Environmental Strategies
(IGES)

CDM Potential in Asia

- Region accounts for 20% GHG emissions; 40% of global economy
- Emissions increasing (~32% by 2030) due to increasing population and economic growth rates
- Region uses several outdated technologies and offers considerable low-cost opportunities for abating GHG emissions - leading to a large potential share in CDM market
- Positive Factors: High economic growth, large FDI, proximity to Japan

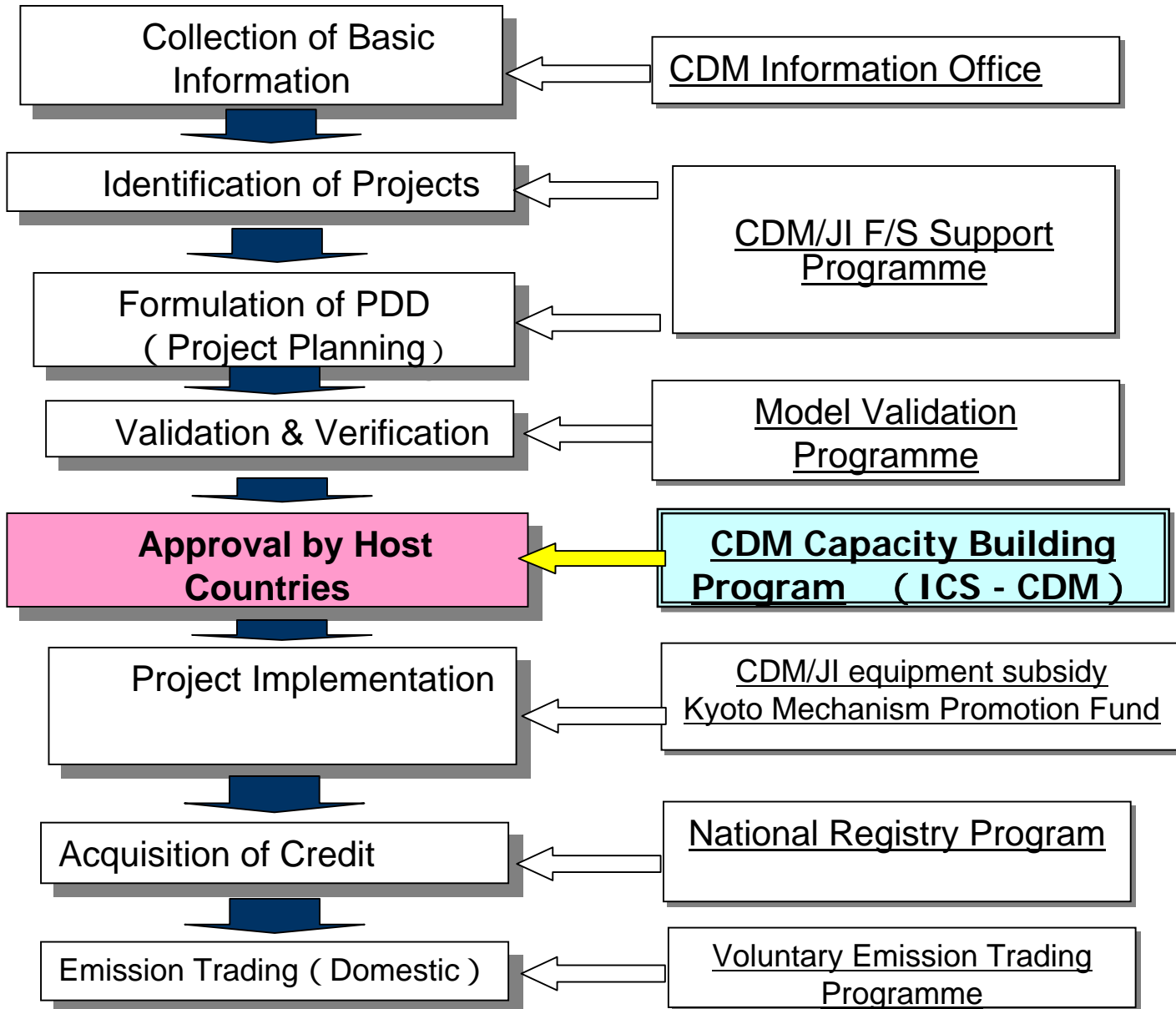
Main Barriers for CDM in Asia

- Institutional and policy barriers
- Social barriers
- Technological/methodological barriers
- Financial barriers
- Legal barriers

MOE's JI/CDM Promotion Programmes

CDM Project Cycle

Kyoto Mechanism Promotion Initiatives



Primary Objective

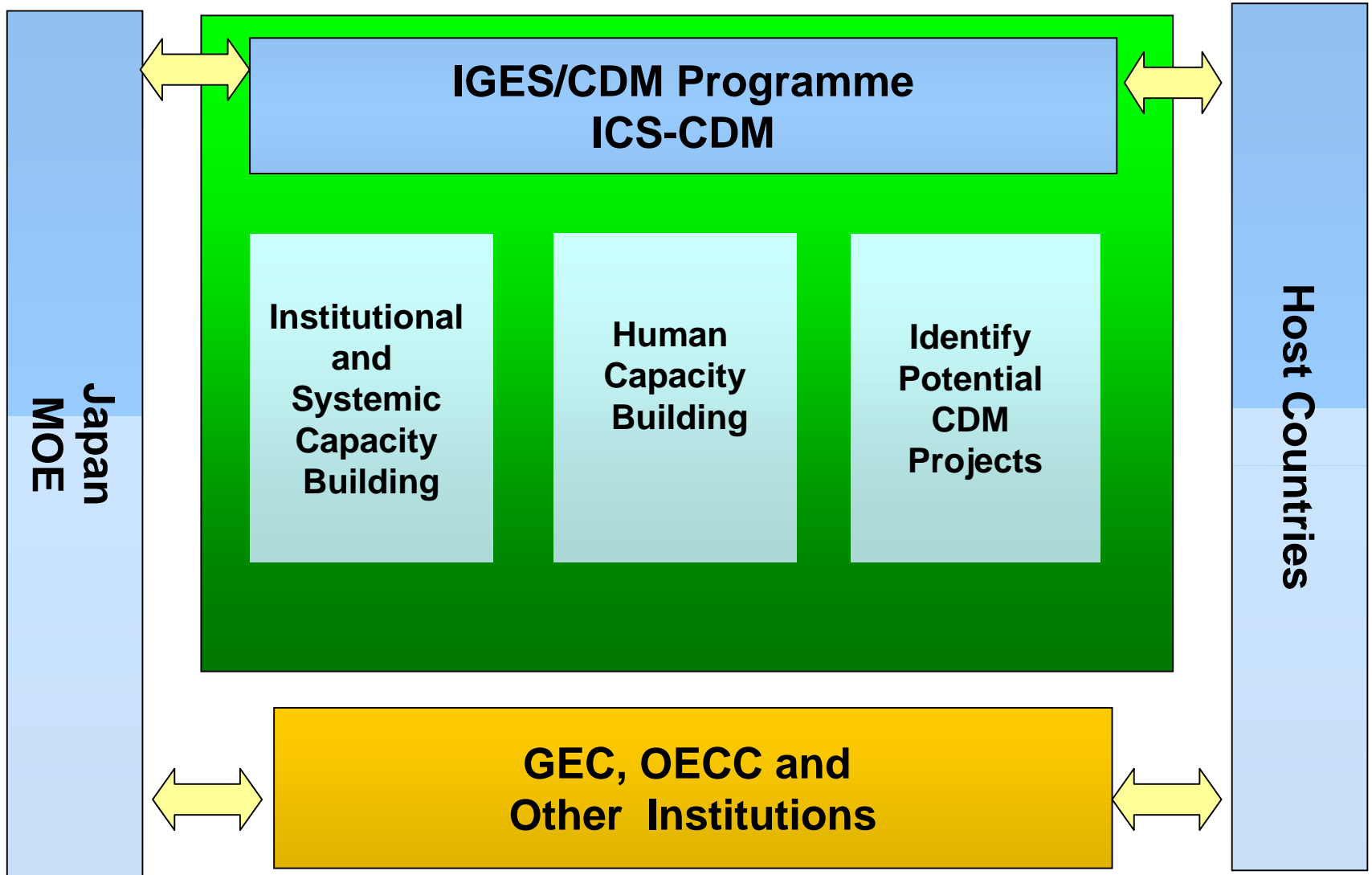
To develop institutional and human capacities in Asia for implementing CDM within the context of sustainable development through;

- raising awareness on CDM opportunities among various stakeholders (policy-makers, private sector, NGOs/academia)
- implementing actions to support institutional networks for CDM
- enhancing competitiveness of Asia within the CDM market through training and human resource development
- and, supporting CDM project identification, development and implementation activities

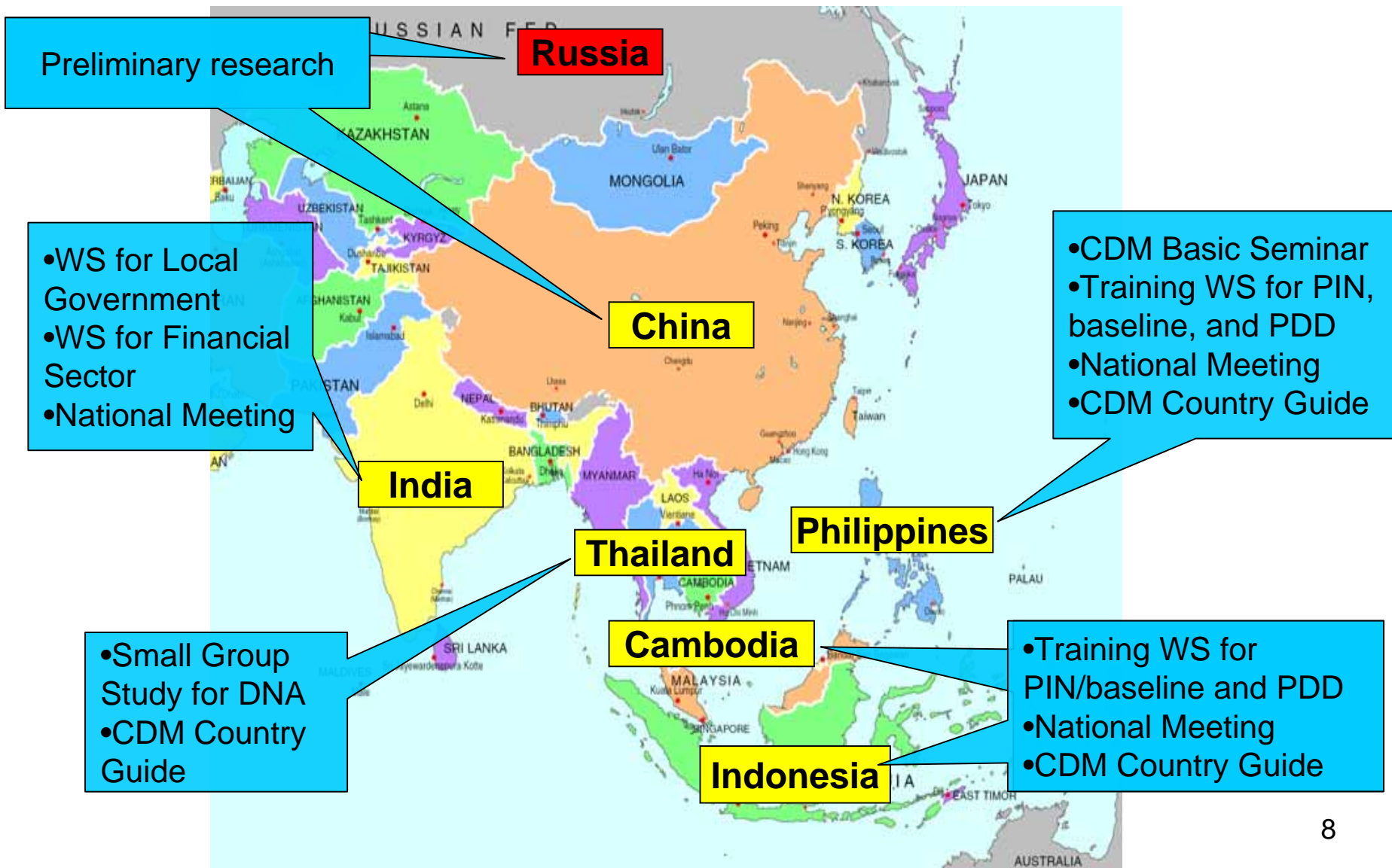
Typical Tasks

- Awareness raising and information outreach
- Development of the capacity of
 - Policy-makers and Government officials
 - DNA for CDM
 - Project developers
 - Project financiers
 - NGOs, Local communities, research organizations and Academia
- Facilitation of the development of CDM-eligible projects in priority sectors
- CDM Investment promotion activities
- Research on CDM policy development

ICS-CDM/JI Framework

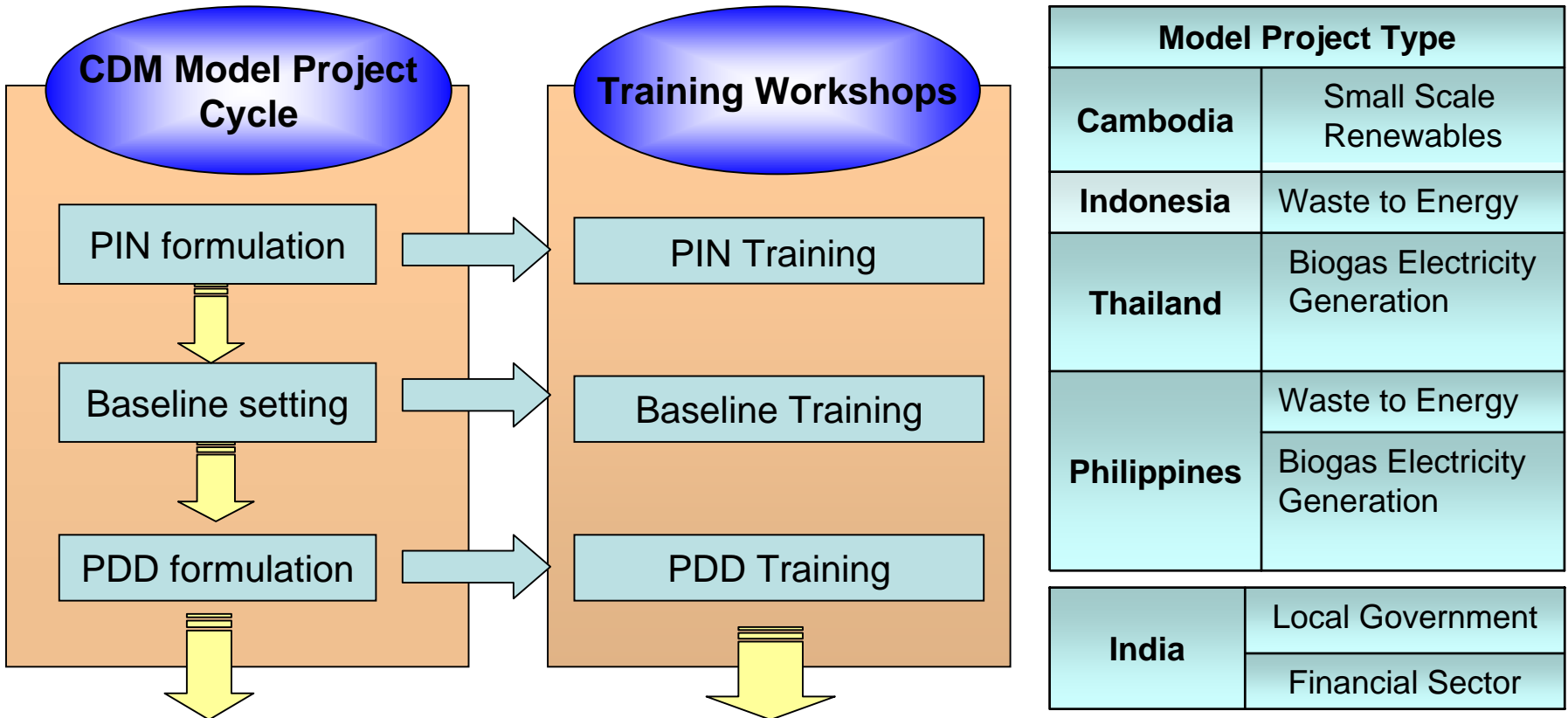


Country Activities FY 2004



Country Activities FY 2004

Sector focused: biomass, waste to energy, and small-scale renewable CDM



- Facilitate CDM projects development
- Accumulate know-how on CDM procedure and modalities
- Develop CDM Country Guide

FY 2004 Other Activities

- **Regional workshop** for CDM in co-operation with UNEP-RISO
- **The side event** on the CDM at COP 10 in Buenos Aires, discussing the future capacity building needs for the successful CDM project implementation
- **National meeting** in each host country to assess accomplishments and to identify the target for further strengthening the capacity to operationalise CDM projects
- Publications of textbook; **CDM and JI in CHARTS**
- Publication of **CDM Country Guides**; overview of developing and implementing CDM project in each country including CDM potential, institutional arrangements, regulations, government incentives, financial issues, etc.

ICS-CDM/JI Milestone

	FY 2003	FY 2004	FY 2005
Activities	<p>Information dissemination and awareness raising e.g. CDM basic WS, publication of CDM/JI textbook</p> <p>Training human resources e.g. training WS for CDM project identification and formulation</p> <p>Supporting institutional framework e.g. small-group study for approval process CDM County Guide</p> <p>Regional Activities e.g. COP Side Event, WS with UNEP-RISO, etc.</p>		

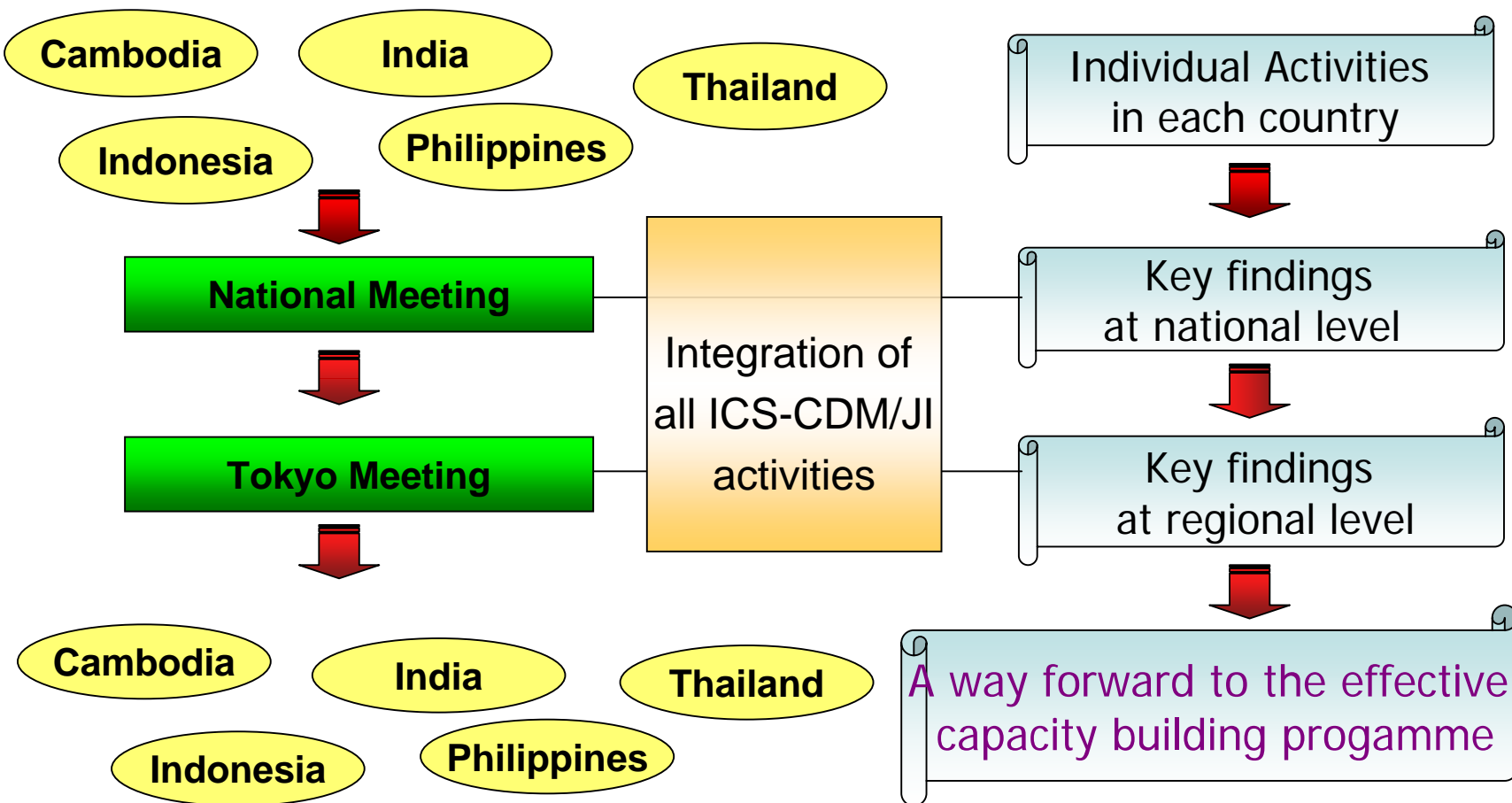
Lessons Learned from ICS-CDM

Activities	Lessons learned
Information dissemination & awareness raising	<ul style="list-style-type: none"> · <i>CDM/JI in Charts</i> It was outstandingly popular for its user-friendly style and most updated information · <i>CDM Country Guides</i> There still lack substantial amount of the information to satisfy high demands e.g. modalities and procedures, legal issues, real project pipeline, etc.
Training human resources	<ul style="list-style-type: none"> · <i>Training workshops</i> using real project activities as models were successful, but more narrowly targeted audience may help to maximize their benefits · <i>Other workshops</i> they achieved their objectives and contributed to lively discussions on given topics partially because target groups were well defined before setting the objectives
Supporting institutional framework	<ul style="list-style-type: none"> · Reassessment of the needs for support at the government level will help to further facilitate the development of CDM project activities
Regional Activities	<ul style="list-style-type: none"> · Immediate action is required for closer co-operation with other donor organizations

ICS-CDM Tokyo Meeting

Purpose of the meeting

- To present salient findings and lessons-learnt from the FY 2004 ICS-CDM
- To facilitate interaction among those participants to share information and experiences regarding the capacity building of CDM
- To identify effective capacity building programme



For further information:
Institute for Global Environmental Strategies
CDM Programme

2108-11 Kamiyamaguchi, Hayama, Kanagawa, 240-0115, Japan

Tel: +81-46-855-3820

Fax: +81-46-855-3809

Web: <http://www.iges.or.jp/en/cdm/index.html>

4. Presentations



Latest Progress of Indonesia DNA establishment

<http://dna-cdm.menlh.go.id>

Climate Change Division: climate@menlh.go.id

The Ministry of Environment, Republic of Indonesia

**“Tokyo Meeting of Integrated Strengthening of CDM
implementation”**

Tokyo, March 3-4, 2005

National Committee on CDM: (**Komisi Nasional Mekanisme Pembangunan Bersih**)

Designated **N**ational **A**uthority of CDM in Indonesian is **Komisi Nasional Mekanisme Pembangunan Bersih (KN-MPB)**

- Will be established by a Ministerial Decree (short-term program)
- Members of KN-MPB: MoE; MEMR; MoFr; MoIT; MoFA; MoHA; MoTr; MoAgr; Natl Devt Planning Board (BAPPENAS)

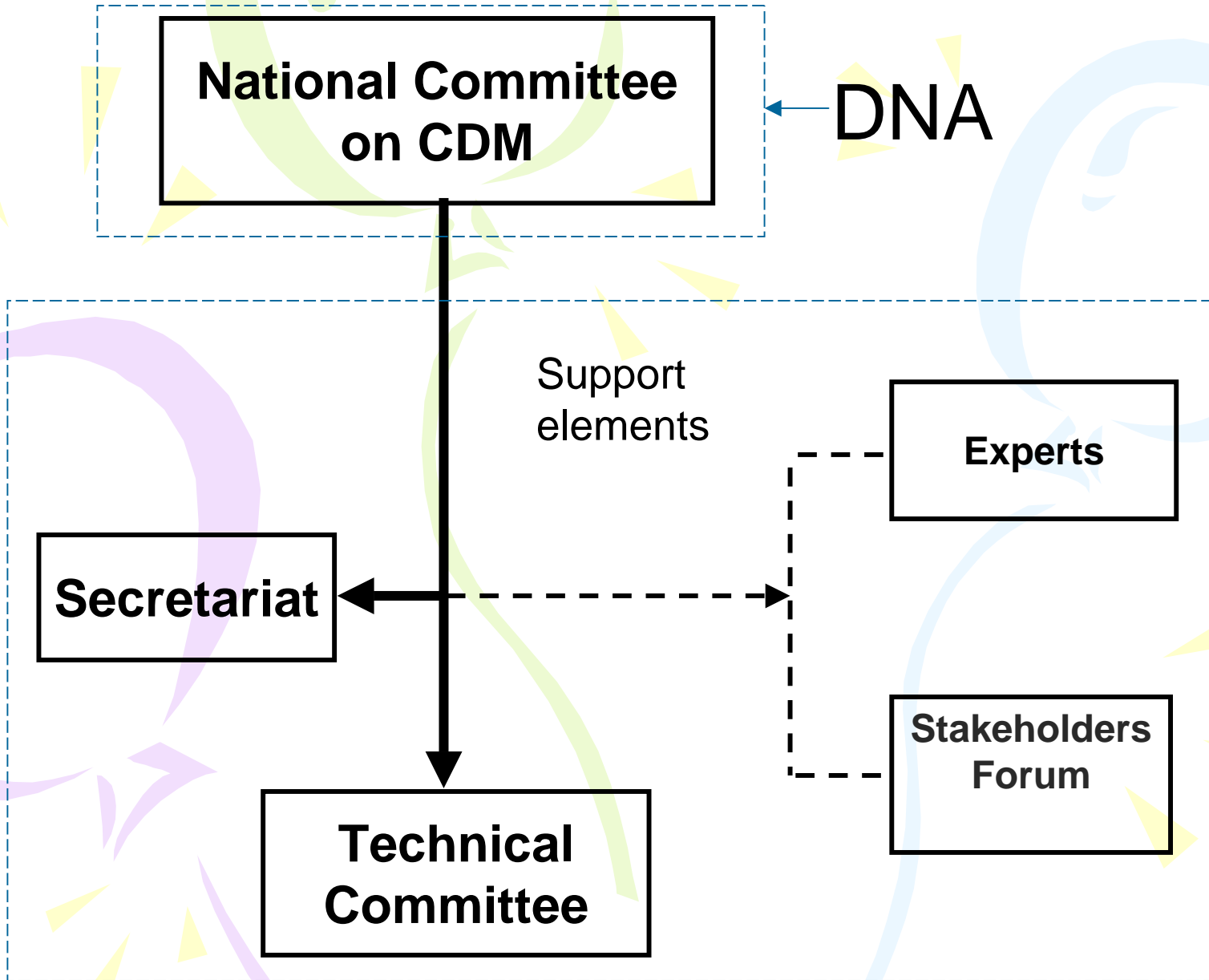
Note: **MoE**=Ministry of Environment; **MEMR**= Ministry of Energy and Mineral Resources; **MoFr**=Ministry of Forestry; **MoIT**= Ministry of Industry and Trade; **MoFA**=Ministry of Foreign Affairs; **MoTr**=Ministry of Transportation; **MoHA**= Ministry of Home Affairs; **MoAgr**=Ministry of Agriculture; **National Development and Planning Board**

Supported Elements

- Technical Team:
 - Permanent team (Core)
 - Non Permanent team (Additional Members)
- Secretariat
- Ad hoc:
 - Roster of Experts
 - Stakeholder Forum

Institutions of Permanent Member (Technical Team)

- Min of the Environment
- Min of Energy & Mineral Resources
- Min of Forestry
- Min of Foreign Affairs
- Min of Industry and Trade
- Min of Transportation
- Min of Agriculture
- Min of Home Affairs
- National Development Planning Board
- Non Government Organization (NGO)



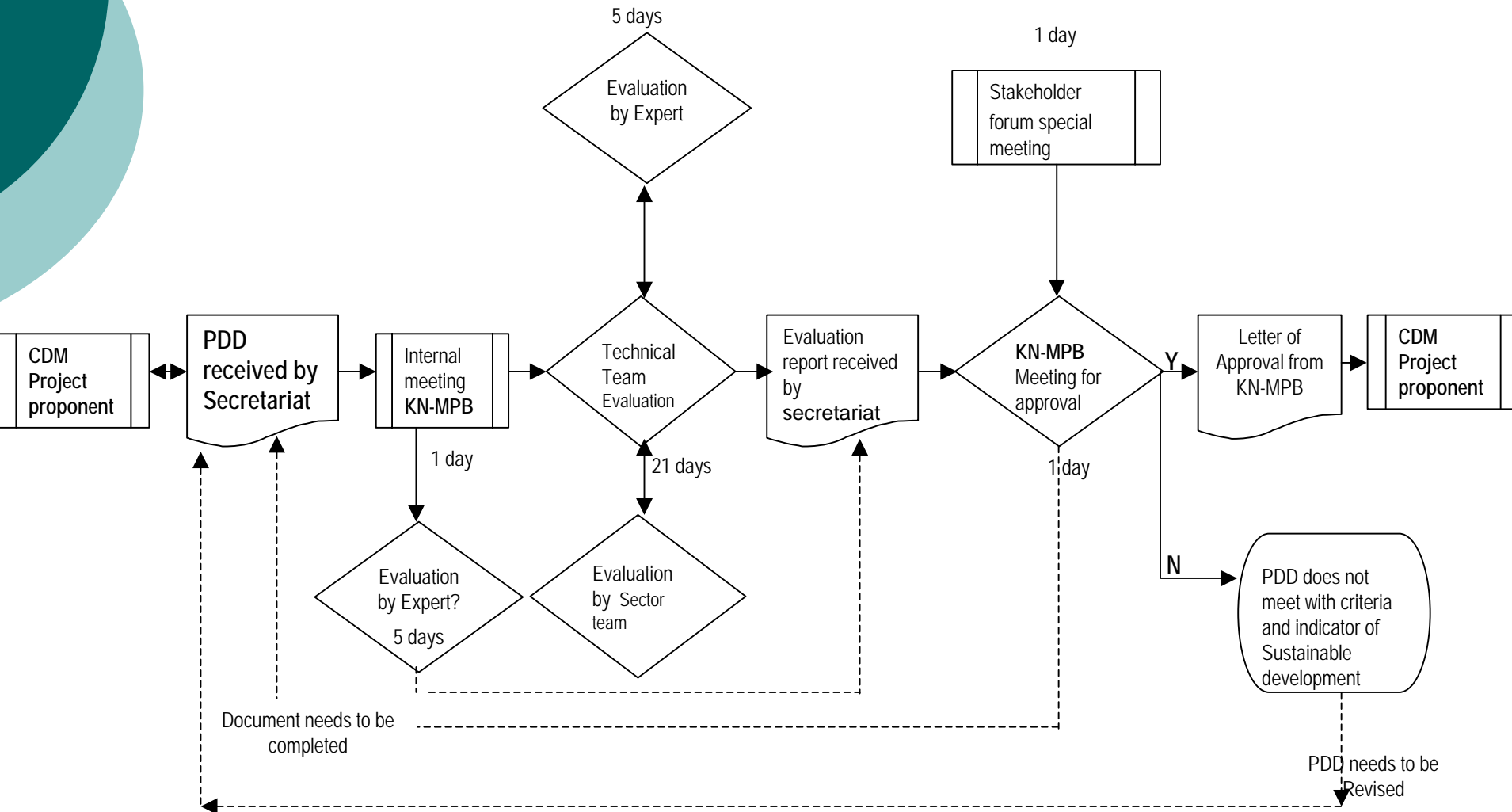
Organization Structure of DNA

Application documents

Fill of application form consist of description stating that the project has fulfil all the criteria of sustainable development;

- Document/proposal of the Project Design (*Project Design Document*)
- Report of EIA (AMDAL), if it is required;
- Note of consultation process with community (public);
- "Recommendation letter" from the Ministry of Forestry, particularly for project proposal Afforestation and Reforestation CDM project activities;
- Other documents that are needed to support the project justification.

Approval Process



Role of KN-MPB

- Organize the coordination meeting and meeting for decision making process in order to provide recommendation of approval for the project proposal that has been accepted according to the criteria and indicator of sustainable development
- Organize special meeting of stakeholder forum

Function

- Provide information to *support marketing of the certified emission reductions (CERs)* and/or the potency of CERs
- Facilitate communication among investors and project proponents and stakeholders;
- Facilitate the capacity development of the stakeholder in Indonesia to propose and implement the CDM project activities

Criteria and Indicator of SD

A. Environmental Sustainability

Environmental sustainability by implementing conservation or diversification natural resource utilization

- 1. Maintain sustainability of local ecological functions
- 2. Not exceeding the threshold of existing national, as well as local, environmental standards (not causing air, water and/or soil pollution)

B. Economic Sustainability

- Local community welfare
 - 1. Increase local community's income
 - 2. There are adequate measures to overcome the possible impact of lowered income of community members
 - 3. Improve local public services
 - 4. An agreement among parties is reached, conforming to existing regulation

C. Social Sustainability

- Local community participation in the project
 - 1. Local community has been consulted
 - 2. Comments and complaints from local communities are taken into consideration and responded
 - 3. Does not cause the conflict in the local community

D. Technology Sustainability

- Technology transfer
 - 1. Not causing dependencies on foreign parties in knowledge and appliance operation (transfer of know-how)
 - 2. Not using experimental or obsolete technologies
 - 3. Enhancing the capacity and utilisation of local technology

National Strategy Study of CDM

- **On Energy Sector (2001) and Forestry Sector (2002)**
 - The technical potential for and cost of GHG emission reduction projects
 - International market scenarios, including the size of CDM market
 - Factors that will affect Indonesia's share
 - Lesson learned from pilot emission reduction projects in Indonesia.
 - Explore issues and challenges in sink or land-use, land use change and forestry (LULUCF)



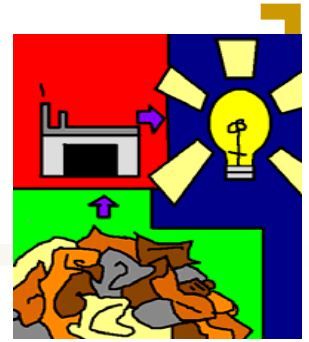
Notes From Capacity Building Activities in Indonesia

Integrated Capacity Strengthening
IGES - MOE

[Background]

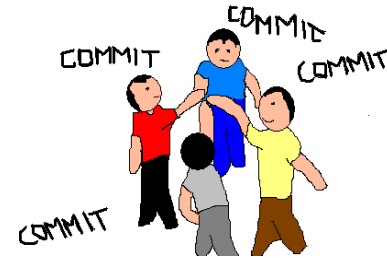
- Indonesia has ratified Kyoto Protocol in 2004 (Law No.17/2004)
- DNA to be operational real soon, target May 2005
- Potential to acquire approx.2% carbon market share
- However, awareness and capacity of the Indonesian still needs to be increased – still few projects submitted to EB and under development

[About the Training



- Topic : Waste to energy projects possess big potentials - supports sustainable development actions: municipal solid waste, palm oil, rice husk and sugar cane waste
- Series of activities (integrated) : Training on PIN, PDD and National Forum – this kind of approach is still lacking in Indonesia
- Involving various stakeholders representatives – however, sometimes difficult to deal with due to different level of understanding / background

Concerns on CDM process



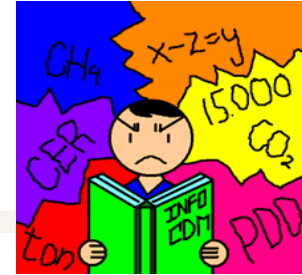
- Make approval process (DNA) simple yet accountable in National Level is highly expected since CDM is already a complicated mechanism at the global level.
- The challenge now : is it ready to be operational once it is established ?
- CDM requires commitment from many parties in the country: coordination in every levels is important - how to make it efficient?
- CDM should be in accordance with the regulations that applied to their underlying projects (for example conduction of EIA) – no new regulation imposed except for sustainable development criteria

Concerns on Financing issues



- CDM is only a part of a bigger project (underlying), therefore CDM is influenced by the issues surrounding its underlying project – investment climate should be conducive
- Project developers hope that Annex 1 countries also involve in investment
- Lack of local financier involvement in climate friendly projects – what are the challenges?
- No clear guidance on how to treat the income from CDM (CER) – is it taxable?

Concerns on National Capacity



- Transaction cost is one of the main hurdle - It is important to build local capacity to reduce transaction cost and therefore makes CDM feasible and attractive to be pursued
- CDM is a new mechanism, involving substantial risk – needs capacity building on risk management strategy
- Availability of data on national GHG emission profile (especially of utility and electricity generation companies) is still lacking – needs national commitment on data development
- Involvement of private sectors in CDM is crucial – the first important step : capacity to identify project potentiality (to be submitted as a CDM project)



[...continue...]



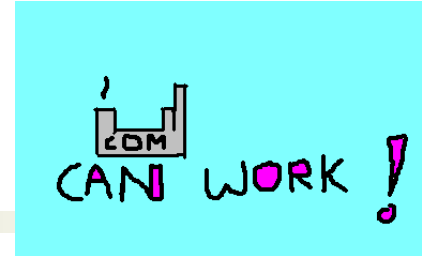
- Project developers still faced difficulties in selecting appropriate and reliable climate friendly technologies – whose role is this?
- Potential project developers still face difficulties in negotiation process e.g contracting issues etc – needs DNA support on this issue – is it possible?
- Local level governments (authonomy era) still have low awareness on the CDM – important to stimulate the emergence of CDM projects in local level – how to reach them?

Concerns on Sustainable Development



- Small scale CDM projects are important for Indonesia – needs high commitments from various parties including Annex 1
- Indonesia has huge potential in renewable energy – mostly small scale (except geothermal) – needs commitment from Government to provide incentive (tax reduction on imported machinery etc)
- CDM should be made use to encourage development of Renewable Energy projects – increase electricity access - 43% Indonesian population still un electrified

[Summary



- CDM is a good scheme : economic tool for environment conservation
- Indonesia has ratified Kyoto Protocol – meaning willing to participate in such global effort
- However, challenges of CDM implementation is still huge – where to start?
- Need demonstration that CDM can actually work – however, window of opportunity is narrowing – should act now !



Thank you

BARRIERS IN PREPARING CDM COUNTRY GUIDE FOR INDONESIA

Indonesia MoE - IGES

Team:

CERIndonesia, YBUL

Upik R. Wasrin, Nina Natalina

10 3 2004

Barriers encountered during preparation of CDM Country Guide (1)

- Many regulations require for CDM implementation are not ready yet for the CDM implementation in Indonesia
- The current regulation exist is available for “Business As Usual” and usually indirectly connected to the CDM both in energy and forestry

Barriers encountered during (2) preparation of CDM Country Guide

- Data on eligible land for CDM projects in forestry is available in a segmented areas (i.e. critical lands of MoFr) that should still be screened further into actual Kyoto eligible land (not forest in Dec.1989 and in 50 years back).
- Information on Possible Project Pipelines in forestry is based on coarse critical lands available at the Min. of Forestry alone for the forest state lands and witnesses of the community for the private lands

Barriers encountered during (3) preparation of CDM Country Guide

- For energy sector, information on Project Pipelines can not be kept as for long period, since the information provided will be very dynamics depending on the nature of emission reduction planned, in particular for the small scale emission reduction project activities.
- Information on Possible Project Pipelines in energy should be up dated at least every two years to get a real potential of the proposed project activities.

Barriers encountered during preparation of CDM country Guide

(4)

- Comprehension of related parties on CDM are still varies, therefore at the time of interview and discussion on related regulations, many parties are still missed conception on a complete picture of CDM
- This is mainly true for the Financial Institutions, Bankers, Policy Makers, Member of House of Representative (DPR)

How CDM Country Guide could (1) help facilitating CDM Projects

- Provide clear description on the present status of the potential CDM projects and its mechanism for implementation
- Provide clear potential on financial arrangement for carbon projects from international institutions up to the real and measurable approaches at the implementation level that reader could easily comprehend.

How CDM Country Guide could help facilitating CDM Projects ⁽²⁾

- Translate the Country Guide into local language version (i.e. in Bahasa Indonesia), hence the information at the international level could be conveyed with the national level.
- Expose and disseminate the Country Guide into wider stakeholders at national and local scales.

Some thoughts on Barriers for CDM ⁽¹⁾ implementation in Indonesia

- Regulations that support the operational application of CDM in the field are still inadequate
- Most of operating institutional entities to support mechanism and procedure are not ready
- The financial benefit from project carbon is still too small which is not very attractive for project developer

Some thoughts on Barriers for CDM ⁽²⁾ implementation in Indonesia

- Financial scheme is still unclear
- Especially for Small Scale Projects, no access to credit, competition to other land use (opportunity cost) related to flexibility of market and attractiveness of GHG market.
- Policy makers, financing staffs, bankers are still limitedly accessed hence very little or completely far from comprehending the CDM.

How to address barriers for CDM ⁽¹⁾ project implementation

- Capacitate key stakeholders particularly those related with data and information and legitimate project implementation through stakeholder forum/process
- Assistance to the country to prepare the database on eligible lands
- Provision of special scheme of credit for small scale projects and information system on potential other funding sources.

How to address barriers for CDM project implementation

- Simple mechanism in market arrangement especially for small scale projects
- Capacity building for direct stakeholders to build political and social support
- Provision of related policies and regulations for CDM project implementation.



Thank you

Integrated Capacity Strengthening for the CDM Tokyo Meeting

3-4 March 2005

Tokyo, Japan



Cambodian Designated National Authority (DNA)

Sum Thy

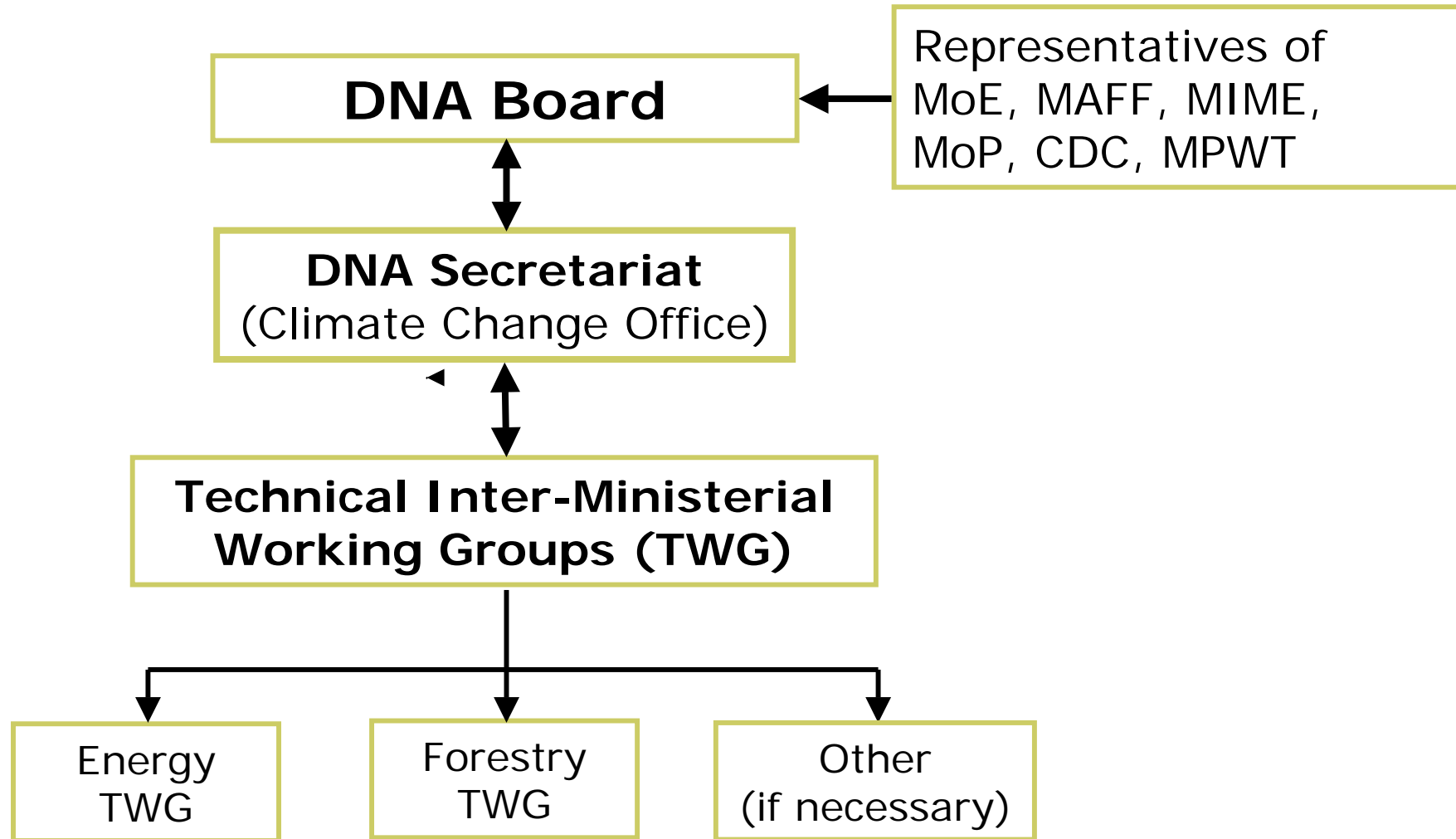
Climate Change Office, Ministry of Environment, Cambodia

cceap@online.com.kh

Outline of Presentation

- 1. Cambodia's DNA Structure**
- 2. Current Status of Cambodian DNA**
- 3. Sustainable Development Criteria**
- 4. Assessment/Approval Process**

1. Cambodia's DNA Structure (1)



1. Cambodia's DNA Structure (2)

DNA Board:

- o **COMPOSITION:** one representative (at least Under-Secretary of State level) from each of the following Ministries: MoE, MAFF, MIME, MoP, CDC, MPWT.
- o **ROLES AND RESPONSIBILITIES:**
 - ❖ issues an official approval letter confirming voluntary participation and project conformity with national sustainable development objectives.
 - ❖ facilitates project evaluation by the DNA Secretariat with public institutions.

1. Cambodia's DNA Structure (3)

DNA Board (2):

DECISION-MAKING AUTHORITY

- ❖ DNA Board has the right to approve/reject proposed CDM projects for Cambodia. Decision making requires the full consensus of all DNA Board members and their signatures for the DNA Board's minutes. The official approval letter is signed only by the Chair of the DNA Board.
- ❖ The DNA Board appoints members of the Technical Inter-ministerial Working Groups.
- ❖ The DNA Board has the authority to withdraw its approval in case if the CDM project implementation fails to comply with the commitments made in the PDD related to sustainable development.

1. Cambodia's DNA Structure (4)

DNA Secretariat (1/4)

- o **COMPOSITION:** The Cambodian Climate Change Office (CCCCO) acts as the DNA Secretariat.
- o **ROLES AND RESPONSIBILITIES:**
 - ❖ The national contact point for CDM activities in Cambodia.
 - ❖ The DNA Secretariat receives and screens PDDs for completeness and coordinates working group activities.
 - ❖ The Secretariat communicates directly with the DNA Board and is responsible for collating relevant information for the DNA Board to make an informed decision on proposed CDM projects.
 - ❖ The DNA Secretariat coordinates broad-based consultation of stakeholders (NGOs, private sector, academia, experts, community organisations, members of the public, etc.).

1. Cambodia's DNA Structure (5)

DNA Secretariat (2/3)

DECISION-MAKING AUTHORITY

- ❖ The Secretariat has the right to reject incomplete PDDs.
- ❖ The Secretariat has no project approval authority: it cannot accept or reject PDDs based on national sustainable development criteria/objectives.
- ❖ The Secretariat may hire or invite national and international technical experts for PDD assessment as needs basis.
- ❖ The DNA Secretariat has the authority to request additional information from project proponents and full access to the proposed project development site as needs basis.
 - o The DNA Secretariat has the authority to conduct public consultation with stakeholders and to release or publicise project information submitted.

1. Cambodia's DNA Structure (6)

Technical Working Groups

Energy TWG	Forestry TWG	Others
representatives of MIME (Renewable Energy & Energy Efficiency, Planning, Hydroelectricity, etc.), representatives of MoE (CCCO, Environment Impact Assessment, other relevant department), representative from RUPP, representative from RUA, representative of ITC, representative of MPWT	representatives of MAFF (Forest Administration, Agronomy, Planning, etc.), representatives of MOE (CCCO, Environment Impact Assessment, etc.), representative from RUPP, representative from RUA.	If necessary

1. Cambodia's DNA Structure (7)

Technical Working Groups

- **ROLES AND RESPONSIBILITIES**
 - ❖ The TWGs review PDDs against Sustainable Development Criteria.
 - ❖ The TWGs prepare the Project Technical Assessment Report, including technical and policy recommendations for the DNA Board. The Project Technical Assessment Report is submitted to the DNA Secretariat.

2. Current Status of Cambodian DNA

- Finalizing sustainable development (SD) criteria;
- Finalizing approval process for proposed CDM projects;
- Finalizing Sub-Decree on the establishment of a National Climate Change Committee (NCCC).

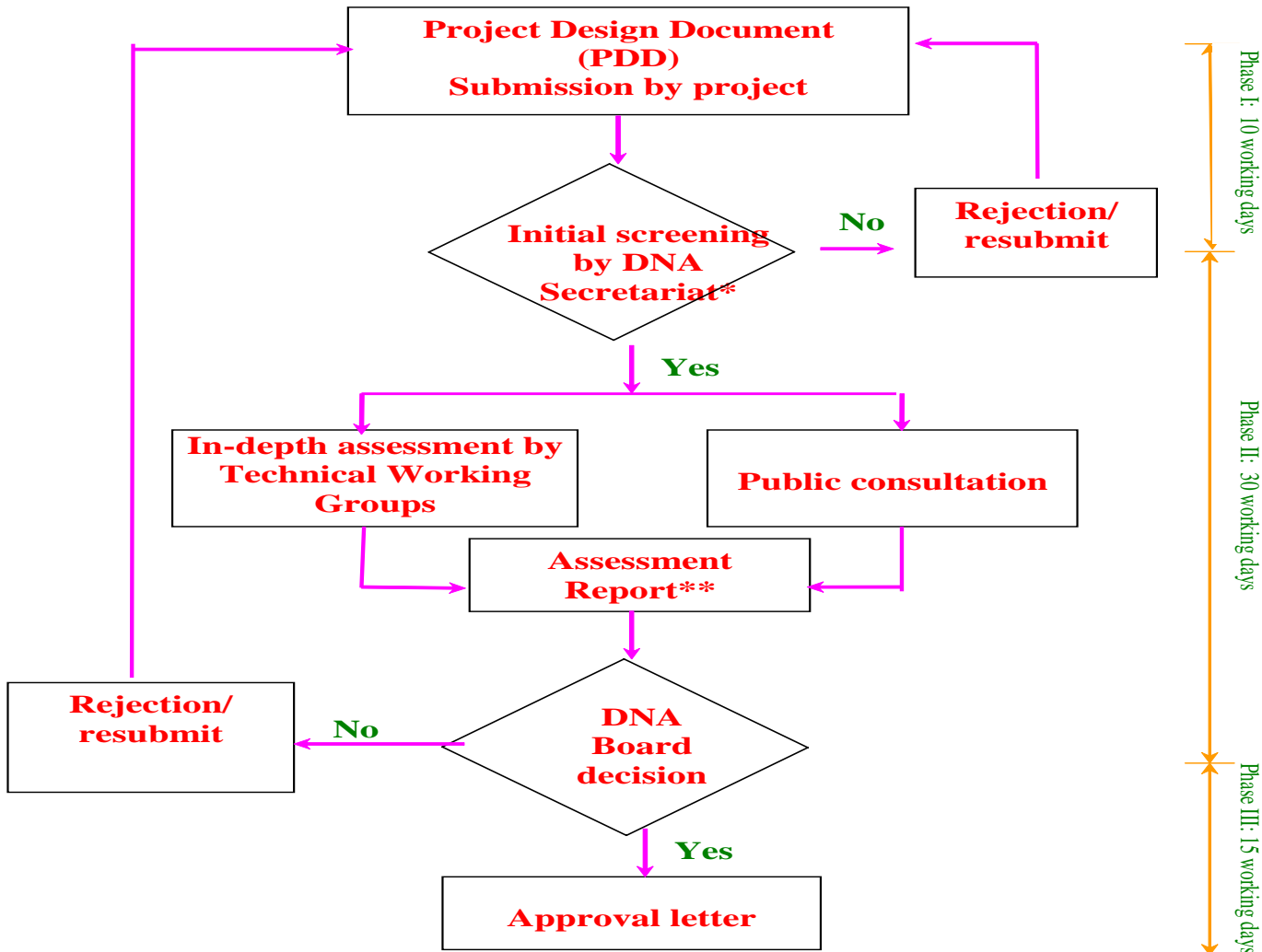
3. Sustainable Development Criteria (1)

- Cambodia's SD criteria were developed jointly by inter-ministerial working groups, involving representatives from MoE, MIME and MAFF, based on Cambodia's existing Laws, Regulations, Sub-decrees, Cambodia's commitments to International Conventions, etc.
- The structure is based on the SSN/WWF Gold Standard Procedures.
- The Matrix is based on 4 SD categories:
 - ❖ Environmental
 - ❖ Social
 - ❖ Economic
 - ❖ Technology transfer

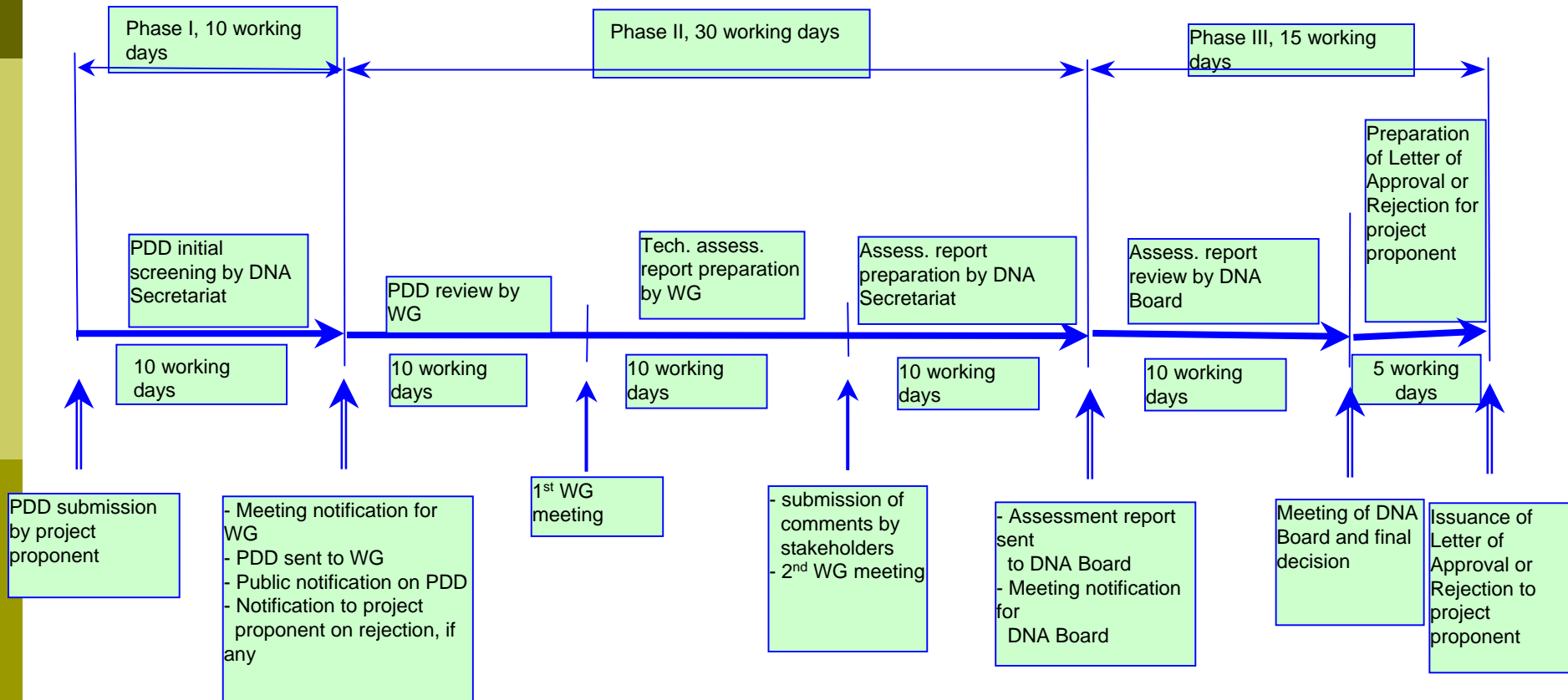
3. Sustainable Development Criteria (1)

- Each indicator is scored from -3 to $+3$
 - ❖ -3 : serious negative impact
 - ❖ 0 : no impacts, neutral or impacts mitigated
 - ❖ $+3$: significant beneficial impact (best practice)
- For each indicator, a minimum score of 0 must be achieved (no serious negative impact).
- Negative points for a specific indicator cannot be counterbalanced by positive points for another indicator.

