



# Awareness Raising Workshop

## Part 1: The Clean Development Mechanism (CDM)

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# Overview

- Background Kyoto Protocol and CDM
- Baseline and Additionality
- Approved Methodologies and Obstacles
- Small Scale CDM and Sinks Projects
- CDM Demand
- CDM Supply (Technology Share, Funds)



# Background + History

1992: United Framework Convention on Climate Change  
UNFCCC

1997: Kyoto-Protokoll: emissions targets for industrialized countries

→ No targets for developing countries, but incentives for reductions on the basis of the Clean Development Mechanism

2001: Marrakesh Accords which set the rules for Flexible Mechanisms

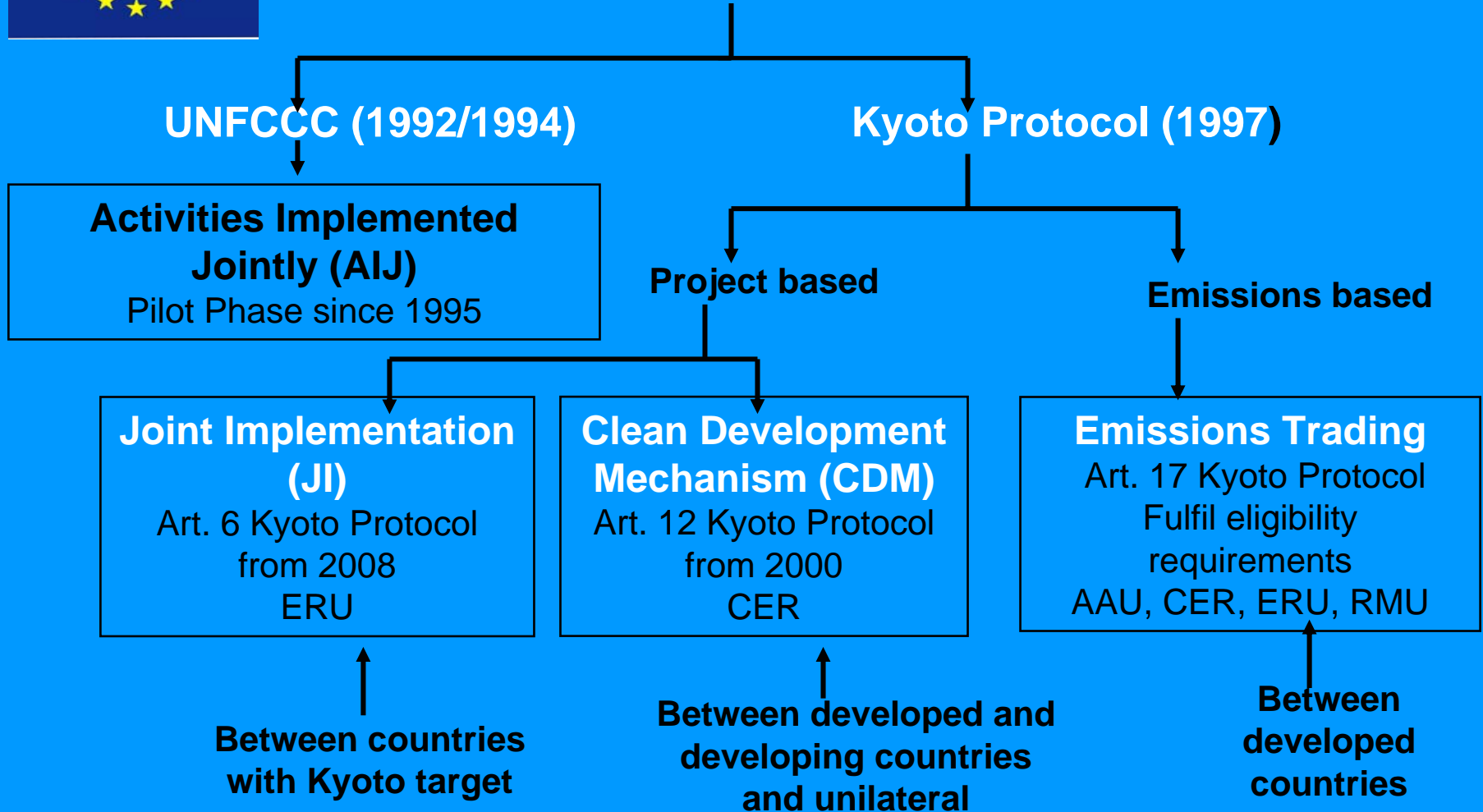
2003: Rules for CDM sink projects

2004: Rules for small scale CDM sink projects

Aim: cost effectiveness → Flexible Mechanism



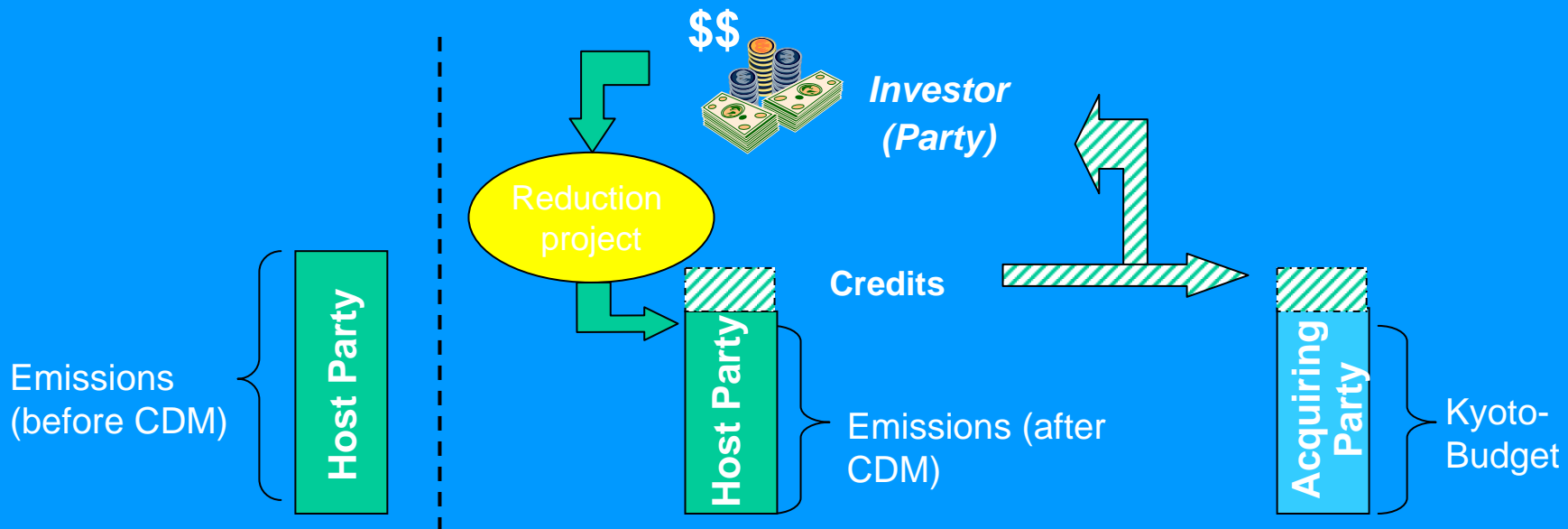
# What are the Flexible Mechanisms?





# Functioning of CDM

- Project proponent (government / private) invests in reduction project
- Certified Emissions Reductions (CERs) are generated
- CERs are credited on target of Investor (Party or entity)





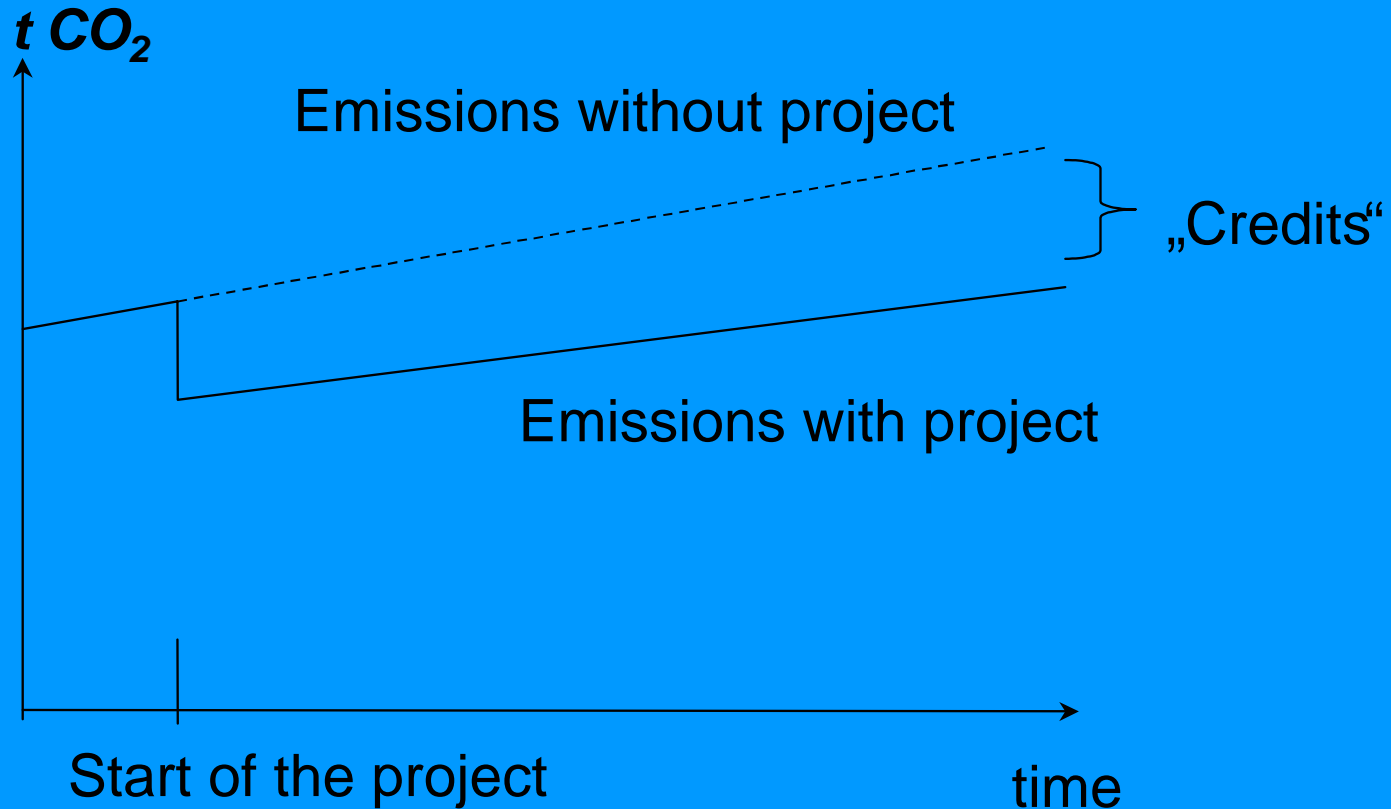
# Project Eligibility

- Only emissions of greenhouse gases listed in Annex A of the KP (Article 3 KP).
- Demonstrable contribution **sustainable development** (Annex p. 35, Para. 40a [2])
- Written Approval of **voluntary participation** of project participants. (Annex p. 35, Para. 40a [2])
- Refrain from using **official development aid** (Decision p. 20 [2])
- **Additionality**: Barriers or quantitative evidence
- Refrain from credits generated from **nuclear facilities** (Decision p. 20 [2])
- **Stakeholder** comments and a report to the designated operational entity on how due account was taken of any comments has been received (Annex p. 14, Para. 31 [2])





# Baseline



**Crediting time: 3 x 7 years or 1 x 10 years**



# Baseline: Case law and path dependency

- The EB does not provide a basic set of rules beyond the Marrakech Accords text
  - Exception: small scale projects
- All rules are developed by case law
- Project pioneers have to propose a new rule (“methodology”) for each new project type
  - Higher validation costs
  - Delay of several months
  - Risk of refusal
- The CDM regime is shaped by first proposers
- Important role of validators, methodology panel and expert reviewers



# Additionality and baselines

**Kyoto Protocol** states CDM projects should lead to:

*Real, measurable, and long-term* benefits related to the mitigation of climate change; Reductions in emissions that are *additional* to any that would occur in the absence of the certified project activity (Art. 12, 5, b+c)

## Environmental integrity

- Prevent fictitious emissions reductions

## Economic efficiency

- Minimize sum of transaction costs for project participants and public institutions



# Additionality tests

## **10th session of CDM EB states:**

As part of [...] determining the baseline scenario an explanation shall be made of how, through the use of the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario.