4. Assessment/Approval Process (1)



4. Assessment/Approval Process (2)



Questions/Comments?

INTEGRATED CAPACITY STRENGTHENING FOR THE CDM TOKYO MEETING

3-4 March 2005

Tokyo, Japan



Cambodia: Summary of National Meeting & CDM Country Guide

Presented by

Dara YOU, ICS-CDM Cambodia

Outline

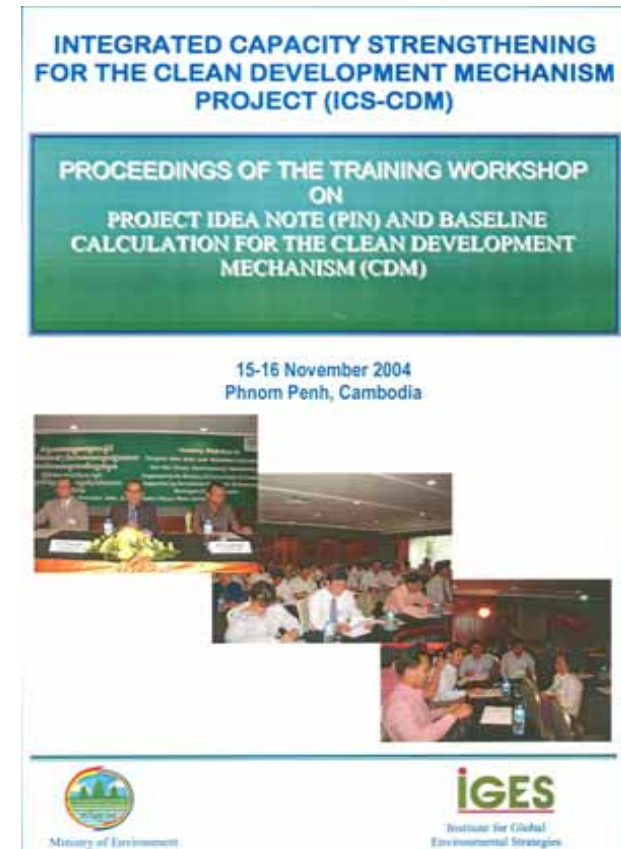
1. **ICS-CDM Activities in Cambodia for Fiscal Year 2004**
2. **Summary of National Meeting**
3. **CDM Country Guide**

I. ICS-CDM Activities in Cambodia for Fiscal Year 2004 (1)

- 4-5 October 2004, Core Member Meeting of PIN and Baseline Calculation to discuss PIN of model project Marubeni Co.
- Meeting discussed:
 - o ICS-CDM/JI and its activities in Cambodia;
 - o Experiences and achievement of ICS-CDM phase 1 in Cambodia;
 - o Renewable Energy in Cambodia;
 - o Marubeni Model Project Guidelines in Modolkiri Province;
 - o Lessons learned from Marubeni case in PIN formulation; and
 - o Lessons learned from Marubeni case in baseline setting.

I. ICS-CDM Activities in Cambodia for Fiscal Year 2004 (2)

- 15-16 November 2004, Training Workshop on PIN and Baseline Calculation in Phnom Penh.
- Outputs:
 - o 50 participants
 - o Training workshop proceedings (published in Khmer and English version)
 - o Three projects were identified and discussed to develop the PINs:
 - *Mekong Waste Wood (7.5 MW)*;
 - *Piggery Methane Capture*; and
 - *Agricultural Residue Energy Production*.



I. ICS-CDM Activities in Cambodia for Fiscal Year 2004 (3)

- 14 January 2005, Core Member Meeting of PDD Preparation
- Meeting discussed:
 - PDD of Model Project; and
 - CDM and JI in CHARTS.

- 17-19 January 2005, Training Workshop on PDD.
Output:
 - 50 participants;
 - Training workshop proceedings is being prepared; and
 - Three projects were converted from PIN to preliminary draft PDDs:
 - *Mekong Waste Wood (7.5 MW);*
 - *Piggery Methane Capture; and*
 - *Agricultural Residue Energy Production.*

II. Summary of National Meeting (1)

- 4 February 2005, National Meeting of Lessons Learned and Perspectives of the Integrated Capacity Strengthening for the Clean Development Mechanism (ICS-CDM);
- **Meeting aims to:**
 - Present the lesson learned and outcomes of the project activities in FY 2004;
 - Strengthen capacity of government of Cambodia and private sector in identifying eligible CDM projects;
 - Identify activities for follow-up capacity development in the country.

II. Summary of National Meeting (2)

- **The meeting presented the following topics:**
 - CDM update;
 - Cambodian DNA's perspectives;
 - Japan's perspectives;
 - Project developer's perspectives (Angkor Bio Cogen project and Wind power project in Mondulkiri);
 - ICS-CDM activities in Cambodia; and
 - Lesson learn from the previous training workshop.
- **A panel discussion was organized to discuss the following issues:**
 - Difficulties in operationalizing CDM projects in Cambodia;
 - The eligible 'good' CDM projects to expand in the whole country;
 - The next step for CDM capacity building; and
 - Stakeholders' expectation from CDM Capacity Building Program.

II. Summary of National Meeting (3)

Summary of panel discussion (1):

(1) Difficulties in operationalizing CDM projects in Cambodia

- o Country's technical capacity remained weak;
- o The awareness and knowledge among stakeholders and private sector were largely low;
- o Involvement of private sector is relatively weak.
- o CDM is a new concept and it is difficult to understand its process;
- o Without support from donors for feasibility study and PDD development, the project would have never occurred;
- o CDM process is long and complex with which medium and small medium enterprises are not familiar;
- o The transaction cost for project development is too high;
- o Simplified methodology is applicable for small-scale projects, but it remains complicated, particularly for methane capture project (biomass)
- o Access to available information is limited
- o CDM Project needs long term investment with high risks.

II. Summary of National Meeting (4)

Summary of panel discussion (2):

(2) The eligible 'good' CDM projects to expand in the whole country

- Cambodia has low investment potential, comparing to India, China, and larger countries
- More cooperation with stakeholders is needed to identify potential projects to initiate national CDM portfolio.

II. Summary of National Meeting (5)

Summary of panel discussion (3):

(3) The next step for CDM capacity building

- o Working with stakeholders to identify potential CDM Project in priority sectors
- o Awareness raising and information outreach (Identify relevant stakeholders at provincial level and their activities, Organize provincial workshops and face-to-face meetings)
- o Strengthening capacity of stakeholders (develop generic baseline data in relevant sectors, undertake a pilot case study and 'learning by doing' in PDD formulation)
- o Information dissemination and marketing of potential CDM Projects

II. Summary of National Meeting (6)

Summary of panel discussion (4):

(4) Stakeholders' expectation from Capacity Building Program for the CDM

- o Eager to see guidance and relevant regulation from the government
- o Interest in resource centre on market, prospect for NGOs and service provider in Cambodia.
- o Investment security for CDM projects.

III. CDM Country Guide (1)

- **Status of preparation:**
 - Submitted first draft version to IGES on 29 November 2004.
 - Received based on comment from IGES on 15 December 2004.
 - Submitted final version to IGES on 1 February 2005.
- **Target audience:**
 - Project proponents, Developers and investors in CDM projects in Cambodia
- **Main objective:**
 - To provide a summary of all the information necessary to the successful implementation of CDM in Cambodia, along with relevant references to official documents and contact details Social, Economic and Political Profile.

III. CDM Country Guide (2)

- **Main objective:**

- To help Project proponents, Developers and investors by providing a summary of all the information necessary to the successful implementation of CDM in Cambodia, along with relevant references to official documents and contact details, Social, Economic and Political Profile.

III. CDM Country Guide (3)

- **CDM Country Guide can help facilitate CDM project in Cambodian by providing:**
 - Detail CDM project approval procedures and processes by the Cambodian Designated National Authority (DNA), including the national sustainable development objectives.
 - Cambodia's profile with essential social, economic and political information
 - Technical potential for implementing CDM projects
 - CDM project cycle from the early identification of a project to the trading of Certified Emission Reductions
 - Summary of investment laws, investment restrictions, environmental laws and other regulations respectively applicable to CDM energy projects and CDM forestry projects; and
 - Financing and fiscal issues, and government incentives.

Thank You!



Development and Processing of CDM Projects

Clear Sky: Beginning of the Kyoto
Protocol Era

17 February 2005



Kyoto Protocol

- Commits developed countries to reduce GHG emissions by 5.2% below their 1990 levels during the first commitment period 2008-12;
- Basket of six gases;
- Energy, industrial processes, agriculture and waste major contributors;
- USA & Australia at present outside the ambit of KP;



Mechanisms of Kyoto

- Clean Development Mechanism;
- Joint Implementation;
- Emissions Trading;



CDM set up by UNFCCC

- CDM Executive Board
 - Supported by Secretariat
- Meth panel
- Accreditation Panel
- Working groups
- Designated Operational Entities



Facilitating CDM Implementation

- Designated National Authority
 - National CDM Authority
 - Inter Ministerial Committee
 - Single Window clearance
 - Project Concept Note (PCN)
 - Project Design Document (PDD)
 - Eight meetings since Cabinet approval



National CDM Authority

- Secretary (E&F) Chairman
- Foreign Secretary
- Finance Secretary
- Secretary, DIPP
- Secretary, MNES
- Secretary, MOP
- Secretary, Planning Commission
- Joint Secretary (CC), MoEF
- Director (CC), MoEF Member Secretary



Single Window Clearance

- PCN as per MoEF format
- PDD as per UNFCCC format
- 20 copies each
- Two CDs
- Project promoter to give a presentation in the DNA meeting
- Host Country Approval



Project Cycle of CDM

- Project Design & Formulation
- Host Country Approval
- Validation/ Registration
- Project Monitoring
- Verification/ Certification
- Issuance of Certified Emission Reductions (CERs)



CDM Project Design

- Normal project report
- Add Carbon chapter
- Adopt approved methodology or make a new one
- Prove that it is not BAU project
- Negotiate with Developed Country Party for sale of CERs



Small Scale CDM Projects

- Power projects upto 15 MW
- Energy saving of 15 GWh
- CO₂ Abatement of 15 kt
- A & R Sequestration of 8 kt CO₂
- Approved Simplified Methodologies by CDM EB
- Same DOE can undertake validation, verification and certification
- Bundling of projects feasible



Host Country Approval

- Emissions Additionality
- Sustainable Development
- Parties should have ratified Kyoto Protocol
- Voluntary participation



Sustainable Development Criteria

- Prerogative of the Host Party
- Economic well being
- Social well being
- Environmental well being



Validation

- Designated Operational Entities
 - JQA
 - DNV Certification
 - TÜV GmbH
 - SGS UK



Contd..

- DOE thoroughly vets the proposals and puts on UNFCCC website for one month for comments from public
- Meth panel for new methodology
- CDM Executive Board for Registration



Verification/Certification

- DOE does the verification based on inspection of records, field visits
- Certification to CDM EB
- Issuance of CERs by EB to Party's account and Project participants as per sharing agreement



Type of projects

- Renewable energy (Wind, Biomass, Solar)
- Switching to Alternate Fuels
- Energy Efficiency
- Waste Management
- Oil & Gas
- Agriculture
- Carbon Sequestration in Forests



Types of Projects approved

- Biomass/ Cogeneration 16
- Industrial Processes/
Energy Efficiency 15
- Municipal Solid Wastes 1
- Fuel Switching 2
- Renewables' 10



Projects State-wise

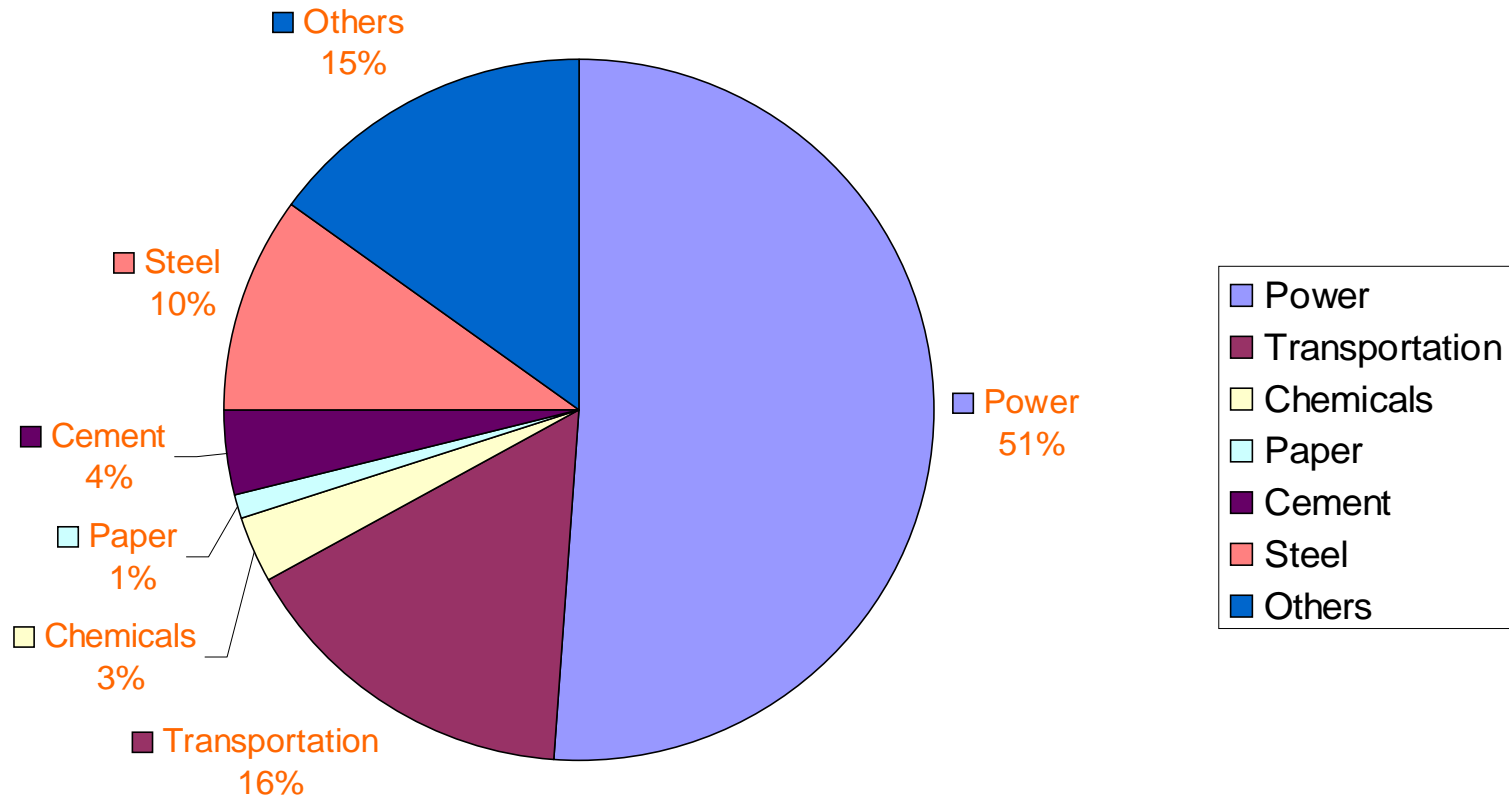
Karnataka	8	Punjab	2
UP	7	Jharkhand	1
AP	5	Orissa	5
Gujarat	2	Maharashtra	1
Rajasthan	2	Chattisgarh	3
TN	3	HP	3
WB	2		



Potential in Renewables

<i>Technology</i>	<i>Potential</i>	<i>Cum. Installation upto March 31, 2003</i>
Wind Power	45000 MW	1870 MW
Small Hydropower (< 25 MW)	15000 MW	1509 MW
Biomass	19500 MW	484 MW
Energy from Waste	1700 MW	26 MW
Solar photovoltaic		121 MWp

Beneficiary Sectors-Potential



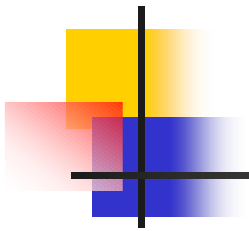
Carbon Dioxide emission as of the year 1995

SOURCE : HANDBOOK OF STATISTICS 1998



The CDM today

- Market heating up. Till recently few buyers - market dominated by government and multilateral buyers
- Effect of EU – Emissions Trading Scheme on CDM yet to be assessed
- High transaction costs
- Bundling of small projects to be encouraged
- If low carbon prices prevail then CER revenue will rarely be the deciding factor



Thank You



ICS-CDM country activities in India

IGES ICS Tokyo meeting
Finding ways towards effective
capacity building in Asia

Ulka Kelkar, TERI

3 March 2005

Objectives

- ❑ Create awareness among policy makers on CDM at state level
- ❑ Facilitate state level CDM cells
- ❑ Explore ways and means to strengthen institutions and identify needs for capacity building
- ❑ Promote sectoral CDM

Rationale

- State agencies ideally placed to promote CDM-related activities
- First points of contact
- Maximize public-private partnership
- Aware of local issues
- Influence CDM in state policies
- Easily integrate with GoI policies
- Diversify and position as facilitation centres

“Not as regulatory bodies”

Expectations

- General awareness on CDM
- Need assessment and capacity building
- Develop facilitating framework and interact with other departments / institutions
- Accelerate CDM project development activities

Outreach activities



Workshops for state-level policymakers

- Western region: 10-11 January, Pune
- Southern region: 17-18 January, Visakhapatnam

Participants

State energy development agencies

State utilities

Municipal corporations

State pollution control board

State consultancy organisations

State infrastructure corporation

State electricity regulatory commissions

Academic and research institutions

Financing institutions

Project promoters and consultants

Outreach activities



Workshops for state-level policymakers

- Western region: 10-11 January, Pune
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Participants

State energy development agencies

State utilities

Municipal corporations

State pollution control board

State consultancy organisations

State infrastructure corporation

State electricity regulatory commissions

Academic and research institutions

Financing institutions

Project promoters and consultants

CDM basics & update,
Issues & challenges,
case studies, success
stories, panel discussion

Outreach activities



Workshops for state-level policymakers

- Western region: 10-11 January, Pune
- Southern region: 17-18 January, Visakhapatnam

Participants

State energy development agencies

State utilities

Municipal corporations

State pollution control board

State consultancy organisations

State infrastructure corporation

State electricity regulatory commissions

Academic and research institutions

Financing institutions

Project promoters and consultants

Themes: Power

Energy efficiency

Municipal services

Feedback

- ❑ CDM still complex and unclear to administrators
- ❑ High transaction cost
- ❑ Less information on buyers (unilateral CDM)
- ❑ Need for more awareness and capacity building at local levels
- ❑ Project development modules
- ❑ More success stories
- ❑ Develop more methodologies
- ❑ NCA to promote CDM at state level, facilitate and fund for PDD development
- ❑ More capacity building workshops at state level
- ❑ Need to look at municipal services to introduce CDM as effective tool for accelerated implementation
- ❑ Need for sensitization of regulatory authorities

Challenges

- ❑ Varied skills: project vs. CDM
- ❑ Co-ordination among CB activities: NCA to be the focal point to maximize results
- ❑ Sensitization of state-level policymakers
- ❑ Data access, availability and authenticity
- ❑ Emphasis on project development and access to buyers

Outcomes

State level CDM cells

- MEDA
- KSPCB and KUIDFC:
CDM Committee
- TEDA and CLRI

Capacity building

- Indian DOE
- State utility
- State energy
development agencies
- Public sector power
trading firm
- Industry associations

Assistance in developing sectoral CDM projects

- U&I corporation
- Municipal and
Transport corporations
- State utility

Outcome
highly
encouraging!

National workshop: Stock-taking and way forward, 31 January 2005, Delhi

- IGES initiative welcome!
 - CDM supply gap has to be met by boosting development of CDM projects
 - Sensitization and involvement of CDM stakeholders is crucial at this juncture
- Reach out to sectors
- Share models (risk assessment, M&V protocol), develop transparent database, and build capacity to develop new methodologies
- Sensitize FIs for financial closure and project implementation
- Reach out to buyers

Future action plan

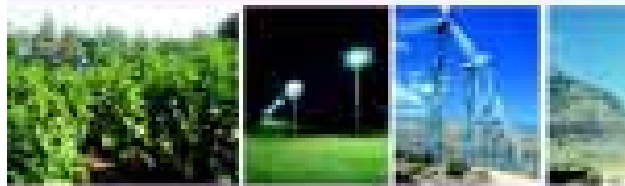
- Focused capacity building exercise
- Institutional capacity building: CDM project development mode
- ICS CDM to identify Japanese investors (buyer – seller facilitation)
- Direct energies on action and deals

Fast-tracking CDM **in** Indian States



Information book developed by TERI (The Energy and Resources Institute) under the Integrated Capacity Strengthening for the CDM Programme of IGES (Institute for Global Environmental Strategies), Japan

■ Introduction	1
■ What is CDM?	2
■ CDM project cycle	7
■ Why should India be interested?	15
■ Why should states be interested?	20
■ Annexe 1: CDM information sources	26
■ Annexe 2: Glossary of CDM terms	27
■ Annexe 3: Details of Annexes provided in the UNFCCC and the Kyoto Protocol	36
■ Annexe 4: NCA approved projects (as on December 2004)	38
■ References	40



Thank you

www.teriin.org/events/docs/cdmpune.htm

www.teriin.org/events/docs/cdmvisakhapatnam.htm

Development Alternatives & IGES CDM Capacity Building in India



by

Kalipada Chatterjee



**Climate Change Centre
Development Alternatives**

Tokyo, 3-4 March 2005

Introduction

- ❖ In the last 2 years, DA organised 2 CDM capacity building workshops under IGES programme – at National and State level
- ❖ Rajasthan was selected because
 - Forward looking state
 - Large potential of CDM projects in RE and EE sectors

INDIA

States and Union Territories



Objectives

- ❖ To initiate capacity building activities on CDM in Rajasthan to enable it to realise the potential of CDM and assist the state in achieving SD
- ❖ To prepare a framework for bundling of small scale CDM projects
- ❖ To facilitate establishment of CDM cell in the state for
 - Close co-ordination of CDM activities in the state, and
 - Providing linkages with the DNA and other facilitating centres in India and with IGES in Japan

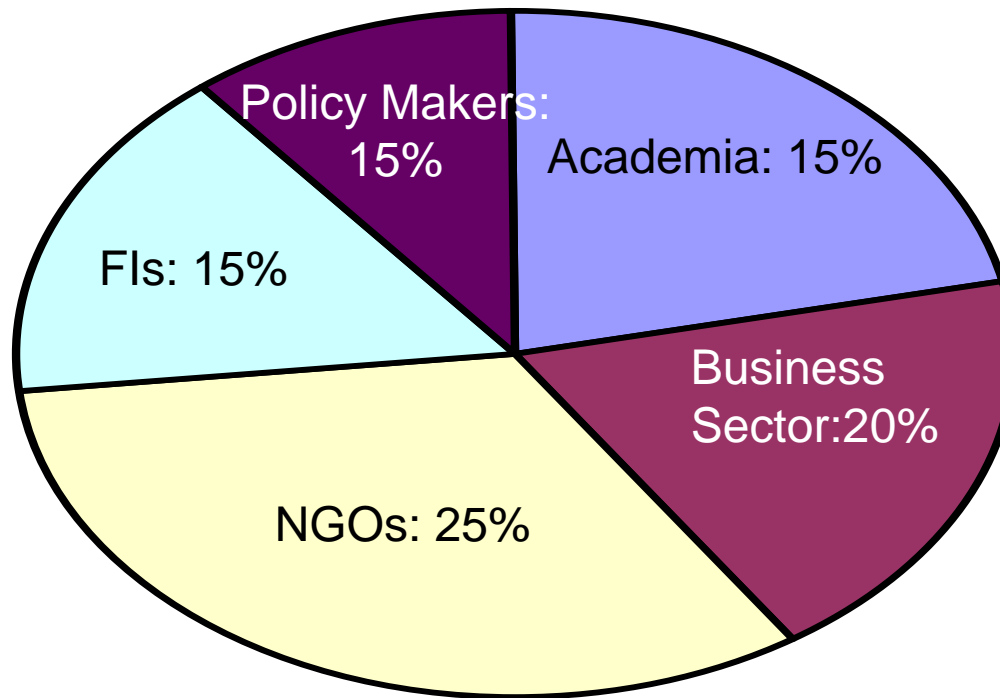
Expectations from the Jaipur Workshop

- ❖ Improved awareness among stakeholders in Rajasthan about climate change & CDM
- ❖ Prepare ground for development of CDM projects from Rajasthan
- ❖ CDM as an incentive for promotion of RE and EE projects

.....leading to a well co-ordinated programme on CDM in Rajasthan

Targeted Beneficiaries

Total Participants: 38



Targeted Beneficiaries.... *Contd../-*

❖ Policy Makers

- Officials from RREC,
- Rajasthan Pollution Control Board,
- Discoms

❖ NGOs, working in fields of

- Sustainable development
- rural energy

Targeted Beneficiaries.... *Contd../-*

❖ Business Sector

➤ Renewable Energy

- Wind Energy
- Biomass based power generation
- Solar Equipment manufacturers

➤ Energy Efficiency

- Hotels
- Small & Medium Enterprises
- Large units such as Hindustan Copper Limited, NG based power plants etc.

Targeted Beneficiaries.... *Contd../-*

❖ Financial Institutions

- Rajasthan Industrial Investment Corporation
- Bureau of Industrial Promotion, Rajasthan
- SIDBI, etc

❖ Academia

Topics Covered

- ❖ Basics of Climate Change & CDM
- ❖ CDM Opportunities in Rajasthan
- ❖ Roadmap for CDM Project development
- ❖ Issues in CDM Projects
 - Enabling Environment
 - Financing
 - Technical: Baselines, Additionality, Sustainable Development
- ❖ Way forward: for maximising benefits



Lessons Learned

- ❖ The policy level participants evinced a very keen interest in promoting CDM in the state
- ❖ Stakeholders felt
 - Workshop provided a **forum** for bringing out their hurdles as well as offered solutions
 - Need for **continuity in CDM promotion activities** even after the workshop
 - **learning by doing**
 - Need for a **data bank** to be operated for investors interested in CDM projects in the state
 - Well defined **guidelines** be brought out for CDM project development

Lessons Learned.... *Contd../-*

- ❖ Outreach of CDM activities through newspapers, periodicals, newsletters and websites etc.
- ❖ A network to enable the task to be taken forward

Way Forward

- ❖ Close co-ordination and liasion with the CDM cell
(to be established soon)
- ❖ In addition to DNA, GoI may also act as a facilitation centre to CDM Project Development
- ❖ IGES future programme
 - To be strengthened and enlarged
 - Provision of learning by doing
 - Outreach at others centres in Rajasthan
 - Focus more on both capacity building and project development for implementation
 - Partners should have closer co-ordination with the business sector, FIs and carbon investors

Thank You
Thank You

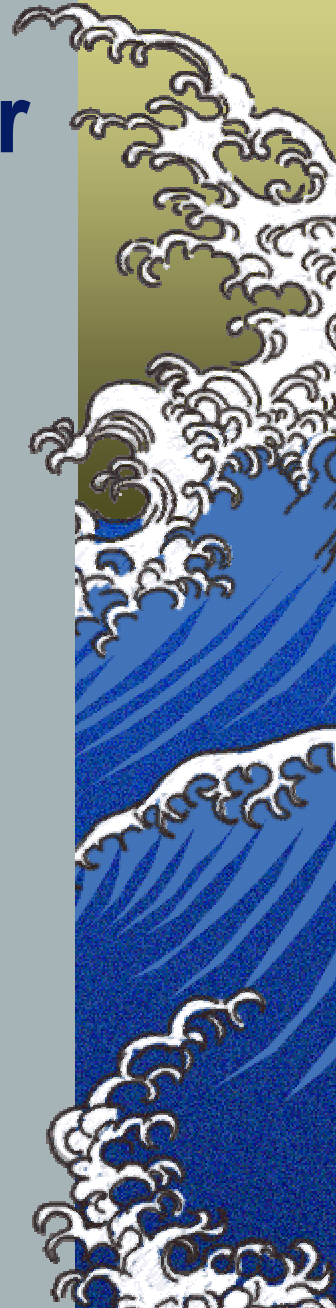
Workshop for the Financial Sector & CDM Country Guide

Facilitated by

Winrock International India (WII)

Supported by

**Institute for Global Environmental
Strategies (IGES), Japan**



Workshop for the Financial Sector

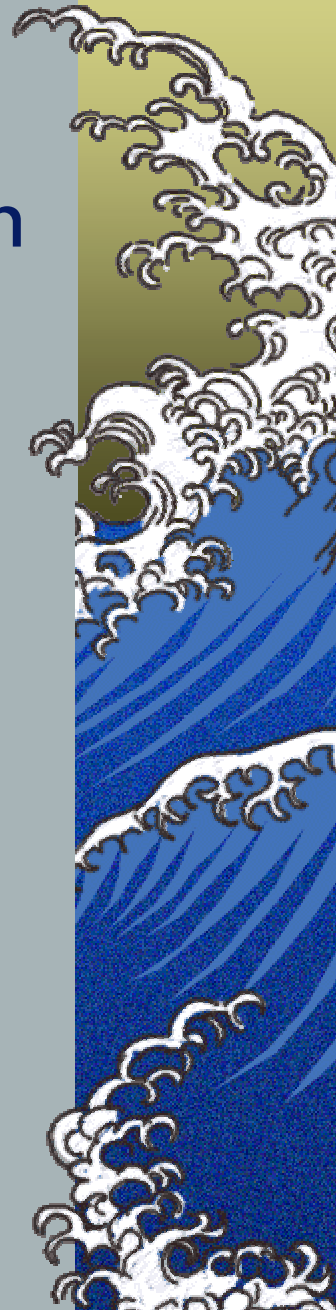
Title Capacity Building Workshop
for the Financial Sector on Clean
Development Mechanism
(CDM)

Organized by Winrock International India
(WII) &
Institute for Global
Environmental Strategies
(IGES)

on January 25, 2005

at Viceroy Hotel, Hyderabad

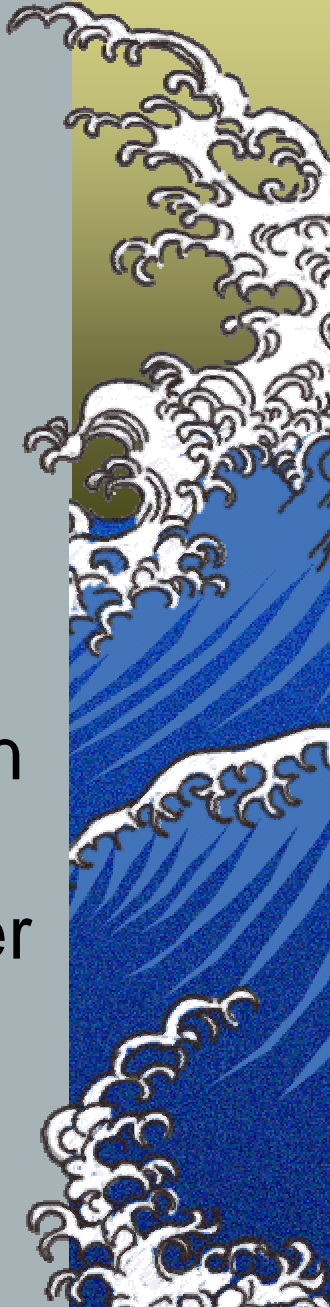
IGES ICS-CDM Meeting: Tokyo, March 3-4, 2005



Workshop for the Financial Sector

Objectives

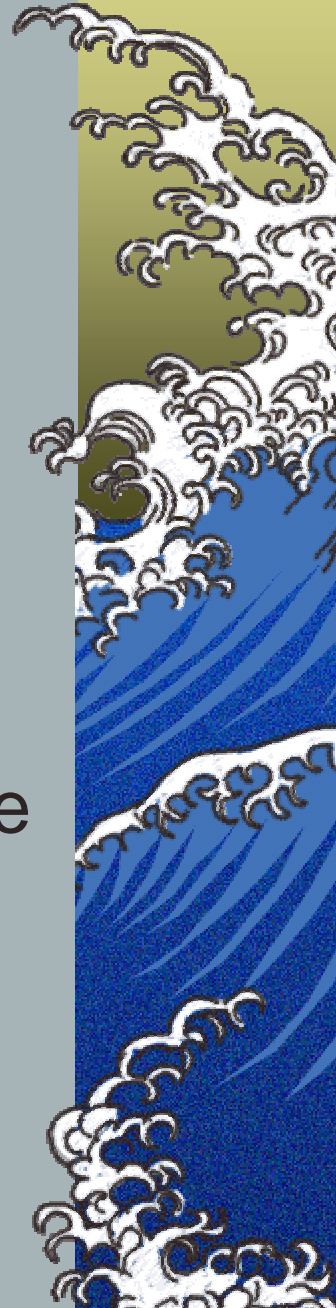
- To create wide spread awareness on technical, financial, legal and regulatory issues of CDM
- To create platform for interaction between participants from financial community, project developers, CER buyers and other relevant stakeholders.



Workshop for the Financial Sector

Topics covered

- Introduction to CDM
- CDM Project Cycle
- Financial Issues in CDM Projects
- Legal Issues in CDM Projects
- Validation, Verification & Certification
- Buyers' Perspectives on Carbon Finance & CER Purchase



Workshop for the Financial Sector

Participants

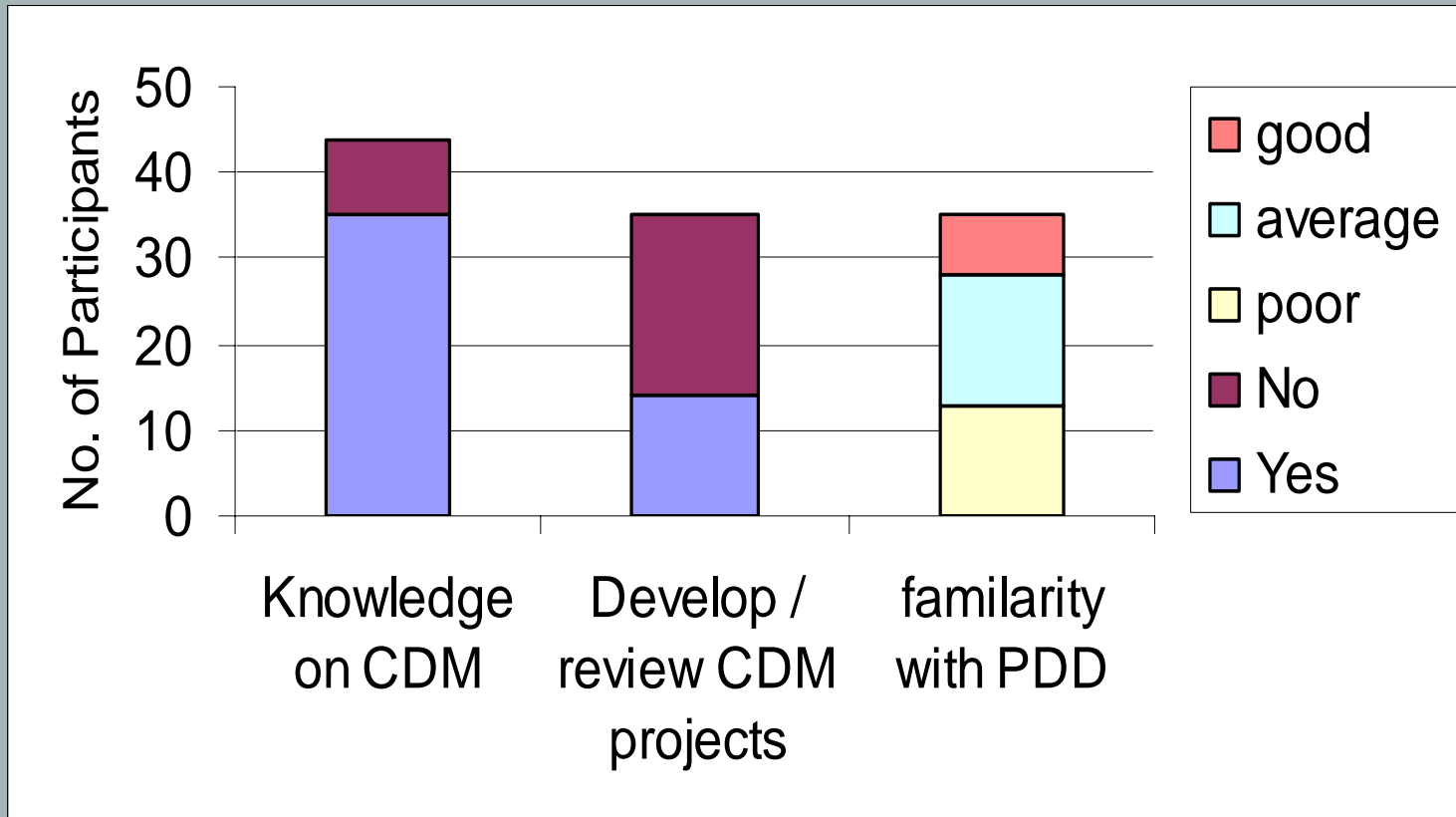
• Financial Sector	20
• Project developers	12
• Academia	6
• Consulting Organizations	4
• DOE	2
Total	44

Buyers	4
Other Speakers	6
IGES	1
WII	6



Workshop for the Financial Sector

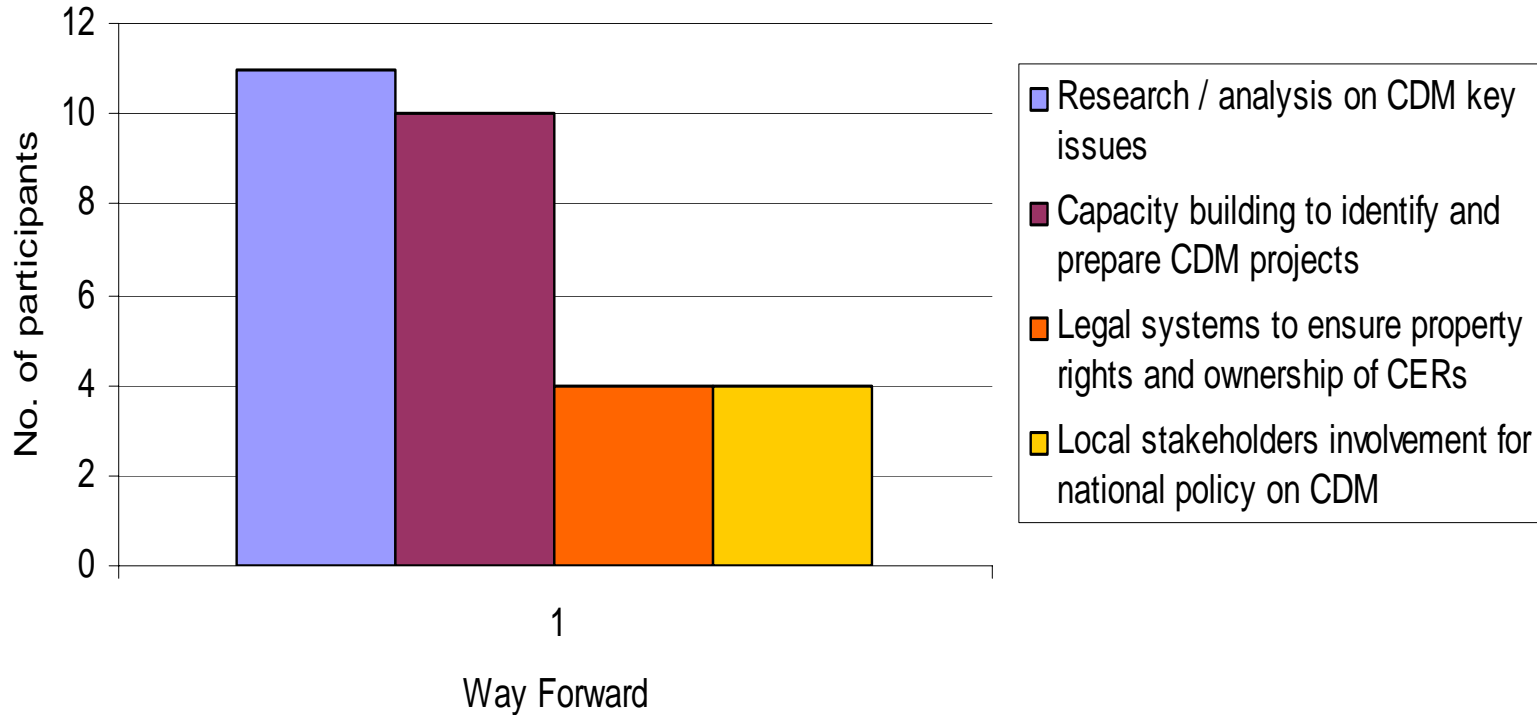
An Analysis



Cont'd ..

Workshop for the Financial Sector

An Analysis



Cont'd ..

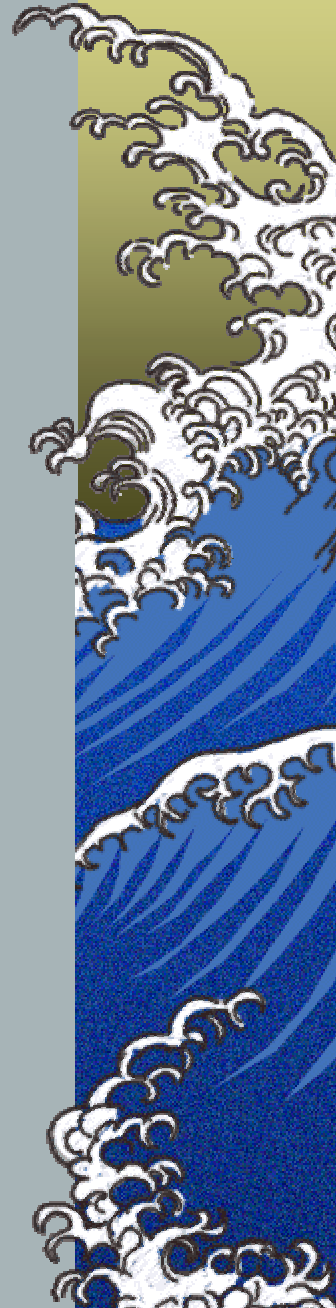
Workshop for the Financial Sector

Participants feedback/expectations/lessons learnt

Require detailed understanding on the following:

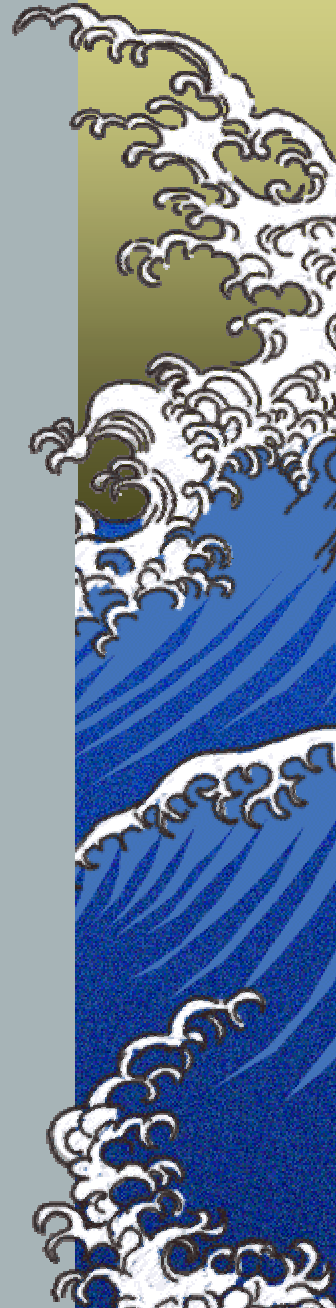
- Clarity on baseline philosophy & additionally issues
- Transaction cost for small scale CDM projects
- Registration mechanism of CDM projects
- CDM legislation?
- Role of Financial Institutions – project financing and marketing of CERs?
- Additionality and viability of CDM projects
- Case studies on
 - Validated projects
 - Fructified ERPAs
 - Sector specific CDM projects
 - Assessment and viability of projects

IGES ICS-CDM Meeting: Tokyo, March 3-4, 2005



Way Forward

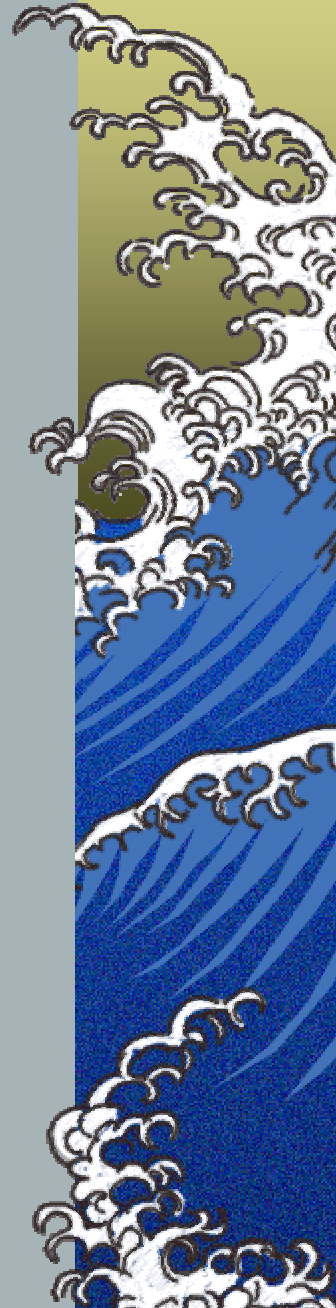
- Intense Capacity Building of Project Developers to prepare PIN & PCN
- Capacity Building of Financial Institutions on Project Appraisal
- Buyer-Seller Meet



CDM Country Guide

Prepared by

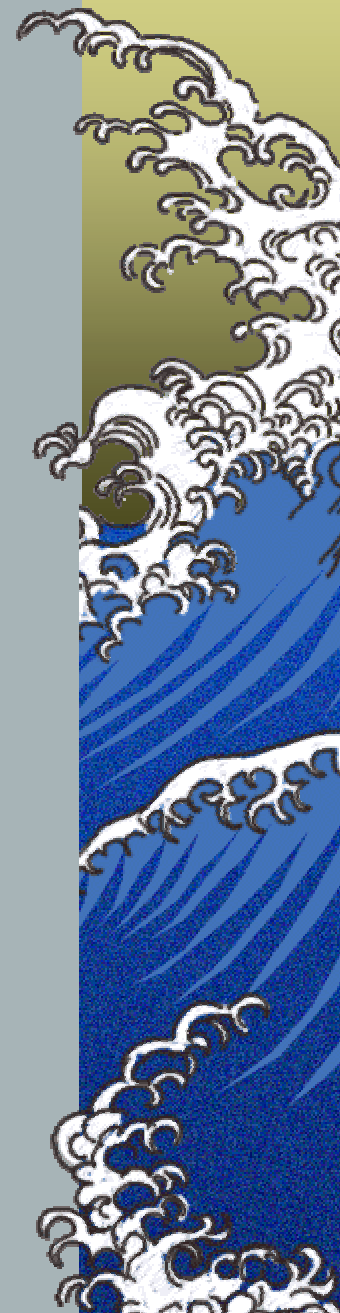
- Winrock International India (WII)
- Institute for Global Environmental Strategies (IGES)



CDM Country Guide

Barriers for drafting the guidebook

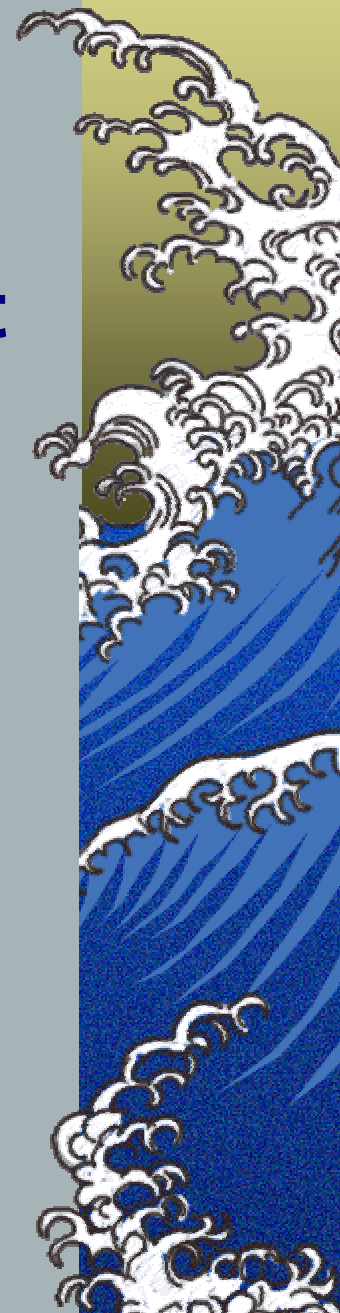
- **Sector-specific baseline information**
- **Clarity on legal framework**
- **Lack of updated information on various issues**
- **Insufficient case-studies on legal and financial issues of CDM**



CDM Country Guide

Recommendations for improvement

- R&D to generate information base
- Develop success stories manual
- Incorporation of above two points in the existing guidebook



Thank you

For further information, contact

Winrock International India (WII)

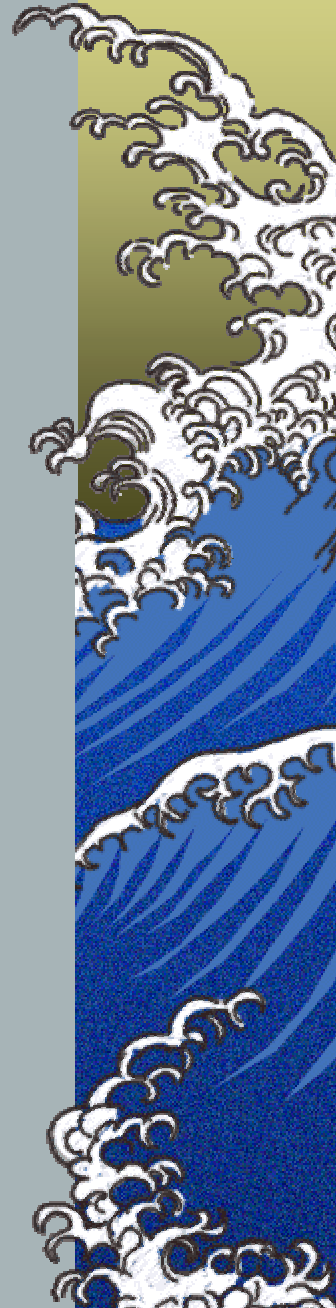
1, Navjeevan Vihar

New Delhi – 110 017

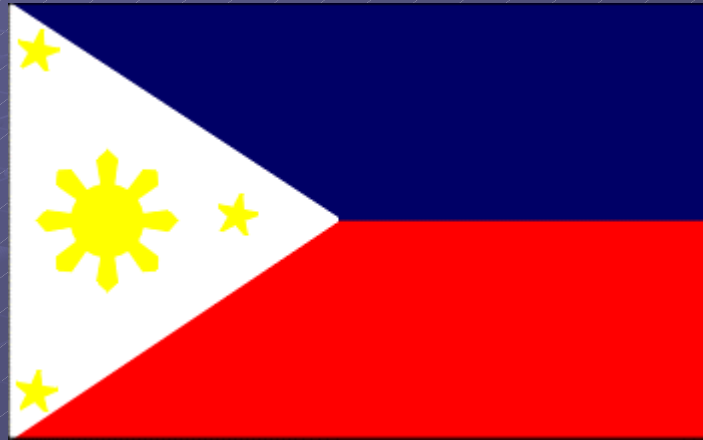
Tel: +91-11-26693868

Fax: +91-11-26693881

E-mail: aditi@winrockindia.org



DNA



in the

Philippines

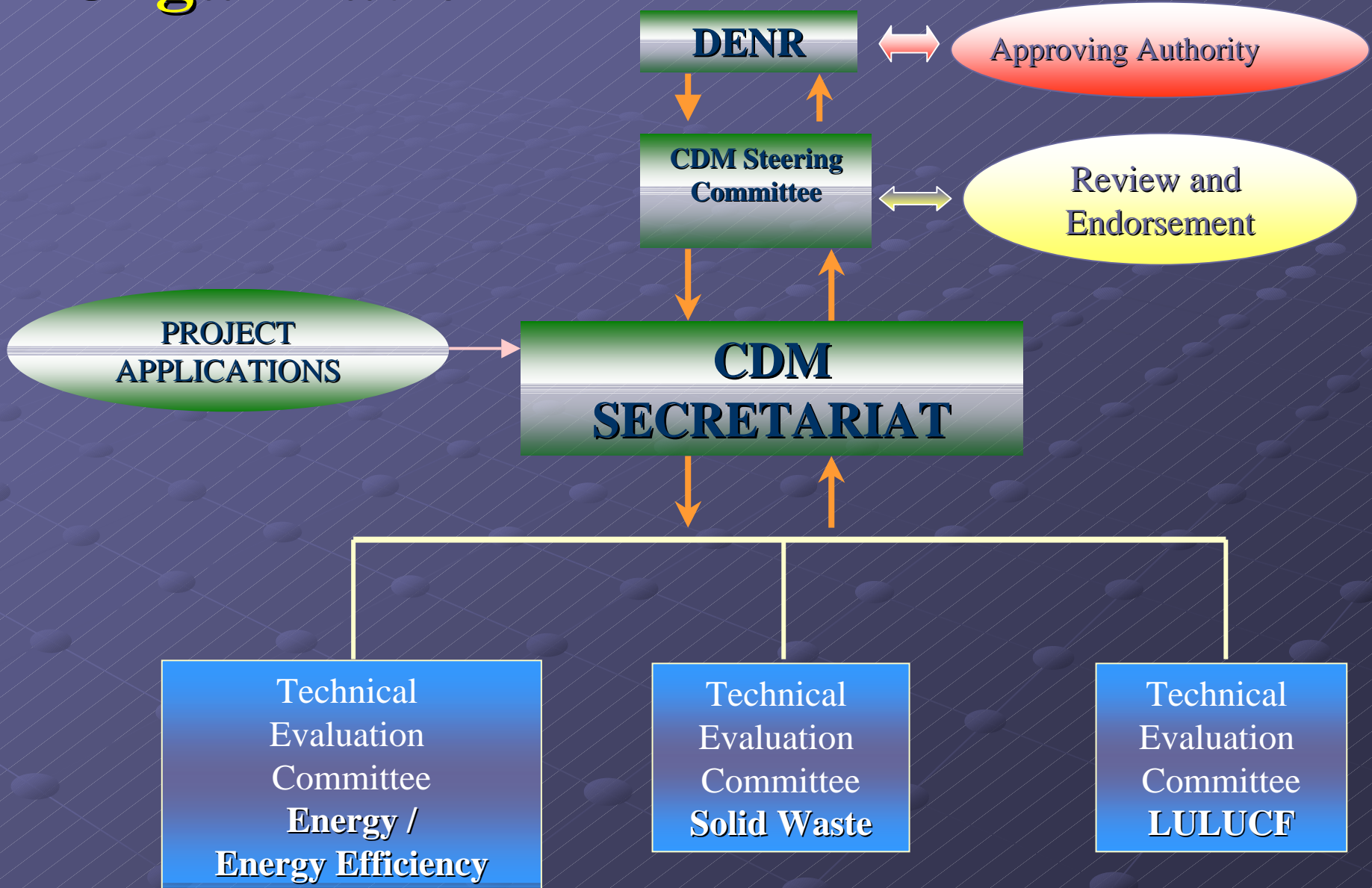
June 25, 2004

Executive Order 320 Designating the Department of Environment and Natural Resources (DENR) as the CDM National Authority in the Philippines signed by President Gloria Macapagal Arroyo

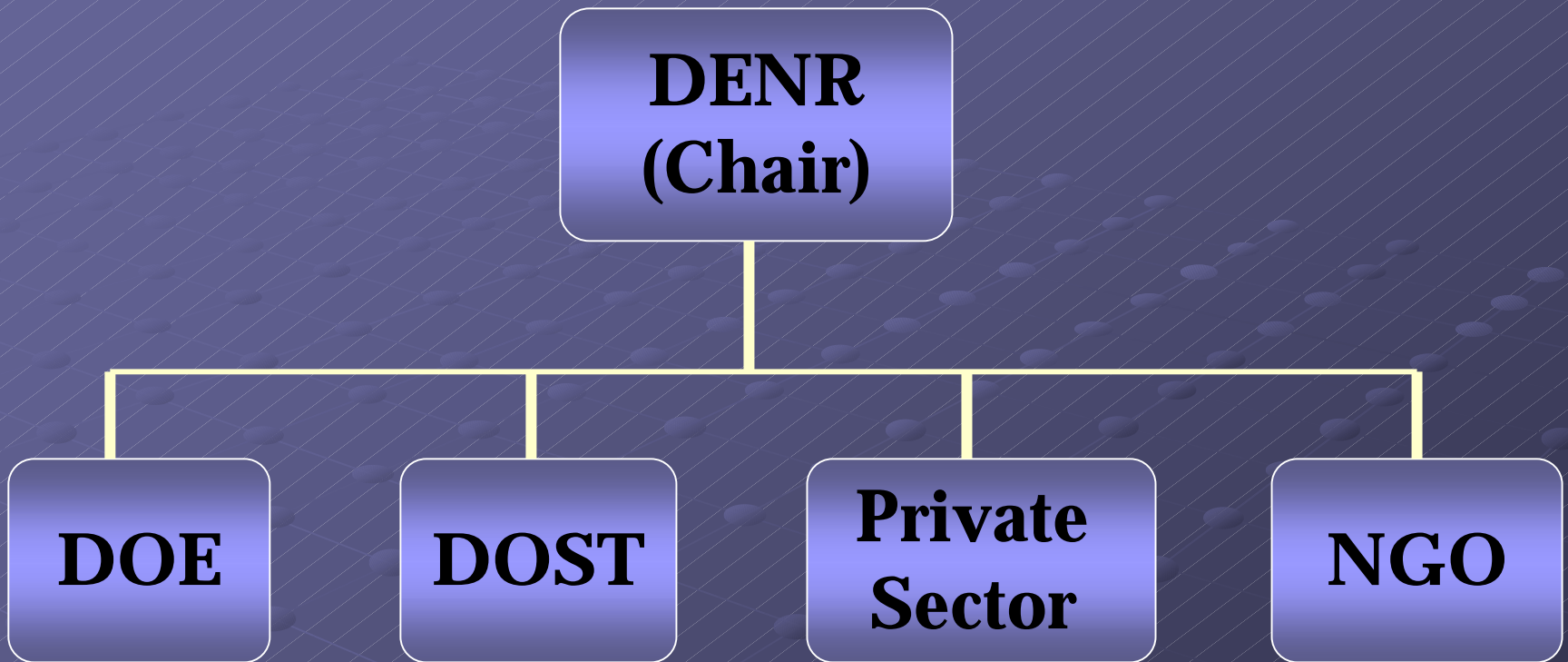
Powers and Functions of the NA:

1. Formulate and develop a national CDM policy;
2. Develop the criteria, indicators, standards and procedures, and evaluation tools for the review of CDM projects;
3. Undertake the assessment and approval of CDM projects that will be submitted to the UNFCCC;
4. Monitor the implementation of CDM projects;
5. Perform other functions related to and in pursuance of the development of CDM.

Organization



Steering Committee



DENR Department of Environment and Natural Resources

DOE Department of Energy

DOST Department of Science and Technology

Submission of application documents

Verification / Confirmation

Payment of processing fee

Endorsement to appropriate evaluation committee

Monitoring Form

Assessment of project documents using the National Evaluation Protocol (NEP)

with revisions

15 working days

Resubmission of revised project documents

w/o revisions

15 working days

Submission of an Evaluation Report

Reassessment using the NEP

10 working days

Convening of the CDM Steering Committee

Assessment of Evaluation Report

Endorsement Report

10 working days

Reviewing and issuance of Letter of Approval or Disapproval

5 working days

Releasing of Letter of Approval or Disapproval and recording of all processed documents

Approval Criteria

- Ψ A Proposed Project shall be given national approval if it assists the Philippines in achieving **sustainable development**.
- Ψ A Proposed Project shall be assessed using **sustainable development** criteria which are meaningful from a **project level perspective** and are in line with the **Philippine Agenda 21**.
- Ψ A Proposed Project shall be evaluated using criteria for the three dimensions encompassing **sustainable development** : economic, environmental and social.

Approval Criteria

- Ψ Project level indicators, quantitative and/or qualitative, shall be used to identify the **sustainable development** impacts of a Proposed Project.
- Ψ Measures to **mitigate** significant **negative** impacts of a Proposed Project must be identified.
- Ψ Methods to **monitor** the major **sustainable development** impacts of a Proposed Project must be identified.
- Ψ The **overall sustainable development** impact of a Proposed Project must be **positive**.

Sustainable Development Criteria

Economic Dimension

- Ψ Generates sustainable employment of local community
- Ψ Provides livelihood and other economic opportunities in the community
- Ψ Provides proper safety nets and compensatory measures for the affected minority
- Ψ Uses cleaner, more efficient and environment-friendly technology

Environmental Dimension

- Ψ Complies with environmental policies and standards
- Ψ Provides local environmental benefits
- Ψ Promotes sustainable use of natural resources
- Ψ Protects and conserves local biodiversity

Sustainable Development Criteria

Social Dimension

- Ψ Provides measures to alleviate poverty
- Ψ Provides education and training which build the capacities of local stakeholders
- Ψ Provides vulnerable groups access to local services
- Ψ Promotes local participation in the project

POTENTIAL CDM PROJECTS IN THE PHILIPPINES

	CATEGORY	PROJECT TITLE	ANNUAL ESTIMATED GHG EMISSIONS REDUCTION (in t CO ₂ equivalent)
1.	Waste Management	Rocky Farms Piggery Waste Biogas Digesters Project, Municipality of Pililia, Rizal Province	4,180
2.	Waste Management	Container Corporation of the Philippines (CCP) Wastewater Gas to Energy Project, Quezon City	(no estimates provided)
3.	Waste Management	Tanay Municipal Landfill Gas to Energy Project, Tanay, Rizal Province	12,800
4.	Waste Management	PNOC Exploration Corporation (PNOC EC) Payatas Landfill Gas to Energy Project, Payatas, Quezon City	35,843
5.	Waste Management	CAT Waste-to-Energy Biogas Project, San Miguel, Tarlac City, Tarlac Province	54,000
6.	Waste Management	Boracay ReSTORE Waste-to-Energy Project, Boracay Island, Municipality of Malay, Aklan Province	3,070

POTENTIAL CDM PROJECTS IN THE PHILIPPINES

7.	Waste Management	Waste to Energy: Integrated Solid Waste Disposal Projects in the Philippines covering 3 sites: Malilipot, Albay Province; City of Manila and Candon City, Ilocos Sur Province	Malilipot: 7,123 Manila: 11,397 Candon: 6,105
8.	Waste Management	50 MW Victorias Bagasse Cogeneration Plant Project, Victorias City, Negros Occidental Province	71,290 to 182,896
9.	Waste Management	30 MW First Farmers Cogeneration Project, Barrio Dos Hermanas, Talisay City, Negros Occidental Province	54,457 to 133,466
10.	Waste Management	La Suerte Rice Mill Cogeneration Plant Project, San Manuel, Isabela Province	7,600
11.	Waste Management	InterCo Rice Husk Power Plant Project, Balagtas, Bulacan Province	28,071
12.	Renewable Energy	42 MW North Luzon Wind Power Project (Phase 1), Burgos, Ilocos Norte Province	78,319

POTENTIAL CDM PROJECTS IN THE PHILIPPINES

13.	Renewable Energy	25 MW North Wind Bangui Bay Project (Phase 1), Bangui Bay, Ilocos Norte Province	76,218.5
14.	Renewable Energy	21 MW Solar Electric Company, Inc. Wind Farm Project, San Carlos City, Negros Occidental Province	13,524
15.	Renewable Energy	10.8 Talubin River Basin Hydropower Project, Bontoc, Mountain Province	32,395
16.	Afforestation and Reforestation	Streambank Rehabilitation and Ecological Enhancement in Tanay Micro-watershed Project, Tanay, Rizal Province	By 2011: 5,230 (low scenario)
17.	Geothermal Energy	20 MW Palinpinon 2 Optimization Project, Palinpinon, Southern Negros	106,946

ICS-CDM

National Meeting:

Philippines



EMB-DENR

Summary of National Meeting

BACKGROUND INFORMATION

ICS - CDM Activities

● Intensive Training Course for the DENR

- October 19-21, 2004 with MO-Klima
- develop the capacities of the personnel of the DENR as the DNA in the CDM process.

● Core Meetings

- Integrated CDM Capacity Building for Local Public & Private Sector Organizations
 - PIN Training – September 18, 2004
 - Baseline & Monitoring – November 18, 2004
 - PDD – January 21, 2005

● Training Workshops:

- PIN – October 25-26, 2004
- Baseline & Monitoring – November 30 – December 2, 2004
- Group Meetings
- PDD – January 24-26, 2005



**IGES ICS-CDM:
STOCKTAKING & WAY FORWARD
NATIONAL MEETING**

*February 7, 2005, 9:00 A.M. – 5:00 P.M.
Richmonde Hotel, Ortigas Center
Pasig City, Philippines*

Objectives of the Meeting

- To review the activities in 2004 and 2005
- To guide the participants in applying the lessons learned of the past year's capacity building.
- Develop on the next steps for the country's capacity building guided by the lessons learned to be discussed

Participants

Government Sector
(15)

NGO (11)

Private Sector &
Academe (19)

IGES
Representatives (3)



Overview of the Meeting

AGENDA OF THE MEETING:

- Welcome Address (from IGES & EMB-DENR)
- CDM Updates:
 - CDM Latest Developments In Asia
 - Latest Developments in Small-scale CDM Projects
 - Procedure after PDD development
- CDM Project Development: Expectations & Experiences from Key Players
 - DNA in the Philippines
 - Japan's Initiatives in CDM/JI & the next steps
- Report on the ICS-CDM Activities
 - CDM Intensive Training Course for EMB-DENR
 - Training Workshops for CDM Project Development and Country Guide
 - ICS-CDM Programme in the Philippines & Lessons Learned from the Training Workshops

Overview of the Meeting

AGENDA OF THE MEETING:

- Panel Discussion on strengthening CDM project development and the next step for capacity building in the Philippines

- Topics:

- Identification of difficulties in operationalizing CDM projects in the Philippines

- Identification of 'good' CDM projects in the Philippines and its technique to expand in the whole country

- The next steps for capacity-building for further CDM development

- Open Forum

- Closing Remarks

Summary of Panel Discussion

Panel Composition:

- Mr. Yuji Mizuno, IGES Consultant
- Mr. Kazuhisa Koakutsu, IGES
- Ms. Joyceline Goco (EMB-DENR for Dir. Julian Amador)
- Ms. Grace Yeneza, PEI
- Mr. Bert Dalusung, PEI
- Dr. Rosa Perez, IACCC
- Fr. Roberto Yap, SJ MO-Klima



Summary of Panel Discussion



- The potential project areas are renewable and wind projects, cogeneration, solid waste, waste water management and reforestation.
- Good DNA structure & approval process is needed
- Enhance the involvement of the private sector as the CDM is a private-sector driven mechanism.
- Sensitization of senior management of private sector to encourage the development of projects.
- Need to develop in-house staff for companies and a larger core of CDM project consultants.
- Trainings of reviewers and evaluators and/or members of the Technical Evaluation Committees.

Summary of Panel Discussion

- Documentation of CDM process is important to pick up lessons learned and monitor the development and progress of CDM in the country.
- Conduct of policy dialogues among the relevant stakeholders.
- The issue of ODA should be resolved.
- Development of a communication strategy to encourage the private sector to develop CDM.
- Enhance awareness on CDM opportunities, risks and scopes in all sectors at both the technical and policy level through the learning by doing approach.
- Training for a broader set of professionals.

Summary of Panel Discussion



- Facilitate the dissemination of knowledge at the regional and the local level with the development of a training manual that may be used by private and public practitioners.
- Local Government Units (LGU) and NGO trainings should be conducted as they will play an important role in the local process of CDM.
- Development of a national promotion strategy for CDM
- Institutional strengthening & capacity-building of the DNA to effectively manage the national CDM process.

Summary of Panel Discussion

- Development of technical capacities, provision of sector-specific training
- Determination/assessment of sectoral migration potential
- Development of local emission factors
- Bundling opportunities for small-scale projects.
- Development of a website/ clearinghouse/ registry.

Thank you!

Joyceline A. Goco
Environmental Management Bureau

2nd Floor, HRD Building
DENR Compound, Visayas Avenue,
Diliman, Quezon City

Tel. No.: +632-920-2251
Fax No.: +632-920-2251
Email: joygoco@yahoo.com

Integrated Capacity Strengthening for CDM: CDM Training Workshops and Country Guide

Grace S. Yeneza & Alberto R. Dalusung III

Preferred Energy Inc.

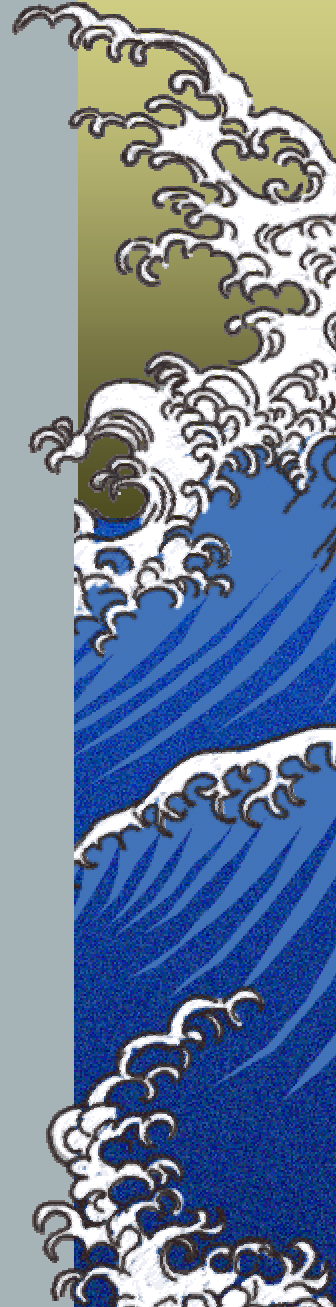
www.pei.net.ph





Introducing PEI

- ▶ *A duly registered Filipino not-for-profit organization engaged in sustainable clean energy and environment solutions since 1995*
- ▶ *Multi-disciplinary Core staff with government and private sector backgrounds*
- ▶ *Our services include:*
 - ▶ *Technical assistance and advisory*
 - ▶ *Project financing*
 - ▶ *Fund design and management*
 - ▶ *Capacity building*



Our Projects



Biomass

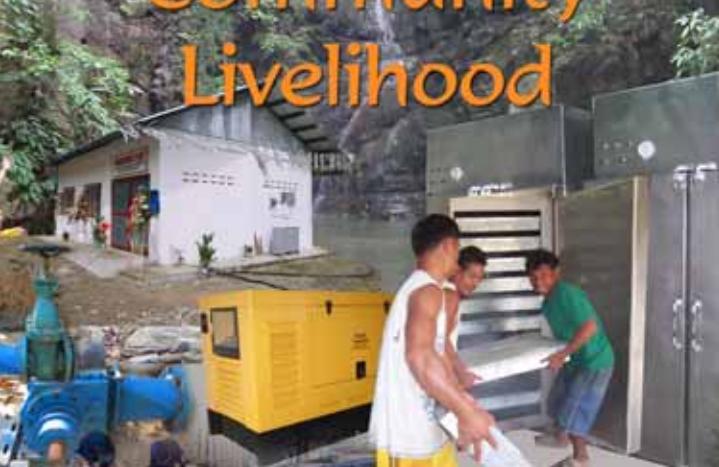


Biogas

Wind



Community
Livelihood



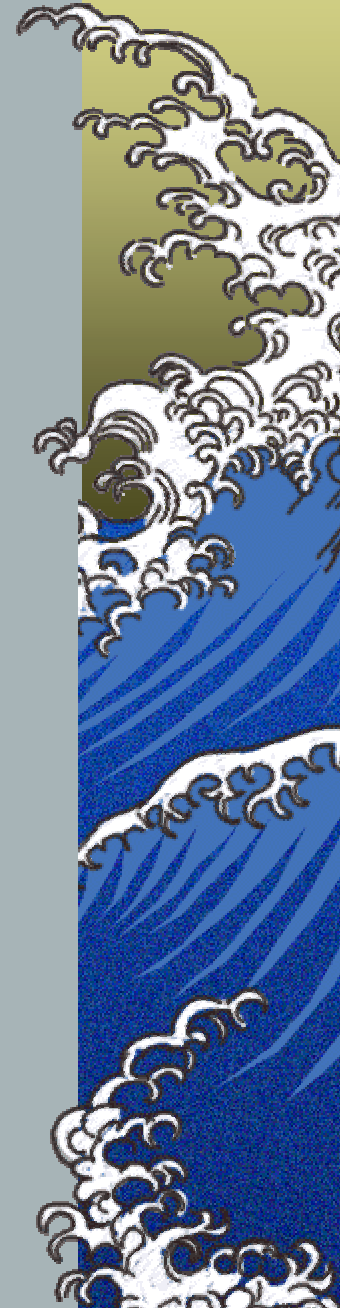
Hydro



Solar



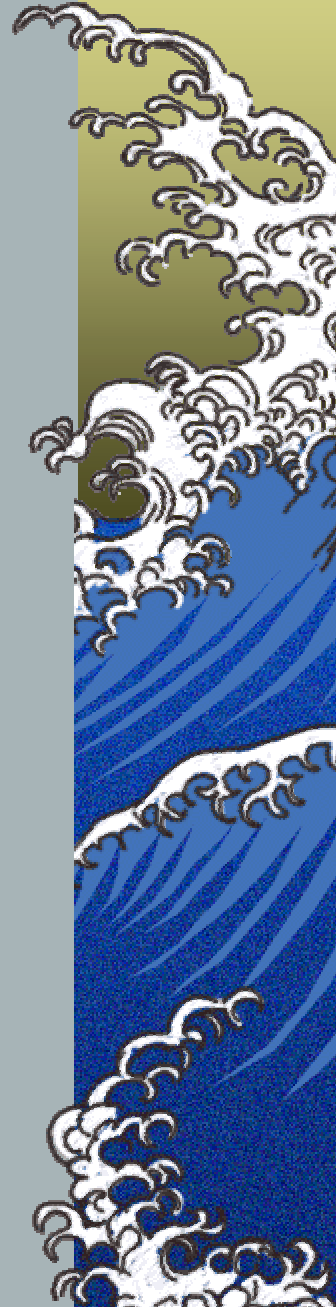
Highlights of Training Workshops





CDM Capacity Building Challenges

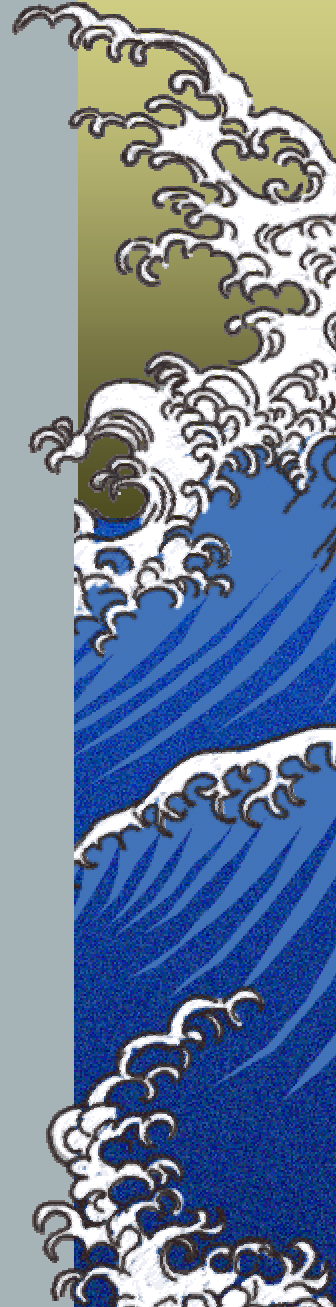
- ▶ *Move from theoretical and/or conceptual discussions to actual model projects*
- ▶ *Delineate public sector/private sector roles, CDM process framework and actions*
- ▶ *Engage prospective private developers*
- ▶ *Expose IACCC/DNA to actual projects to broaden appreciation of local prospects and the project development process*
- ▶ *Streamline local approval processes*





Capacity Building Concepts

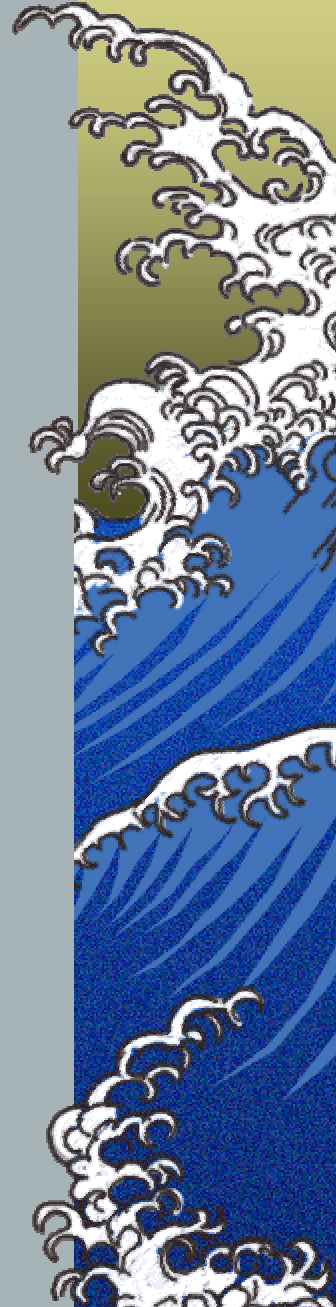
- ▶ *Hands-on preparation/evaluation of CDM documents using real projects*
- ▶ *Feedback mechanism from panel of international and local experts*
- ▶ *Project examples using real model
Philippine projects*
- ▶ *Practical country guide with all key CDM information and forms in one document*





Capacity Building Plan

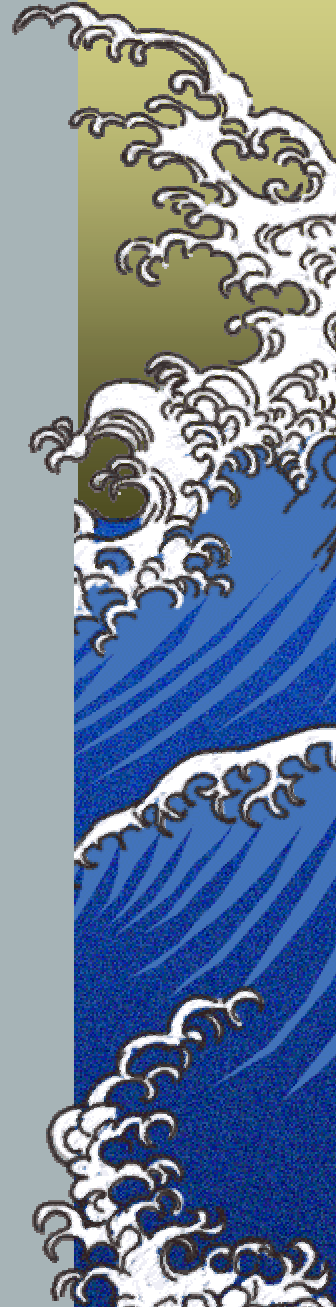
- ▶ *Model projects > participant projects*
 - ▶ *Rocky Farms – waste-to-energy*
 - ▶ *La Suerte Rice Mill – biomass cogeneration*
- ▶ *Hands-on workshops*
 - ▶ *Project Idea Note (PIN), Baseline and monitoring methodologies, Project Design Document (PDD)*
 - ▶ *Group dynamics*
- ▶ *Participant “deliverables”*
 - ▶ *PIN, baseline & monitoring methodologies, PDD*
 - ▶ *Group presentations / simulated*
- ▶ *Comprehensive country guide*





Profile of Participants

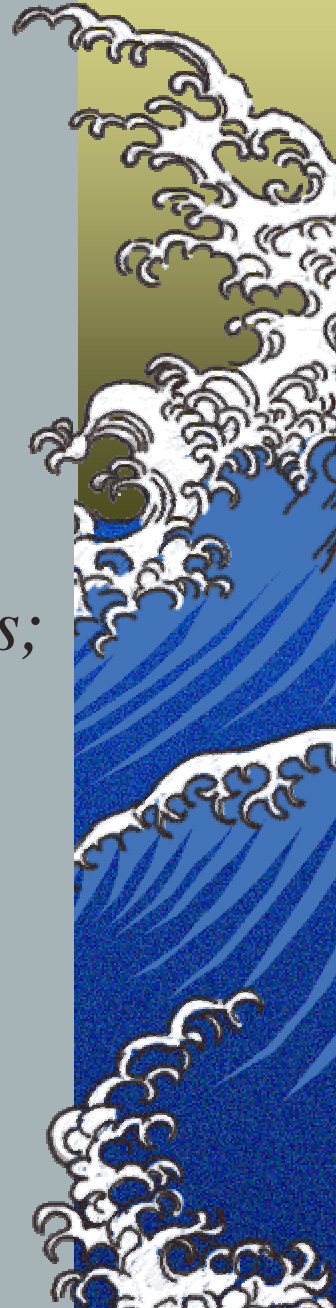
- ▲ *Members of the IACCC/DNA*
- ▲ *Government agencies*
 - ▲ *Philippine Coconut Authority (biodiesel project)*
 - ▲ *Tanay Local Government (open dumpsite project)*
 - ▲ *DOE, PNOC, DOST, BOI, Sugar Regulatory Administration*
- ▲ *Private Sector*
 - ▲ *Intercity Industrial Estate (rice hull power plant project)*
 - ▲ *Phil. Sugar Millers Association (ethanol project)*
 - ▲ *Solar Electric Co. (windpower project)*
 - ▲ *Association of steel millers (coke to natural gas switching)*
 - ▲ *San Miguel Corporation*
 - ▲ *Philippine Geothermal Inc.*





Workshop Highlights

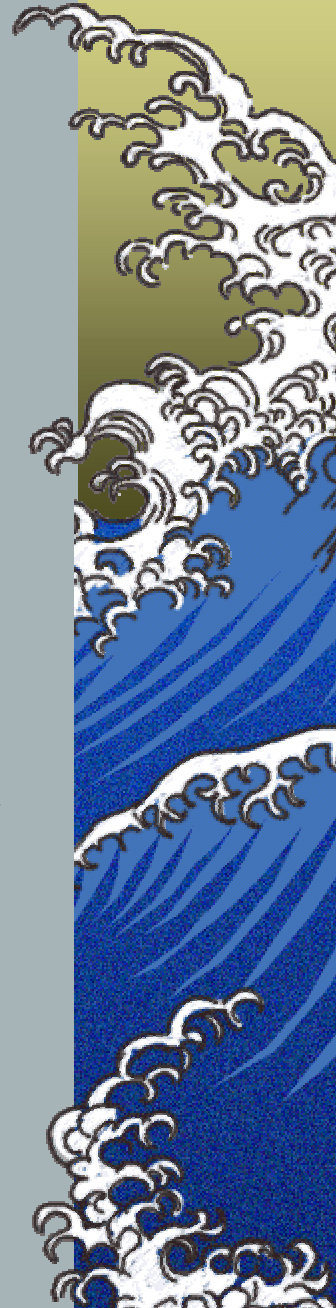
- ▶ *Project diversity in the Philippines;
Project boundaries can be difficult to define*
- ▶ *Project ownership by private sector is key;
Need for pre-investment studies*
- ▶ *Using “real projects” maximize training benefits;
ODA funding participation can be resolved*
- ▶ *Technology issues remain: scale, technology transfer*
- ▶ *Project value is beyond direct CDM benefits*





General Findings

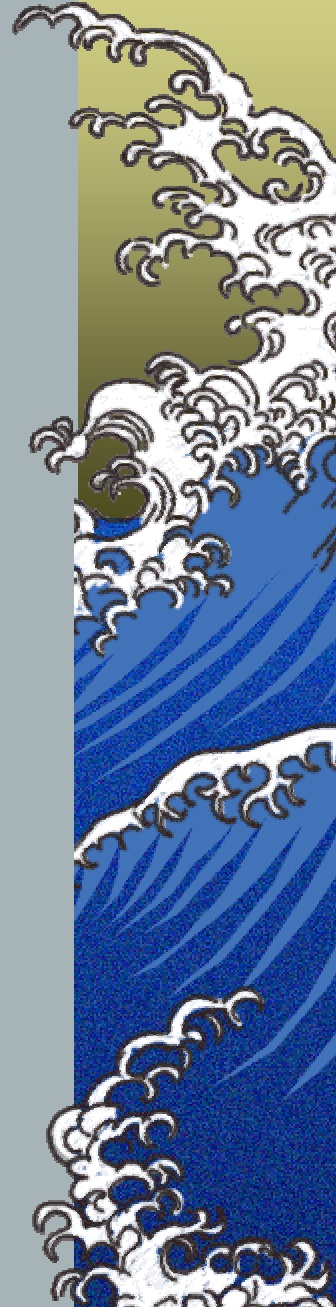
- ▶ *Hands-on project development is well appreciated by participants*
- ▶ *Many important issues have been identified during the course of the workshops*
- ▶ *Core team had a better idea of potential projects and the difficulty of developing them into viable and implementable projects*
- ▶ *Need for continued support for project developers and DNA staff*

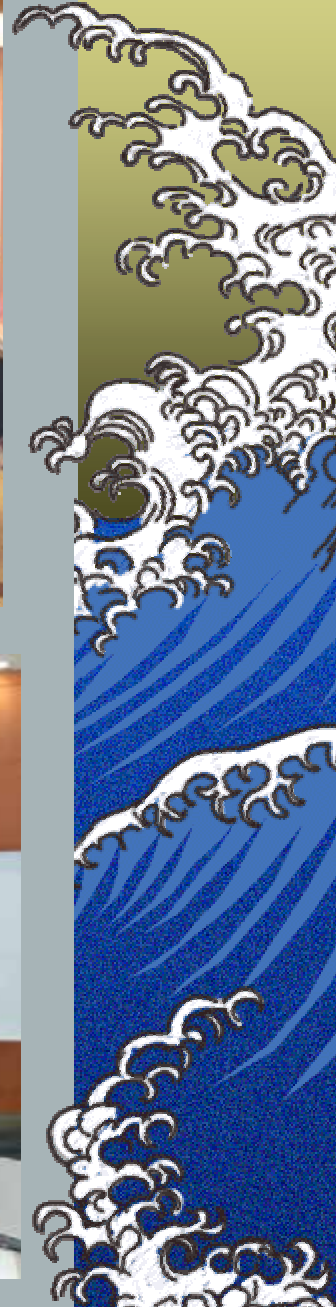




Issues Identified

- ▶ *DNA composition and staffing*
- ▶ *Local CDM process*
- ▶ *DNA role—sustainable development focus*
- ▶ *Sustainable development indicators*
 - ▶ *Clear parameters*
 - ▶ *Conflicts among parameters*
- ▶ *Local emission factors*
- ▶ *ODA resolution*
- ▶ *Pro-active dialogue with private sector*



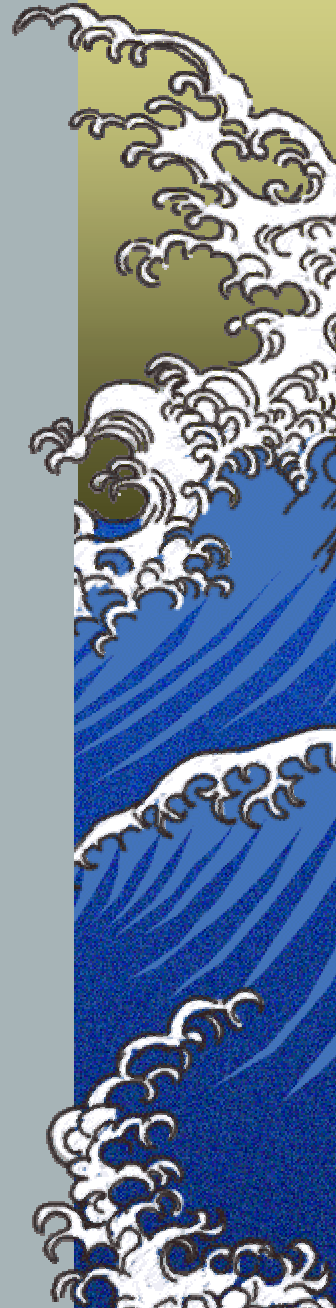




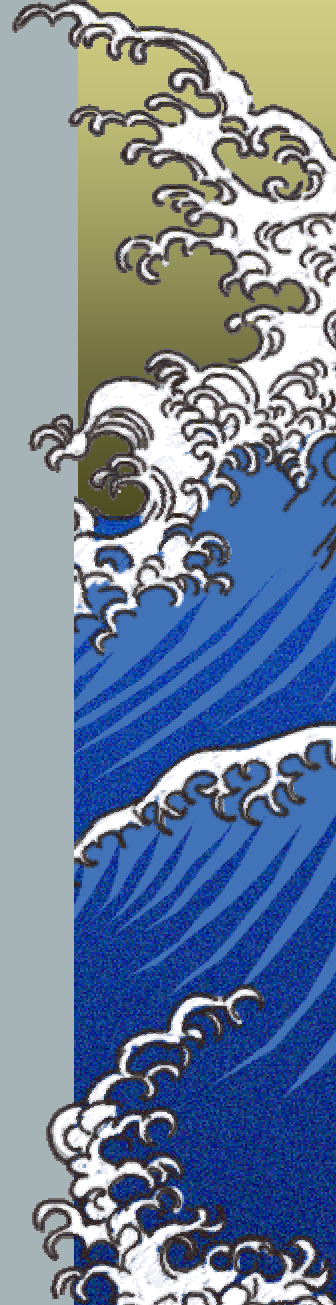


Areas for Further Support

- ▶ *Provide continued support to the DNA in conducting a **policy dialogue** among relevant agencies and private sector*
 - ▶ *ODA*
 - ▶ *Agency roles*
 - ▶ *Energy plan impacts on CDM viability*
- ▶ *Initiate process of developing **local emission factors***
- ▶ *Information campaign through country guide and other useful tools*
- ▶ *Continue capacity building for project developers*



CDM Country Guide

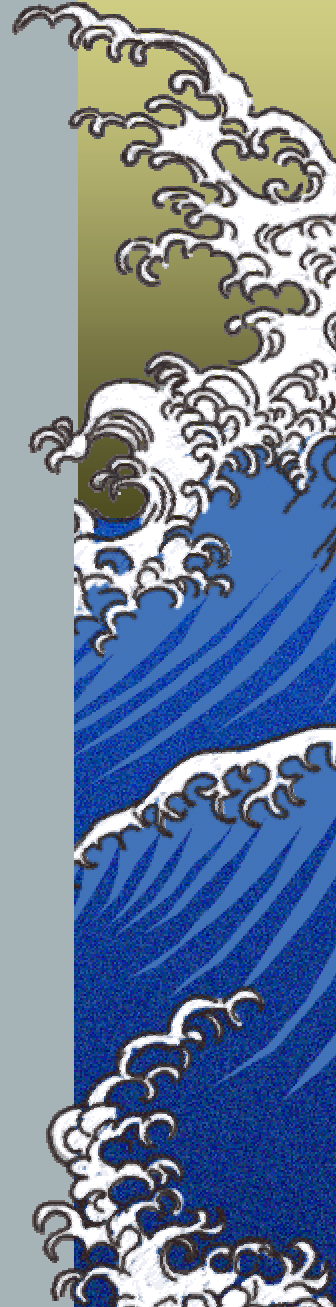




CDM Country Guide

- ▶ *A publication that will contain country –specific information on CDM project development from a practical viewpoint*

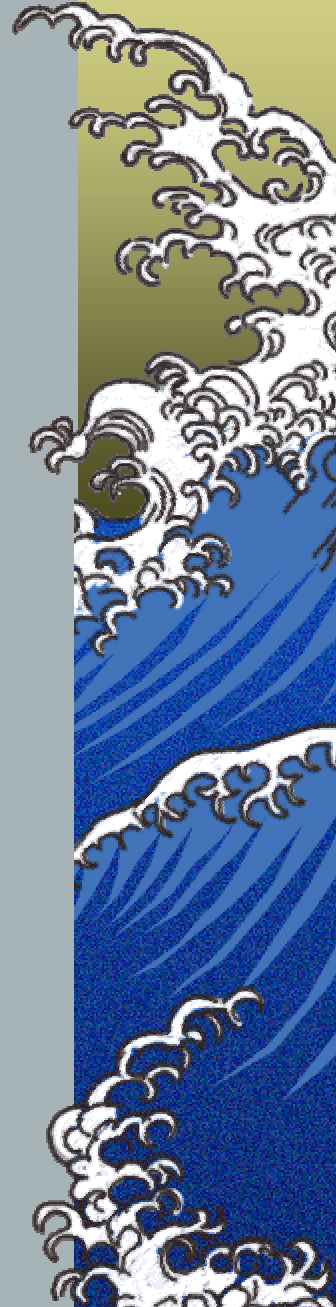
- ▶ *Target audience:*
 - ▶ - *local developers*
 - ▶ - *foreign investors*





Objectives

- ▶ *To facilitate CDM project development in developing countries by providing necessary information for potential investors to reduce investment risks*
- ▶ *To improve quality of CDM projects through discussion of issues considered important by investors*





Coverage

▲ *Cambodia*

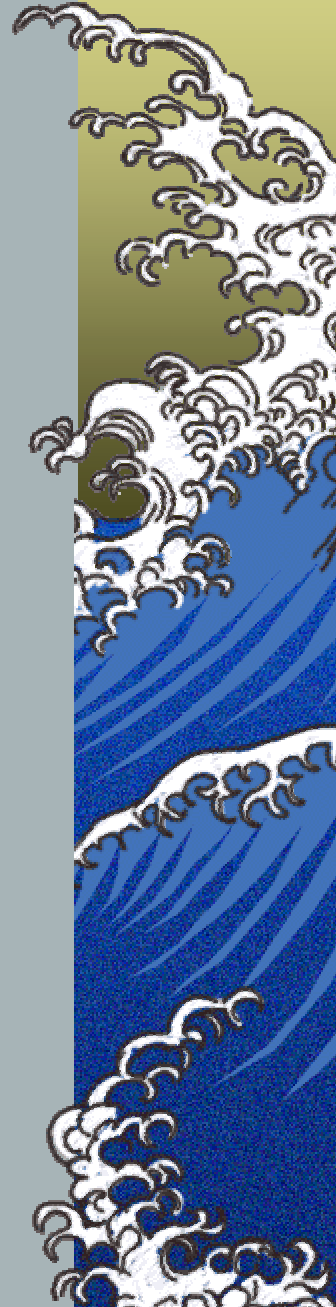
▲ *India*

▲ *Indonesia*

▲ *Philippines*

▲ *Thailand*

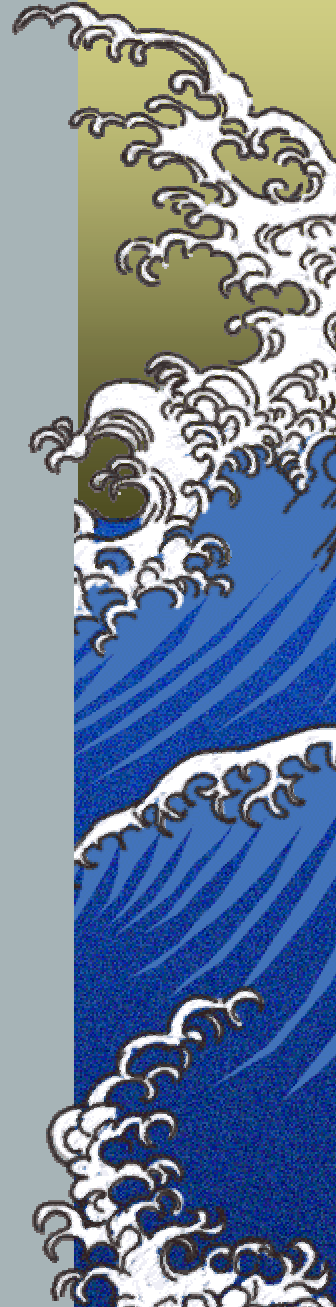
▲ *Same outline applied to all countries for easy comparison*





Contents

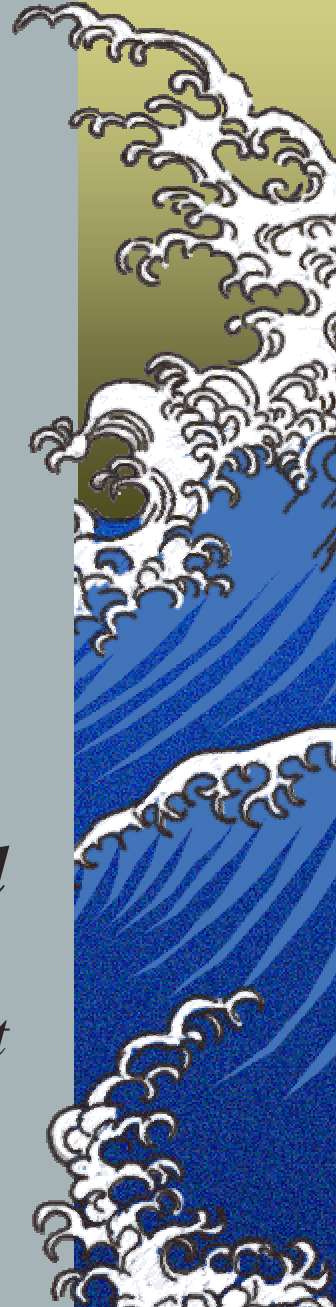
- ▶ ***Chapter 1: Introduction***
 - ▶ - *CDM concepts and issues*
 - ▶ - *how the guide can be used*
- ▶ ***Chapter 2: Country Profile***
 - ▶ - *social, economic and political situation*
 - ▶ - *energy outlook (specific for Philippines)*
- ▶ ***Chapter 3: Possible CDM projects***
 - ▶ - *what projects are eligible?*
 - ▶ - *sustainable development indicators and DNA-*
identified priority areas
 - ▶





Contents

- ▶ **Chapter 4: CDM project cycle (to be prepared by IGES)**
 - ▶ - CDM project cycle and requirements in each process
- ▶ **Chapter 5: CDM-related Government Authorities**
 - ▶ - Designated National Authority (E.O. 320 for Philippines)
 - - related agencies, roles and relationships
- ▶ **Chapter 6: CDM project approving procedures and requirements**
 - - steps and requirements to obtain the project approval
 - - approximate duration of time and fees required₂₀



Contents



▲ **Chapter 7: Laws and regulations**

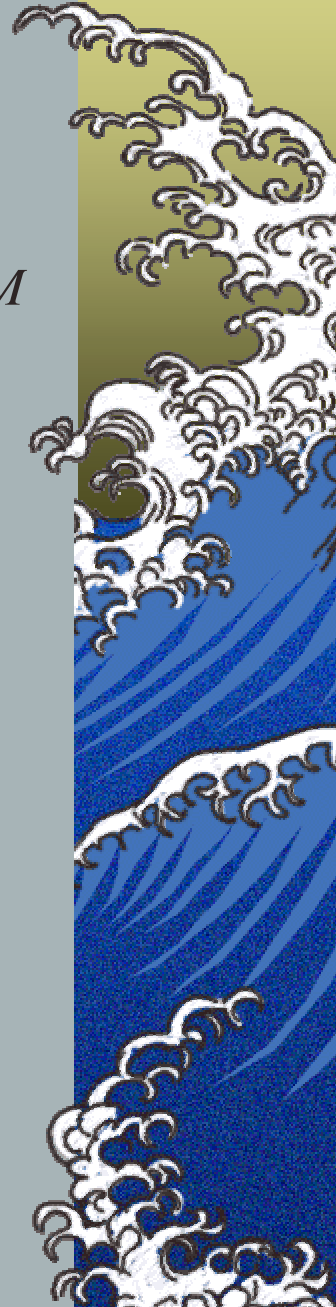
- ▲ - *legal framework, rules and regulations and how CDM projects are subject to certain laws*

▲ **Chapter 8: Financing and fiscal issues**

- ▲ - *general information on financial market in the host country*
- ▲ - *CDM-specific project financing sources (local and foreign)*
- ▲ - *updated information on carbon market development*

▲ **Chapter 9: Government incentives**

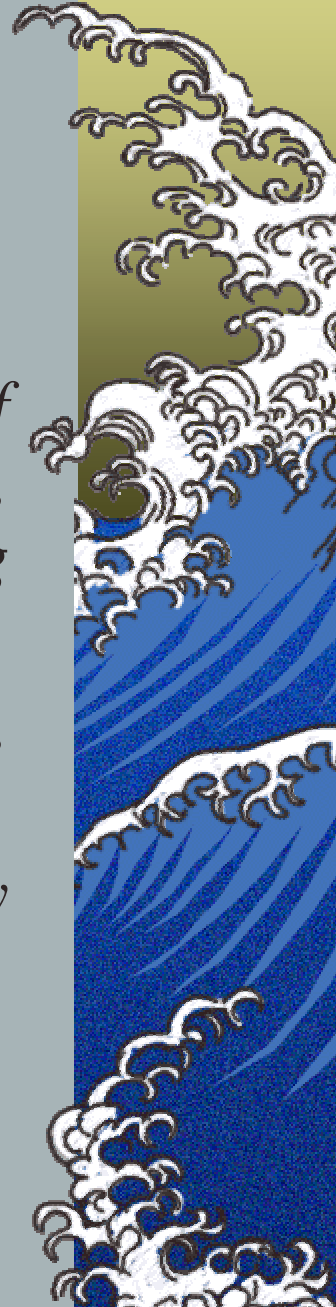
- ▲ - *financial (e.g. tax, import tariffs and duties) and regulatory incentives*
- ▲ - *any new policies in the process*





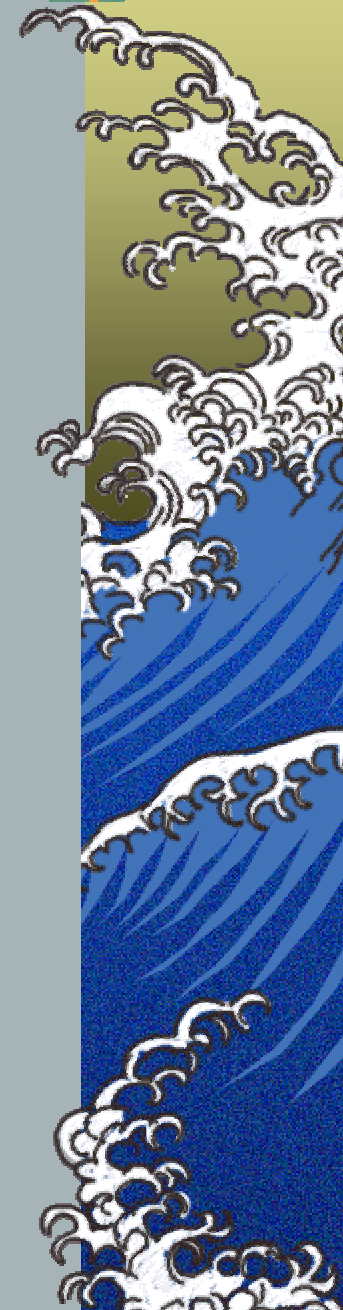
Appendix

- ▶ *Country risk information (optional)*
- ▶ *Project pipelines (optional)*
- ▶ *An example to demonstrate the whole process of project development to approval, or if there are any, to the project implementation and monitoring (optional)*
- ▶ *Contact list (governmental organisations, NGOs, local consultants, financial institutes, etc.)*
- ▶ *Project Concept Note (PCN) form (if required by DNA; optional)*
- ▶ *Project Designed Document (PDD) form (optional)*
- ▶ *Selective baseline methodologies (optional)*



Philippine Country Guide: Proposed Appendices

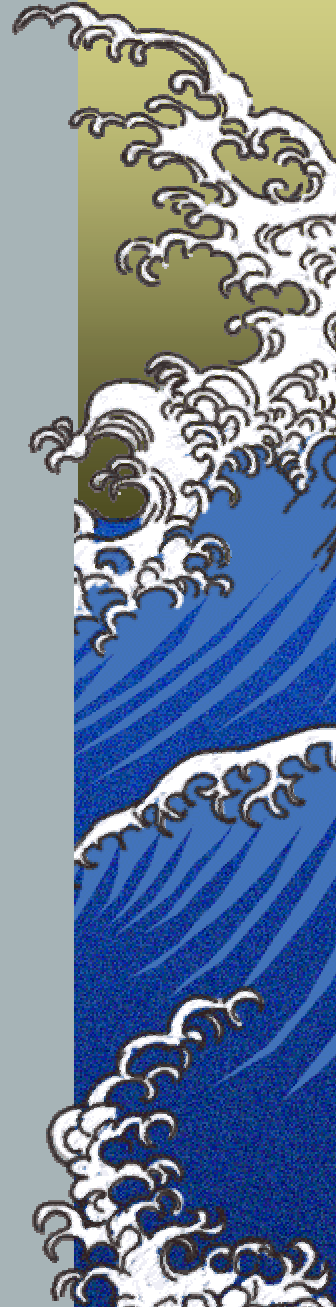
- ▶ *List of contacts*
- ▶ *Step-by step flowchart*
- ▶ *List of requirements by DNA*
- ▶ *Practical guide to baseline calculation*
- ▶ *Commonly used data, conversion factors and default values*
- ▶ *Approved methodologies*
- ▶ *Methodologies for small scale projects*
- ▶ *Relevant website addresses (for accessing forms and additional information)*





Barriers to CDM

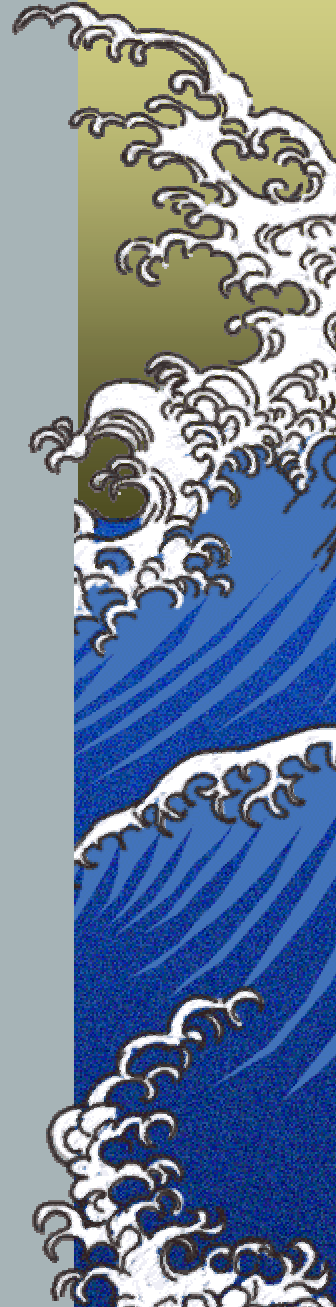
- ▶ *Lack of awareness locally on CDM and its benefits*
- ▶ *Documentation requirements - substantial information needed, tedious process of collecting information; no clearing house for information*
- ▶ *Unclear, lengthy procedures with limited track record → uncertainty*
- ▶ *High cost of project preparation*
- ▶ *Limited access to pre-investment and investment funding*
- ▶ *Projects normally small-scale, need for bundling*





Benefits from Country Guide

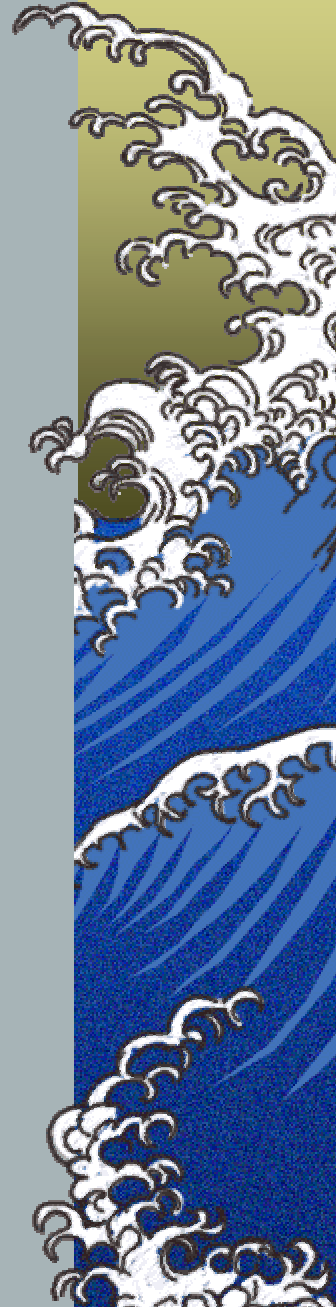
- ▶ *Comprehensive, practical information dissemination will help attract project developers and investors*
- ▶ *CDM Guide would reduce project preparation costs by:*
 - ▶ *Reducing time and money spent for gathering information*
 - ▶ *Directing project developers to eligible projects with higher probability of success*
- ▶ *CDM Guide would facilitate matching of resources*
- ▶ *CDM Guide would enhance trading among interested parties*





Philippine Country Guide: Status

- ▶ *PEI designated to prepare the guide*
- ▶ *Drafts of the chapters 1-6 completed and submitted to IGES for comments*
- ▶ *Drafts of chapters 7-9 for submission*
- ▶ *Target publication – April/May 2005; subject to completion of the CDM Operational Framework*





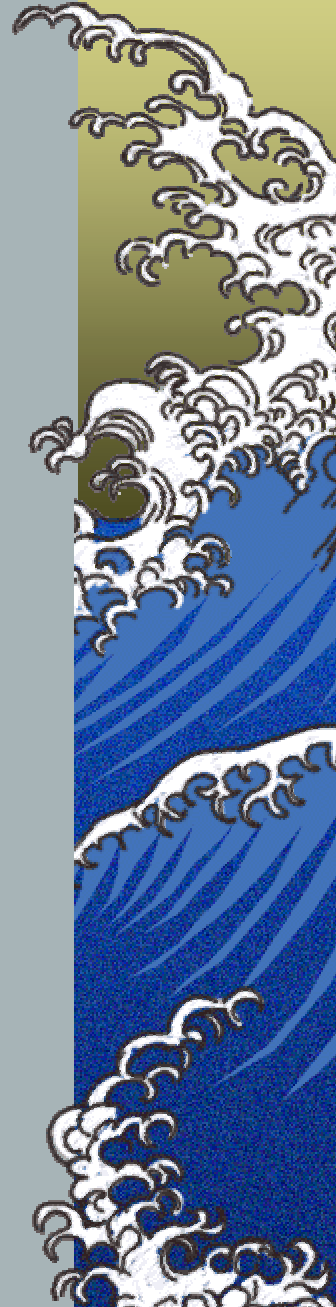
Thank you

For more information, contact:

Preferred Energy, Inc.

Telephone Nos. (632)631 2745/635 9688

www.pei.net.ph



Climate Change and CDM in Thailand



Climate Change Coordinating Unit



**Office of Natural Resources & Environmental Policy and Planning
(ONEP)**

Ministry of Natural Resources and Environment (MONRE)

The Royal Thai Government

Outline of Presentation

- Thailand's Position
- Thailand's Policy on Climate Change
- Institutional Framework
- Thailand's CDM Policy
- CDM Project Criteria
- Approval Procedure & Time Frame

Thailand's Position

Convention

- Thailand Signed the UNFCCC in June 1992 at UNCED and Ratified the UNFCCC in December 1994; and

Kyoto Protocol

- Thailand signed the Kyoto Protocol in February 1999 and Ratified in August 2002.

Thailand's Climate Change Policy

Cabinet Resolution on 10 September 2002

- The Government is aware of the climate change problems;
- The Government will support the projects which will contribute to the GHGs emission reduction; and
- Each CDM project must be submitted to the Cabinet for final approval.

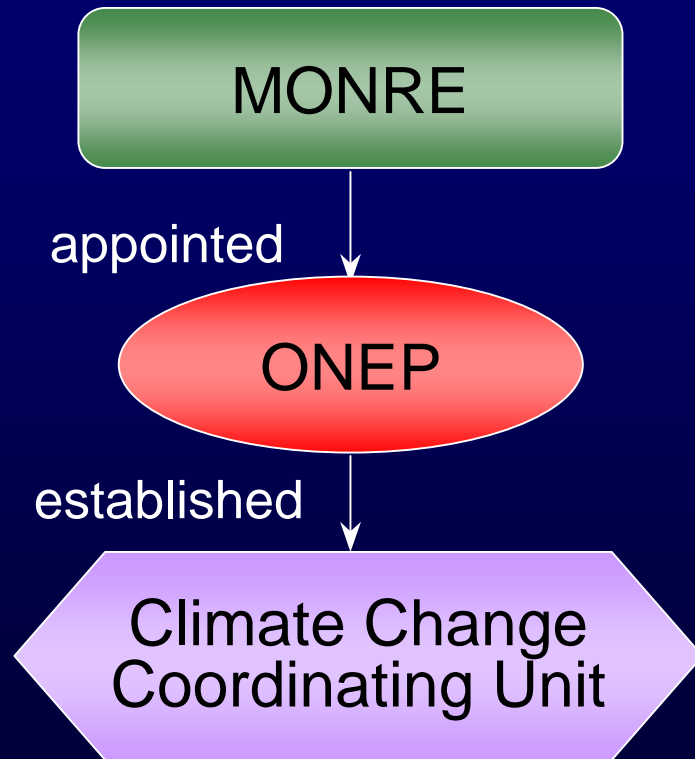
Institutional Framework

Cabinet Resolution on 1 July 2003

- The National Committee on Climate Change chaired by Minister of Natural Resources and Environment (MONRE)
- The National CDM Steering Committee chaired by Permanent Secretary of MONRE
- Appointed MONRE to be DNA CDM

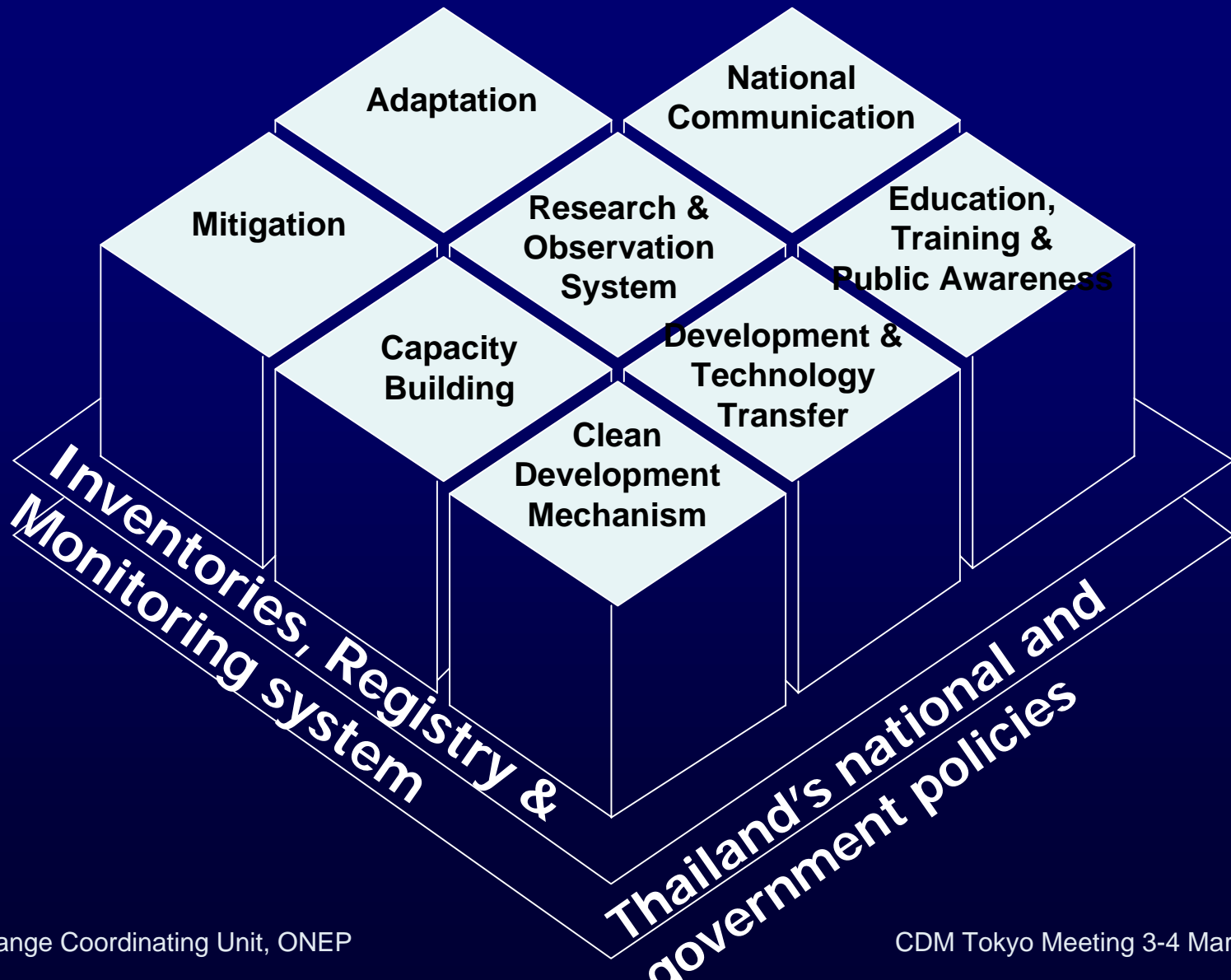
Institutional Framework on CDM

THAILAND'S DNA

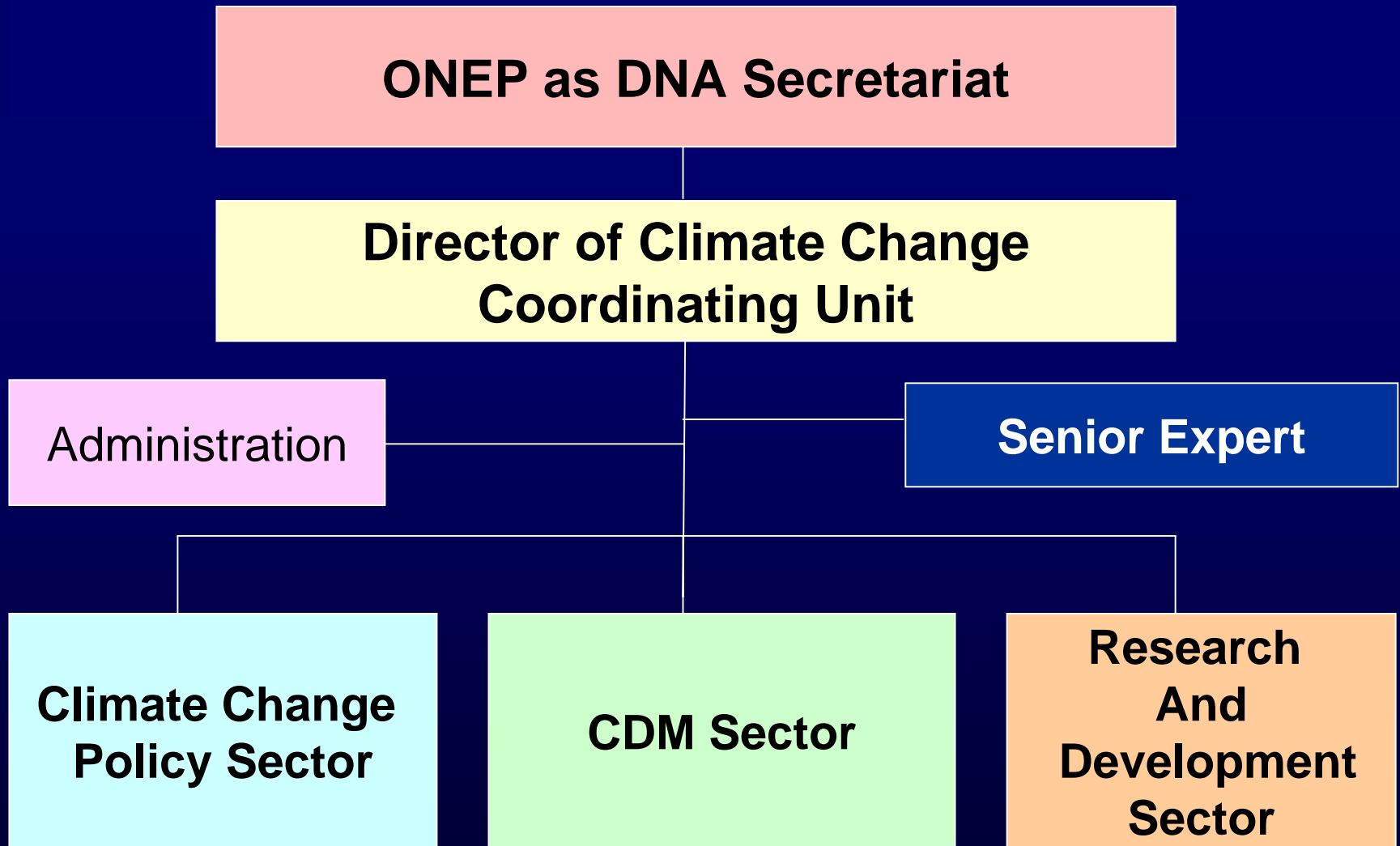


- Ministry of Natural Resources & Environment or **MONRE** as **DNA CDM** (July 2003)
- Office of Natural Resources & Environmental Policy & Planning or **ONEP** as **National focal point**
- ONEP is to coordinate the structuring on CDM operation in the country

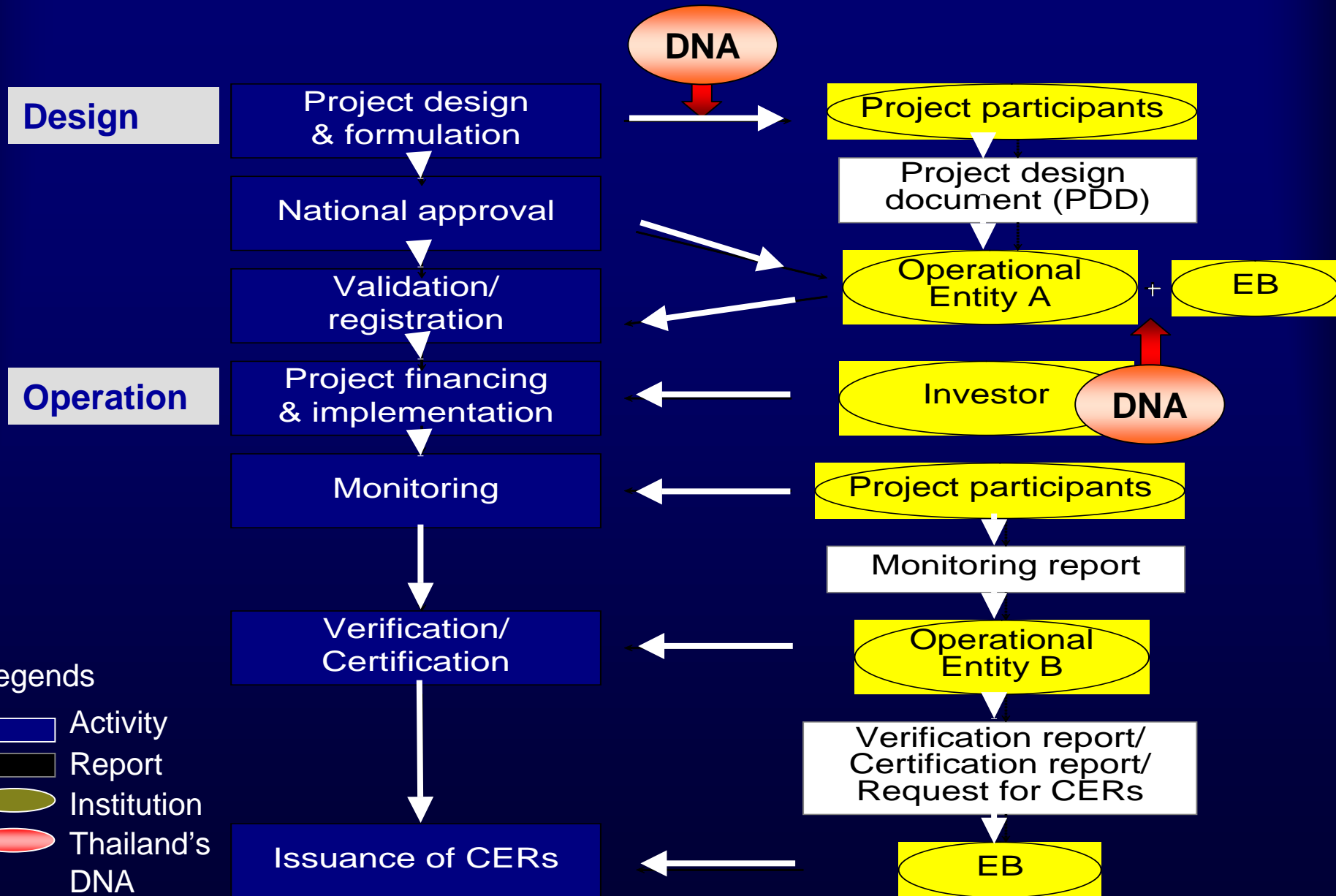
The Climate Change Coordinating Unit



Climate Change Coordinating Unit's Structure



Institutional Framework on CDM



Thailand CDM's Policy

- The Cabinet will give final approval for the operation of CDM project case by case;
- Contribute to National Sustainable Development Plan;
- Technology transfer and capacity building
- Gives priority of benefits to local community; and
- The Thai Government set framework on Thai CERs exchange.

CDM Project Criteria

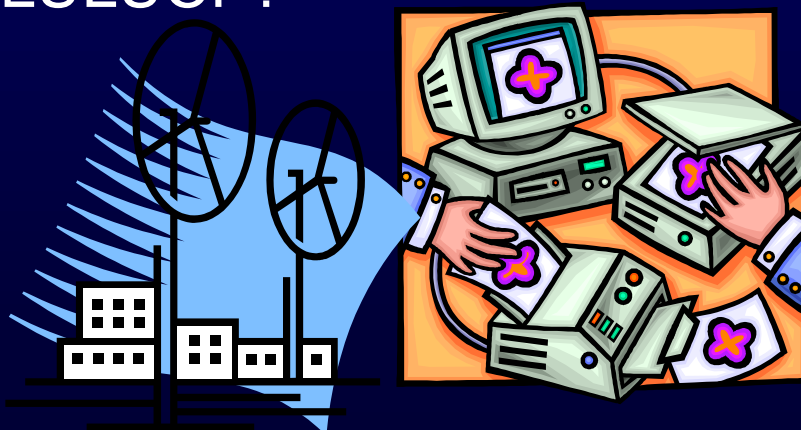
Voluntary participation

Acceptable project type

- Renewable energy
- Energy efficiency
- Energy conservation
- Industry
- Transportation
- LULUCF?

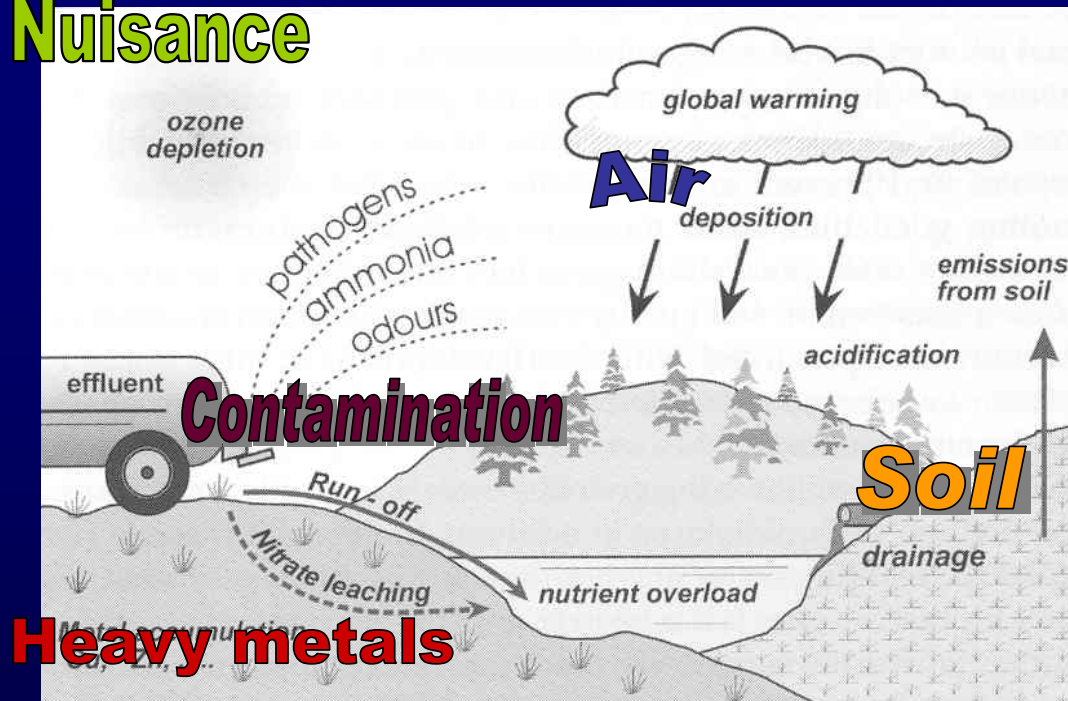
Sustainable Development

- Environmental, social and economic considerations,
- Public participation
- Technology transfer
- Contribution to capacity building, know-how & community development
- Benefit to host country society



CDM Project Criteria (Cont.)

Nuisance



Environmental impacts

Legislation compliance

- Environmental laws & regulations
- Business-Investment related codes

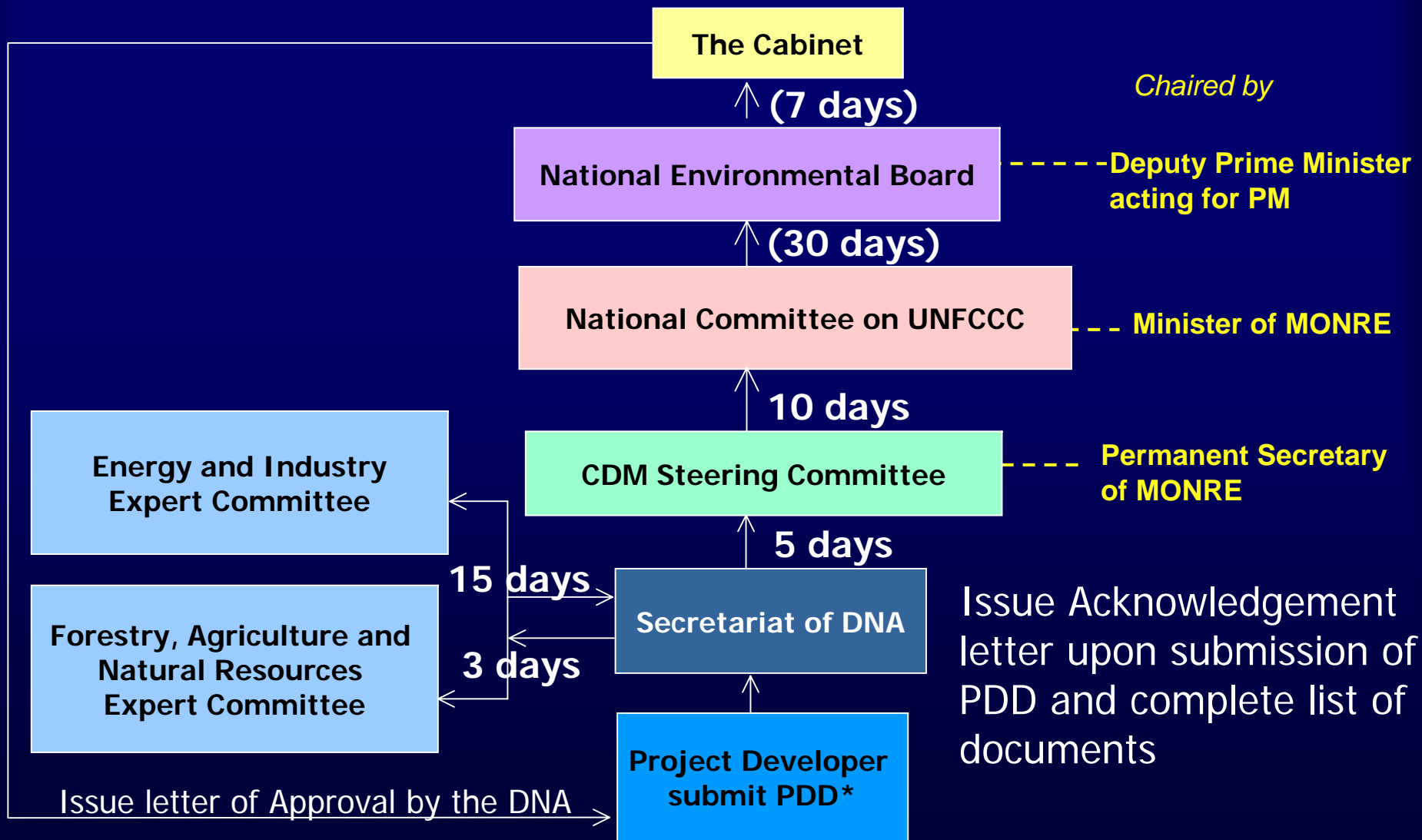
CDM Sustainable Development Criteria

Aspect	Objective	Indicator
Environment	<ul style="list-style-type: none"> • Promoting Environmental Quality and GHG reduction project. • Promoting reduction of natural resource utilization such as underground water and finite energy sources • Full life cycle plan of the project including plan after CERs contract ended 	Improve environmental quality <ul style="list-style-type: none"> - GHG emission reduction - Air pollution SO₂ NO_x PM₁₀ - Water pollution - Solid Waste - Land contamination
		Include plan to sustain biodiversity
		Include underground water conservation plan
		Reduce utilization from finite energy source
		Promote sustainable use of other natural resource (Reduce, Recycle and Reuse)
		Include plan to mitigate environmental impact
		Include decommissioning plan or long term maintenance plan after the end of CERs purchase agreement

CDM Sustainable Development Criteria (Cont.)

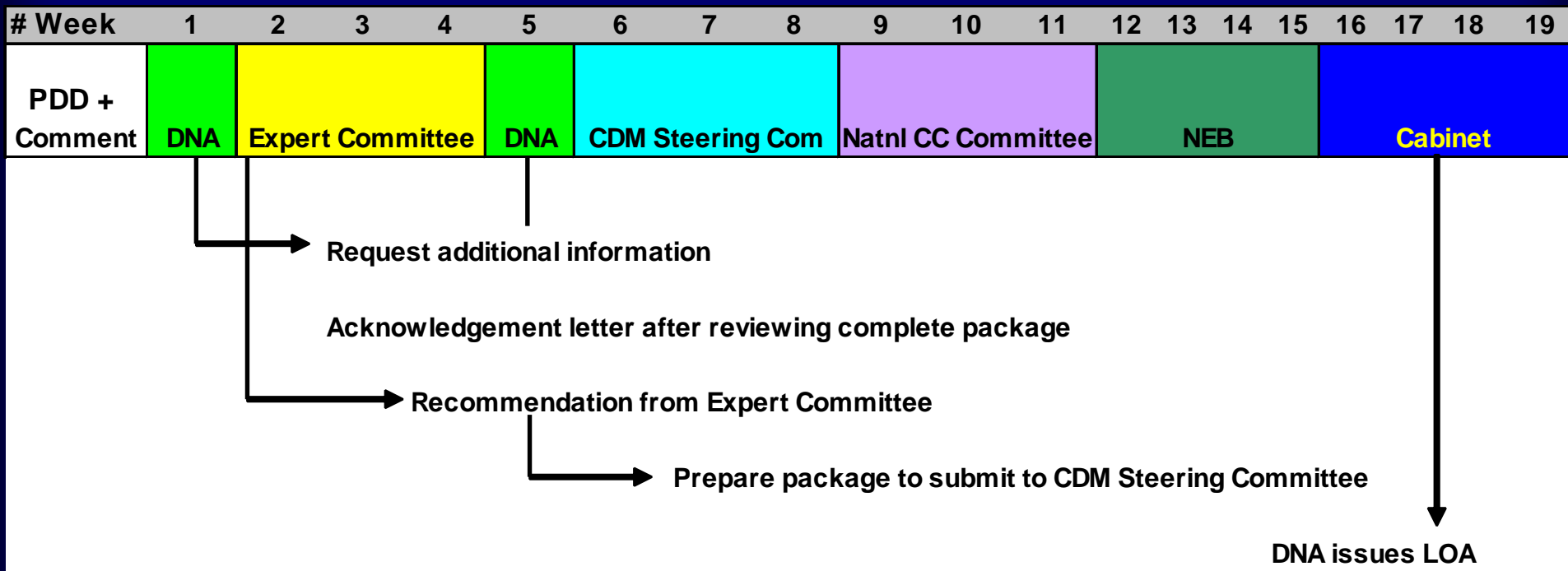
Aspect	Objective	Indicator
Social	Public participation is a major part of SD, and in order to avoid community conflict, the project developer must seek permission from both local and national authority.	In agreement with law and regulations as well as EIA rules
		Information Dissemination to the public
		Equity in Benefit sharing in the community <ul style="list-style-type: none"> - Health - Child Education - Improve workers skill - other benefit
Economic	To promote local economy in the project area that would reflect national economy	Employment (in years)

Tentative CDM Approval Procedure



*PDD is to be submitted with comment from the concerned Ministry

Tentative Approval Process Time Frame



Tentative List of Documents Required for Submission

- Application form;
- Official endorsement from concerned Ministry(s);
- PDD;
- Participation Qualification;
- Baseline Methodology;
- Crediting Period;
- Life Cycle Project Plan; and
- Intellectual Property Right (IPR) Agreement (if required).

Contact Detail

Mrs. Prasertsuk Chamornmarn
Senior Expert on Environmental Planning
Director of Climate Change Coordinating Unit

Office of Natural Resources and Environment,
Ministry of Natural Resources and Environment

Tel. +662 279 7180 ext. 220

Fax +662 298 6063

E-mail sertsuk@onep.go.th

Thank you



Energy Strategy and CDM in Thailand

Department of Alternative Energy Development and Efficiency

(DEDE)

Ministry of Energy

(MOEN)

March 2005

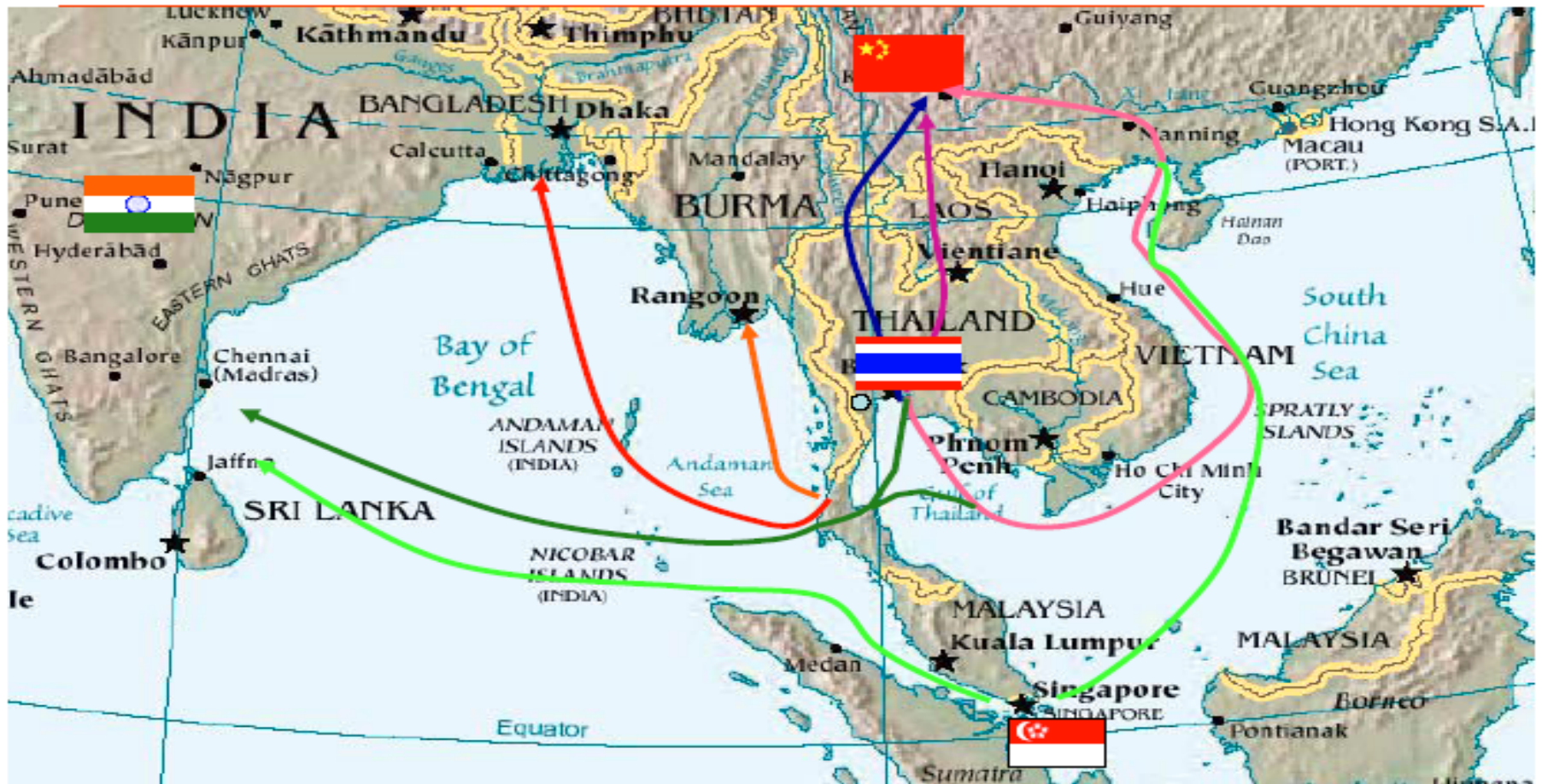
Strategy for Energy Security

- Ensure that Thailand has sufficient and reliable energy supplies for at least 30 years**
- Identify the goal to increase reliability of energy supplies, especially natural gas for the next 50 years**

Strategy for Thailand as a Regional Energy Centre

Develop Strategic Energy Land Bridge linking oil production and transport from the Middle East to Southeast Asia and East Asia

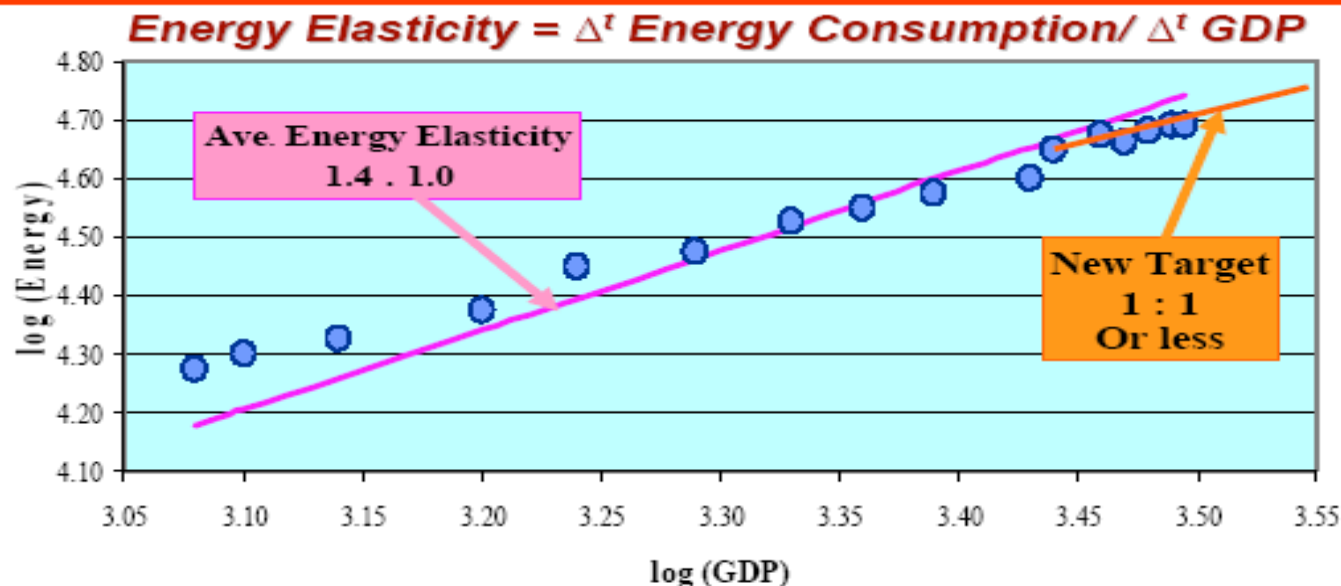
Thailand is Natural Geographical Hub



Strategy for Efficient Use of Energy

Reduce energy elasticity or the growth rate of energy consumption per GDP from 1.4:1 to 1:1 by 2007

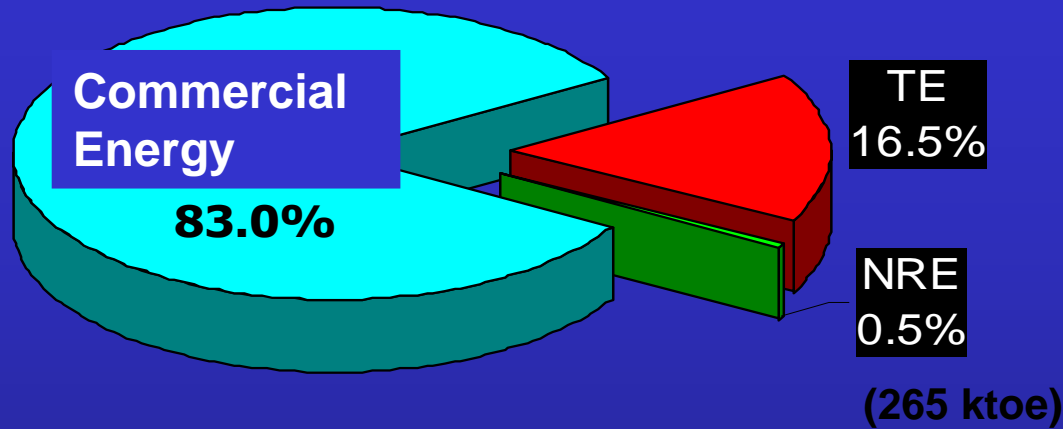
Growth on Energy Consumption is greater than GDP Growth by 40%



Thailand	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Energy-GDP Elasticity Avg.'85-2001
Final Energy Consumption Growth per GDP Growth Rate	0.97	1.24	1.47	1.08	1.51	1.34	1.64	1.94	-3.50	0.47	0.58	0.97	1.07	1.40



Strategy for Renewable Energy Development

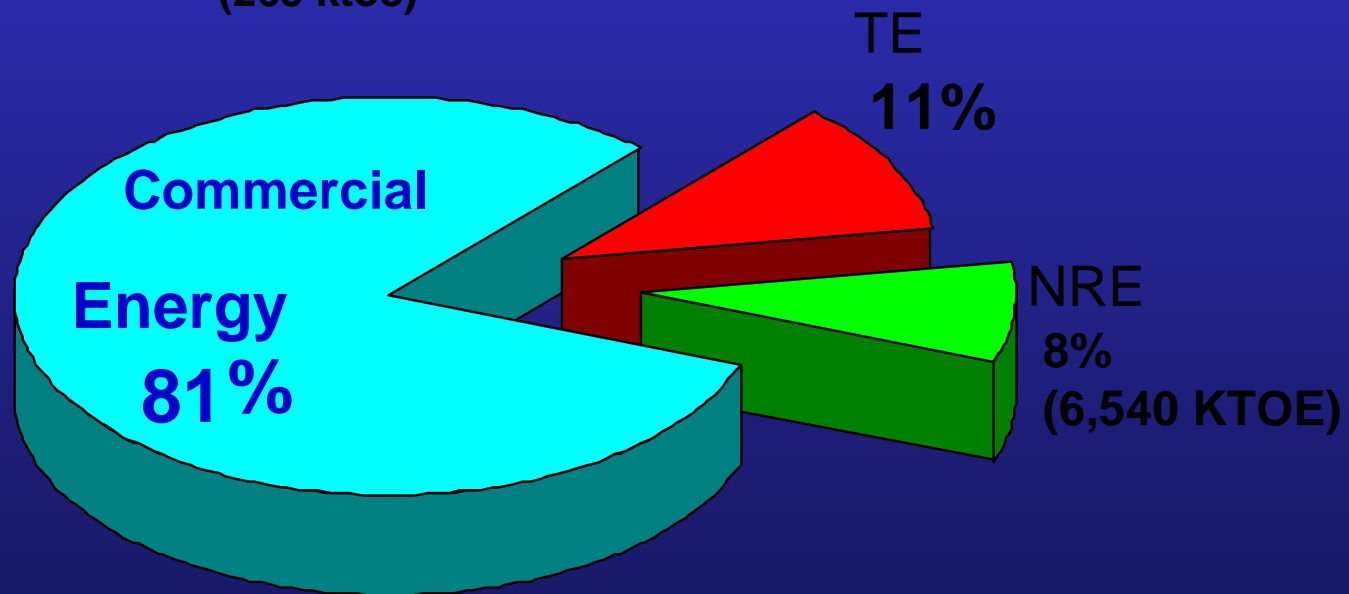


2003

52,939 KTOE

TE = Traditional Energy

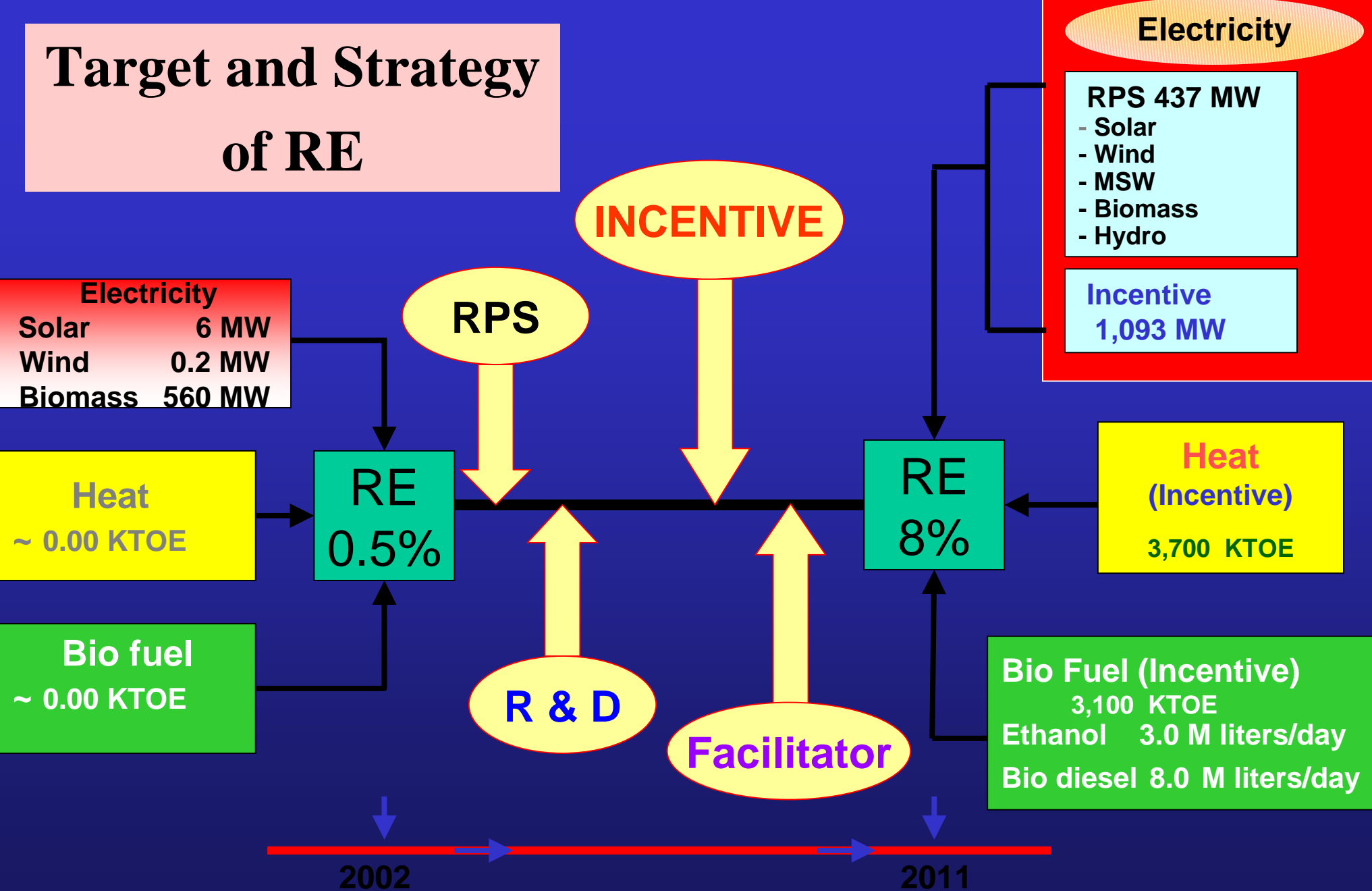
NRE = New & Renewable Energy



2011

81,763 KTOE

Target and Strategy of RE





Potential of CDM Projects in Thailand

- According to the NSS CDM for Thailand
High potential of CDM projects are
 - RE : i.e. Biomass, Biogas, Solar, Biofuels ;
 - Fuel Switching i.e. Oil to NG (such as CNG, Gas-fired PP.), Oil to Biofuel;
 - Production process improvement;
 - Boiler improvement;
 - Combustion efficiency improvement;
 - Waste to energy i.e. LFG.



STATUS OF CDM PROJECT IN THAILAND

- Currently there is **no CDM project** in Thailand.
- One rice husk fired-biomass power plant of AT Bio Power Co. has passed an approved baseline and monitoring methodology of PDD by EB.

Draft Guideline for CDM on Energy

-Alternative Energy and Energy Efficiency Project

- Biomass, Biogas, Solar, Wind, Biofuels ;
- Fuel Switching i.e. Oil to NG (such as CNG, Gas-fired PP.), Oil to Biofuel;
- Production process improvement;
- Boiler improvement;
- Combustion efficiency improvement;
- Waste to energy i.e. LFG

Technology Transfer

New technology

High Investment

CERs Sharing between Government and Project Developer

CDM Country Guide: Thailand

Chaiwat Muncharoen, D.Eng.
Senior Information Officer

Biomass One-Stop Clearing House
Energy for Environment Foundation (E for E)



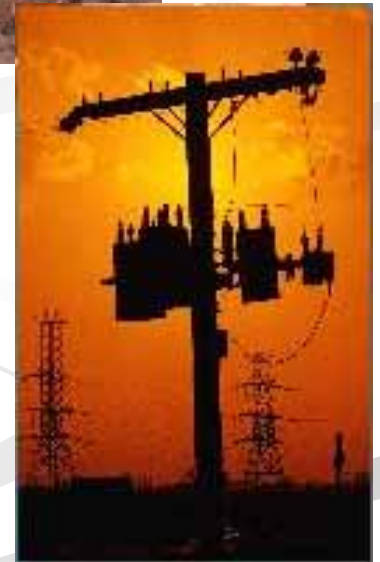
Outline

- Potential CDM Projects in Thailand
- Projects in Pipeline and Current CER Buyers
- Developing an Energy Project in Thailand
- BOI Promotion Privileges
- **Future** Improvements



Potential CDM Projects in Thailand

- Waste-to-Energy
- Renewable energy
- Energy efficiency & conservation



Projects in Pipeline & Current CER Buyers

Project Title	Project Type		CERs buyer
Karat Waste to Energy Project	Methane capture	wastewater	The Netherlands
Rubber Wood Residue Power Plant in Yala, Thailand	Renewable Energy	wood residues	Japan
Green Power from swine farms	Methane capture Electricity generation	swine manure	Denmark
Thai Agro energy ethanol and biogas plant	Ethanol plant Methane capture	wastewater	Denmark
Natural Palm Oil 640 kW electricity and biogas plant	Methane capture Electricity generation	wastewater	Denmark
Dan Chang Bio-Energy Cogeneration	Biomass power plant	bagasse residues	N/A
Phu Khieo Bio-Energy Cogeneration	Biomass power plant	bagasse residues	N/A
Siam Cement biomass gasifier with waste heat recovery	Fuel switching to biomass Combustion efficiency improvement		Denmark
Ratchasima small power producer expansion project	Biomass power plant	bagasse residues	Denmark

Developing an Energy Project in Thailand

Guidance on how to?

- Register a company
- Request for an **environmental permit** (if required)
- Apply for facility **construction & operation permit**
- Apply for **BOI promotion privileges**
 - ✿ Reduction of import duties & corporate income tax
 - ✿ Deduction of utility & transport costs from taxable income
- **Finance** an Energy Project

BOI = Board of Investment



Environmental Permit

Environmental impact study
& report preparation

6-12 months

Submission of report to
ONEP & MONRE

15 days

Review of preliminary
report by ONEP officials

45 days

Review & approval
process by EEC

No

Yes

Permitting agency grants
environmental permit

Approval documents
submitted to MOI

Company Registration

Reservation of corporate
name & filing of Memorandum
of Association (MOC)

Application to establish
company & Tax Registration

Facility Construction & Operation Permit

Submission of application &
required documents to
Department of Industrial
Works, MOI

Granting of
license by MOI

Notification to Local
Authority before
construction

EEC = Environment
Expert Committee

MOI = Ministry of
Industry

MOC = Ministry of
Commerce

BOI Promotion Privileges

Priority given to:

- **Small & medium** industries
- Activities in agriculture and agricultural products
- Projects directly involve technological and human resource development
- **Public utilities & Infrastructure**
- **Environmental protection & conservation**



THAILAND BOARD OF INVESTMENT

THAILAND

THAILAND OF INVESTMENT. DOUBLE YOUR EXPECTATIONS

Hot Topics

The Board of Investment

ShortCuts

BOI Project Approval

BOI Statistics

BOI Eligible Activities

BOI Investment Zone

High Growth Industries

EU-Thailand Partenariat 2005 - Thailand's largest international business matchmaking event

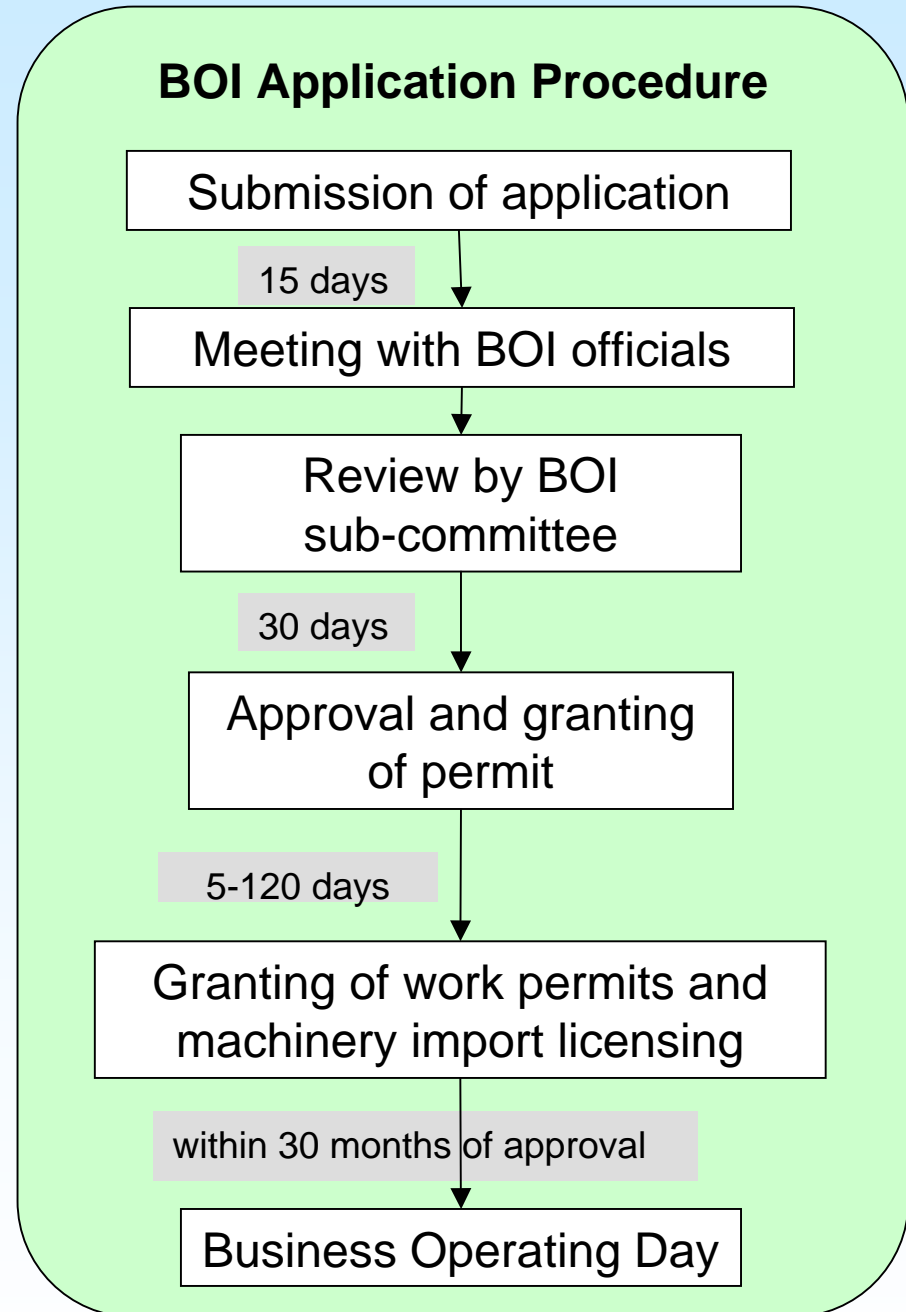
ShortCuts

<http://www.boi.go.th>



BOI Promotion

- Grant a wide range of fiscal and non-fiscal incentives
- Offer business-related services to investors & potential investors
- Focus on projects meeting national economic development goals



Future improvements

Government Policy

Country Policy on CDM
Institutional Framework
Approval Procedure & Criteria
Relevant Government Authorities

Laws & Regulations

Diversified requirements from
local government authorities

CDM Investor

Financial Institutions

Viewpoint on CDM Project
Concern on Risks & Uncertainty
Lack of Understanding
Unestablished carbon market or carbon fund



CDM in China

China Renewable Energy Industry
Association (CERIA)

Liu Yingchun

3 March, 2005

Outline

- I. CDM Policy
- II. CDM Approval Process
- III. Capacity Building Needs in China
- IV. Approved CDM Projects
 - I. Ongoing CDM Projects by CREIA

CDM Policy

- Priority areas: RE, EE, Methane
- Consistency with China's Law and Regulations
- Eligibility
- Revenue distribution

CDM Approval Process

- Submit required documents to NDRC
- Expert Review
- Submit to the National CDM Board
- Approve according to the conclusion by the Board
- Inform the project applicant

Capacity Building Needs in China

- Capacity Building activities in China:
 - a) China CDM Study
 - b) Capacity Building for CDM in China
 - c) Opportunities for CDM in Energy Sector
 - d) Canada-China Cooperation on Climate Change
 - e) Energy Environment Programme

Capacity Building Needs in China

- Capacity building for different stakeholders
 - a) Policy makers and government officials
 - b) Industries
 - c) Financial sector
 - d) Consultancy
- Capacity needs in different sectors and industries
- Capacity needs for Operational Entity

Approved CDM Projects

- Approved CDM projects:
 - a) Beijing Anding Landfill gas
 - b) Wind Power in Inner Mongolia

Ongoing CDM Projects by CREIA

- Wind power in Inner Mongolia
- Wind power in Taonan, Jilin
- Daliangzi hydro-power in Yunnan
- Waste heat power of Taishan Cement Company in Shangdong
- Daoli district heating project in Harbin
- Yanquan coal bed methane power in Shanxi
- Landfill gas recovery and utilization in Nanjing
- Jingcheng coal bed methane project in Shanxi
- Yutan district heating project in Changchun

Contacting Information

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Thank you!

Wind Power Project in Mondul Kiri Province, Cambodia

Norio Ikejima
Marubeni Corporation
(Tokyo, Japan)
ikejima@tec.marubeni.co.jp

1. Renewable Energy Project Using Wind and Solar Power in Mondul kiri Province, Cambodia

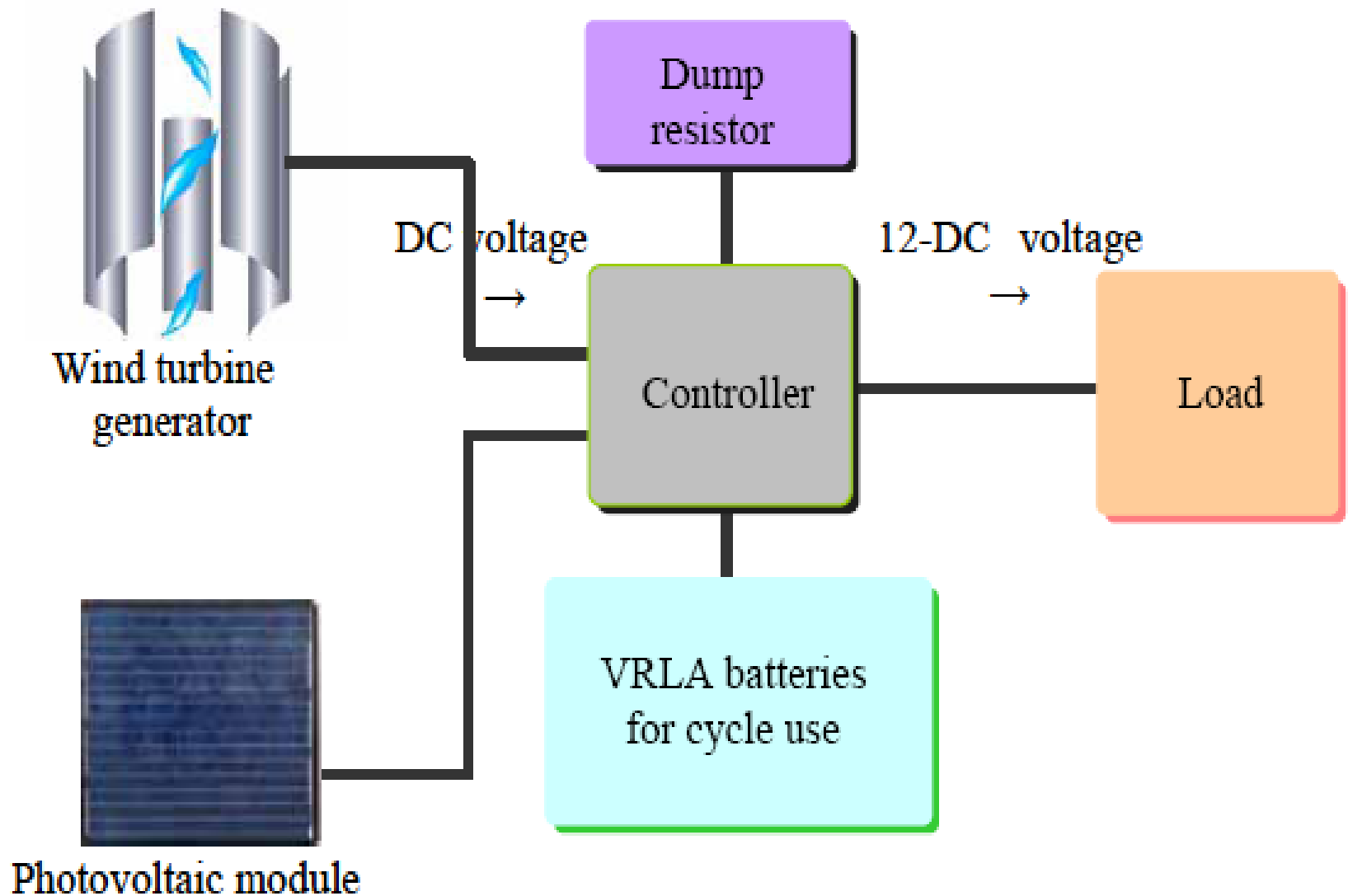


- ❖ Location: Highland in Mondul kiri province near Saen Monourom. 390 km, East of Phnom Penh.
- ❖ Population: approximately 40,000
- ❖ Project period: 30 years
- ❖ Equipment: 115 small-size hybrid systems of wind and solar power generation with a total of 1.4MW for installed capacity. These hybrid power generators are implemented in 21 communes and 99 villages.

2. CO₂ Emission Reduction Estimates

Item		Term / Parameter	Value
Annual Output of the Project	A	Number of hybrid systems	115
	B	Installed capacity per hybrid systems	Approx. 10-20 kW
	C	Total installed capacity of hybrid systems	1.4 MW
	D	Annual average load factor of hybrid systems	20 %
	E	Total annual operating hours	8,760 hrs
	F	Annual power generation of the Project [C x D x E]	2,452,800 kWh
Annual Energy Baseline	G	Default value for distribution losses	20 %
	H	Energy baseline [F/(1-G)]	3,066,00 kWh
Annual CO ₂ Emission Estimates by the Project	I	Emission coefficient for diesel generation units	0.9 kg-CO ₂ /kWh
	J	Annual CO ₂ emission reductions [H x I]	2,759 t-CO ₂ /yr
	K	Total CO ₂ emission reductions during the crediting period (21yrs: 2006-2026)	57,939 t-CO ₂
	L	Total CO ₂ emission reductions during the Project (30yrs: 2006-2035)	82,770 t-CO ₂

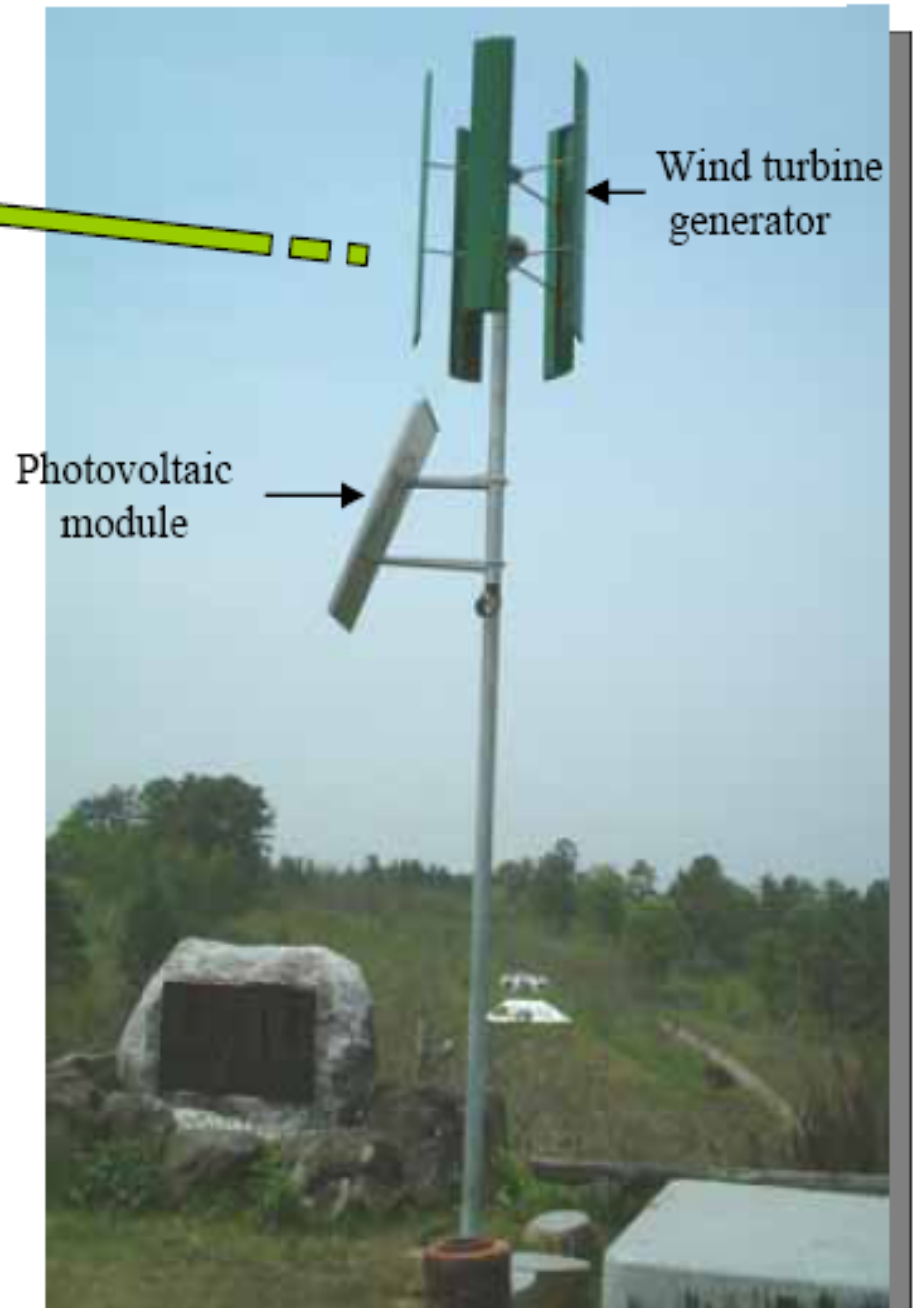
● Basic system configuration



● Cygnus Mill



● Example of installation



3. Requirements of Small Scale CDM Project

A. Project Description

B. Project Baseline

C. Duration of the Project / Crediting Period

D. Monitoring Plan

E. Calculation of GHG Emissions

F. Environmental Impacts

G. Comments by Local Stakeholder

4. Advantages of Our Project

Renewable Energy Project Using Wind and Solar Power



CAMBODIA

- ❖ Improvement of Living Standards

- ❖ Preservation of Local Environment



JAPAN

- ❖ Carbon Credit

- ❖ Regional Development

- ❖ Technical Transfer

សាលាបឋមសិក្សា ត្បូងឃ្មុំ





តារាងអក្សរខ្មែរ

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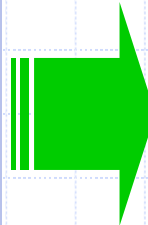
5. Situation of Project's Progress and Future Schedule

Jul 31 to Aug 7, 2004 (1st Mission)

- Selection of the candidate site for sample unit
- Interviews with the local stakeholders

Nov 10 to 16, 2004 (2nd Mission)

- The meeting with the relevant Cambodia Governmental agencies
- Interviews with the stakeholders
- Setting up of the sample unit



At the End of March, 2005

- Submission of F/S report to Japanese Ministry of the Environment

2006

- Submission of PDD to U.N. CDM Executive Board

Outlines of Bantergebang LFG Collection & Energy Recovery CDM Project

ICS-CDM Program Tokyo Meeting

2005.3.3

KAJIMA CORPORATION

Topics to be covered

- **Project Overview**
- **Technology to be used**
- **Baseline Scenario Setting**
- **Estimation of LFG Emission**
- **Evaluation of Economic Feasibility**
- **Environmental Impact Assessment**
- **Stakeholder Consultation Process**
- **Project Schedule**
- **Site Investigation**

Project Overview

Organization of FS Team

Kajima Corporation

Architects, Engineers, Contractors & Developers

Annual sales : approx. US\$ 15 billion (consolidated)

Total assets : approx. US\$ 18 billion

Employees : 11,000

Yachiyo Engineering Co., Ltd.

Consulting Engineers & Architects

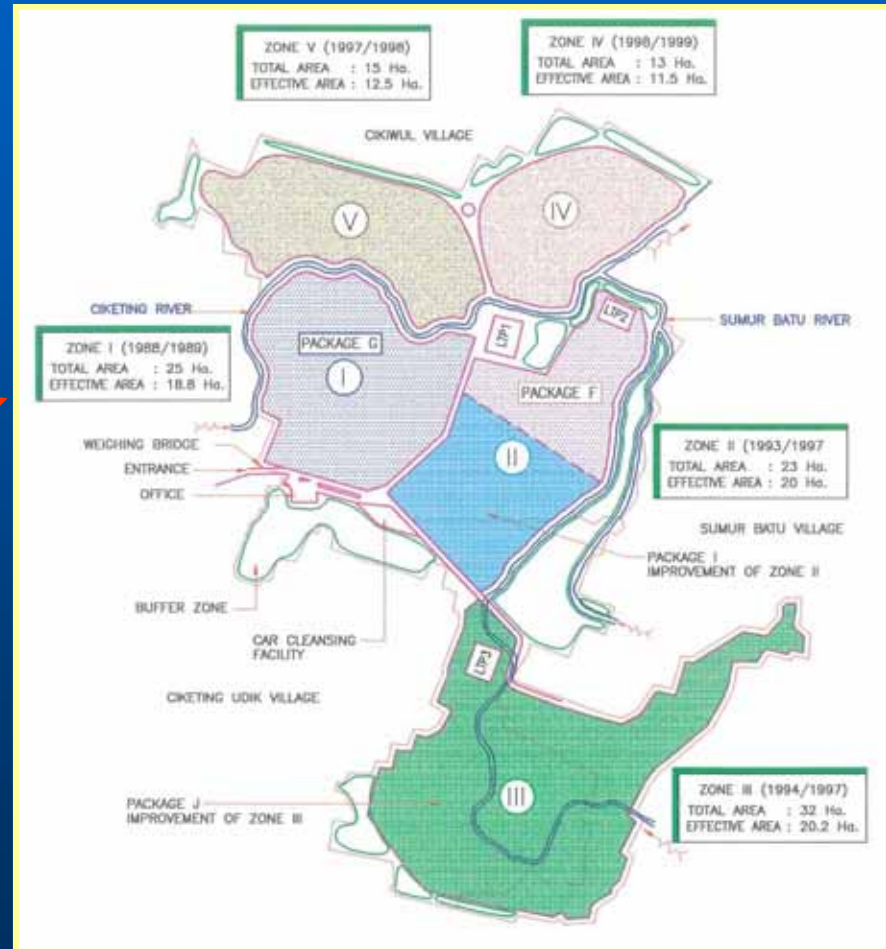
Annual sales : approx. US\$ 158 million

Total assets : approx. US\$ 4.4 million

Employees : 850

Site Location of Banter Gebang LF

Banter Gebang LFG Site is located approximately 40km northeast of downtown Jakarta.

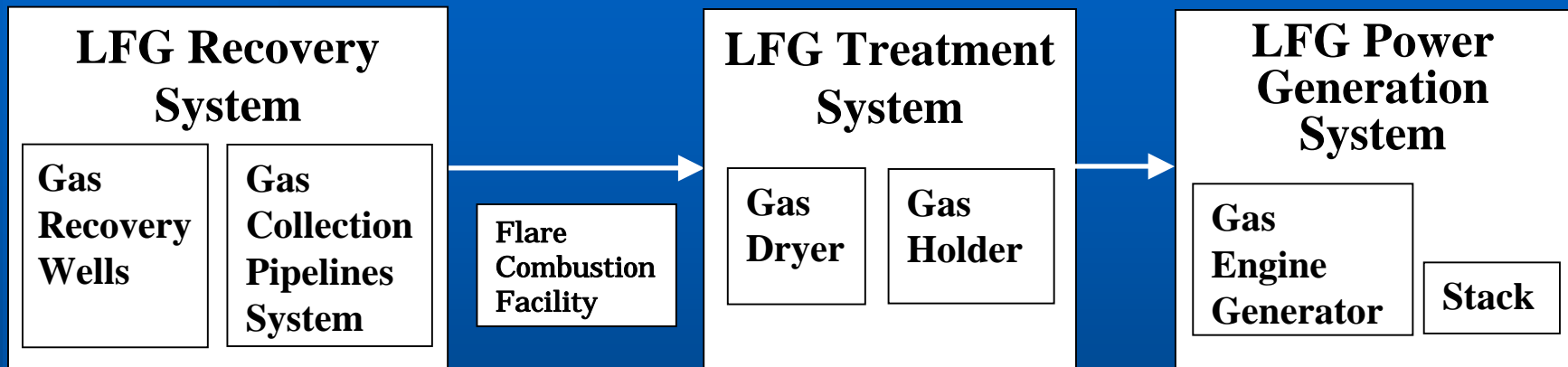


What our project will do ?

- **Collecting bio-gas emitted from landfill by installing vertical & horizontal pipelines at landfill**
- **Generating electricity using the collected bio-gas**

Technology to be used

LFG to Electricity System Flow



LFG Recovery System

- Landfill area will be covered with soil of thickness 0.5m
- LFG is collected through gas recovery wells and pipelines

Treatment System

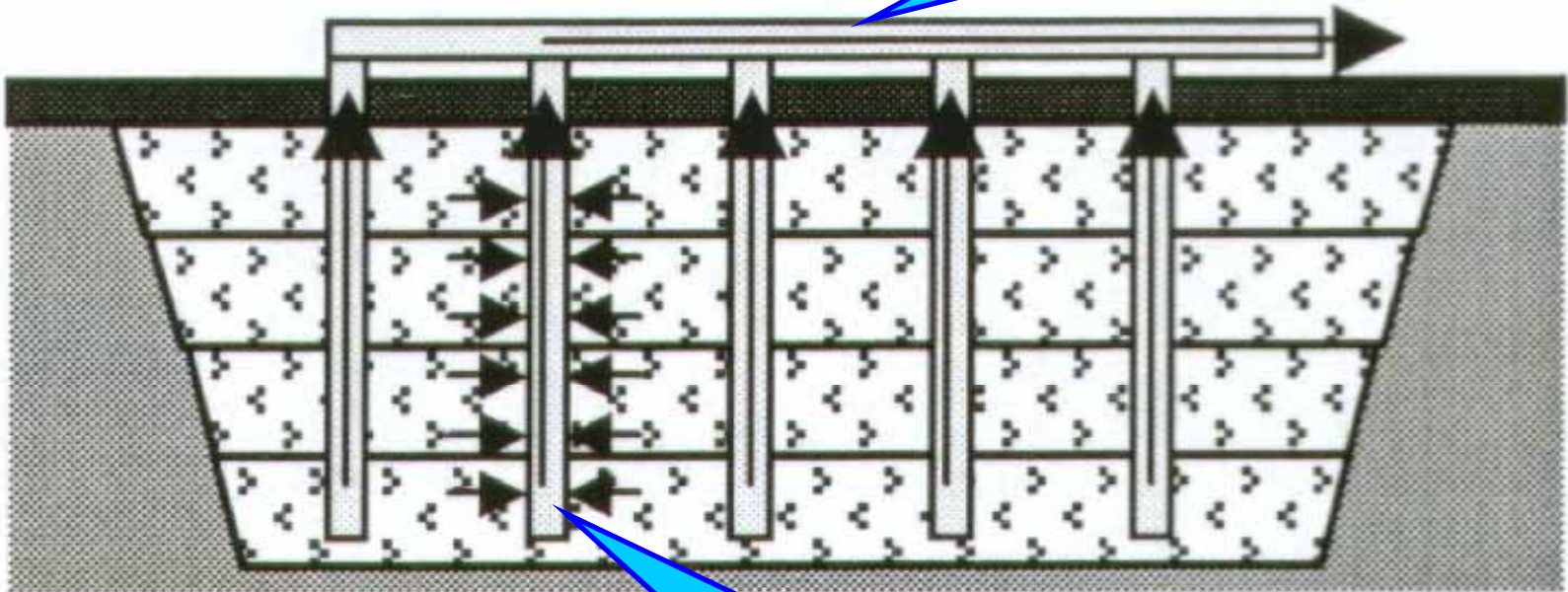
- Gas dryer reduces moisture content of the gas

Power Generation System

- Gas engine generators combust the gas as fuel to generate electricity

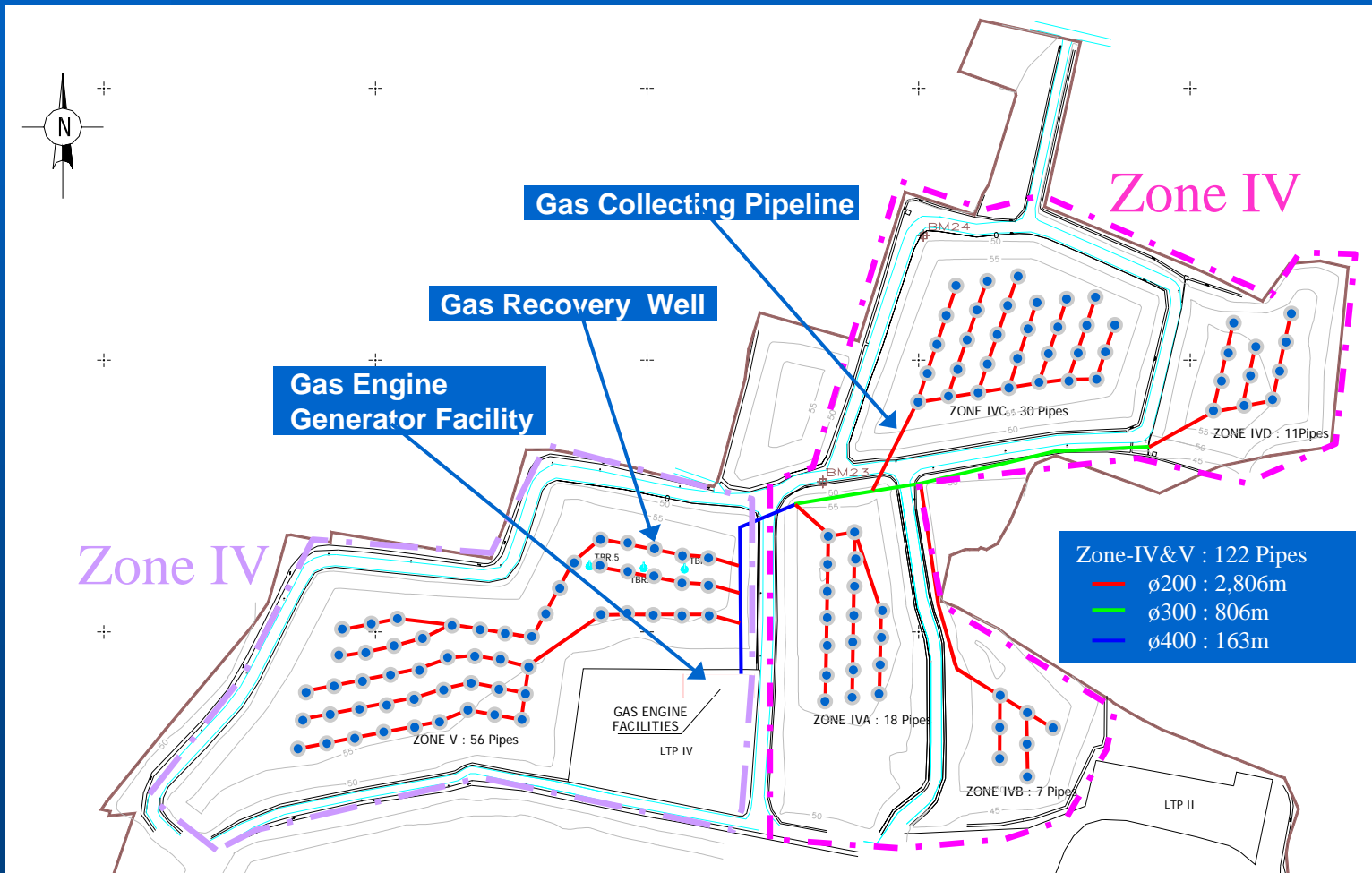
Gas Collection System

Gas Collecting Pipeline



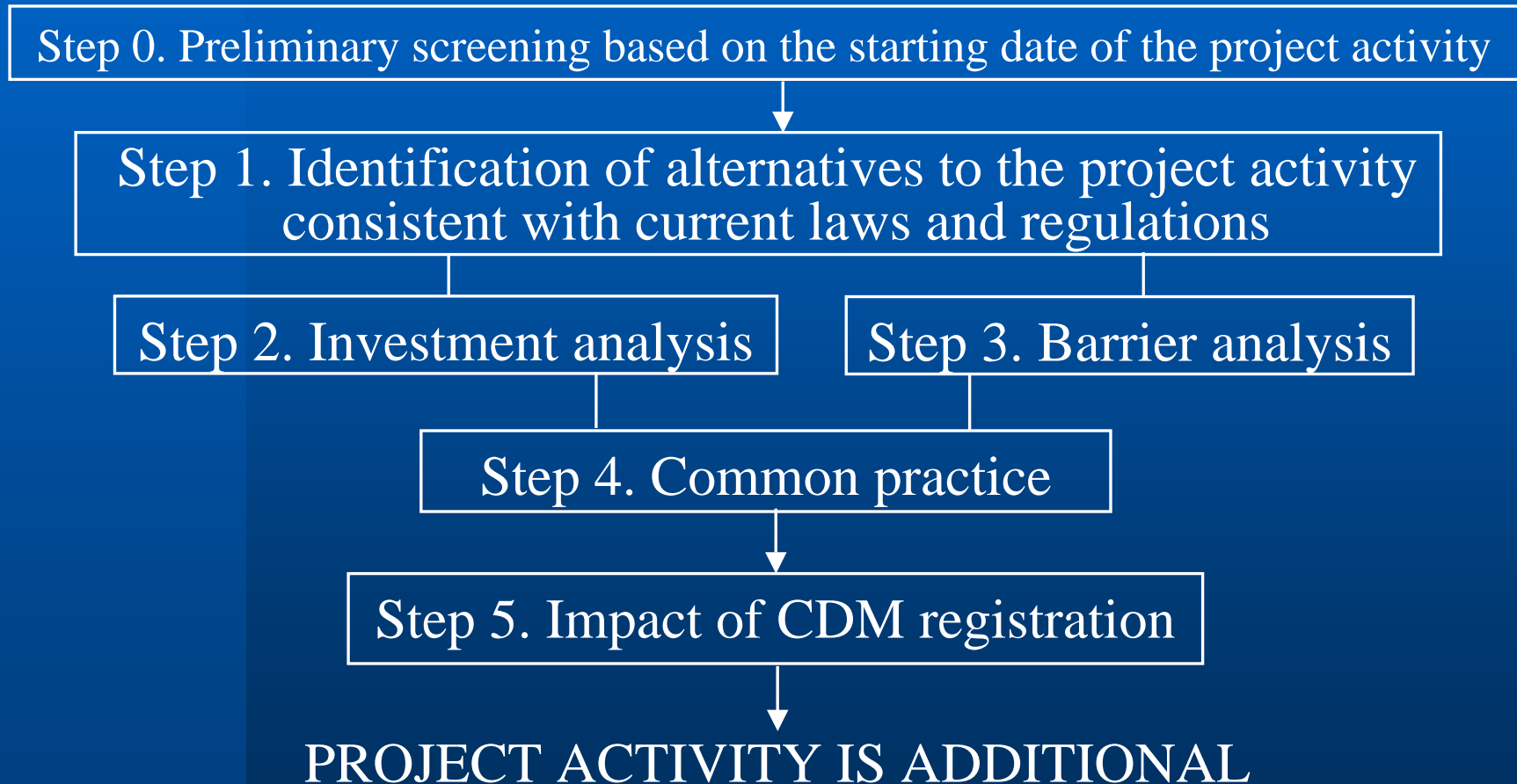
Gas Recovery Well

General Arrangement of Production Well and Collecting Pipe System



Baseline Scenario Setting

Flowchart of Additionality Scheme



Step 1. Identification of Alternatives

Sub-step 1a. Define alternatives to the project activity

- Alternative 1: Generating electricity by landfill gas (Project Scenario)
 - Alternative 2: Soil covering with flaring captured gas
 - Alternative 3: Soil covering with installing shallow vertical pipes (Treatment for Zone IV and Zone V of Bantergebang Site)
- Continuation of the Current Situation (Baseline Scenario)

Sub-step 1b. Enforcement of applicable laws and regulations:

There are no official enforcements or guidelines regulating biogas .

Step2. Investment Analysis

Sub-step 2b – Option III. Apply benchmark analysis

Evaluating economic feasibility of Alternative 1 by IRR.

Benchmark:

Interest rate of Indonesian Government Bond : 8.3-8.4%

- **Alternative 1: Generating electricity**

REVENUE: sale of electricity

IRR: -12% financially unattractive course of action

thus cannot be a Baseline Scenario

assuming;

Electricity sale price: 0.04 US\$/kWh

Inflation Rate: 5.78%

Corporate Tax: 30%

- **Alternative 2: Flaring captured gas (Negative)**

Not Applicable

- **Alternative 3: Soil covering**

Not Applicable

Step3. Barrier Analysis

- **No Regulations or Guidelines Prohibiting any Alternatives we proposed**
- **There are no Enforcement Regulating Safety Closure of Landfill Sites**
- **However, Flaring System is Undesirable for Energy Saving and Sustainable Development**

Do not Prevent Alternative1 and Alternative3
Slightly Prevent Alternative2

Step4. Common Practice Analysis

Current Status Regarding Closure Treatment

- Almost all landfill sites in Indonesia have no special treatment for closing sites.
- There are no enforcement regulating safety closure of landfill sites.
- Zone IV and Zone V of the Banter Gebang landfill site are soil covered in Indonesia. Other ordinal landfill sites have no special treatment.

Continuation of Current Situation Baseline Scenario

- Soil cover is commonly used for safety closure of landfill sites in many countries.

Step5. Impact of CDM Registration

- **A large number of Open Dumping Landfill Sites in Indonesia such as Banter Gebang Site.**
- **Appropriate Closure Treatment and Valid Use of collected Biogas from landfill sites will Contribute to not only Preventing Global Warming but also Improving Local Environment.**
- **Introduction of LFG Collection & Energy Recovery System will contribute to Technological Sustainability as well as Environmental Sustainability determined as Indonesian Environmental Policy.**

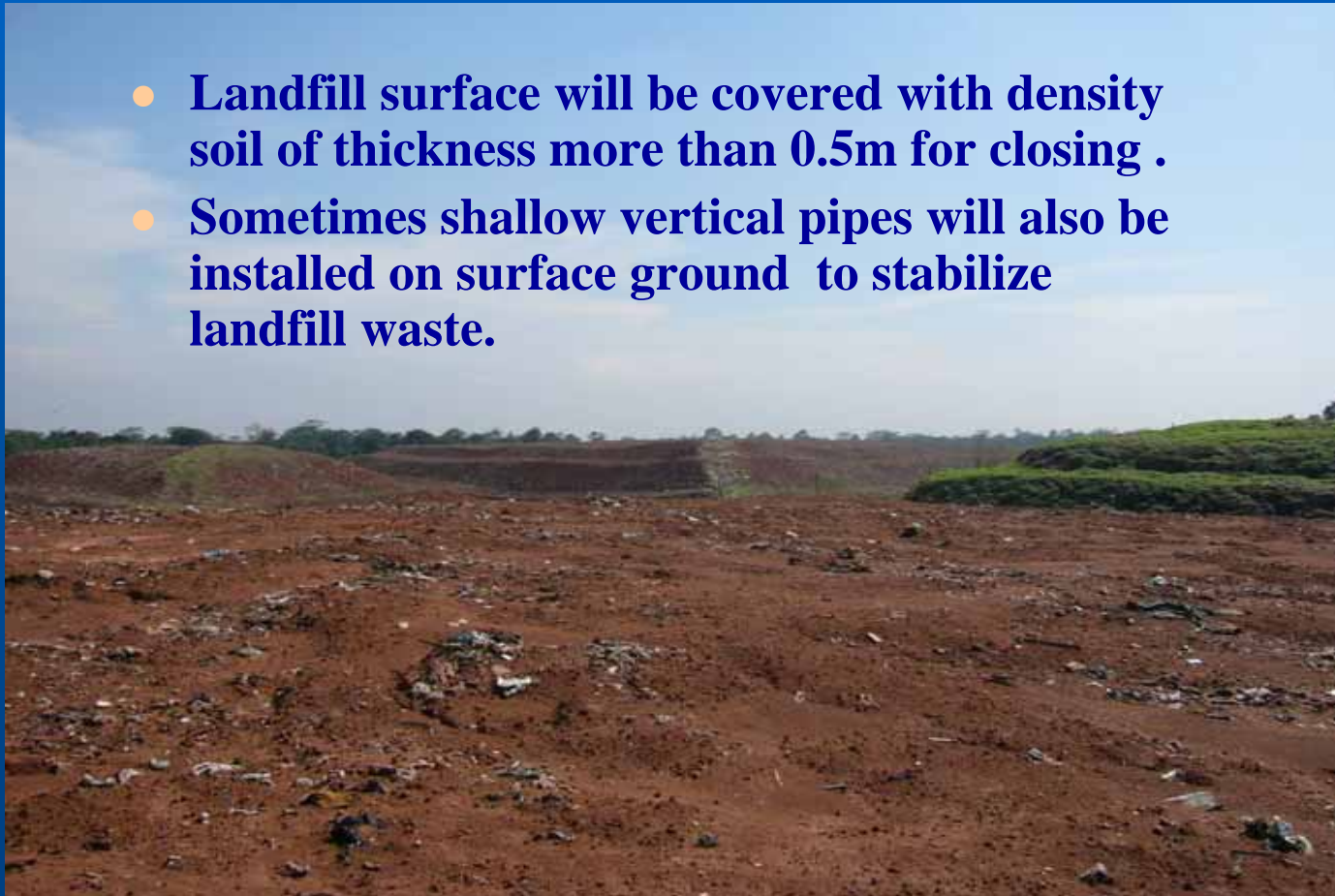
Baseline Scenario

Soil Covering with Shallow Vertical Pipes

- A landfill is closed with soil cover and shallow vertical pipes are installed for stabilizing, in other word, enhancing aerobic reaction. Emitted landfill gas is not captured nor flared.
- This treatment is applied only for Zone IV and V of the Banter Gebang site. This treatment is sometimes used for safety closure of landfill sites in other countries.

Soil Cover and Shallow Pipes as Surface Treatment for Closure

- Landfill surface will be covered with density soil of thickness more than 0.5m for closing .
- Sometimes shallow vertical pipes will also be installed on surface ground to stabilize landfill waste.



Estimation of LFG Emission

Estimation Model

We applied First Order Decay Model (F.O.D) specified in the IPCC Guidelines for calculating LFG emissions.

First Order Decay Model (IPCC Guidelines Vol.3-Ch.6)

LFG volume emitted in the year j from the solid waste deposited in the year i (V_j) is calculated by the equation bellow.

$$V_j = M_i \times G_e \times k \times e^{-k(j-i)} \text{ ---(a)}$$

M_i : amount of solid waste deposited in the year i (ton)

k : decay rate (1/year)

$$G_e = 1.868 \times C_0 \times (0.014 \times d + 0.28) \text{ ---(b)}$$

G_e : gas generation potential

C_0 : amount of total organic carbon in waste

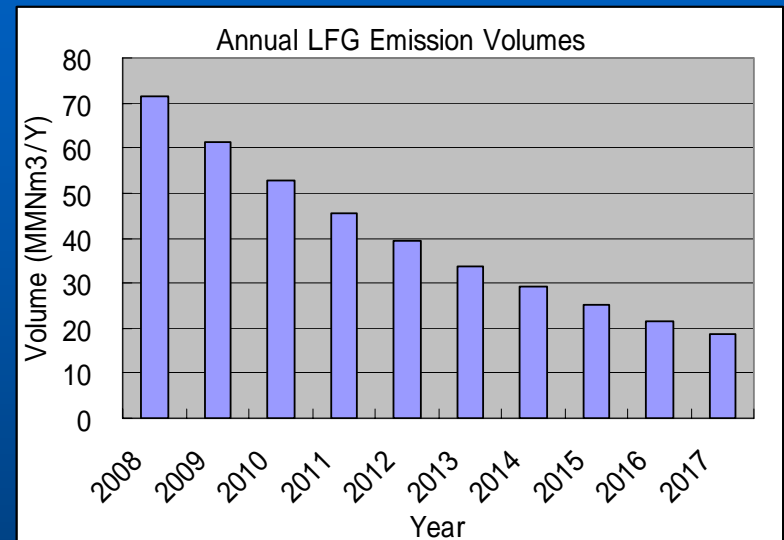
d : temperature in landfill

LFG Emission Volume Estimation

Parameter Settings for F.O.D Model

Parameters for Methane Gas Estimation

1 Total Organic Carbon in Waste (TOCo)	80.00 kg/t
2 Decay Rate (k value)	0.15 /yr
3 Methane Concentration in Landfill Gas (CH4)	50%
4 Methane Gas Potential (Ge)	146.45 m3/t
5 LFG being collected	39,881 m3/day
Average LFG Emission from a Borehole	0.0038 m3/s
Borehole Diameter	0.07 m
Average Velocity	1.00 m/s
Number of Boreholes	120
Per unit wait of waste	0.323 t/m3
Temperature	50

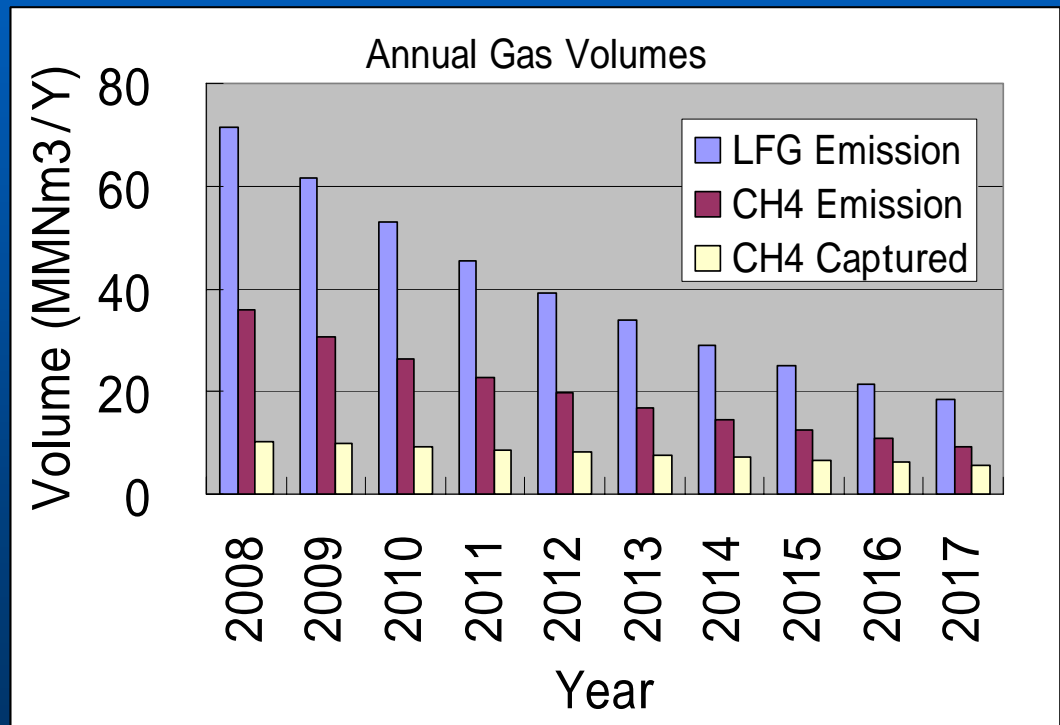


Year	deposit t/year	gas emission volume (m3/day)									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
2004	210,001	7,078	6,092	5,244	4,513	3,884	3,343	2,878	2,477	2,132	1,835
2003	458,164	13,291	11,440	9,846	8,475	7,294	6,278	5,404	4,651	4,003	3,446
2002	0	0	0	0	0	0	0	0	0	0	0
2001	2,240,005	48,140	41,434	35,663	30,695	26,420	22,740	19,572	16,846	14,499	12,480
2000	2,127,924	39,361	33,878	29,159	25,098	21,602	18,593	16,003	13,774	11,855	10,204
1999	2,122,110	33,786	29,080	25,029	21,543	18,542	15,959	13,736	11,823	10,176	8,759
1998	2,122,110	29,080	25,029	21,543	18,542	15,959	13,736	11,823	10,176	8,759	7,539
1997	2,122,110	25,029	21,543	18,542	15,959	13,736	11,823	10,176	8,759	7,539	6,489
total	11,402,424	195,765	168,497	145,026	124,825	107,438	92,473	79,592	68,506	58,963	50,750
Annual m3		71,454,298	61,501,284	52,934,646	45,561,272	39,214,950	33,752,620	29,051,150	25,004,556	21,521,621	18,523,831

Captured Methane Volume Estimation

Methane Concentration in Landfill Gas : 50%

Annual LFG Emission Volume (m3/Year)	Annual CH4 Emission Volume (m3/Year)	Annual CH4 Captured Volume (m3/Year)
71,454,298	35,727,149	10,235,886
61,501,284	30,750,642	9,724,092
52,934,646	26,467,323	9,212,297
45,561,272	22,780,636	8,700,503
39,214,950	19,607,475	8,188,709
33,752,620	16,876,310	7,676,914
29,051,150	14,525,575	7,165,120
25,004,556	12,502,278	6,653,326
21,521,621	10,760,810	6,141,532
18,523,831	9,261,915	5,629,737



Evaluation of Economic Feasibility

Generated Electricity Estimation

Parameters for Electricity Computation

- 1 CO₂ Emission Volume 0.48 kg/kWh
- 2 Electricity Price 0.04 /kwh
- 3 Annual Power Generation Availability 90%

Parameters for Electricity Generation

- 1 Caloric Value of Methane 8,600 kcal/m³
- 2 Conversion from Calorie to Joule 4.1861 J/cal
- 3 Power Generation Efficiency 25%

CO ₂ emission vol./kg	=	0.48						
Electricity Price (US\$/kwh)	=	0.04						
% of electricity to produce electricity for operation	=	90%						
	=	5%						
Year	mwh/day	Electricity Generated kwh/year	CO ₂ to be replaced in ton	Fixed CER	Market CER	Total	Income from Electricity Sales	
2008	70.1	23,030,762	10,590	15,090	70,420	85,511	875,169	
2009	66.6	21,879,224	10,060	14,336	66,899	81,235	831,411	
2010	63.1	20,727,686	9,531	13,581	63,378	76,960	787,652	
2011	59.6	19,576,148	9,001	12,827	59,857	72,684	743,894	
2012	56.1	18,424,610	8,472	12,072	56,336	68,408	700,135	
2013	52.6	17,273,072	7,942	11,318	52,815	64,133	656,377	
2014	49.1	16,121,534	7,413	10,563	49,294	59,857	612,618	
2015	45.6	14,969,996	6,883	9,809	45,773	55,582	568,860	
2016	42.1	13,818,457	6,354	9,054	42,252	51,306	525,101	
2017	38.6	12,666,919	5,824	8,300	38,731	47,031	481,343	

Assumptions for IRR Calculation

Project Costs

1 Initial Cost	US\$6,000,000
2 Loan Amount	US\$0
3 Operational & Maintenance Cost	US\$240,000
4 Inflation Rate *1	5.78%
5 Corporate Tax *2	30%
6 Salvage Value	US\$0
7 Annual Depreciation Rate	12.5%
8 Electricity for Operation	5%
9 CDM Administration Fee	5%

CER Price

1 Fixed Certified Emission Reduction	\$5.00
2 Market Certified Emission Reduction	\$10.00

Electricity Price

0.04 /kwh

Notes:

- 1 Depreciation is exempted from tax
- 2 Property tax is not considered
- 3 Income comes only from Sale of Electricity

*1 Data Source: Central Bureau of Statistics, "Statistical Year Book of Indonesia, 2003"

*2 Data Source: JETRO Indonesia

Corporate Tax Rates

- 10% for taxable income up to Rp. 50 million.
- 15% for taxable income between Rp. 50 and 100 million.
- 30% for taxable income in excess of Rp. 100 million.

Result of Sensitivity Analysis

Construction Cost	Project Scenario		
	7,000,000	6,000,000	5,000,000
Construction Cost (US\$)	7,000,000	6,000,000	5,000,000
Operating Cost(US\$)	240,000	240,000	240,000
Depreciation Rate	12.5%	12.5%	12.5%
TOC	80	80	80
Fix CER	30%	30%	30%
Market CER	70%	70%	70%
IRR	14%	18%	23%

TOC	Project Scenario		
	6,000,000	6,000,000	6,000,000
Construction Cost (US\$)	6,000,000	6,000,000	6,000,000
Operating Cost(US\$)	240,000	240,000	240,000
Depreciation Rate	12.5%	12.5%	12.5%
TOC	60	80	100
Fix CER	30%	30%	30%
Market CER	70%	70%	70%
IRR	9%	18%	25%

CER	Project Scenario			Baseline Scenario		
	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000
Construction Cost (US\$)	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000
Operating Cost(US\$)	240,000	240,000	240,000	240,000	240,000	240,000
Depreciation Rate	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
TOC	80	80	80	80	80	80
Fix CER	100%	70%	50%	30%	0%	0%
Market CER	0%	30%	50%	70%	100%	0%
IRR	9%	13%	16%	18%	21%	-12%

Assuming FixCER : US \$ 5 , MarketCER : US\$10
 Applying 8 -Year fixed amount depreciation

Environmental Impact Assessment

Environmental Impact Assessment

- **AMDAL : EIA of Indonesian Regulation**
EIA is required for
Electric Center of other type >10MW
- **EIA is Approved by Regional Government**
“The Committee of the City of Bekasi”
- **Special Scientific Reason shall be Assessed**
 - Air quality, Noise Impact
 - Except Vibration

Environmental Impact Assessment

The proposed LFG gas recovery project is

- **Not a development project, and**
- **Contributes to the Improvement of Environment**

Therefore;

- **EIA is not necessary, but**
- **UKL(managing plan) and**
- **UPL(monitors plan) are required**

Stakeholder Consultation Process

Stakeholder Consultation Process

Government Stakeholder

“Counter Part Team” consists of

- Ministry of Settlement & Regional Planning
- DKI Jakarta
- City of Bekasi
- State Ministry of Environment
 - Three Meeting with the Counterpart Team
 - They agree to Cooperate for this CDM project

Stakeholder Consultation Process

Local Stakeholder

- **PLN**

- We have presented our CDM project.
- Final agreement on electricity sale shall be settled.

- **The Company operating Banter Gebang Site**

- **Local other Companies (Participants)**

- **Residential Associations**

We expect the counterpart team could coordinate the Residential Associations and arrange meetings.

Project Schedule

Project Schedule Outline

- **July, 2004:** Beginning of Feasibility Study
- **March, 2005:** End of Feasibility Study
- **April, 2005:** PDD Validation Begins
- **Middle of 2006:** Conditional Approval from Indonesia Government
- **End of 2005:** Registration of Project with CDM EB
Application to CDM EB & Methodology Panel
- **End of 2006:** Establishment of SPC
- **2006 ~ 2007:** Design and Construction
- **Middle of 2008:** Commencement of Operation

Stepwise LFG Collecting Plan

● Current Situation of Each Zone

Zone	Area(ha)	Status	Remarks
ZoneI	25	Operating	<ul style="list-style-type: none"> • Compacting existing layers and dumping over them • Expand the landfill capacity up to approx. twice.
ZoneII	23	Will be Operating	
ZoneIII	31	Will be Operating	
ZoneIV	14	Final Closing	4 Monitoring wells for measurement
ZoneV	15	Temporary Closing	1 Monitoring well for measurement

● Overview of Stepwise Gas Collecting Plan

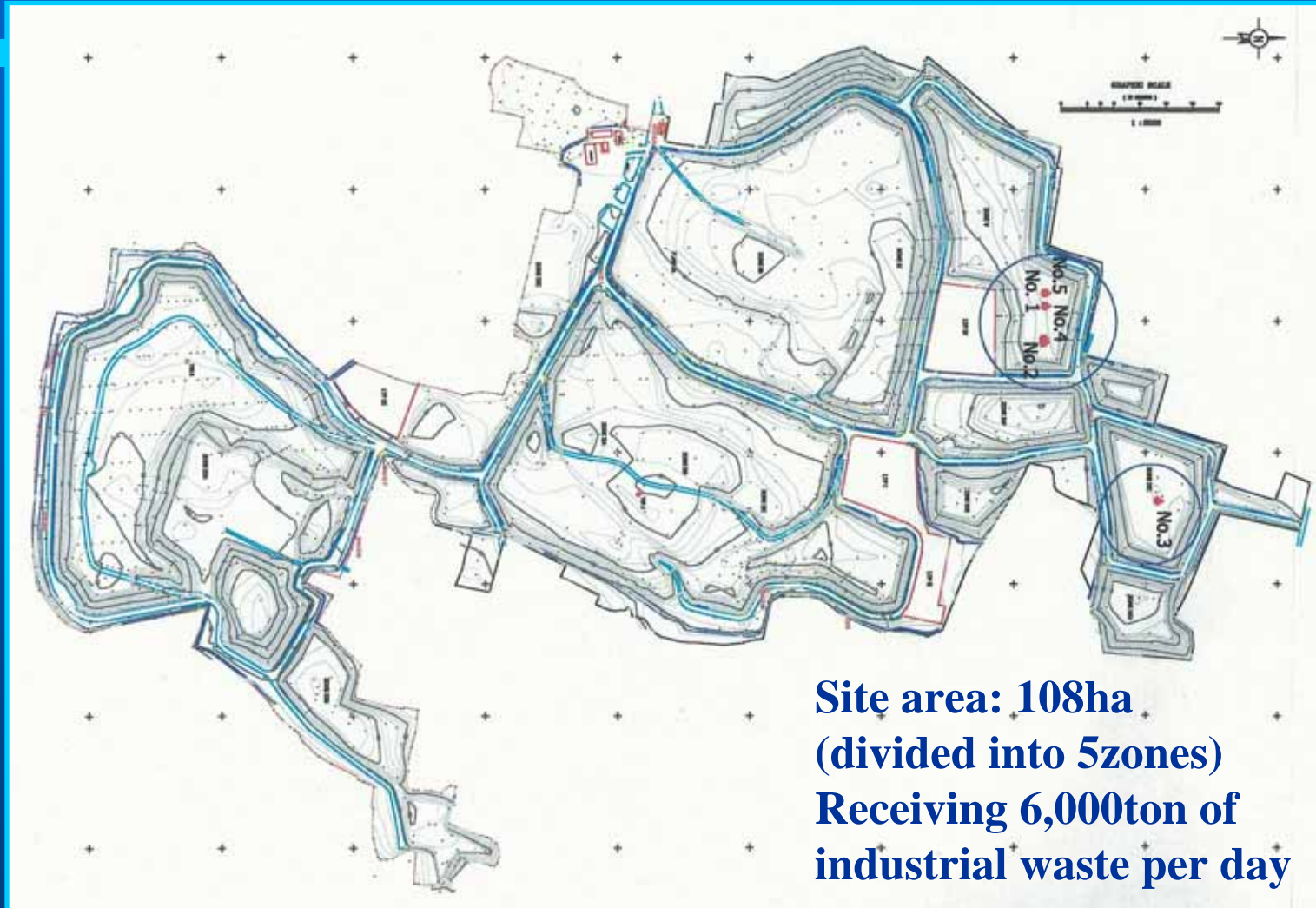
Zone	1st phase	2nd phase	3rd phase	4th tphase
ZoneIV&V	generating period	flaring period
ZoneI	construction period
ZoneII		
ZoneIII			

Site Investigation

What is Site Investigation for ?

- **Analysis of Deposited Waste Samples**
 - Chemical Composition of Waste
 - Composition of Bio-Gas
- **Use of Measured Data For**
 - Accurate Estimate of Bio-Gas Emission Volume
 - Design of Collection and Power Generation Facilities

Survey Map of the Project Site



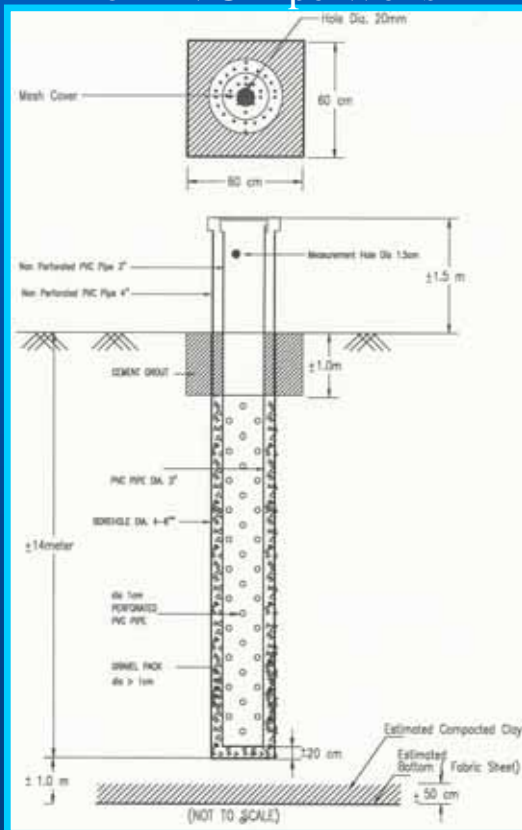
**Site area: 108ha
(divided into 5 zones)
Receiving 6,000ton of
industrial waste per day**

Installation of Gas Monitoring Wells



Pipe Well Section and Methane Content

Typical Installation of PVC Pipe Wells



Methane Contents in LFG gas

表-1 INDONESIA BATAR GEBANG LANDFILL SITE LFG GAS SURVEY

Date	Bore hole	time	Atmo temp (°C)	Well Temp (°C)	Baro Press (m b)	Rel Press (m b)	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	H ₂ S (ppm)	Remarks
19/10/04	02	09:45	31	42	1003	-033,74	55,9	40,3	00,3		
	02	10:30	32	39	1002	-035,64	55,3	40,8	00,3		
	04	09:50	32	45	1003	-033,74	55,9	40,5	00,1		
	04	10:25	32	45	1003	-036,28	55,4	40,6			
	01	10:00	32	43	1003	-038,51	54,9	41,1	00,2		
	01	10:20	32	44	1003	-038,28	54,1	41,0	00,2		
	05	10:05	31	44	1003	-039,72	55,6	40,8	00,3		
	05	10:15	35	43	1002	-034,81	55,0	35,1	05,9		
	03	10:50	35	39	1002	-034,16	09,1	09,8	13,5		
	03	11:05	36	39	1002	-036,54	10,6	12,1	11,9		

Approx 55%

RTDY: MR. HIRDIANI TANABE

To Promote CDM Project

Removing Risk of Uncertainty


- **Jurisdictions of Host Countries for CDM project**
- **DNA Structure of Host Countries**
- **Governmental Policy**
- **Identifications of Stakeholders**
- **Local Project Participants**
- **Institutional Systems (Laws and Regulations) for Foreign Investments**

Incentives for Project Participants

- **Subsidies and Tax Incentives for Renewable Energy Producers**
- **Off-take Guarantee of Renewable Energy**
- **Standardizing Purchase and Sales Agreement of Electricity**
- **Extending the limitation of Small Power Producers**
ex. less than 1MWh in Indonesia

END

Thank you for your kind attention.



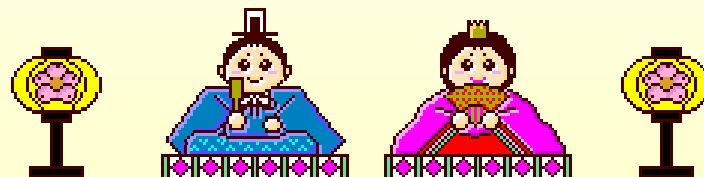
Lessons Learned from Feasibility Study on Biogas Power Project in Thailand



Mihoko Kawamura

TAKUMA

3 March, 2005





CONTENTS



1) Company Profile

2) Project Outline

3) Lessons Learned



1) Company Profile



Takuma
headquarters

Company Outline

TAKUMA

(as of March 31,2002)

Corporate name: TAKUMA CO., LTD

Established : June 10 ,1938

Capitalization : ¥ 13 billion

President : Tsuneo Nishida

Headquarters : Amagasaki City, Hyogo

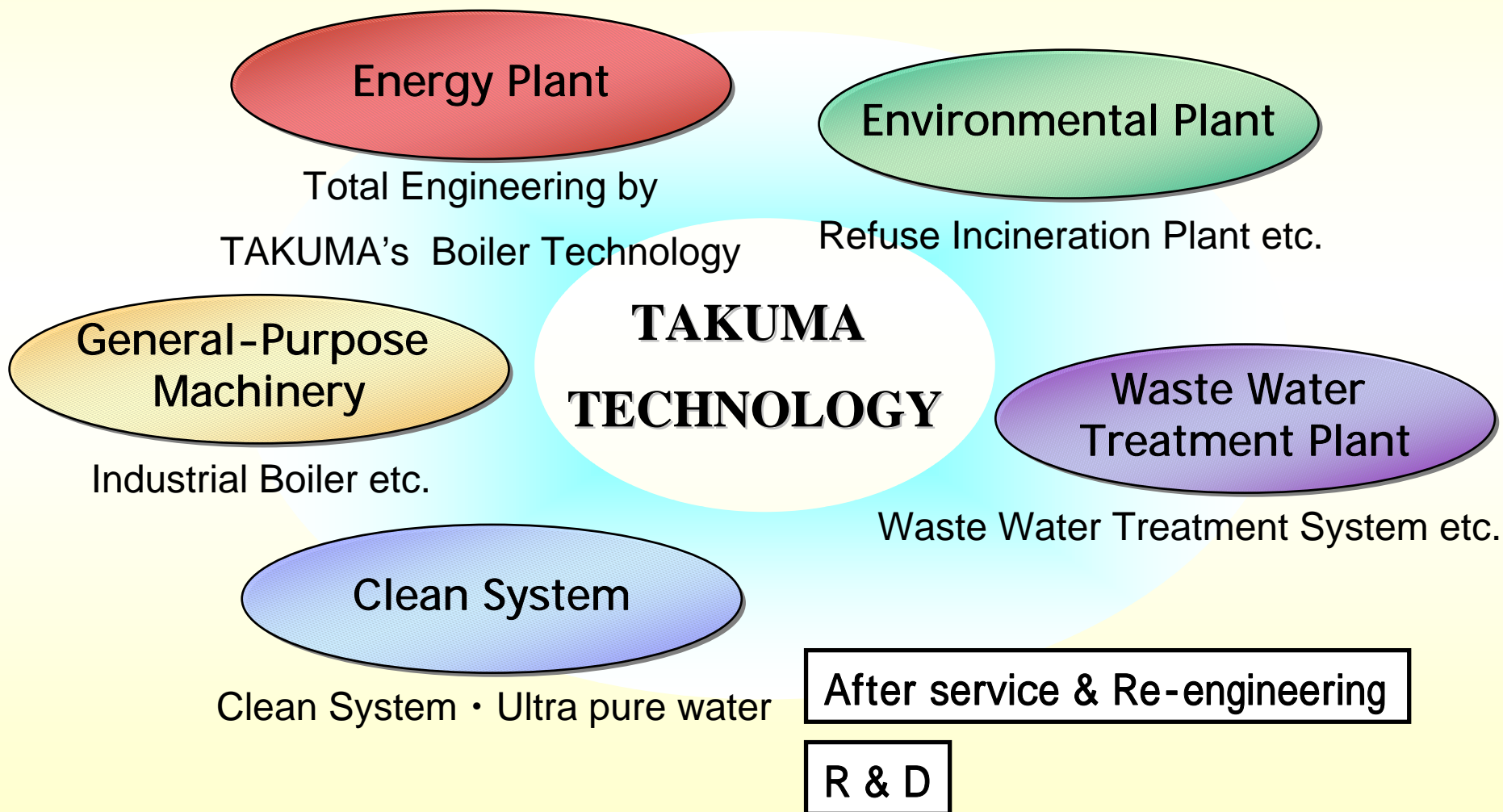
Branch : Tokyo, Nagoya, Kyushu, Hokkaido, Hokuriku,
Hiroshima, Sendai, Yokohama, Okinawa, Kumamoto,
Taipei(Taiwan), Bangkok (Thailand), Shanghai (China),
Beijing (China)

Factory : Harima (Hyogo), Kyoto (Acquired ISO14001
Certificate in 1999)

Employee : 822 (Acquired ISO9001 Certificate in 1997)



TAKUMA is “Total Engineering Plant Manufacturer”.



Energy Plant



A bagasse firing boiler in a sugar factory of Thailand (300t/h 2units).

Supply Record of Biomass Firing Boilers

TAKUMA



For Bagasse, Wood Waste, Palm waste, etc.

(As of 2000)

- Japan	168
- Indonesia	118
- Thailand	108
- Malaysia	36
- Philippine	17
- Korea	13
- Singapore	12
- Other countries	58

- Total	530 Units
---------	-----------



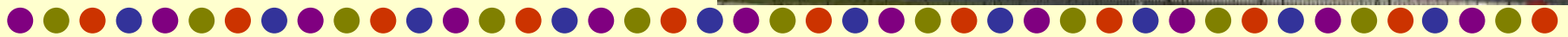
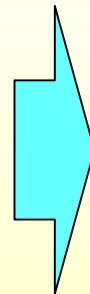
Waste Incineration Plants

TAKUMA



Customer :Kang-Shan, Taiwan
Completion : April,2001
Capacity : 1,350 t/d
(450t/24h × 3Lines)
Electric capacity:42,000kW
Steam condition : 40kg/cm²,400

Customer: Lut-Sao, Taiwan
Completion : December,2001
Capacity : 900 t/d
(450t/24h × 2Lines)
Electric capacity : 28,000kW
Steam condition : 40kg/cm²,400



2) Project Outline



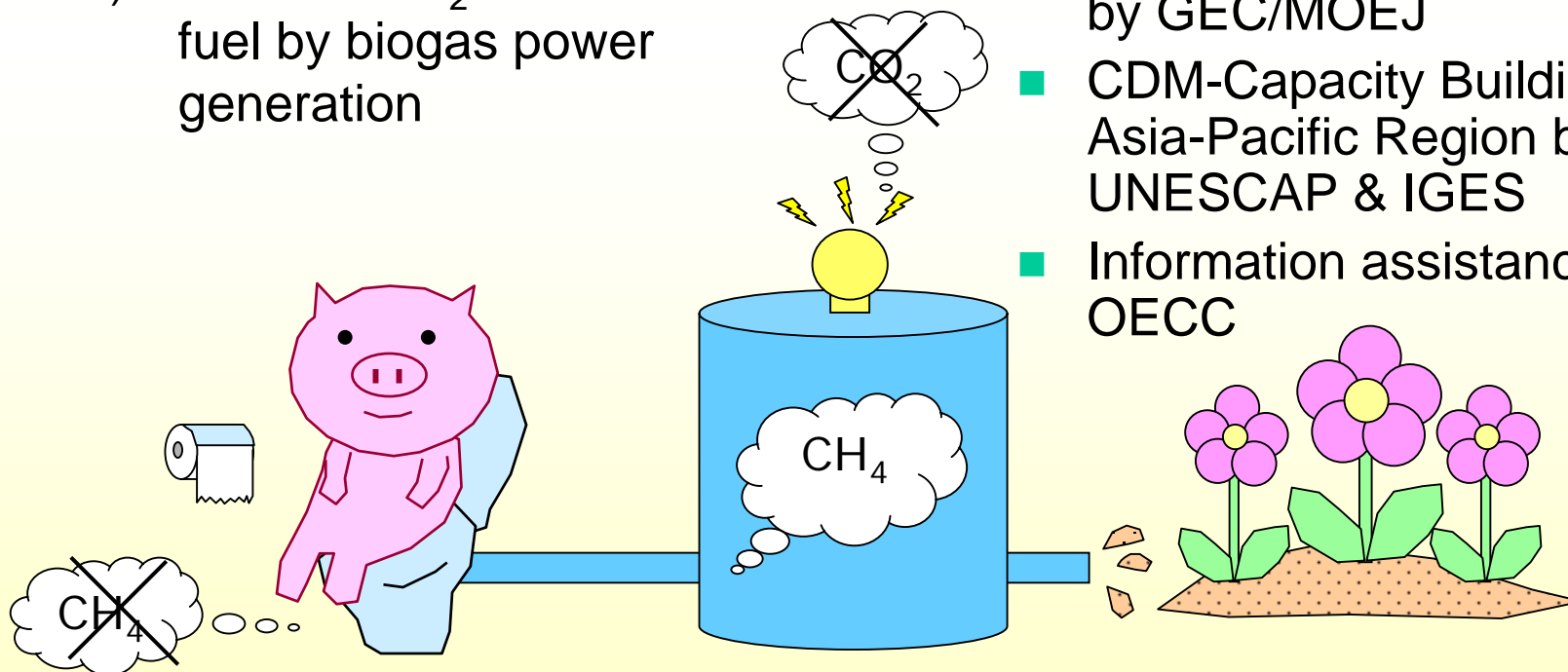
Pilot plant in Hiroshima for Swine manure treatment

Project Outline

Project Activity

Biogas (methane) recovery from swine manure (pig waste)

- 1) Avoid methane emission from wastewater treatment
- 2) Reduce CO₂ from Fossil fuel by biogas power generation



Project Site

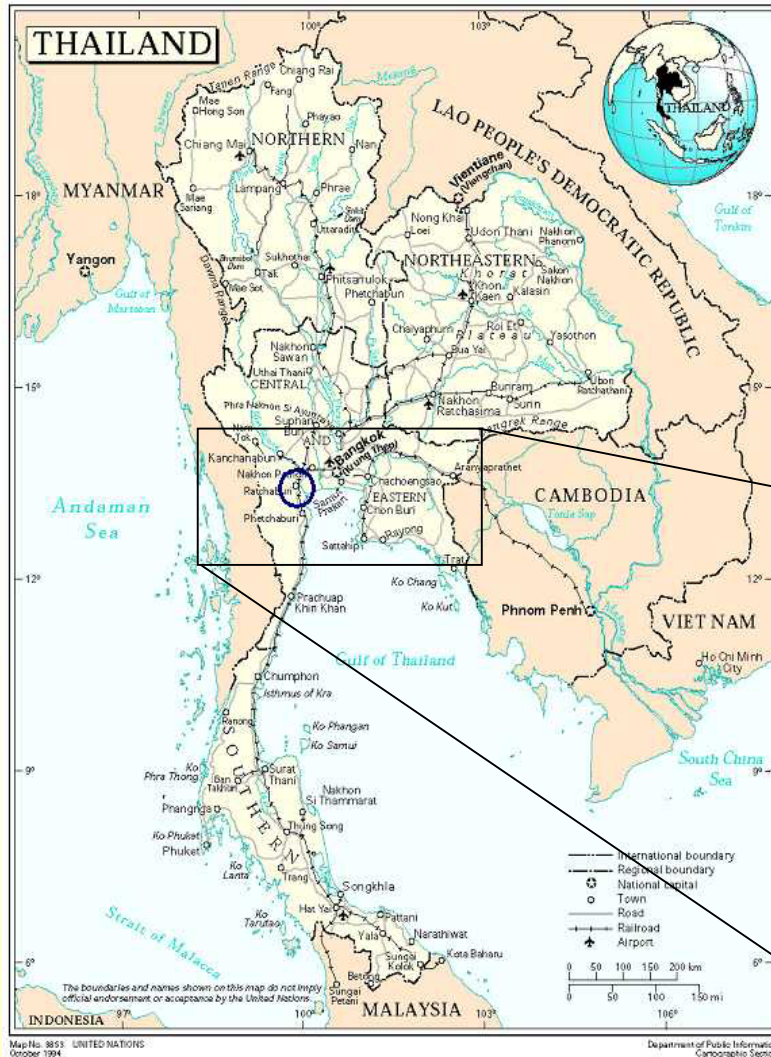
Pig farm in Ratchaburi, Thailand

Sponsor

- Feasibility Study funded by GEC/MOEU
- CDM-Capacity Building in Asia-Pacific Region by UNESCAP & IGES
- Information assistance by OECC

Project Site Geography & Climate

Ratchaburi province -- Center Thailand 100 km southwest of Bangkok



Climate of Ratchaburi

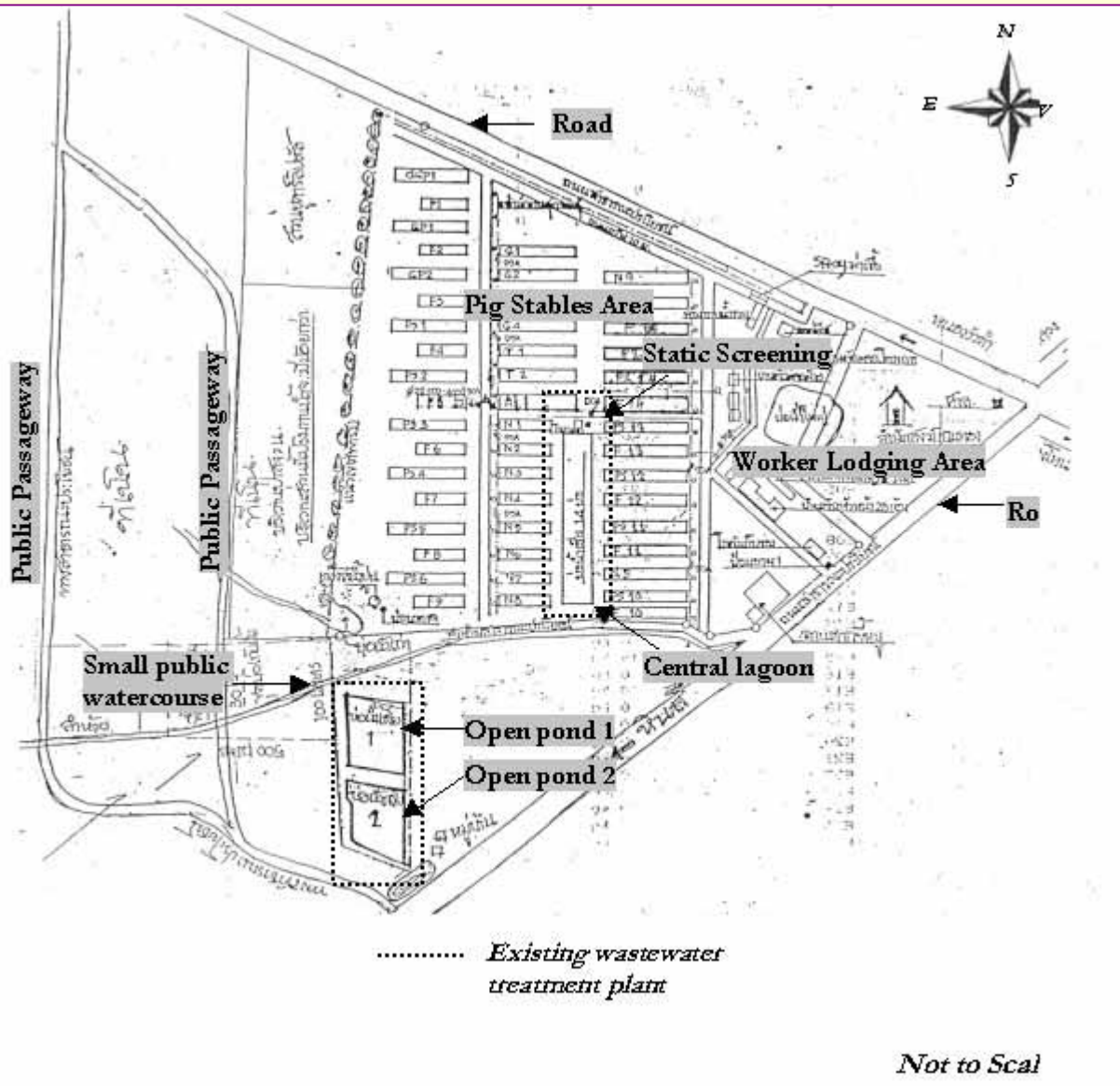
Average highest temperature 37
Average highest temperature 20
Annual rainfall 1,000 ~ 1,250mm

Pig business in Ratchaburi

20% of domestic production (No.1 in 2003)



Project Site Site map

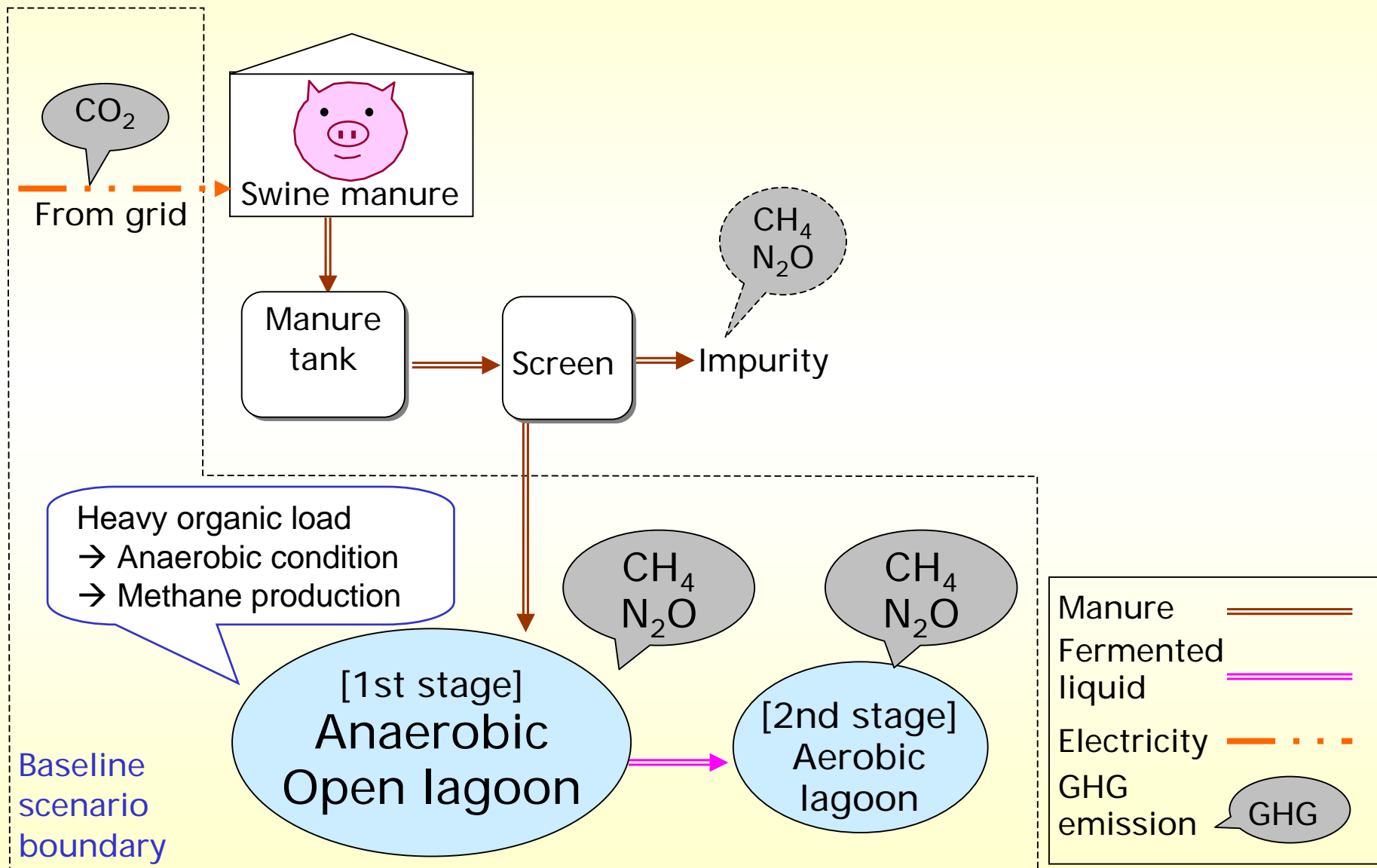


Project site:
Kanchana Hybrid Farm

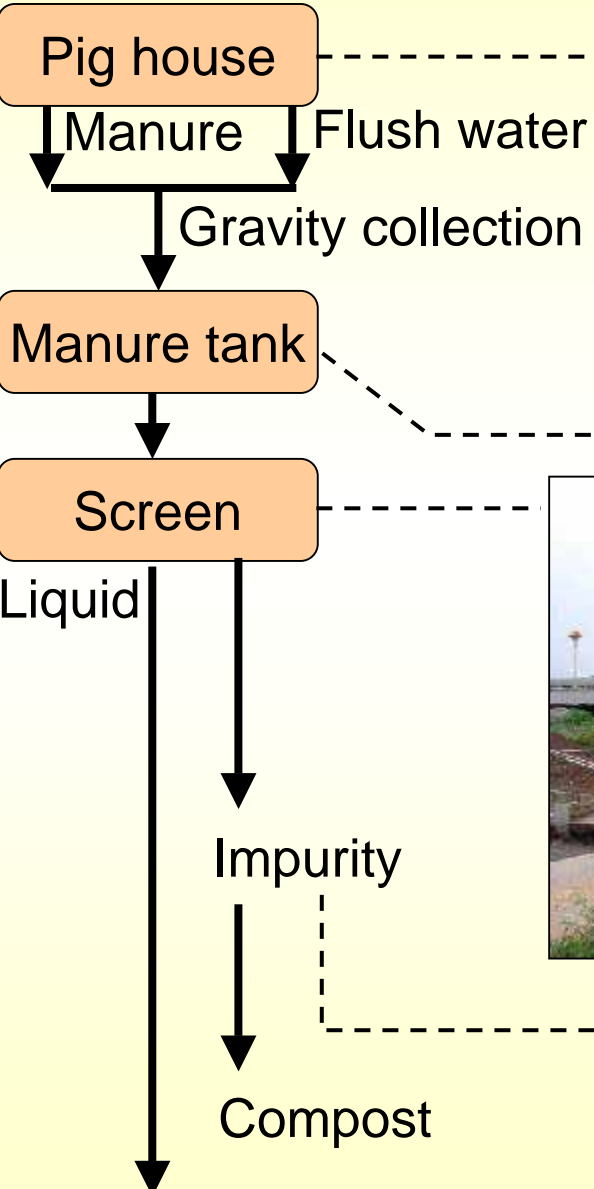
400,000m²
46,200 pigs
49 pig houses

181 employees
45km from the city

Baseline – Current Anaerobic Open Lagoon **TAKUMA**



Current Wastewater Treatment - 1 -



Current Wastewater Treatment -2-



Screened liquid at the upstream of lagoon

Bubbles of methane on the surface

Liquid

Anaerobic lagoon

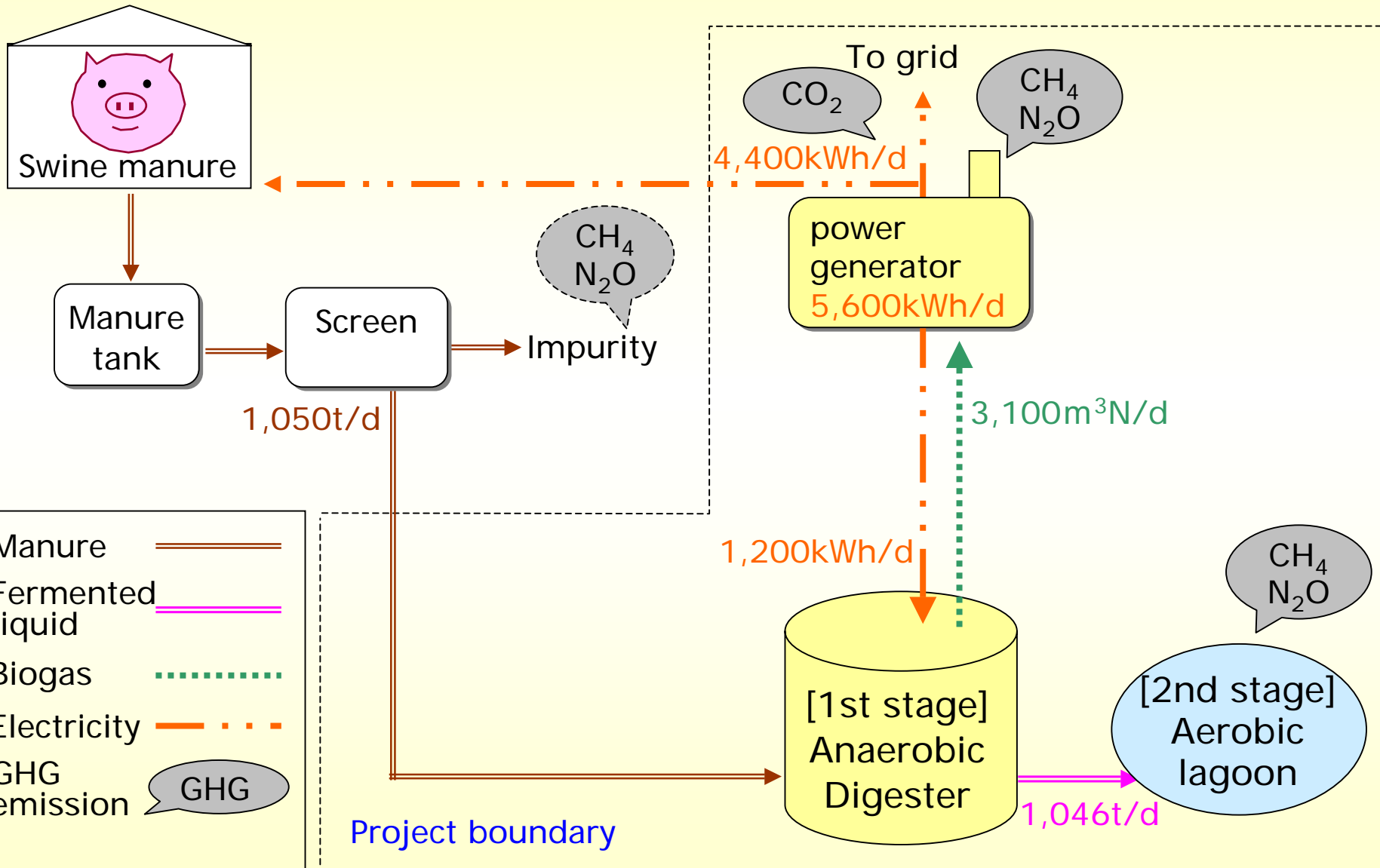
Aerobic lagoons

Effluent

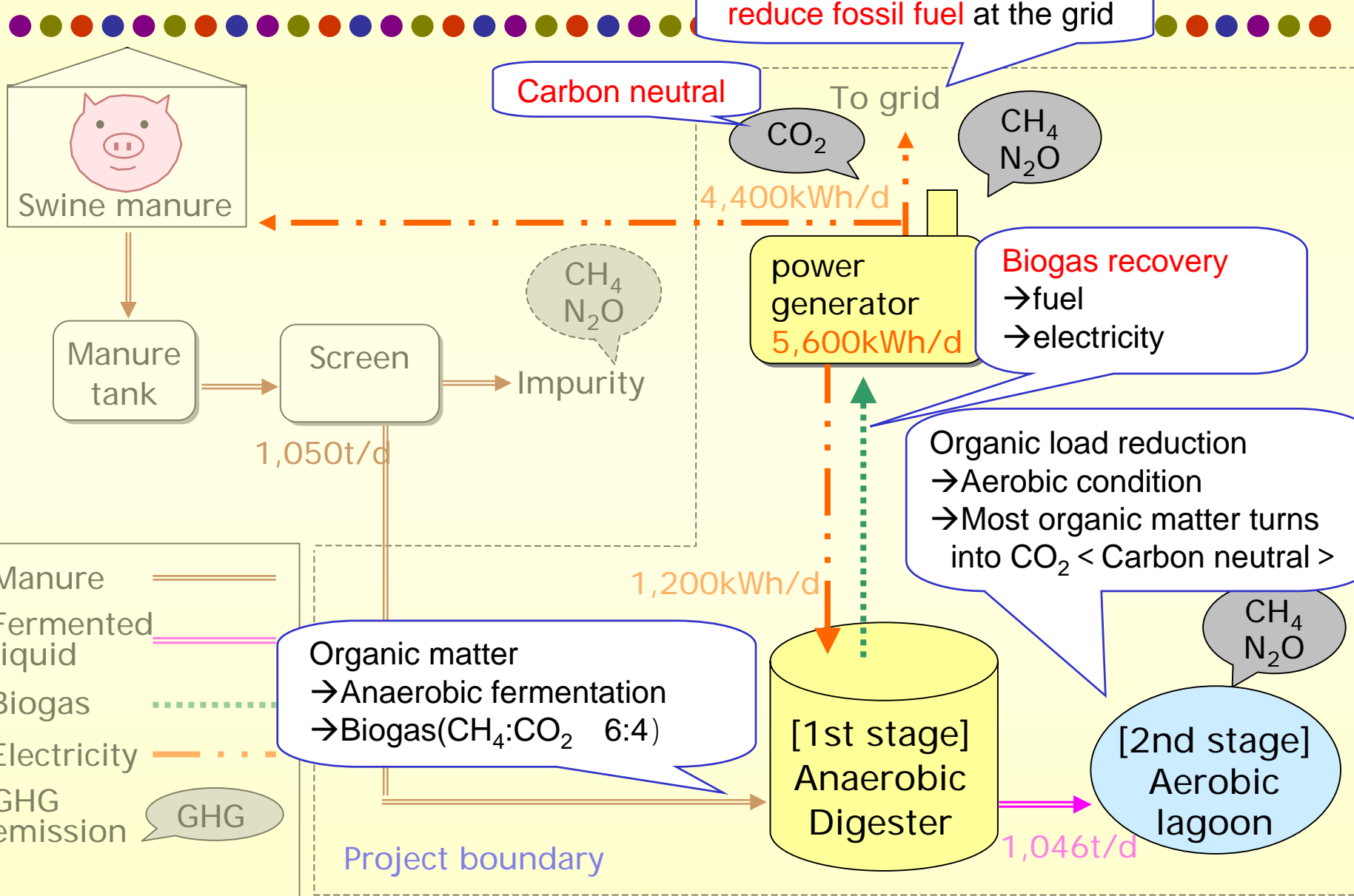
Anaerobic open lagoon followed by 2 aerobic lagoons.

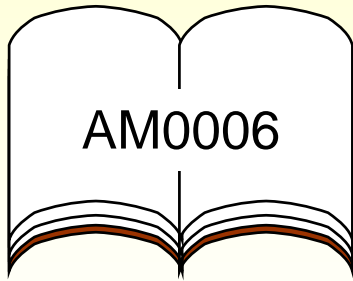


Project Activity -Anaerobic Digester -



Detail of Project Activity

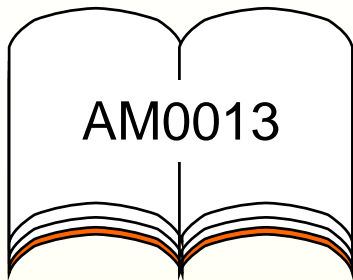




Animal Waste Management System

Calculation of CH₄ and N₂O emission by each treatment stage (anaerobic/ aerobic)

+



Electricity

Calculation of weighed average emission factor based on EGAT Power Development Plan

New Methodology



Emission Reduction



Emission reduction during the crediting period (10 years)

(t-CO₂)

Source	GHG	Baseline	Project	Emission reduction
1st stage	CH ₄	271,480	0	271,480
	N ₂ O	5,800	5,800	0
2nd stage	CH ₄	60	230	-170
	N ₂ O	87,060	116,080	-29,020
Biogas electricity	CO ₂	8,699	0	8,699
TOTAL		373,099	122,110	250,989

25,000 t-CO₂/y



3) Lessons Learned



Wat Pho (Temple of reclining Buddha)



English barrier

- Common to all non-native speakers
- Difficult to understand PDD and methodology
- Conflicts with counterparts can be possible

PDD structure

- Difficult to understand → Need translation
- CDM terms
- Difficult to describe in text → Flow diagram/ tables /pictures
- Writing varies by project participants → Have to check many PDDs
→ Useful guidebooks available “CDM and JI in Charts”, “CDM Methodology guidebook”, “CDM/JI Hyojun Kyozaï (Japanese)”



Need to polish English ability

PDD and NMB Requirements



PDD

Requirement is not clear

B.2. Description of how the methodology is applied in the context of the project activity:

Identification of Baseline scenario ?

B.3. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity:

Demonstration of Additionality

NMB

Requirement is clear

D.1. Explanation of how the methodology determines the baseline scenario (that is, indicate the scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases (GHG) that would occur in the absence of the proposed project activity

Identification of Baseline scenario

D.3. Explanation of how, through the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario (section B3 of the CDM-PDD)

Demonstration of Additionality

 Unclear guidance and Inconsistency between PDD and NMB cause confusion



Site specific data

-Not only wastewater analysis, but also detailed related information is necessary (ex. ISO certification?, how many pigs in one pig house?, what is the neighbor's livelihood?, etc.)

Unexpected “nearby facility”

- The pig farm owner was constructing a H-UASB digester with a support of ENCON fund!
- NO ADDITIONALITY!!
- Could not justify in PDD...



Manure tank



- Close communication with the counterpart is inevitable
- Fund availability is a weak point of the project.
(But how about in other countries? Fund, ESCO...)
- Pre-FS may be necessary

Methodology Application

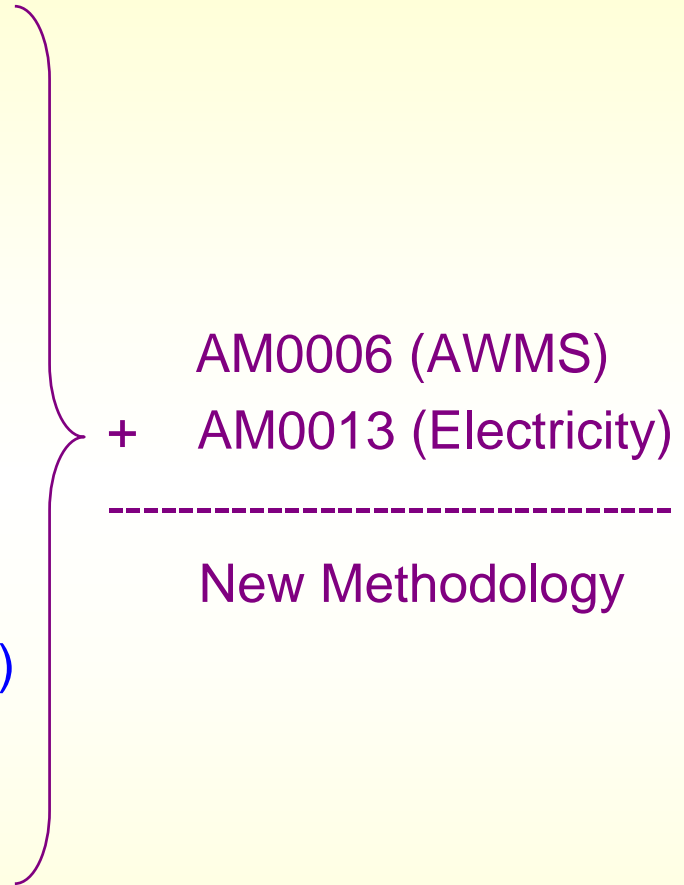


AM0013 (Palm oil wastewater)

- 😊 Easy
- 😊 Digester used
- 😊 Electricity CO₂ counted
- 😞 No N₂O counted
- 😞 Applicable to animal waste?

AM0006, AM0016 (Swine waste)

- 😊 Applicable to swine waste
- 😊 Applicable to digester (covered open lagoon)
- 😊 N₂O counted
- 😞 Difficult
- 😞 No electricity CO₂ counted



- Project participants have to check all the relevant methodologies
- Consolidation /modularlization of methodologies by EB will be appreciated

Electricity

Power generation in the Project activity

= Power consumption in the baseline scenario

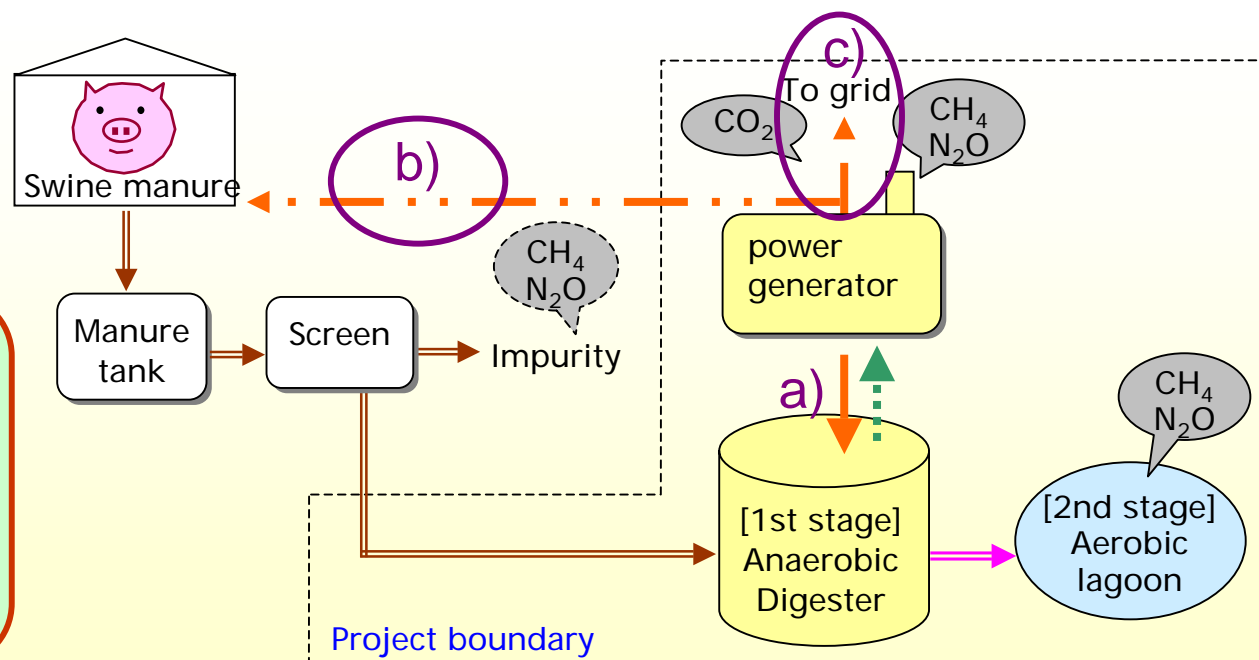
- a) Digester electricity is additional use → Not count (Not seen in AM0013)
- b) Pig farm electricity → same amount in the baseline
- c) Electricity for grid export → include in baseline emission

Baseline emission

= b) + c)



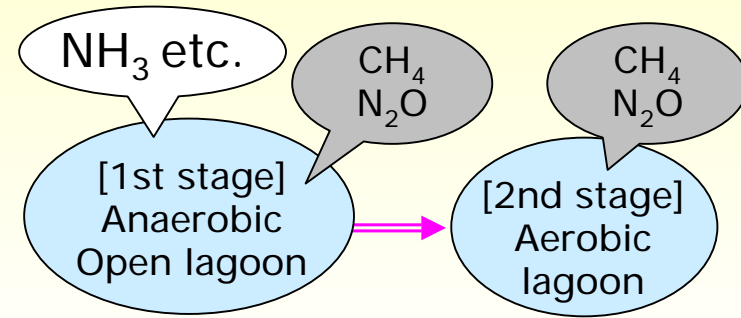
Difficult work to define baseline electricity emission from the project activity



N₂O Increase !

Baseline : Open lagoon

- 1st stage: Not closed system → 25% Nitrogen reduced
- Need to examine credibility of default degradation value (25%)

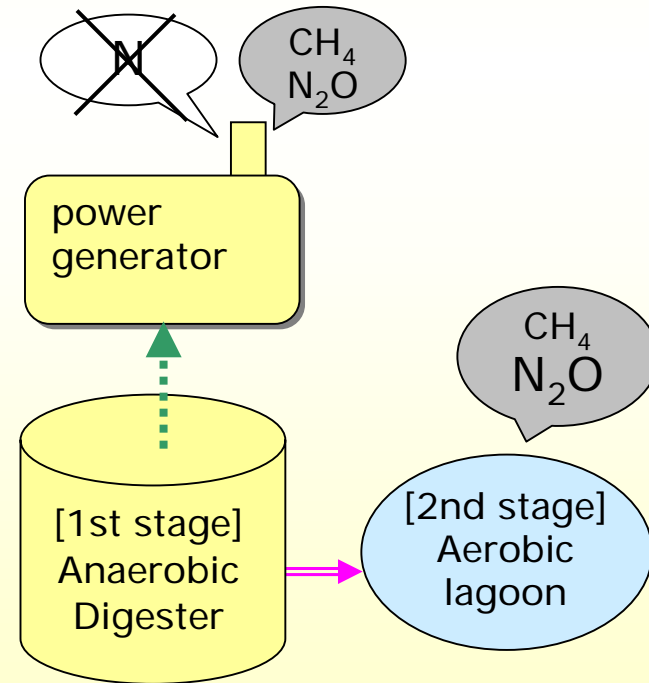


Project : Closed digester

- 1st stage: tightly closed system → 0 % Nitrogen reduced
- 2nd stage: more N₂O than the baseline emitted



- Weak point of the methodology
- Traditional wastewater treatment technology has been focusing on CH₄ utilization, not N₂O.



Issues Ahead



Financial analysis

Finalization of PDD

Project implementation not discussed

Communication with Thai DNA



Thank you very much!



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kawamura@oecc.or.jp

www.takuma.co.jp

CDM/JI Feasibility Studies

**ICS-CDM Tokyo Meeting by IGES
March 3-4, 2005 Tokyo, Japan**

Kunihiro Ueno

Mari Nishiki

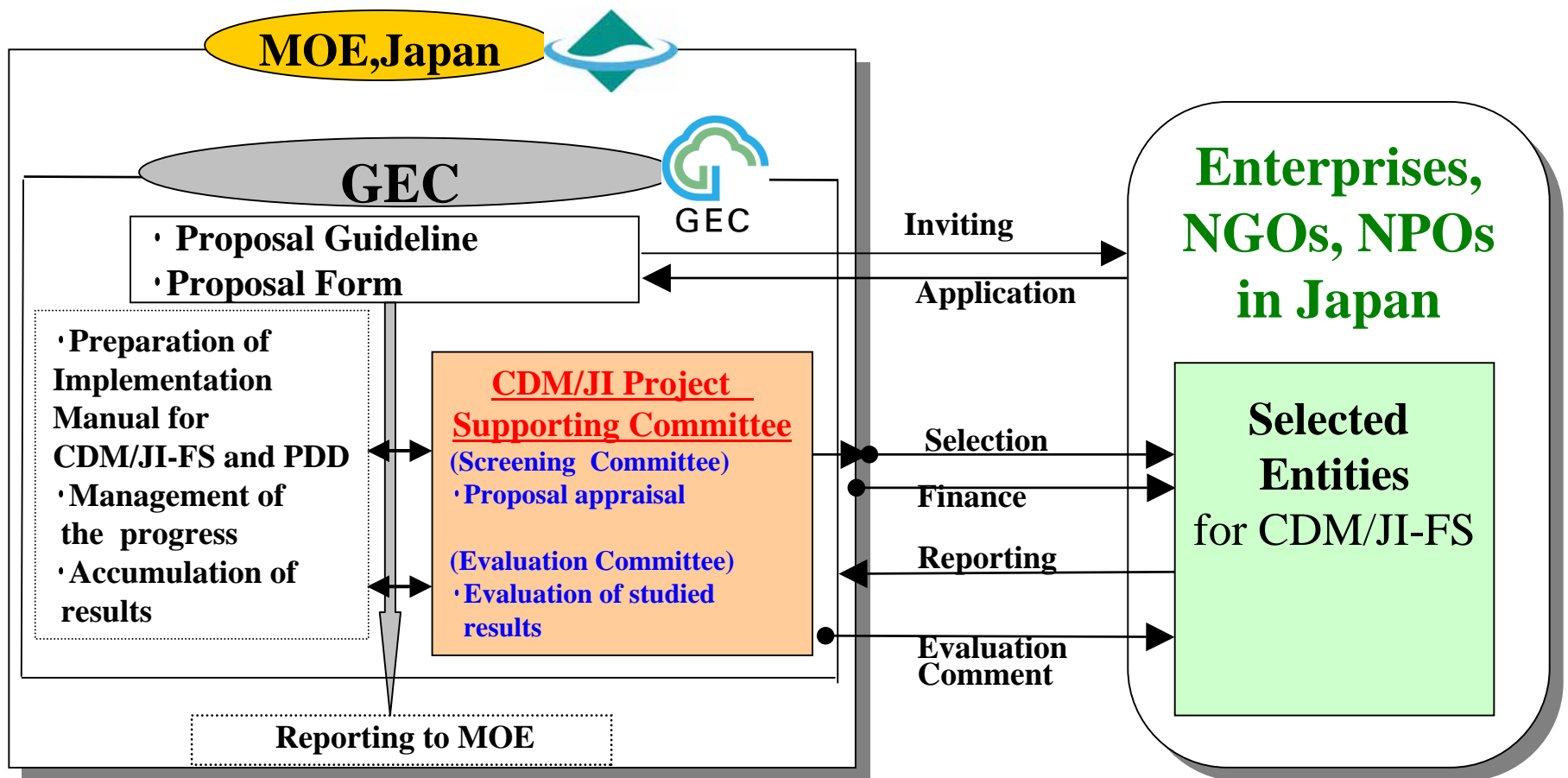
Global Environment Centre Foundation



Presentation Outline

1. Brief overview of Feasibility Studies
 - Focused sectors of MOEJ
2. Lessons learnt from FS
 - Prospects and issues of CDM/JI
3. Toward CDM/JI project registration

CDM/JI Feasibility Study project



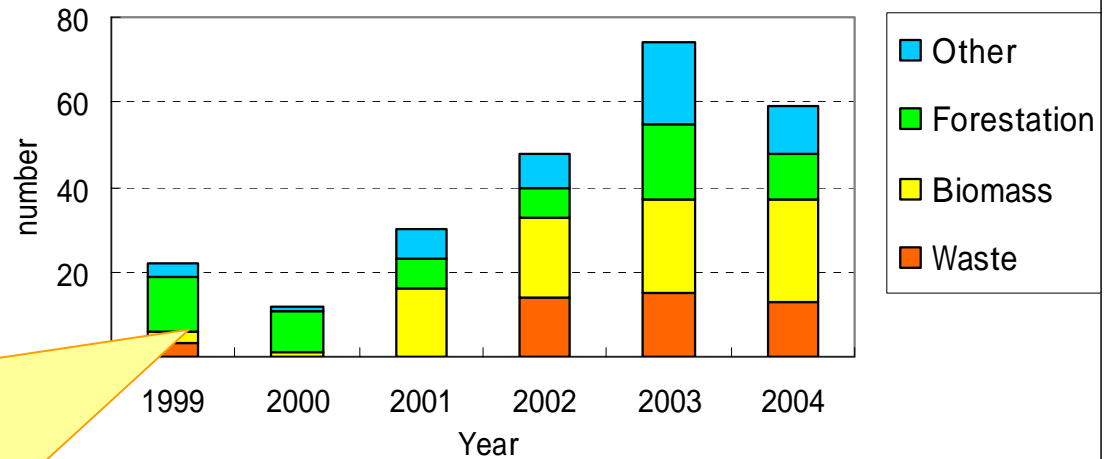
【 Priority in selection 】

- Feasible enough to develop PDD
- Available for model Validation by OEs

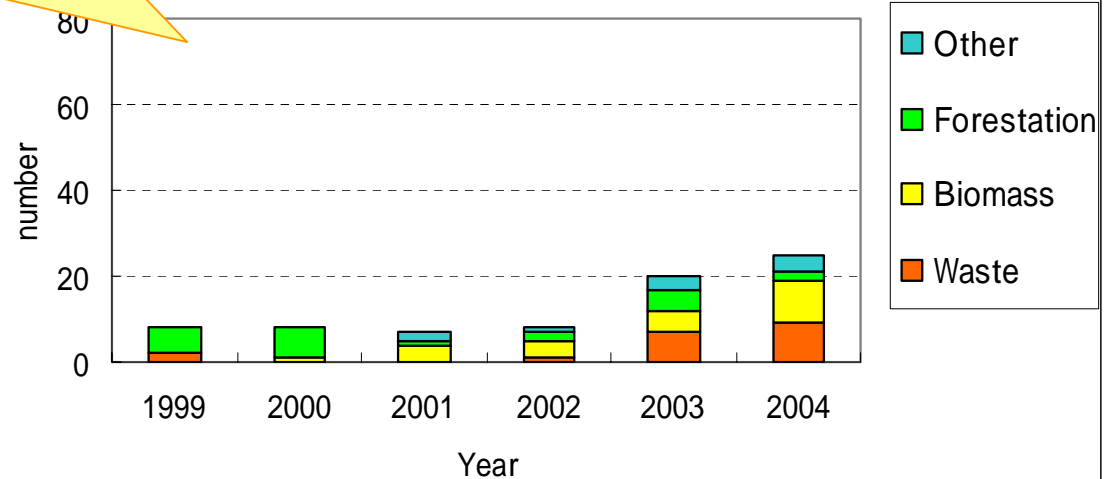
Number of FS (FY1999-2004)

**Small number of
PDDs have been
submitted to EB!!**

Applied project
(in total 245 projects)

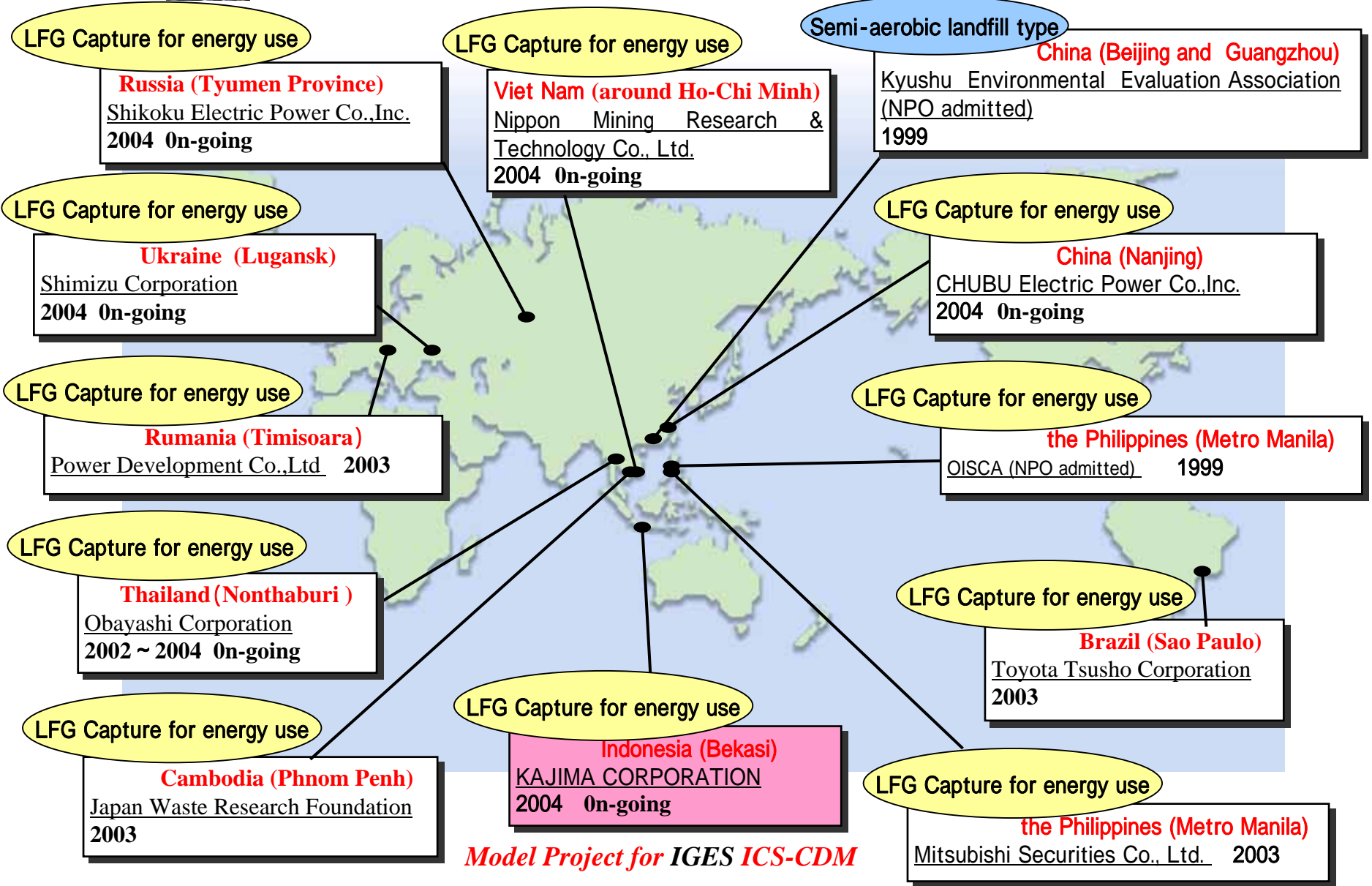


Adopted project
(in total 76 projects)





FS for Landfill gas project (LFG)



Model Project for IGES ICS-CDM

LFG capture and power generation project

Contribution for SD of host countries

Energy supply

Environmental improvement

Waste disposal, offensive odor, **early stabilization of landfills**,
water pollution

Project Issues

Few technical problems

- Treatment of Hydrogen sulfide (maintenance of power plants)
- Purified gas (if utilized as city gas)

Locals interest in landfill sites and collected CH₄

Advantages for CDM

Additionality (Investment barrier)

High sensitivity to CER value

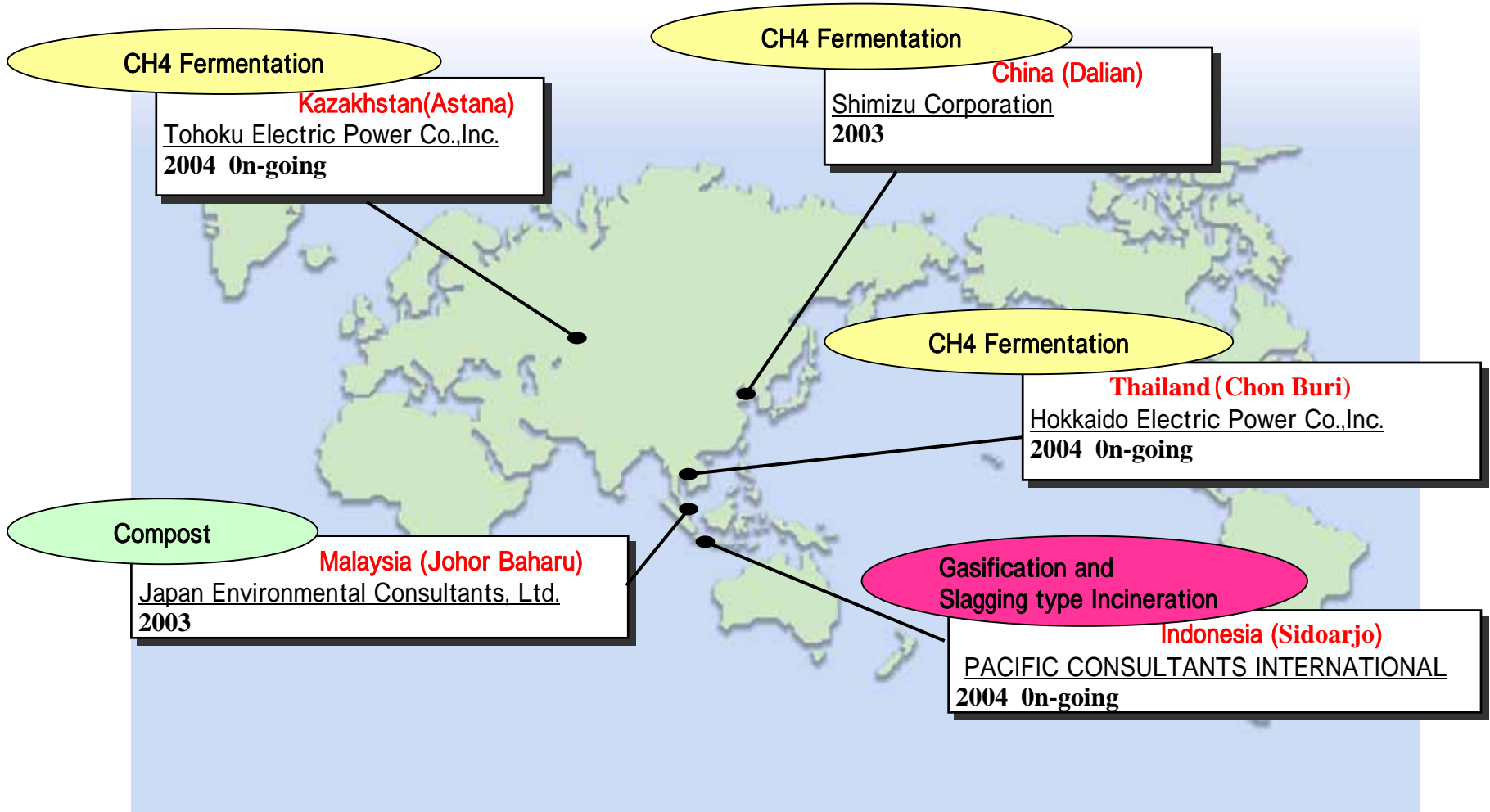
Many approved methodologies available

Disadvantage for CDM

Risk for uncertain the captured amount of CH₄



FS for reducing Wastes project



Methane fermentation project from organic wastes and sewage sludge for energy use

Contribution for SD of host countries

Energy supply

Environmental improvement

Waste disposal, offensive odor, lengthening use life of landfills, water pollution

Technology transfer for CH₄ fermentation

Project Issues

Some technical problems

- Residue treatment for further fermentation Compost in Aerobic fermenter
- Control and maintenance for Methane fermenter

Difficulty in systemizing separate collection of wastes

Advantages for CDM

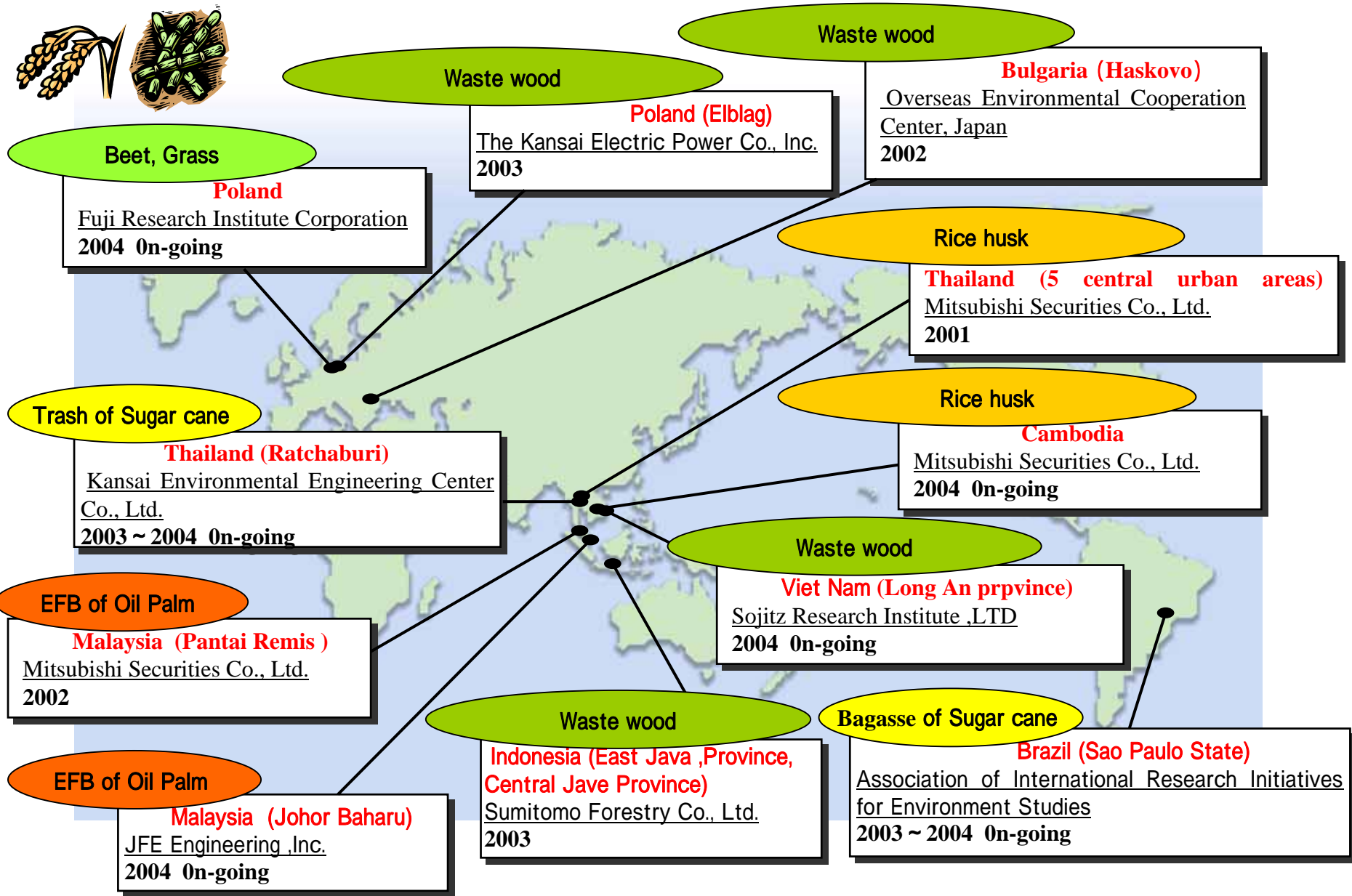
Additionality (Investment barrier, Technological barrier)

High sensitivity to CER value

Disadvantage for CDM

Difficulty in setting the baseline and estimating GHG reductions

FS for Biomass power generation, Co-generation



Grid-connected Biomass power generation project

Contribution for SD of host countries

Energy supply

Environmental improvement

Waste disposal

Project Issues

How to collect biomass constantly for steady supply of sources

Advantage for CDM

Approved methodologies available

Disadvantages for CDM

Slight difficulty in demonstrating the additionality

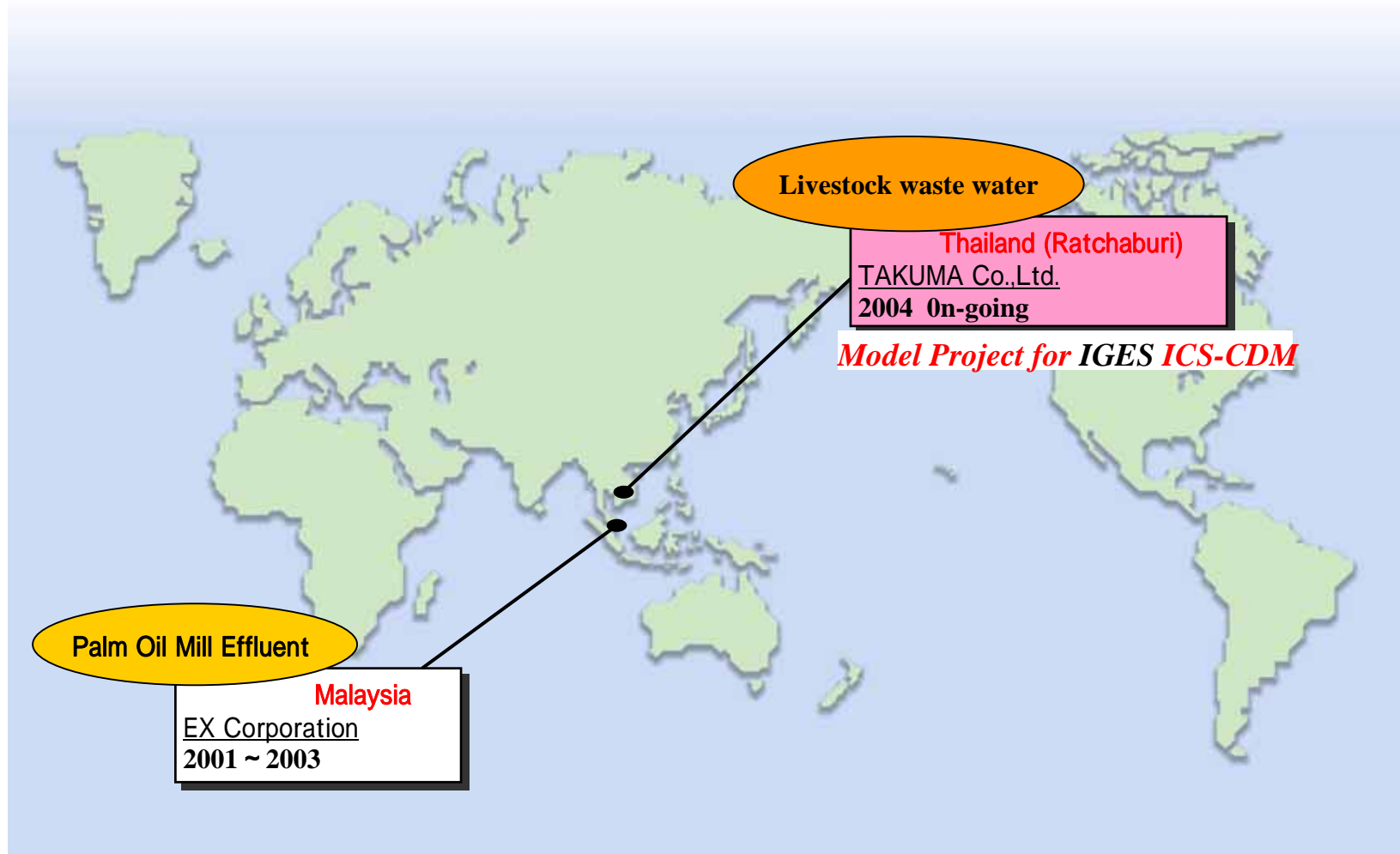
Difficulty in identifying what power sources of the grid would be displaced

Leakage

Low sensitivity to CER value



FS for Biogas energy use project



Biogas extraction and power generation project

Contribution for SD of host countries

Energy supply

Water pollution control

Technology transfer for CH₄ fermentation

Project Issues

Control and maintenance for closed digesting tanks

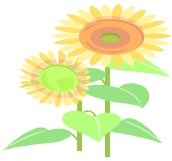
Advantages for CDM

Additionality (Investment barrier, Technological barrier)

High sensitivity to CER value

Disadvantage for CDM

Slight difficulty in estimating the baseline emission of CH₄ released into the atmosphere



FS for manufacturing Bio-diesel, Gasohol project for vehicle fuel



Ethanol Fermentation from oats

Lithuania (Kaunas)

Mitsui Engineering & Shipbuilding Co., Ltd.
2004 On-going

Bio-diesel from Sunflower kernel

Thailand (Loei)

PowwowPool Co., Ltd.
2003 ~ 2004 On-going

Ethanol Fermentation from Malasses and Bagasse

Viet Nam (Southern Part)

Nippon Mining Research & Technology
Co., Ltd.
2002

Bio-diesel from Jatropha Curcas

South Africa (KwaZulu Natal)

Mitsui & Securities Co., Ltd.
2004 On-going

Ethanol Fermentation from Malasses and Bagasse

India (Koihapur)

Nippon Mining Research & Technology
Co., Ltd.
2002

FS for manufacturing Bio-diesel, Gasohol project for vehicle fuel

Contribution for SD of host countries

Energy supply

Measures for **lead pollution** by leaded gasoline

Measures for **Air pollution by Diesel (NO_x, SO_x, PM)**

Employment

Project Issues

How to collect biomass constantly for steady supply of vehicle fuels

Some technical problems

- Dewatering, Saccharification in case of using Bagasse (Gasohol)
- Manufacturing technology (Bio-diesel)

Disadvantage for CDM

Difficulty in setting the project boundary and baseline

Low sensitivity to CER value



FS for other project for biomass use

**Recycle of Livestock waste
"Green Mighty System "**

Ukraine (around Khar'kov)

Non Profit Organization Japan PFI Association
2001

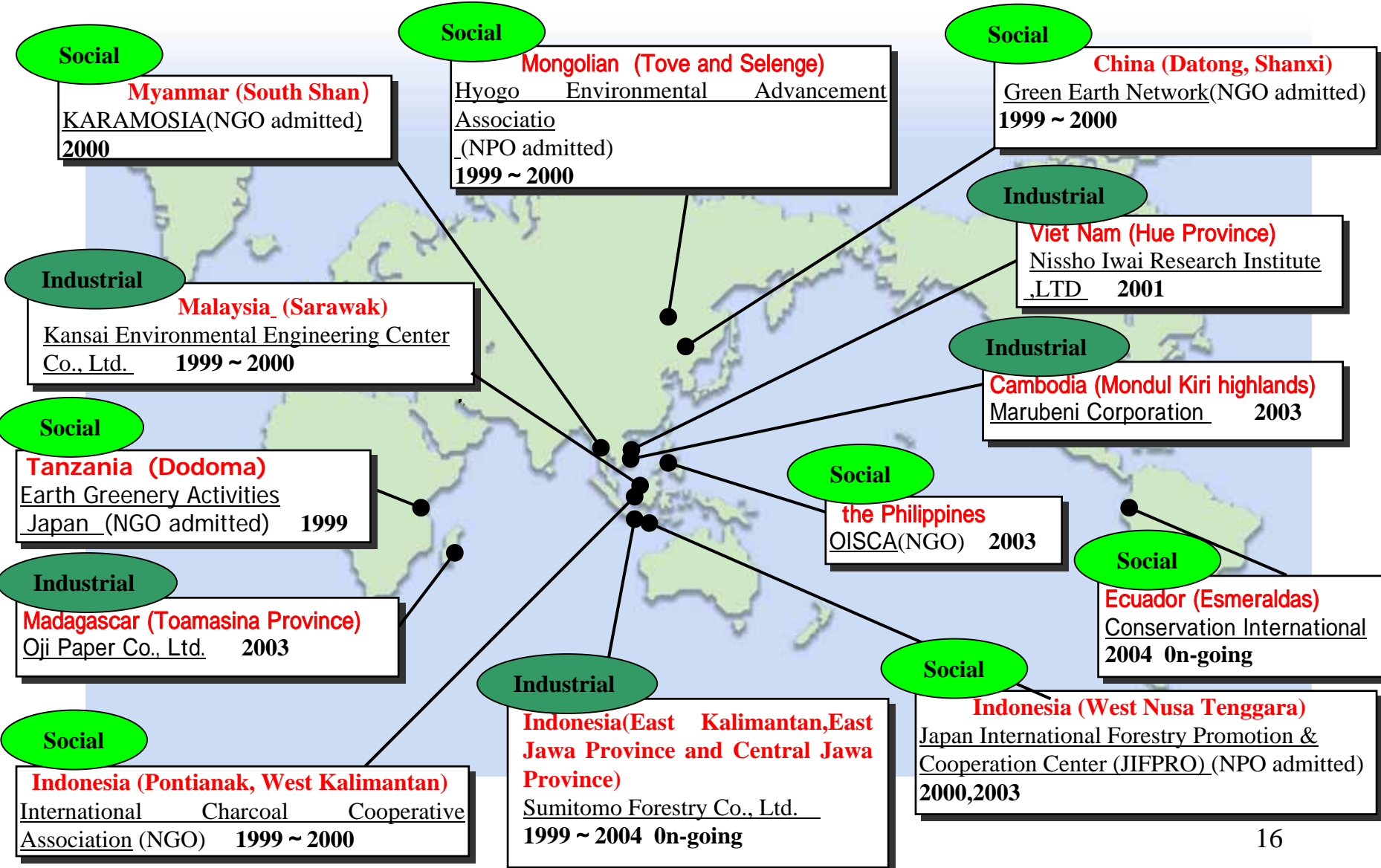
Carbonization

Indonesia (South Sumatra)

Kansai Environmental Engineering Center
Co., Ltd.
2001



FS for A/R project





FS for A/R project

Contribution for SD of host countries

Measures for Deforestation and improvement in ecological situation

Promotion of forest industry (industrial forestation)

Environment restoration (social forestation)

Employment

Project Issues

Locals interest in plantation areas

Risk and Uncertainty (Forest fires, Diseases and pests)

Low cost-effectiveness

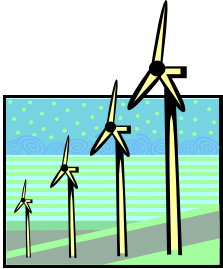
Disadvantages for CDM

It takes a lot of times for carbon stock

Leakage

CER with a time limit

(Temporary CER (t-CER) , Long term CER (l-CER))



FS for Other project

Wind Power Generation

Estonia (around Paldiski)
Overseas Environmental Cooperation Center, Japan (NPO admitted)
2001

Wind Power Generation

Hungary (Mosonmagyaróvár)
Mizuho Securities Co., Ltd.
2003

Wind Power Generation and Solar panel

Cambodia (Mondul Kiri highlands)
Marubeni Corporation 2004 On-going

Model Project for IGES ICS-CDM

Geothermal Heat Pump

Russia (Irkutsk)
Japan Metals and Chemicals Co., Ltd. 2003

Fuel switching from coal to natural gas

Russia (Khabarovsk)
Toyota Tsusho Corporation
2004 On-going

Incineration of HFC 23 waste streams

Mexico (Monterrey)
UNICO International Corporation
2004 On-going

Destruction of Hydrochlorofluorocarbon

South Korea
Institute for Industrial Location CO.,Ltd.
2004 On-going

Destruction of Hydrochlorofluorocarbon

China(Shanghai)
Nissho Iwai Research Institute ,LTD
2003

Solar panel and others

the South Pacific Island Countries
Pacific Consultants Co., Ltd.
2001 ~ 2002

*Lessons learnt from FS
- Overall -*

Knowledge to develop PDD

- Need to develop capability of project developers

Better understanding of projects with local stakeholders

- Need to increase capacity of host countries
- Need more information of host countries

What GEC has done so far . . .

For project developers

- Develop Project Manual and Methodology Guidebook in Japanese and English

For stakeholders

- Collaborate with IGES's Capacity Development program by including FS as case studies

Benefit for BOTH host countries and project developers



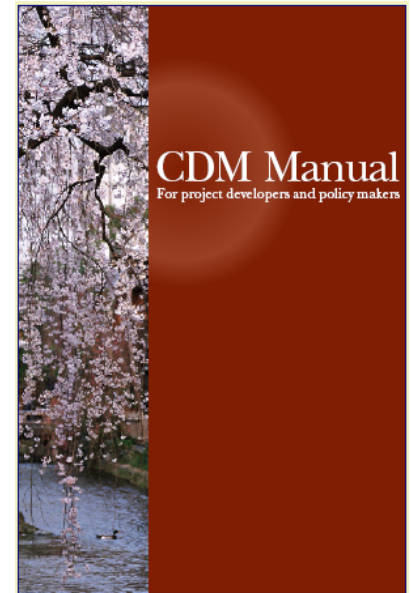
CDM Manual for project developers and policy makers

prepared by MOEJ, GEC and Pacific Consultants

[http://gec.jp/gec/gec.nsf/en/Publications-Reports_
and_Related_Books-CDM-Manual-2004](http://gec.jp/gec/gec.nsf/en/Publications-Reports_and_Related_Books-CDM-Manual-2004)

Structure

- 1. Objectives and Structure**
- 2. CDM Institution and Processes**
- 3. Small-scale CDM Project Activities**
- 4. Normal Scale CDM Project Activities**
- 5. A/R CDM project activities**

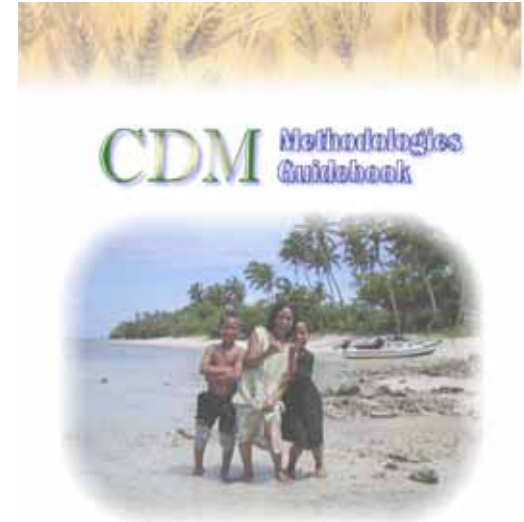




CDM METHODOLOGIES GUIDEBOOK

prepared by MOEJ, GEC and Climate Experts

http://gec.jp/gec/gec.nsf/EN/Publications-Reports_and_Related_Books-CDM_Meth_Guidebook



Contents

Chapter I: Theoretical Basis for CDM Methodologies

Chapter II: How to Describe NMB/NMM/PDD

Chapter III: Displacement Effect of Grid Electricity

What GEC will do . . .

Knowledge

- Update Manuals on decisions in CDM-EB meeting

Project

- Select better FS
- Identify feasible entities for financial support from MOE

***Thank you for
your Attention !***

<http://www.unep.or.jp/gec/>

E-mail : ogawa@unep.or.jp



Kyoto Mechanism Information Platform

assisting CDM/JI Stakeholders
Information-wise

Makoto Kato
Researcher

Overseas Environmental
Cooperation Center, Japan(OECC)



Outline of the Presentation

- Rationale for the Information Platform
- OECC's Strength
- Development of the Programme
- Assistance Menu for Host country Stakeholders

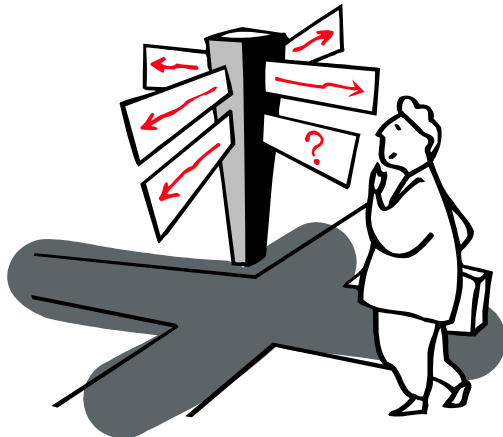
Rationale for the Information Platform(1)

What is Information Assistance? Why is it necessary/useful?

● Rationale for the Information Platform

No Information
= No Investment

**Investors
need information**



- CDM/JI Procedure?
- Country Information?
- Benefits from Investment?

Rationale for the Information Platform(2)

Host Countries need information

- Attracting Good Business
- Compatibility with National Development Plan
- Introducing technologies

CDM/JI to promote financial/technological flow from Annex I to Host countries/communities

Promoting SD thru business



The text is centered and surrounded by six light purple circles. Three circles are arranged in a horizontal row at the top, and three are arranged in a horizontal row at the bottom. The circles are semi-transparent and overlap slightly.

**Do we know well
about each other?**

Information Gap

Business cost and risk is relatively high

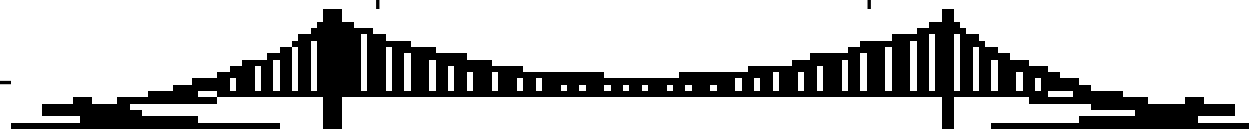
CDM/JI Investors

- attractive project locations?
- how to find local counterparts?
- approach to / cooperation with local authorities?



Host Countries

- potential project areas/ technologies
- promotion of CDM/JI business – how and to whom??



Bridging the Information Gap

Assisting investors and host countries “information-wise”...

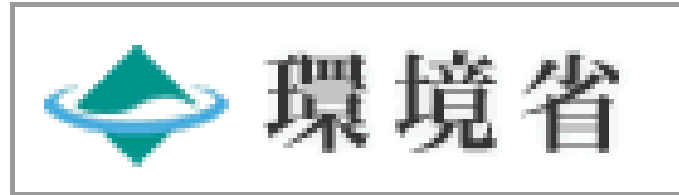
The image features five light purple circles arranged in two rows. The top row contains three circles: an empty circle on the left, and two solid circles on the right. The bottom row contains three circles: two solid circles on the left, and an empty circle on the right. The text "Why OECC?" is centered over the middle of the circles.

Why OECC?

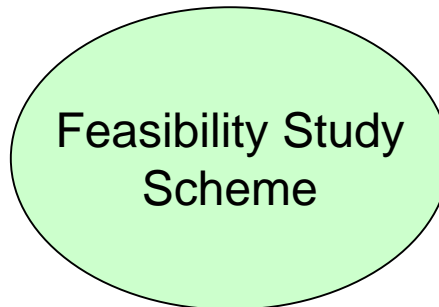
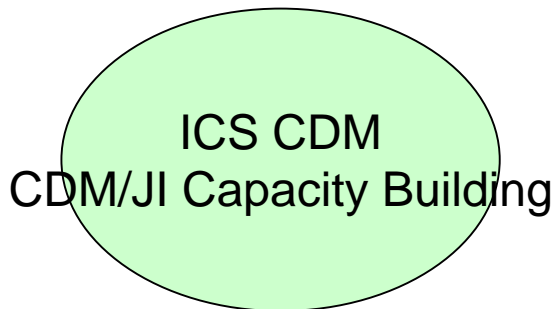
OECC's Strength(1)

MOEJ's Brother Programmes

Ministry of the Environment, Japan



Our Brothers..



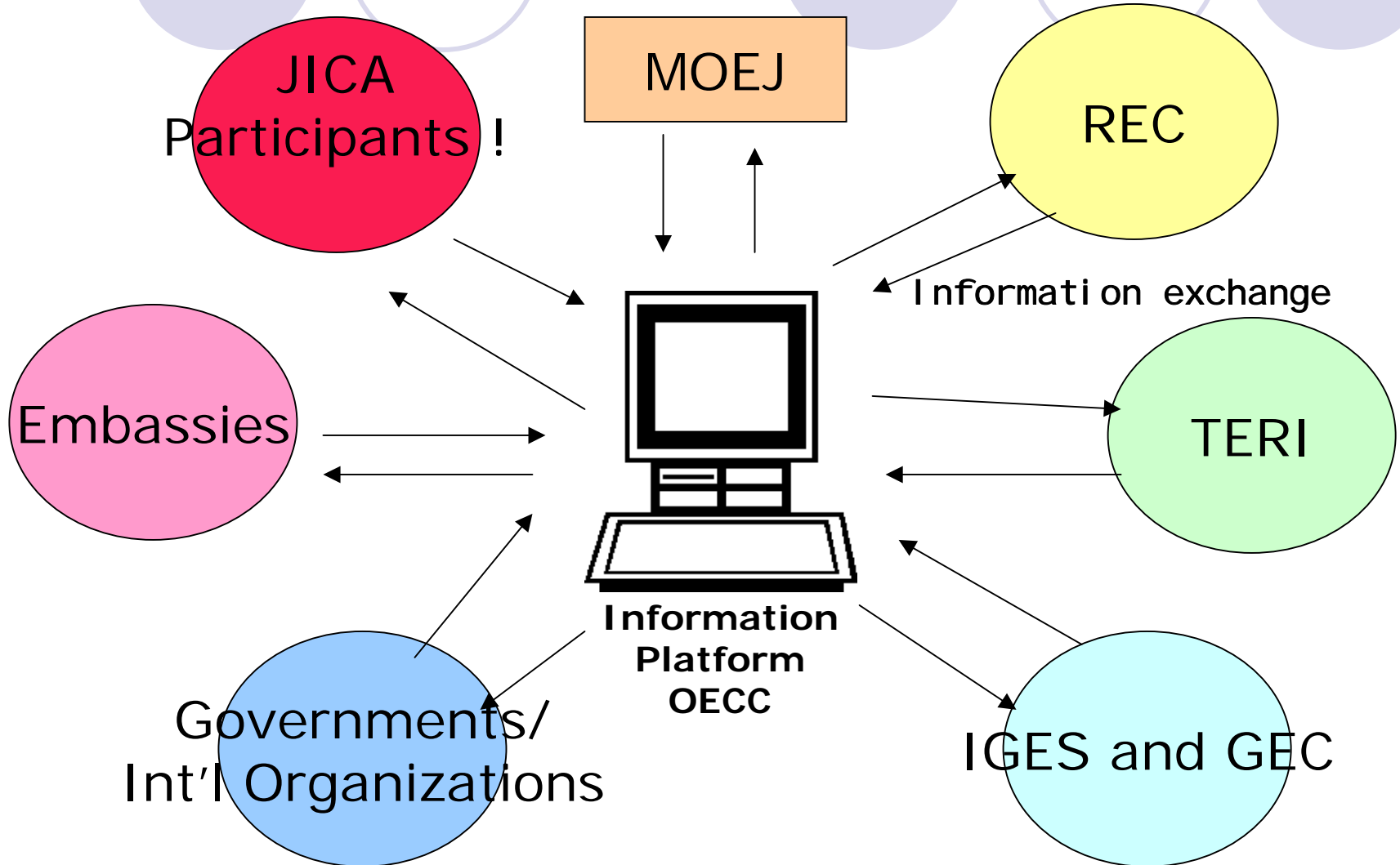
Enabling environment for

project identification, experience gaining, and partner finding!

OECC's Strength(2)

Partnership with International Stakeholders

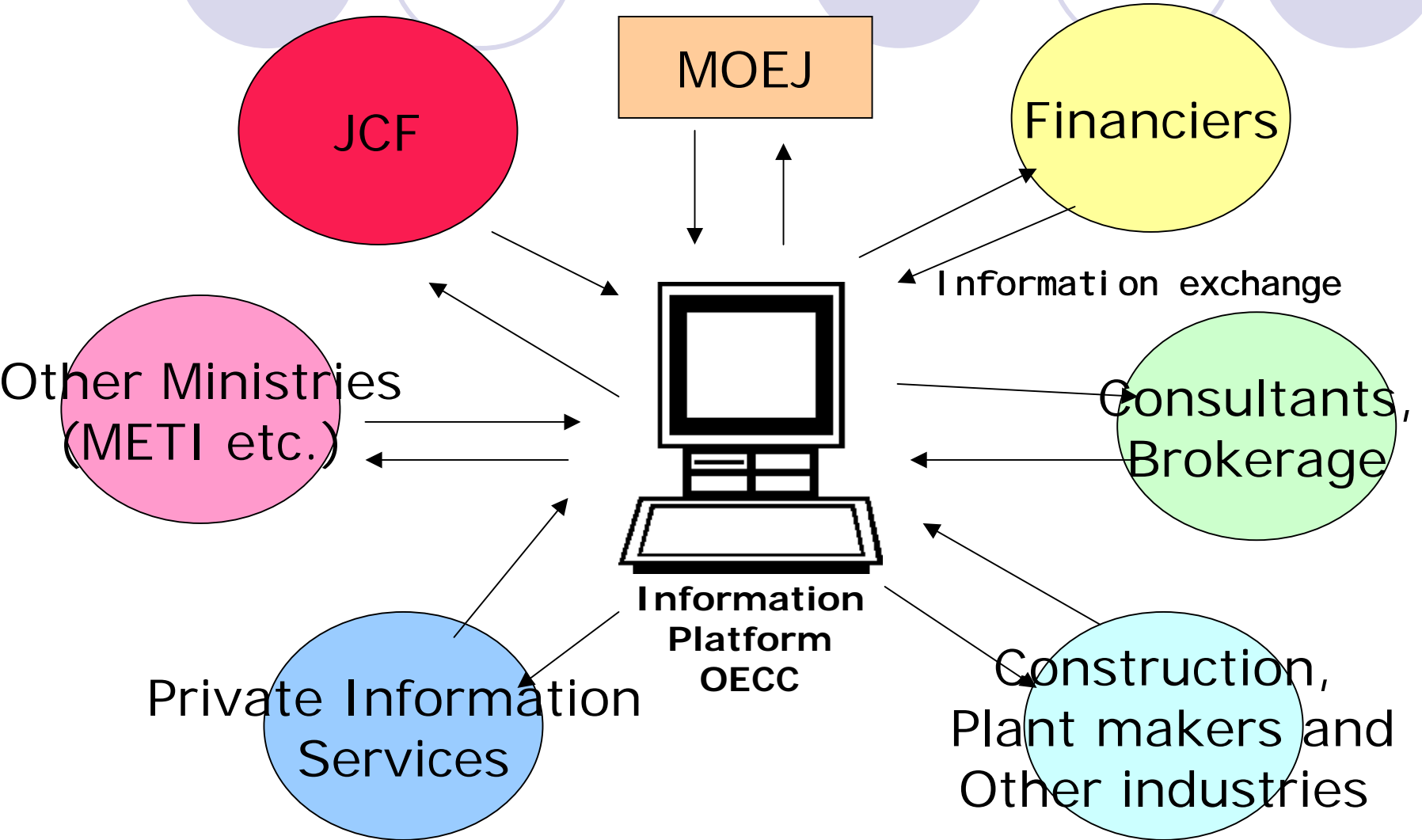
Our Network



OECC's Strength(2)

Partnership with Japanese Stakeholders

Our Network



OECC's Strength(3)

Synergy effects with other Climate Change /Environmental Efforts

- Asia-Pacific Seminar on Climate Change
- JICA Group Training Course on Climate Change
- Asia-Pacific Network on Climate Change etc.....



The screenshot shows the AP-Net website. At the top, there is a navigation bar with links for Home, Seminar on Climate Change, Climate Change Efforts, E-learning CBM, AP-Calendar, and Database. The main heading is "Asia-Pacific Network on Climate Change". Below this, there is a section titled "What is AP-Net?" with a list of bullet points: "A knowledge-based on-line clearing house for Asia-Pacific region on climate change issues", "Provides platform for policy dialogues and consultation within the region", "Provides access to lists of information and data on climate change issues and developments focusing on the Asia-Pacific", and "Supports capacity building for developing countries in the region". There is also an "AP-net Updates" section with two entries: "21-24, September 2004" for "The 14th Asia-Pacific Seminar on Climate Change" and "3, September 2004" for "AP-Net Homepage launched". On the right side, there is a search box and logos for the Ministry of the Environment, OECC, and IGES. The footer contains copyright information for 2004 AP-Net, all rights reserved, and the address: Shinjyokan Annex 7th Floor, 1-6, Shibakojima 3-chome, Minato-ku, Tokyo 105-0011, Japan. It also includes a "powered by OECC" logo.

**How far have we made
progress?**



Development of the Programme

- Sept. 2003 Call for request for governments in the 13th Asia-Pacific Seminar on Climate Change
- Nov. 2003 Started preliminary survey
- Mar. 2004 Japanese Website Structured /Country Portfolio for 8 Countries
- June 2004 Help Desk Service launched
- Sept. 2004 Progress Reported at the 14th AP Seminar
- Dec. 2004 English Webpage Opened for Information Dissemination on Japan
- Dec. 2004 COP10 Sided Event jointly organized with IGES/GEC
- Mar. 2005 IGES ICS-CDM Tokyo Meeting!!

Our Activities are expanding!!



What can we offer??

Platform's Assistance Menu for Host country Stakeholders (1)

Providing Information on Japan

- Japan's Policy on Climate Change?
- Projects Approved by GOJ?
- GOJ Assistance Menu –
Int'l Workshop, Upfront Payment Programme, and other useful scheme

Information Platform provide Info in
ENGLISH LANGUAGE

Platform's Assistance Menu for Host country Stakeholders (1)

Providing a vehicle to promote Host Country in the Japanese Carbon Market

- Country Portfolio

Information on DNA, Host Country Approval Procedure/Country Criteria
Energy/Environmental related Laws

Your Information is directly disseminated in
JAPANESE LANGUAGE

Kyoto Mechanism Information Platform

サイト検索 GO

京都メカニズム情報プラットフォーム

- Contents
- Home
- News Tank
- 京都メカニズムとは
- 京メカの制度
- CDM理事会のうごき
- 環境分野別情報
- 国別ポートフォリオ
- 事業者支援情報
- 関連情報
- サイトマップ
- お問い合わせ

HOME > 国別ポートフォリオ > ベトナム社会主義共和国

京都メカニズム・国別ポートフォリオ

ベトナム社会主義共和国



一般情報 GHG排出インベントリー CDMを取り巻く国内制度 プロジェクト実施例

【国別ポートフォリオの使い方】

【一般情報】

面積	: 32万9,241km ²
人口	: 約7,971万人
言語	: ベトナム語
政治体制	: 社会主義共和国
GDP	: 301億米ドル
一人当たりGDP	: 388米ドル
経済成長率	: 7%
物価上昇率	: 4.00%
主要産業	: 農林水産業、鉱業
FDI	: 398億ドル
対日関係	: 技術協力協定(1998年) 投資協定(2003年)
主要援助国	: (1)日(2)仏(3)独
失業率	: 6.01%(都市部のみ) (外務省調べ)



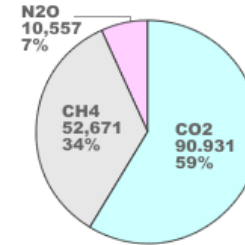
【GHG 排出インベントリー】
GHG Emissions in Viet Nam/1994 (Gg/CO2e)

【CDMを取り巻く国内制度】

ベトナムCDM準備体性のながれ(予定を含む)

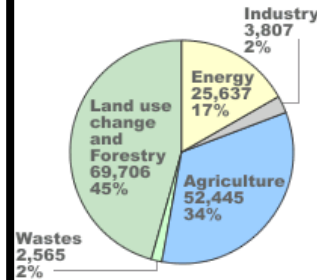
1994年11月 国連気候変動枠組条約(UNFCCC)批准

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327Gg) is excluded.

Gg/CO2e)



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Country Portfolio



Our Partnership/Participatory Approach...

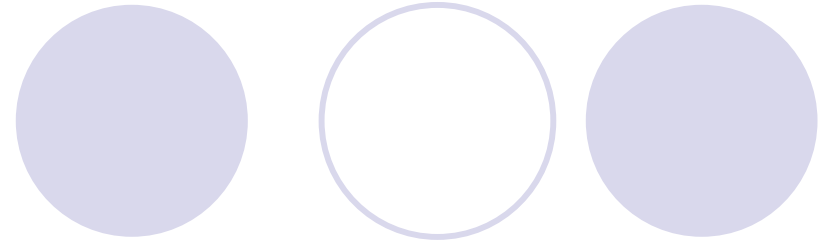
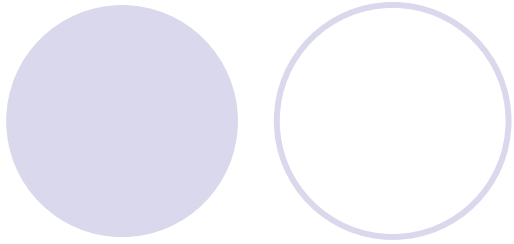
Calling for information

Any Idea from YOU?

Website: www.kyomecha.org/e

Email: Info@kyomecha.org

kato@oecc.or.jp



OECC Thanks YOU!



Overview and Lessons from UNEP/NL CDM capacity building initiative

**ICS-CDM Meeting
Tokyo
March 2005**

UNEP Risoec Centre

Brief of CD4CDM

- Donor: the Netherlands Ministry of Foreign Affairs
- Implemented in 12 developing countries by UNEP through its UNEP RISØ Centre on Energy, Climate & Sustainable Development
- Phase I: Feb. 2002 – 2nd quarter of 2003, preparation of national work plans
- Phase II: 3rd quarter of 2003 – end of 2005, implementation of national work plans
- Investment-neutral and not connected to the actual purchase of carbon credits: a pure CB initiative

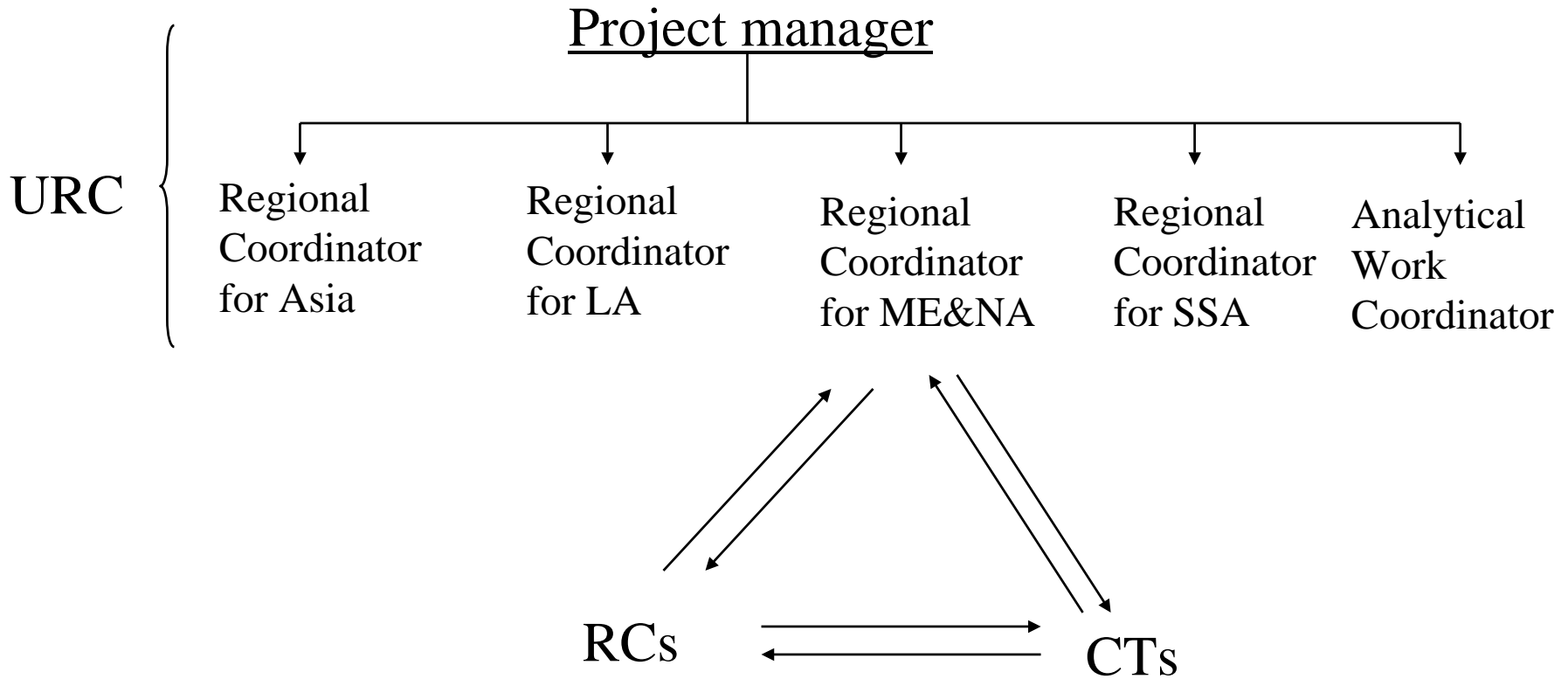
Aim and Objectives

- Generating a broad understanding of the CDM and creating an enabling business & regulatory environment for CDM investment in target countries through
- Developing institutional capability & human capacity in selected public & private entities
- Helping host countries to be equal partners with developed countries and fully participate in the formulation and implementation of the CDM
- Assisting countries in getting benefit from the CDM

Implementation Strategies (1)

- On-site implementation: identification of target groups; capacity building for different groups by means of workshops, training sessions, and technical assistance and consultations, etc.
- Background materials: internal expertise, involving regional centres and hiring external experts

Implementation Strategy (2)



inter-regional and intra-regional sharing of information and experiences

Key Outputs

- Establishment and/or consolidation of DNA
- Formalized national project approval procedures
- CDM promotional publications & brochures
- A national CDM website
- Side-events at COP & SB and information dissemination
- Pipelines of CDM projects: PINs, PDDs
- National experts capable of CDM project design

Investors Forum (1)

Two regional investors forum: Tunisia and the Philippines

Objectives

- Marketing of CDM project portfolio in participating countries and their neighbors.
- Informed the sellers on Terms & Conditions of some of the existing Emission Reductions purchase programs.
- Informed the buyers on CDM institutional preparedness of countries in the region (DNA & KP ratification).
- Discussions between buyers and sellers regarding CDM project details.

Participants: around 100 in each forum

- CDM investors, National carbon funds, Carbon brokers, VER brokers

Pan-African Investors forum is planned in Cairo, November 2005

Facilitate participation of countries in Carbon Expo, May 2005

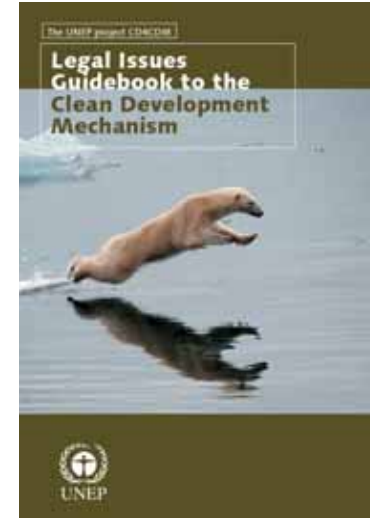
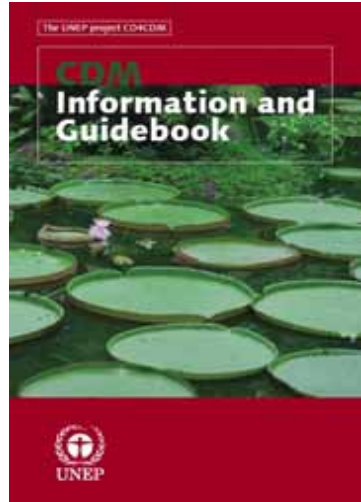
Potential projects

- Egypt
 - : two grid-connected wind, five EE, two landfill gas capture and flaring projects
- Morocco
 - : seven RE, two EE, two landfill projects
- Cambodia
 - : one biocogen, one methane recovery
- Philippines
 - : one bioenergy, one waste-to-energy, one forestry, two wind projects
- Viet Nam
 - : one biomass, one forestry, one wind-diesel hybrid project

Current Progress

	Asia	Latin America	ME & NA	SSA
Phase I	completed	completed	completed	completed
KP ratification	Cambodia, Philippines, Viet Nam	Bolivia, Ecuador, Guatemala	Morocco Egypt	Uganda Mozambique
DNA	Viet Nam, Cambodia, Philippines	Bolivia, Ecuador	Morocco, Egypt	Mozambique (unofficial)
Project portfolio	Cambodia, Viet Nam, Philippines	Bolivia, Ecuador	Morocco, Egypt	Uganda

Development of Guidebooks (1)



Development of Guidebooks (2)

- A guidebook to baseline methodologies for CDM projects
- Bundling of small-scale CDM projects
- Bio-energy and Forestry

These three will be ready in early 2005.

Information Sharing and Collaboration

- Advisory Body meeting: NL, UNFCCC, WB, UNF, UNIDO, UNDP, ADB, WBCSD, IGES, e7, GTZ
- Information sharing on who is doing what, where
- Project based collaboration: Morocco and the Philippines with UNDP
- A discussion with UNDP for collaboration in the next phase
- Co-organizing capacity building workshops with e7 and IGES
- Co-project with the WB in Africa: CF-SEA
- Information sharing with private sector

Why Capacity Building for the CDM?

- A new concept and a new market
- Legal prerequisites and eligibility criteria
- CDM is an investment scheme and investors want
 - a well-established institutional set-up, e.g. one-stop shopping
 - clear and transparent rules and approval procedure
 - minimum uncertainty and low transaction costs

Experiences from Previous CDM CB Activities vs. CD4CDM

- Donor competition in certain countries: *difficult to avoid but try to coordinate different donors by organizing Advisory Body meeting*
- Uncoordinated workshops and activities without follow-up and coordination: *organize co-workshops with other donors to maximize synergies, e.g. collaborate with IGES in Asia and UNDESA in LA*
- Flow back of a high share of project budgets into investor country or international consultants: *60% for in-country activities*
- No funding for real institution buildings: *budget to set up DNA but need to ensure its financial sustainability after the project*

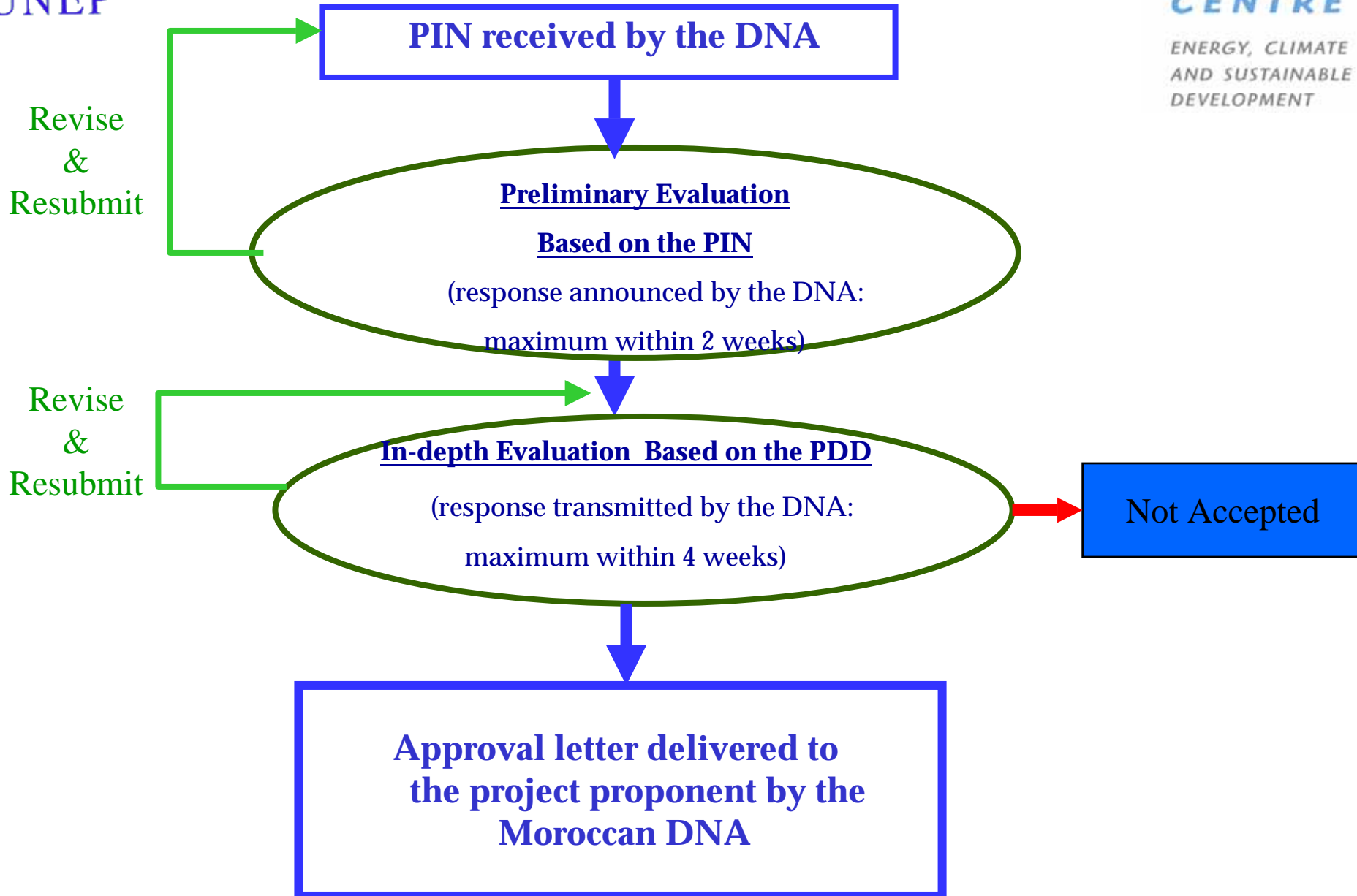
Source: Axel Michaelowa, CDM Host country institution building, 2003

Country Example: Morocco

CD4CDM assisted Morocco establish a DNA structure, consisting of:

- CDM National Council, with members including:
 - Ministries of Foreign Affairs, Environment, Interior, Finance, Industry, Agriculture, & Energy.
 - Selected NGOs.
- A Permanent Secretariat of the National Council (CDM PS) based at the Climate Change Unit; Secretary of State for the Environment.

Morocco's CDM Project Approval Procedure



Morocco's CDM Project Portfolio

- Through project development support, CD4CDM assisted Morocco develop a portfolio of CDM projects (small-scale and full-scale) both at PIN and PDD levels which includes:
 - Seven renewable energy projects
 - Two energy efficiency projects
 - Two landfill projects

- Clear objectives and targets with visible/quantitative milestones
- **Understand differences in target areas and sectors**
 - : historic, cultural, socio-economic, political, insititutional, etc.
 - : no one-size-fits-all methodology
- The progress depends on various factors
 - a high level political commitment
 - **identificaition of right partners**: including their domestic networks
 - initial capacity of local partners
 - incentives for local participants: let incentives talk
- Coordination among and participation of relevant ministries important
 - particularly ministries in charge of energy, industry, economy, transportation and agro-forestry
- **Trust** among key players: mutual understanding through close communications
- **Try to think from the partner's perspective**

- Country driven, needs-based approaches
- Bilateral relationship: give first
- **Confidence-building**: make local partners feel ownership; serve as assistants, do not act as instructors
- **Exercise flexibility**: both in work plans and budget
- mobilizing the existing expertise and capacity: building upon the current institutional framework as much as possible rather than making a whole new structure, particularly in small and poor countries
- Stability of local staff: institutional memory
- Maximize transparency and minimize bureaucracy
- Learning by doing through real cases
- Taking advantage of the process to build your own capacity and expertise: you will also learn a lot from your partners

Summary of key success factors

1. Understand differences
2. Identify right partners
3. Build trust by showing your trust
4. Help your partners build self-confidence
5. Exercise flexibility but keep the bottom line

Issues needing further support

- Financial sector and local government
- Forestry
- Small scale project
- Outreach
- deal-making with buyers
- DOE from Non-Annex I
- A regional cooperation mechanism to attract buyers
- Collective efforts to simplify the CDM decision-making process
- Sustainability of DNA

How to address these issues

- Further financial and technical support: use of ODA
- Help climate change be integrated into national development agenda
- Address the issues with a long-term perspective



CD4CDM

Capacity Development for the CDM



[Home](#) | [Links](#) | [Site map](#) | [Contact us](#) | [Advanced search](#)

Home

[UNEP and Climate Change](#)
[UNEP & CDM](#)
[Project background](#)
[Advisory Body](#)
[Participating countries](#)
[Calendar of events](#)
[National workshops](#)
[Regional workshops](#)
[Publications](#)
[Background Papers](#)

[Back](#)

[Intranet](#)

Welcome

The Clean Development Mechanism (CDM) proposed under article 12 of the Kyoto Protocol is an important potential instrument to promote foreign investment in GHG emission reduction options while simultaneously addressing the issue of sustainable development.

With the international framework for the CDM presently under development, many complex legal, financial and technical issues still require further discussion. Under these circumstances, most developing countries with limited institutional capacity will face a significant challenge in taking a pro-active approach to participate as equal and reliable partners in CDM when it becomes operational.

Reflecting the needs of developing countries, UNEP is implementing a 4-year project on Capacity Development for the CDM with funding from the government of the Netherlands.

Overall Objective

- To generate in participating developing countries a broad understanding of the opportunities offered by the CDM, and
- To develop the necessary institutional and human capabilities to formulate and implement projects under the CDM.
- To help ensure the early success and efficacy of the CDM through creating national capacity to implement the CDM in 12 developing countries.

News!

[Presentations,](#)
[Manila CDM](#)
[Investor Forum](#)

[Presentations,](#)
[Jerba CDM](#)
[Investor Forum](#)

[| Top](#) | [Back](#) |



UNDP and CDM

Kamal Rijal, Ph. D.

Sustainable Energy Policy Advisor

Regional Centre in Bangkok

Serving Asia and the Pacific

United Nations Building, Thailand

UNDP' Energy and Climate Change Portfolio

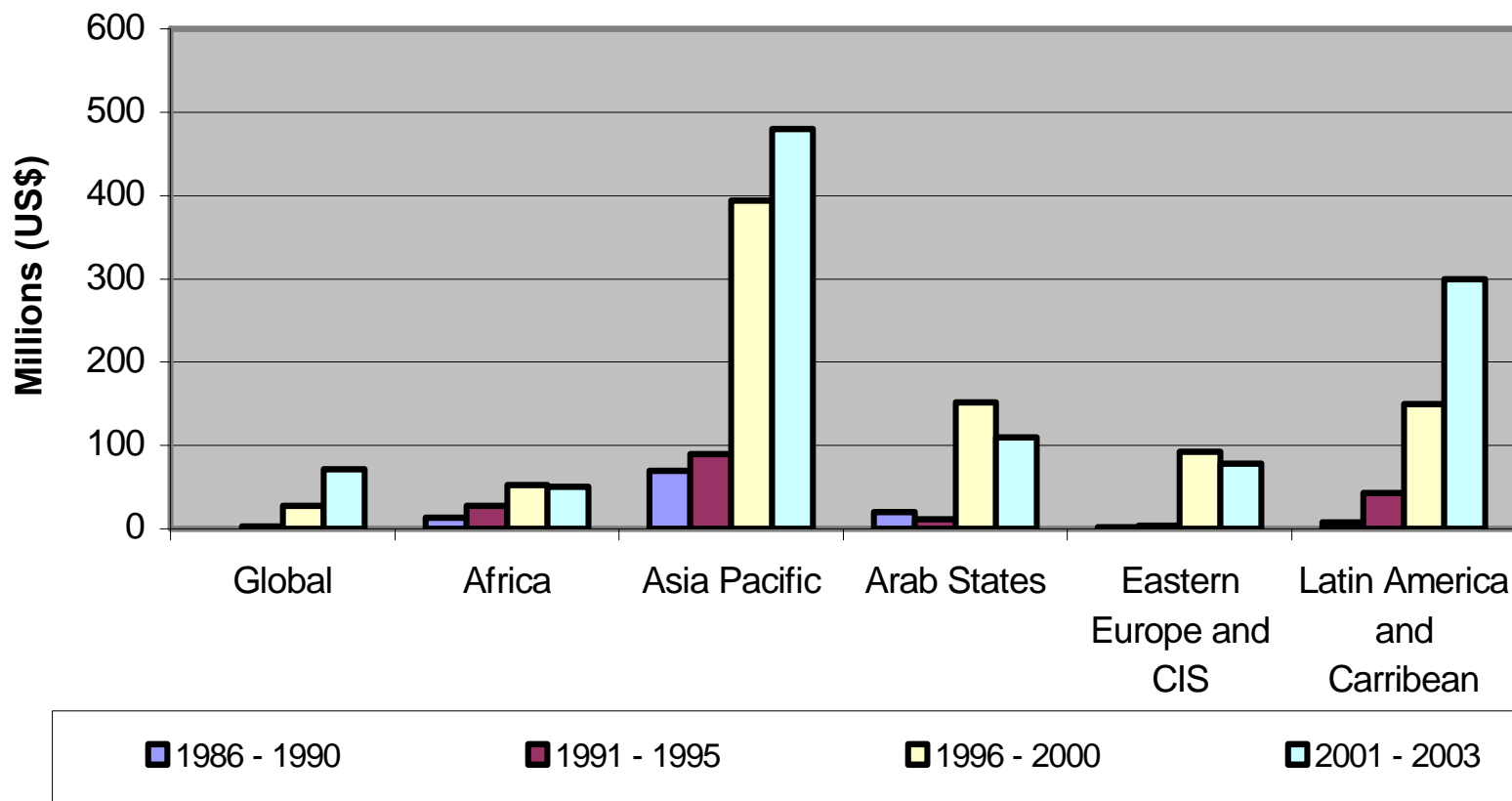


- **UNDP has by far the largest energy and climate change portfolio among all UN agencies, and the portfolio is growing rapidly since 1996.**
- **Over 374 energy projects established in 159 countries worth \$1.96 billion since 1996.**
- **UNDP GEF Small Grants Programme: 820 energy related projects.**
- **Network of 136 country offices and over 300 UNDP staff working on energy issues.**

UNDP energy portfolio (1986-2003)



Figure 3: Regional Growth in Funding for Energy Projects - 1986 - 2003





UNDP's Energy Priorities

UNDP corporate energy priorities are set around four thematic areas:

- ✓ **Strengthening national policy frameworks to support energy for poverty reduction and sustainable development;**
- ✓ **Promoting rural energy services to support growth and equity,**
- ✓ **Promoting clean energy technologies for sustainable development; and**
- ✓ **Increasing access to investment financing for sustainable energy.**

The fifth and cross-cutting area is analysis and global advocacy.



Energy and the MDGs

- **The Millennium Development Goals (MDGs) are a series of quantified development targets agreed at the UN General Assembly in 2000.**
- **There is no MDG on energy**
- **Greatly increased quality and quantity of energy services will be required to meet all of the MDGs**
- **Energy services can be generated from conventional or renewable energy: ‘services’ = light, heat, mechanical power, communications etc.**
- **The quality, reliability and affordability of the services are what matter in human development terms;**
- **Rural areas generally have both the lowest levels of modern energy services and greatest poverty**

Why is UNDP Interested in CDM?



- **Climate Change is emerging as a key development challenge for this century**
- **CDM has potential to contribute to sustainable development**
 - ▶ **tech. Transfer, FDI, human capacity development**
 - ▶ **Multiple environmental benefits**
- **May help to integrate climate change consideration into national level decision making**
 - ▶ **increased economic resilience**
- **UNDP is the main development agency**
 - ▶ **on the ground in more than 160 countries**
 - ▶ **extensive experience in all key sectors**
 - ▶ **funds a large number of projects in Climate Change & Renewable Energies**



UNDP CDM Activities

- **UNDP has worked on CDM issues with over 20 countries and has gained direct hands-on experiences in 11 of these countries.**

- **UNDP activities include:**
 - ▶ **Capacity building of DNAs**
 - ▶ **Stakeholder awareness raising**
 - ▶ **Assistance in formulating sustainable development criteria**
 - ▶ **Developing PPP to engage local entrepreneurs**
 - ▶ **Developing CDM projects proposals**
 - ▶ **Carbon market information dissemination activities**

Lessons Learnt from CDM Activities



- ❑ **CDM is a complex process – a range of administrative and technical issues to resolve**
- ❑ **High expectations in many developing countries about what CDM can provide**
- ❑ **Significant knowledge and information gap on CDM exists**
- ❑ **Identified need for human and institutional capacity building**
- ❑ **Good host country enabling environment is critical for CDM**

Key Institutional Issues – DNA



- **Establishing an efficient CDM approval process important**
 - considerable variability in structures
 - capacity and technical constraints exist
 - resourcing and legal issues
 - approval times
 - need projects to test structures

- **Considerable capacity development needs identified**
 - UNDP and others can play a role here

- **Sustainable Development criteria**
 - not well understood
 - need to develop and road test



Key Issues - DOEs

- ▶ **Vital role but limited progress to date**
(influences transaction costs)
- ▶ **Rules and procedures still emerging**
(Verification standards)
- ▶ **Need to expand and localise DOE functions**
(will be essential but little exists so far)



Business sector engagement

- **Private sector engagement and understanding is still limited**
 - **Need for consistent guidance and information**
 - **Improve understanding of project cycle, DNA processes and SD criteria**
- **Public Private Partnerships**
 - **Engaging technical experts and prospects**
 - **Building linkages**

Potential Role of UNDP in CDM (1)



Global Advocacy

- Highlight current barriers and issues that restricts the flow of development dividends to host countries, particularly poverty alleviation and MDGs.

Policy Advice

- Provide meaningful advice and guidance to countries to assist them to focus on those CDM project areas that are likely to deliver positive economic and environmental returns.

Capacity Development

- Provide TA to develop national capabilities to assess and use the CDM mechanism, particularly thru pilot and demonstration initiatives that provide a strong 'learning by doing' capacity development component, including promotion of PPP and assessment of CDM market.

Potential Role of UNDP in CDM (2)



Knowledge Products

- Develop and disseminate appropriate knowledge products to effectively support and guide CDM activities thru virtual knowledge platforms and Knowledge Fairs.
- Support the development of methodologies that generate CDM projects that multiple development outcomes, particularly bundling of small-scale projects.

Partnerships and Synergies

- Build stronger links with UNEP and other international agencies to ensure that available resources for CDM activities are targeted to areas that have the highest potential payoffs for least-developed and developing countries.
- At the national level, it is critical for UNDP to promote coordination between environmental focal points under the UNFCCC and the DNA under CDM, including various stakeholders.

Concluding Remarks



- It will take some time before CDM provides a development dividend in a meaningful way.

- **UNDP can play an important part**
 - ▶ Global advocacy and policy advice.
 - ▶ **Capacity development.**
 - ▶ knowledge transfer, uptake & dissemination.
 - ▶ **Facilitate enabling environments.**
 - ▶ Encourage partnerships and synergies.



Thank you very much

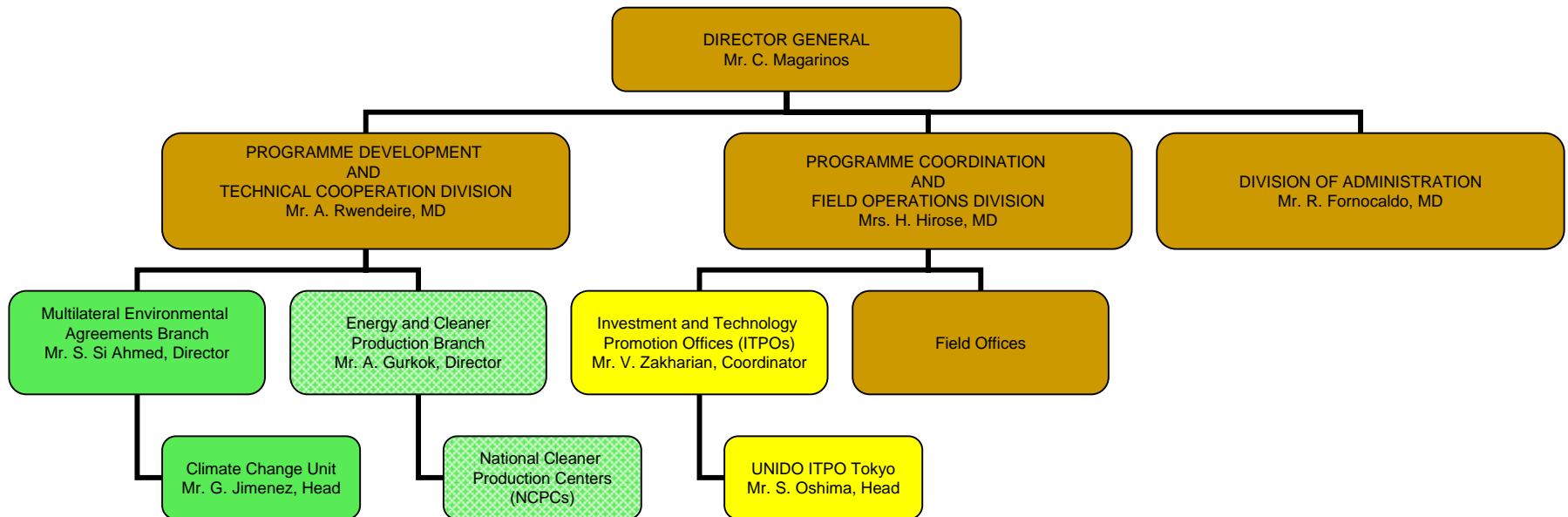
Promoting CDM/JI

by UNIDO ITPO Tokyo



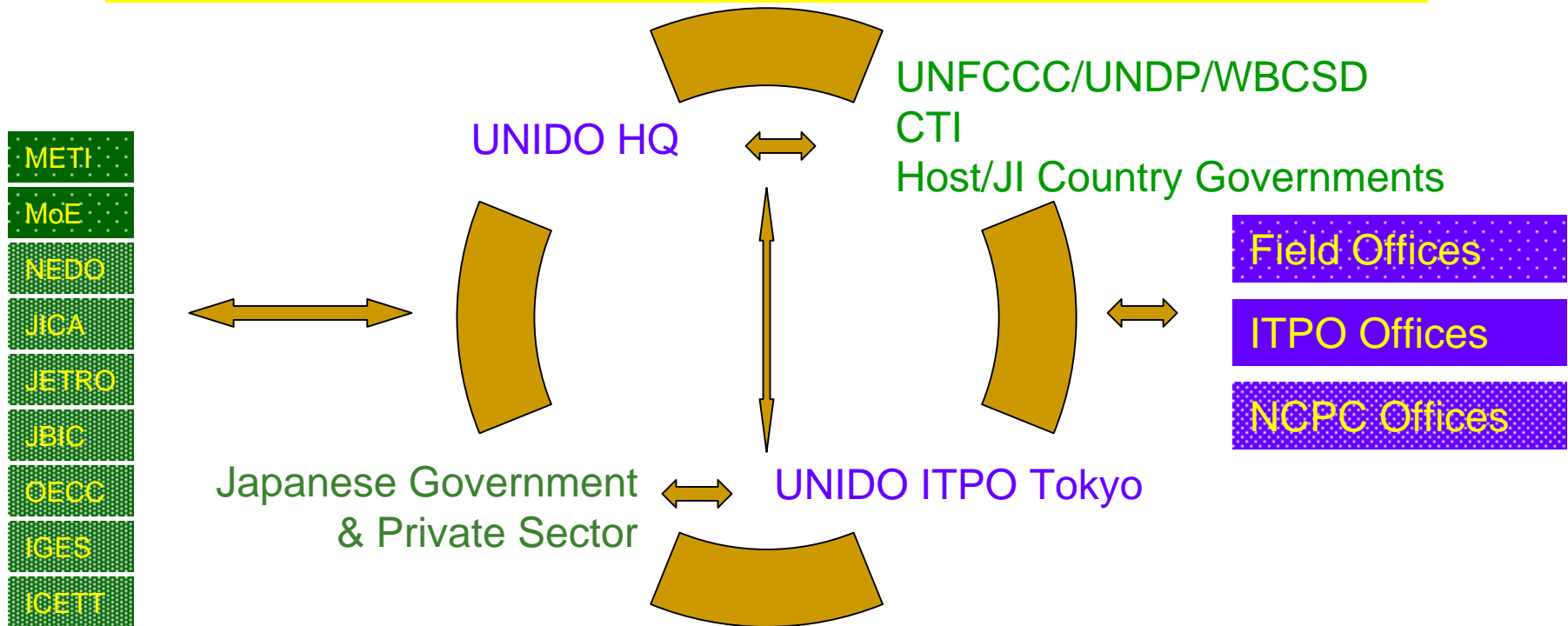
ICS-CDM/JI Meeting, IGES, Tokyo
March 3-4, 2005

UNIDO: Organizational Structure (partial)



Cooperation Model for CDM/JI

- ✓ Capacity building for project identification/development
- ✓ International discussion through conferences
- ✓ Regional, country, sector based approaches



- ✓ Promotion of CDM/JI projects and country information in Japan

Key Words

- Engaging the public and private sector in CDM/JI
- Project identification and formulation in Host countries
- Promotion of projects in investor countries
- Interagency cooperation (UN, and bilateral, national, etc.)

UNIDO HQ Activities: examples

- Project identification in South Africa, Mexico and Vietnam for the Austrian Government (2004-)
- CTI/UNIDO Joint Seminar on Central/Eastern Europe (2003/2004)
- Engaging the private sector in CDM projects activities (2002-2004)
 - Guidance on methodologies for baseline and additionality analysis and
 - CDM Investor Guide for Brazil
 - CDM Investor Guide for South Africa

UNIDO ITPO Tokyo Activities

- CDM/JI Country and project promotion in Japan (2003)
 - Delegate Programmes for South Africa, Brazil, Bulgaria

- CDM Seminars/Fora (2002-2004)
 - Asia, Central/Southeast Europe
 - CDM Forum on Asia; Country specific seminars in Japan

- Training (2003/2004)
 - Central/Southeast Europe

- ✓ Target = Accelerate promotion and implementation of CDM/JI projects between Japan/host countries

CDM Delegate: Brazil

- Mr. Jose Roberto Moreira, CENBIO
 - (also Member, IPCC & Prof., University of Sao Paolo)
- May 12-21, 2003 in Tokyo and Nagoya
- Promoted 53 CDM projects from Brazilian companies
 - Energy efficiency; Renewable energy (Small hydro and wind energy, Biomass, Photovoltaic); Landfill gas;
- 17 company meetings, 1 seminar, 1 roundtable
- Assisted several Japanese Co. projects while in Japan
- Interagency project: UNIDO/UNFCCC/WBCSD/UNDP

http://www.unido.org/file-storage/download?file_id=11229

CDM Delegate: South Africa

- Mr. Stefan Raubenheimer, SouthSouthNorth
- May 21-31, 2003 in Tokyo and Nagoya
- Promoted 21 CDM projects from South African cos.
 - Landfill gas; Housing/Energy efficiency; Biomass; Energy conversion; Fuel switch
- 13 company meetings, 1 seminar, 2 roundtables
- Japanese companies started looking at South Africa
- Interagency project: UNIDO/UNFCCC/WBCSD/UNDP

http://www.unido.org/file-storage/download?file_id=12074

CDM Delegates

Brazil, Prof. Moreira



South Africa, Mr. Raubenheimer

CDM/JI Training: South East Europe (2003-)

- Cooperated by JICA and UNIDO HQ
- 2004 Programme: 11 CDM/JI experts from 9 countries
 - Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Macedonia, Moldova, Romania, Serbia and Montenegro, Ukraine
- 3 weeks in Vienna, Tokyo and Nagoya
- Activities
 - Capacity building through lectures, workshops and roundtable meetings with the Japanese public and private sector
 - Visits to factories/sites in Japan (i.e. utilities, machinery, etc.)
 - Country presentations at CDM/JI seminar
- Follow-up activities in-country (Macedonia*)

CDM/JI Training: South East Europe (2003-)



Upcoming (2005-)

- CDM/JI Delegates (under consideration)
 - Morocco
 - India
 - Philippines
 - Costa Rica
 - Brazil/South Africa (repeat programmes?)

- Macedonia Workshop on CDM/JI (in Skopje)

- SEE CDM/JI Training, with JICA (Nov. 2005)

Frequently Asked Questions

...by the Japanese Private Sector

- What is the government policy for CDM/JI?
 - What are the regulations for CDM/JI?
 - Who are the major players, both public and private?
 - How to find and reach focal points for CDM/JI?
 - What is the market price of CERs?
 - **How to find CDM/JI projects?**
- ✓ Target = Find answers through UNIDO programmes (i.e. delegate programme)

Network in Host countries

- MoE
 - DNA
 - IPA (Investment Promotion Agency)
 - Consulting companies (public or private)
-
- ✓ Which organization to contact for CDM/JI projects in your country?
 - ✓ Who can promote CDM/JI projects on behalf of your country?

A winning formula?

- Establish cooperation between DNAs and IPAs
- CDM/JI promotion is “investment promotion”
- IPAs (i.e. BOIs) have a good global network and know-how to deal with foreign investors
- With knowledge on CDM/JI, IPAs can help your country to establish a direct link to investors

A winning formula?...case of Bulgaria

(Nov/ 2003)

- Mr. Atanas Traykov, Vice Chairman of BFIA
- 1 month programme in Tokyo, Osaka, Kobe...
- Investment promotion with focus on JI
- Coordinated with Bulgaria MoE's KP experts
- 7 JI projects promoted in Japan (out of 15 FDI projects)
- Arranged visit by Japanese officials to meet the Minister of Environment of Bulgaria
- Several Japanese companies sent missions to Bulgaria to follow-up on the projects

Bulgaria: Mr. Traykov



Bulgaria: JI Projects

No.	Project name	Type	Location	Description	Participants
BUL 001	Construction of Geothermal Power Plant, University Hospital Verna	Geothermal Power Plant	Varna	Construction of a geothermal facility to utilize the existing hot spring water resources for production of both electricity, central heating and hot water.	Medical University of Varna, Bulgarian Energy Efficiency Agency
BUL 002	Construction of Geothermal Utilization Plant, Zlatograd Municipality	Geothermal Power Plant	Zlatograd Municipality	Construction of a geothermal facility to utilize the existing hot spring water resources for heating of house hold and municipality building, as well as heating of some facilities like greenhouse and fish breeding farms, that are to be established by the municipality.	Zlatograd Municipality, Bulgarian Energy Efficiency Agency
BUL 003	Construction of 52MW Wind Mill, the Region of Peak Murgash	Wind Mill	Murgash (35km away from Sofia)	Construction of a 52 - 60 MW wind mill power plant in the region of peak Murgash. Eco EL-2002 JSC, Bulgarian Company prepared a pre-feasibility study for Murgash project and also have purchased the project site(50 ha land).	Eco EI - 2000 JSC, Bulgarian Foreign Investment Agency

Bulgaria: JI Projects (cont'd.)

No.	Project name	Type	Location	Description	Participants
BUL 004	Construction of Modules for Combined Generation of Electric and Heating Power in Existing District Heating Companies	Cogeneration Modules	Bourgas, Kazanluk, Veliko Turnovo, Pleven, Vratsa and Plovdiv	Modernization of the generating facilities with a very low effectiveness and construction of cogeneration modules in the district heating companies.	Ministry of Energy, district heating companies, Bulgarian Foreign Investment Agency
BUL 005	Development of the Low-Pressure Natural Gas Network and Market in Bulgaria	Low-pressure Natural Gas	8 regions (covering the total land of Bulgaria)	Development of low pressure gas network for households, small industry and municipality institutions (school, hospital etc.) by giving concessions to interested companies / investors.	State Energy Regulatory Commission (SERC)
BUL 006	Reduction of Emissions of TPP and District Heating "Republica", City of Pernik	Thermal Power Plant	Pernik	Construction of a new "fluidized bed" boiler and installation of desulphurization system for boiler to reduce emission of sulphur dioxide, dust and nitrogen oxides.	Ministry of Energy, TPP Republika, Pernik , Bulgarian Foreign Investment Agency
BUL 007	Construction of Gorna Arda Cascade	Hydraulic Power Plant / Dam		Construction of a new 170 MW capacity, including 3 dams and 3 Hydraulic Power Plants with annual generation of 454 GWh.	Ministry of Energy, TPP Republika, Pernik, Bulgarian Foreign Investment Agency

Conclusions

- CB for project identification and formulation
- Private sector involvement is key
- Coordination and cooperation between DNAs and IPAs (or similar organizations), and between UN and bilateral agencies
- Promotion of CDM/JI projects in investor countries
- Regional promotion efforts welcome
- **All project areas are of interest** (incl. biofuel, sinks, etc.)

UNIDO's Global Network

UNIDO Field Representation (35 countries).

Regional Offices (9): Colombia; Egypt; Ethiopia; India; Lebanon; Mexico; Nigeria; Thailand; and Uruguay

Country Offices (21): Algeria, Bolivia; Cameroon; China; Cote d'Ivoire; Ghana; Guinea; Indonesia; Iran; Kenya; Madagascar; Morocco; Pakistan; Philippines; Senegal; Sudan; Tanzania; Tunisia; Turkey; Vietnam; and Zimbabwe

Focal Points (5): Mozambique; Sri Lanka; Togo; Uganda; and Ukraine.

Other Offices (48 countries)

Investment and Technology Promotion Offices (ITPOs) 14: Bahrain, Belgium, Brazil, China(2), France(2), Greece, Italy, **Japan**, South Korea, Poland, Russia, UK

Investment Promotion Units (IPUs) 5: Egypt, Jordan, Morocco, Tunisia, Uganda

National Cleaner Production Centres (NCPCs) 30: Brazil, China, Costa Rica, Croatia, Czech Republic, El Salvador, Ethiopia, Guatemala, Hungary, India, Kenya, Lebanon, Mexico, Morocco, Nicaragua, South Korea, Slovak Republic, Sri Lanka, South Africa, Tanzania, Tunisia, Uganda, Uzbekistan, Viet Nam, Zimbabwe, Russia(2), Cuba, Macedonia

Thank you for your attention...

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For KP, go to: Services>Sustainable Energy and Climate Change>Climate Change and KP

For Global Network, go to: UNIDO Overview

UNIDO ITPO Tokyo

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5. Group Work

For Identifying the Next Step for the Capacity Building in Asia

**Parallel Breakout Group Discussion:
(Technical Issue)**

1. Bundling

Please choose all answers you think the Kyoto Protocol, Marrakech Accord, or the decision of the CDM Executive Board prohibits its right to be CDM project.

Submit a PDD, which:

Bundles 2 wind power turbines (1 MW for each), located in neighboring lands as a small-scale CDM project

Bundles 15 wind power turbines (1 MW for each), located in neighboring lands as a small-scale CDM project (Total: 15 MW)

Bundles 15 wind power turbines (1 MW for each), little far removed from each other (e.g. One site is about maximum 1 km away from the other) as a small-scale CDM project (Total: 15 MW)

Bundles 15 wind power turbines (1 MW for each), located in the same municipality but not neighbored (e.g. One site is about maximum 10 km away from the other) as a small-scale CDM project (Total: 15 MW)

Bundles 15 wind power turbines (1 MW for each), located in the same state but not neighbored (e.g. One site is about maximum 100 km away from the other) as a small-scale CDM project (Total: 15 MW)

Bundles 2 energy efficiency improvements in municipal water utilities (expected emission reductions: 5,000 t/year for each), located in neighboring lands as a normal-scale CDM project

Bundles 3 energy efficiency improvements in municipal water utilities (expected emission reductions: 5,000 t/year for each), located in neighboring lands as a normal-scale CDM project

Bundles 5 energy efficiency improvements in municipal water utilities (expected emission reductions: 5,000 t/year for each), located in neighboring lands as a normal-scale CDM project

Bundles 5 energy efficiency improvements in municipal water utilities (expected emission reductions: 5,000 t/year for each), located in the same municipality but not neighbored (e.g. One site is about maximum 10 km away from the other) as a normal-scale CDM project

Bundles 5 energy efficiency improvements in municipal water utilities (expected emission reductions: 5,000 t/year for each) located in the same state but not

neighbored (e.g. One site is about maximum 100 km away from the other) as a normal-scale CDM project

Bundles biogas utilization in the households (1,000 households, estimated total credit: 4000 t/year) located in the same municipality as a normal-scale CDM project

2. De-bundling

Please choose all answers you think the Kyoto Protocol, Marrakech Accord, or the decision of the CDM Executive Board prohibits its right to be CDM project.

Submit 2 PDDs, which:

De-bundle 30 wind power turbines (1 MW for each) located in neighboring lands as 2 small-scale CDM projects (15 MW for each)

De-bundles 30 wind power turbines (1 MW for each) little far removed from each other (e.g. One site is about maximum 1 km away from the other) as 2 small-scale CDM projects (15 MW for each)

De-bundles 30 wind power turbines (1 MW for each) located in the same municipality (e.g. One site is about maximum 10 km away from the other) as 2 small-scale CDM projects (15 MW for each)

De-bundles 30 wind power turbines (1 MW for each) located in the same states (e.g. One site is about maximum 100 km away from the other) as 2 small-scale CDM projects (15 MW for each)

3. Open Boundary CDM

Open Boundary CDM is the project, of which project participants who claim credits are different from entities who implement actual actions in order to contribute emission reductions. Also actions, which contribute emissions reductions, will be implemented outside of the land project participants own.

Please choose all answers you think new methodologies for baseline and monitoring were already submitted.

Construction of about 100 km- road infrastructure and introduction of more than 1,000 new low-emission buses, which will decrease the use of private vehicles and reduce CO2 emissions.

Fuel switching by producing bio-diesel from edible oil and replacing diesel for vehicles.

Introducing mandatory energy efficiency standard for room air conditioners, so that increasing the average efficiency and reducing CO2 emissions.

Constructing about 1,500 retail outlets for LPG to replace gasoline and diesel for various kinds of vehicles

Utilizing biogas from human excrements in more than 1,000 households in rural area

**Parallel Breakout Group Discussion:
Institutional Issue (DNA)**

Objective

- Identify barriers on DNA implementation
- Find the better (efficient) way of CDM project approval in host country, given the structure of DNA / approval procedure.
- Identify types of capacity building needed for the efficient way of approval.

Discussion topic (Question for implementation of DNA)

Step 1 Initial step / assessment
-What kind of assessment is performed when DNA accepts application? -Who do what?
-What kind of guideline / rule is required for efficient approval? What else? -What kind of capacity building is needed?
Step 2 Technical Team assessment / public consultation
-What kind of criteria you use when you decide whether you ask technical team assessment / public consultation? -What is a role of technical team / public consultation? -What kind of evaluation technical team does? -What kind of guideline the team uses?
-What kind of guideline / rule is required for efficient approval? What else? -How can we facilitate process of DNA board decision-making? -What kind of capacity building is needed?

Step 3 DNA board / relative entities assessment (higher level assessment)

- Who will do what?
- What kind of evaluation this level does?
- What kind of guideline / rule is used?

- What kind of guideline / rule is required for efficient approval? What else?
- How can we facilitate process of DNA board decision-making?
- What kind of capacity building is needed in this stage?

Step 4 Approval letter / notification letter for non-approval

- What kind of letter you will provide?
- When you issue letter of non-approval, is it with reasons or suggestion for revision?

Other topics

What kind of problems do you face?

What kind of activities you need for overcoming?

What kind of capacity building you need?

**Parallel Breakout Group Discussion:
Regional Issue**

Q1. What are the best means to build capacity of the national governments with regard to establishing an efficient institutional setup for approval of CDM project proposals? Is a regional or sub-regional approach appropriate in DNA capacity building?

Q2. What are the useful means to improve human capacity building in the region to assess and promote CDM project proposals? Is it useful to form an Asian network of CDM experts?

Q3. What are the opportunities for inter-institutional collaboration in organizing technology-specific training courses to develop CDM proposals on a regional basis?

Q4. What steps are necessary to enhance region-wide capacity of CDM project developers, prospective certifiers, investors and financial institutions, and legal experts in Asia? What are the effective ways of building synergies in efforts of various capacity building initiatives on a regional basis?

Q5. Which aspects of CDM capacity building (project development, validation and registration, monitoring and verification, and certification) can be best addressed at regional level than at country or local level?

Referece document 1: Country-wise issues

Topic 1. Governments (institutional framework, procedures & modalities)	
Cambodia	<ul style="list-style-type: none"> · Experiences in approving a project activities · Practicality of SD criteria · General awareness raising at the provincial level · Further strenghtening the collaboration between central and provincial governments
India	<ul style="list-style-type: none"> · Further strengthening the collaboration between central and provincial governments · Further strengthening the collaboration among different governmental institutions
Indonesia	<ul style="list-style-type: none"> · Further strengthening the capacity of DNA and other relevant governmental institutions
The Philippines	<ul style="list-style-type: none"> · Follow-up capacity building activities for DNA and other relevant governmental institutions · General awareness raising to decision makers at the government · General awareness raising at the provincial level · Development of the government website with full informaiton (incl. registration) · Further strenghtening the collaboratio among different governemtnal institutions (incl. trade and investment)
Thailand	<ul style="list-style-type: none"> · Need to further strengthen the capacity of DNA and other relevant governmental institutions
Topic 2. Finding potential CDM proejct activities	
Cambodia	<ul style="list-style-type: none"> · Data availability for baseline
India	<ul style="list-style-type: none"> · Balancing the sector representation among the CDM project activities · Further improving the quality of PDD
Indonesia	<ul style="list-style-type: none"> · Data availability for baseline · General awareness raising for the private sector
The Philippines	<ul style="list-style-type: none"> · Data availability for baseline
Thailand	<ul style="list-style-type: none"> · Finding potential CDM project activities and national strategic policy
Topic 3. Technical know-how of CDM by the private sector (e.g. PDD writing skills, monitoring, bundling know-how, etc.)	
Cambodia	<ul style="list-style-type: none"> · Further strengthening the capacity of the private sector · Data availability for baseline
India	<ul style="list-style-type: none"> · PDD consultants and project proponents (cost issue) · Sectoral data availabiltiy for baseline
Indonesia	<ul style="list-style-type: none"> · Further strengthening the capacity of the private sector · Know-how on bundling
The Philippines	<ul style="list-style-type: none"> · Local PDD consultants vs foreign PDD consultants
Thailand	<ul style="list-style-type: none"> · Further deepening the knowledge on baseline methodologies and monitoring plan · Know-how on bundling · Stremelling the information on energy and electricity sector

Topic 4. Implementability of CDM project activities (e.g. financing means/investment, accountability, etc.)

Cambodia	· Creating better investment-friendly environment (particularly for foreign investors)
India	· More involvement of local financial institutions · Establishment of solid data sources for baseline and high quality of PDDs are necessary to reduce the problem of the accountability of CER generation
Indonesia	· Capacity building for the local financial institutions and industrial associations · Creating better investment-friendly environment for CDM promotion · Introducing the pilot projects to reduce the accountability issue
The Philippines	· More involvement of local financial institutions
Thailand	· Capacity building for the local financial institutions

Topic 5. Other activities for creating an enabling environment for CDM (OE, legal & fiscal issues, dispute mecha

Cambodia	· Capacity building to develop local OEs
India	· Further clarification of national policy vis-à-vis legal and fiscal issues (e.g. CER ownership) · Development of dispute mechanism
Indonesia	· Further clarification of national policy vis-à-vis legal and fiscal issues (e.g. CER ownership)
The Philippines	· Further clarification of national policy vis-à-vis legal and fiscal issues (e.g. CER ownership) · Capacity building for legal and fiscal experts
Thailand	· Further clarification of national policy vis-à-vis legal and fiscal issues (e.g. CER ownership)

Reference document 2: Topic-wise issues

Areas for the capacity building	Country Wise					Region-wide	
	Cambodia	India	Indonesia	The Philippines	Thailand	Session on the regional issues	Group Discussion results
Topic 1. Governments (institutional framework, procedures & modalities)							
1) DNA approving experience							
2) DNA SD criteria							
3) Awareness raising for central government							
4) Awareness raising for provincial governments							
5) Inter-governmental collaboration							
6) Central-provincial government collaboration							
7) Improvement of the governmental web-site							
8)							
9)							
10)							
Topic 2. Finding potential CDM project activities							
1) Data availability							
2) Balance of sector representation							
3) Identified CDM projects and national strategic policy							
4)							
5)							
6)							
Topic 3. Technical know-how of CDM by the private sector (e.g. PDD writing skills, monitoring, bundling know-how, etc.)							
1) PDD writing capacity of the private sector							
2) Data availability for baseline (general)							
3) Data availability for baseline (sectoral-specific)							
4) Skills of local PDD consultants							
5) Know-how on bundling							
6)							

Areas for the capacity building	Country Wise					Region-wide	
	Cambodia	India	Indonesia	The Philippines	Thailand	Session on the regional issues	Group Discussion results
7)							
8)							
Topic 4. Implementability of CDM project activities (e.g. financing means/investment, accountability, etc.)							
1) Participation of local financial institutions in CDM							
2) Capacity building for local financial institutions							
3) Capacity building for industrial associations							
4) Creating better investment-friendly							
5) Enforcing the data availability and producing high-quality PDDs to reduce accountability issue							
6) Using pilot projects to reduce the accountability issue							
7)							
8)							
9)							
Topic 5. Other activities for creating an enabling environment for CDM (OE, legal & fiscal issues, dispute mechanism, etc.)							
1) Capacity building for local OEs							
2) Clarification of national policy vis-à-vis legal and fiscal issues							
3) Capacity building of legal and fiscal experts							
4) Development of dispute mechanism							
5)							
6)							
7)							

Group Discussion 3: Regional Issue

Presenter:

Facilitator: Shimura & Tanaka

Distributed documents and available information

- Ref. Doc 1: country-wise issues
- Ref. Doc 2: topic-wise issues
- Panel discussions on the regional issues

Group discussion points	Instructions
<p>1) Synchronize information from the references and results of the panel discussions</p>	<p>(Use Ref Doc 1 & 2)</p> <p>Action 1. Checking the current issues</p> <ul style="list-style-type: none"> · Individual country participants will check items on their countries in Ref. Doc 2 (please if the topics on the left column correspond to your country's current situation, check the box). · Regional participants will check items in Ref. Doc 2 (please if the topics on the left column correspond to your idea, check the box). · Each participant will write what they believe should be considered as a regional issue in each topic of the Ref. Doc 1 & 2 (there are five topics in total). <p>Action 2. Identifying the regional issues</p> <ul style="list-style-type: none"> · Discuss which issues are more effective to bring to the regional level.
<p>2) Identify areas where immediate regional activities can take up with (step-wise analysis)</p>	<p>Action 3. Prioritise the regional issues</p> <ul style="list-style-type: none"> · Discuss in the group which one requires immediate attention for action. Which one is the second most important? · Each participant will write what they believe is the most important issue to be tackle under each topic of the Ref. Doc 1 & 2 (there are five topics in total). · Summarize the different ideas.

Issues and Recommendations

(Technical Issue)

1. Objectives of discussion for technical issues

According to the ultimate objective of discussion; identifying effective capacity development programme in Asia, ICS-CDM/JI Programme designed the group discussion for technical issues by taking the following approaches;

- 1) contributing an understanding of specific issues, which obstruct expansion of the possibilities to identify and to realize potential projects as a CDM project;
- 2) identifying what information is lacked in the process of project identification and development, and;
- 3) identifying any possibilities to develop the capacity by ICS-CDM/JI programme from the technical point of view.

Based on these approaches, technical group had three technical discussions to analyze an understanding of latest issues in CDM and one institutional discussion to identify the existing barriers on the specific sectors and its applicable capacity development approaches for further ICS-CDM/JI intervention from the perspective of the technical assistance.

2. Summary of exercise and discussion

The technical discussions were categorized in the following three issues.

- (1) Bundling
- (2) De-bundling
- (3) Open-boundary CDM

These topics are highly controversial and on-going issues being discussed among the expert-level of the Kyoto Mechanisms in the world. There seems to be lack of comprehensive understanding, which will obstruct further identification of feasible potential projects in the host countries. Therefore, by addressing the participants' understanding on these issues (the participants of the workshop represented the national counterpart of ICS-CDM/JI such as the government staffs, NGOs or universities), ICS-CDM/JI aimed at ultimately contributing further identification of

highly qualified CDM projects to be registered under the CDM-EB by helping the trainers of the country realise and expand these knowledge to the whole country.

Bundling issues brought some discussing points such as capacity of the projects (small-scale or normal-scale), the number of projects to be bundled, proximity to each project site, etc. Facilitators introduced 11 projects, which will plan to bundle in different conditions mentioned above (See the attached detailed questions 1) to promote tangible discussion. Most participants could not distinguish which conditions project developers can bundle due to the lack of understanding in the proximity. In other words, few people recognize there is no limitation to bundle the projects in terms of the proximity to each project.

De-bundling also raised the similar issues. Facilitators introduced 6 projects, which will plan to de-bundle into two small-scale CDM projects (See also the attached detailed questions 2).

Also facilitators introduced 5 different projects, which address open-boundary CDM issues (4 out of 5 projects were already submitted as new methodologies.) Most of them do not seem to be the majority of types of CDM projects. Most participants did not recognize appropriate answers to new baseline methodologies, which indicated that there were still limited ideas to apply for CDM projects among hoste countries (See the attached detailed questions).

By identifying these fixed ideas and removing them, technical group tried to ultimately contribute an expansion of potentiality of CDM projects in the country and develop these areas by further capacity building activities.

Finally, technical group had discussion “which sectors had relative high potentials but still under-development in terms of identification and development of the projects.” Groups had also addressed the availability of approved methodologies and data and possible intervention by capacity building activities. Due to the short time and limited opinions to the sectors, the identified sectors do not necessarily represent the country potential sectors. However, groups had identified key finding toward the intervention of capacity building activities in order to develop the sector-specific issues in each country.

1. There was common concern among all participants toward the area where the

methodologies and projects are still under-developed in terms of number of submission to the CDM-EB. (e.g. large-scale renewable (China), sink projects (Indonesia), etc.)

2. There was limited national publicized data source, which project proponents were able to refer especially national grid data to the specific projects such as geothermal (Indonesia), rough estimation of biomass from the government (the Philippines), no available data (Cambodia), etc.

In conclusion, technical groups summarized the important issues and recommendations for capacity building activities in Asia in terms of technical aspects following two points.

3. Recommendations

It was obvious that there were still misunderstanding towards some definitions, even though the person who were in the technical group at least had experience to train or teach technical issues such as baseline methodologies and development of the Project Design Document as a capacity building activities in the country. Therefore, the recommendations from technical groups for further capacity building activities in Asia are as follows:

- 1) promoting the “training for trainers” WS touching the latest issues, which bring accurate understanding in terms of interpretation of the definition and its establishment of common appropriate understanding to facilitate project submission from the country;
assisting the development of national data and its availability to all project participants in order to distribute the sufficient information and reduce the transaction costs of projects.

Issues and Recommendations (Institutional Group)

1. Information exchange on approval process
 - ✓ Many Governments are in a process of establishing approval process. Good to exchange information and experience. Process needs to be practical, to have clear time line, and to be non-theoretical.
2. Information exchange on approval criteria
 - ✓ Approval criteria should be clean and simple. Should not contain any hidden-criteria. Preferably there should be advisory services for project preparation provided in approval process.
3. Information exchange on SD criteria
 - ✓ Development of sustainable development criteria is a complicated process and exchange of experience is beneficial.
4. Information exchange on decision making structure
 - ✓ Decision making steps and structure, e.g., having a second layer institution, such as a Steering Group or sub-DNA appears common. Information exchange on the functions and constitution of such an institution will be beneficial.
5. Testing of SD criteria
 - ✓ Testing of SD criteria appears necessary. Mutual testing should be considered.
6. Sharing experience and understanding on important issues
 - ✓ DNAs' common understanding and sharing information on important issues, such as additionality , baseline and methodologies will be beneficial.
7. More Regional Workshops
 - ✓ Regional information exchange and sharing relevant database appears necessary and beneficial. Suggest to convene more regional workshops, such as this one, for such a purpose.
8. Internet-based sharing
 - ✓ Regional sharing of experience and information on new methods, and relevant data is beneficial. An Internet-based facility should be considered.
9. Information dissemination to different target groups

Information dissemination to project developers or potential investors needs to be expanded. Workshops for this should be considered.

Issues and Recommendations (Regional Group)

1. Identification of approaches to be taken for designing regional capacity building programmes

Capacity building at the regional level is not new to most of the participants. All group discussion participants agreed that strengthening information sharing and further regional collaboration can contribute to the acceleration of the CDM development in Asia. In order to create effective and robust regional programmes, the participants identified following four issues:

- 1) Needs assessment at the regional level
- 2) Categories for grouping
- 3) Topics and target audience
- 4) Networking

Taking into consideration of the speed of the CDM market evolving, some participants expressed the needs for reassessment on the capacity building as well as already existing initiatives at “regional level” in order to provide a grand and comprehensive scheme for the regional collaboration. The participants of the group discussion agreed that it is not the question of what ‘can’ be done at the regional level, but rather what ‘should’ be done at the regional level so that the regional activities can complement country-level activities. Some group participants expressed that the capacity building for developing Project Idea Notes (PIN)s and Project Design Documents (PDDs) should be done at the country-level while the capacity building for project validation and verification should be done at the regional level. Sector-specific baseline methodologies can be done at the regional level if there is sufficient interest.

The participants also agreed that a definition of ‘regional’ should not reflect only one type of grouping of countries. The effectiveness of sub-regional activities should not be neglected. The categorizing criteria should be based on capacities for some activities rather than based on the geographical grouping. Categorizing criteria can be, for instance, based on the type of topics and target groups. Identifying who requires further capacity strengthening collectively as a region will help to formulate effective

regional programmes. Expert-level training programmes on specific topics can be one niche to bring up to the regional level. The reassessment can also reveal different combination of grouping for the regional activities.

Networking is another issue that the participants felt the needs for clarification. Although there exist various types of networks in the region, the participants believe that the purpose of having a specific type of network and its co-ordination need to be clear from the beginning if we were to have anything concrete to achieve from the networking.

2. Recommendations

Having these four points in mind, the group discussion participants prioritise the four most required area of the regional capacity building:

- 1) investment promotion and finance;
- 2) technical enhancement;
- 3) networking; and
- 4) information exchange among Designated National Authorities (DNAs).

1) Investment promotion and finance

The participants agreed that the utmost priority for the region is the CDM investment promotion and finance because lack of means to finance up-front costs for CDM projects was identified as the most concerned issue of today. Information on access to government funding and investment funding needs to be widely disseminated. The participants felt that one single regional gathering can provide solutions to the major bottlenecks for the development of CDM projects. By bringing in both investors and project developers to a regional forum, we can not only achieve the regional buyer-seller meetings as well as providing specific capacity building for financial institutions and investors.

2) Technical enhancement

Topics for the technical enhancement can be narrowed down to the following issues: baseline methodologies, additionality assessment, and other issues such as validation, verification, CER term/conditions, ODA, etc. Regional technical programmes can, for instance, include training for experts on the subjects which have not been well addressed at the individual country-level, in order to avoid any overlapping between the country-based and regional activities. Establishing a technology needs-matrix can

help effectively use the regional resources.

3) Networking

The participants view networking needs in two aspects: energy-climate-development linkage and technicality of CDM. The participants viewed that a place to address the better linkage in energy-climate-development issues is necessary in Asia in order to mainstream CDM more towards goals of the sustainable development. Networking among professionals for specific issues or process in CDM, such as lawyers, is also crucial to have clarification for sound practice and thus promote CDM activities in the region. Some participants felt that awareness raising of CDM at the sub-regional or regional level should be continued not only for sharing experiences but also for the purpose of networking.

4) Information exchange among Designated National Authorities (DNAs)

The participants agreed that more information sharing efforts should be orchestrated among DNAs of the host countries on regular basis. In stead of being confined to their own sets of rules for approving CDM projects, DNAs can learn from their neighbouring countries in terms of DNA structure, approving process, and sustainable development criteria.