- Flow-chart / series of questions that lead to a narrowing of potential project options
- Qualitative / quantitative assessment of different potential options and an indication of why the non-project option is more likely
- Qualitative /quantitative assessment of one or more barriers facing the proposed project activity
- Project type is not common practice in the proposed area of implementation, and not required by recent/pending legislation/regulations

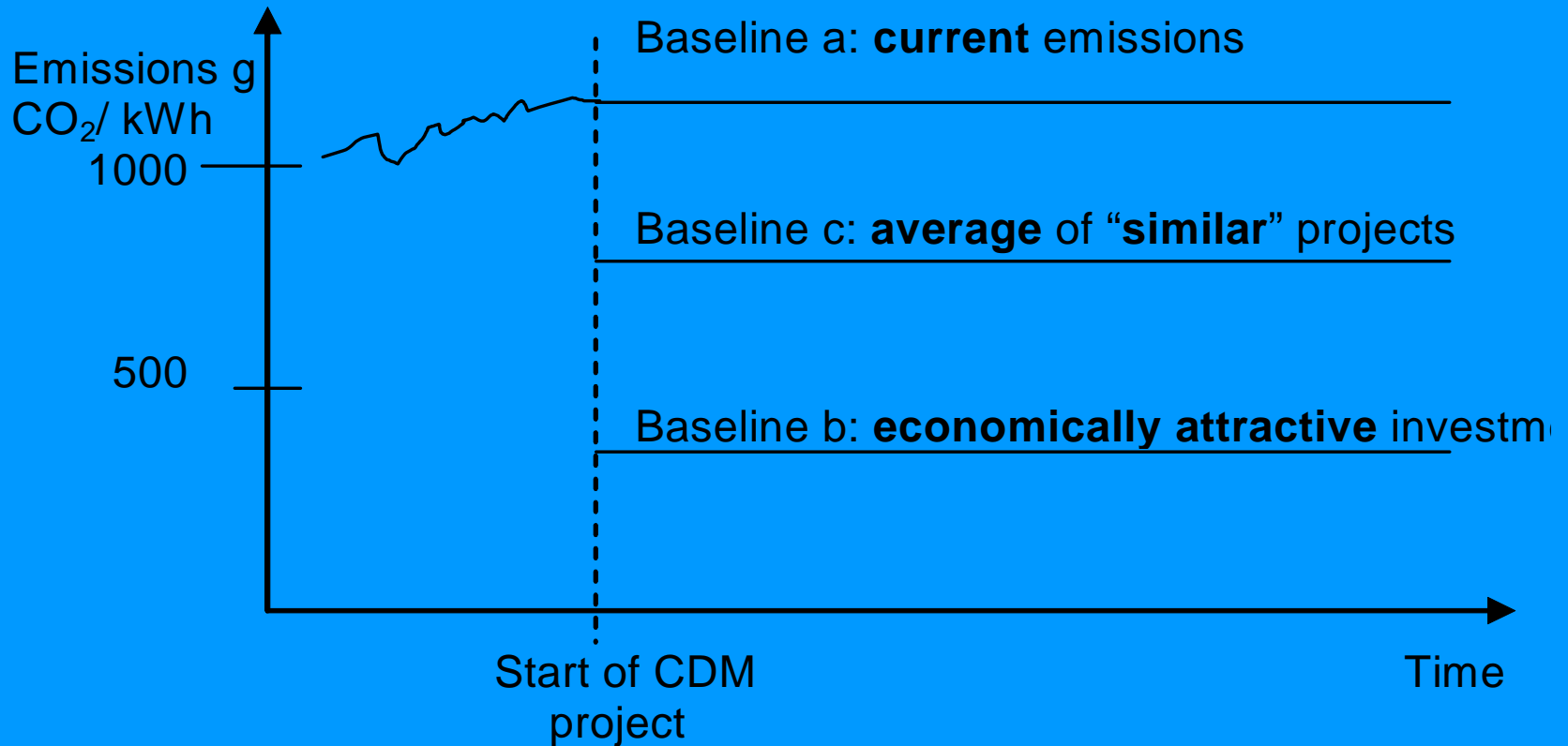


# Links between baseline and additionality determination

- Project-by-project baseline approach allows integrated determination of additionality, e.g. by looking at the least-cost alternative project as a baseline or a control group.
- Benchmarks do not capture additionality; thus a separate additionality test is necessary



# Baseline principles



- a) old coal fired power station 1200 g CO<sub>2</sub>/kWh.
- b) gas turbine 450 g CO<sub>2</sub>/kWh
- c) 850 g CO<sub>2</sub>/kWh

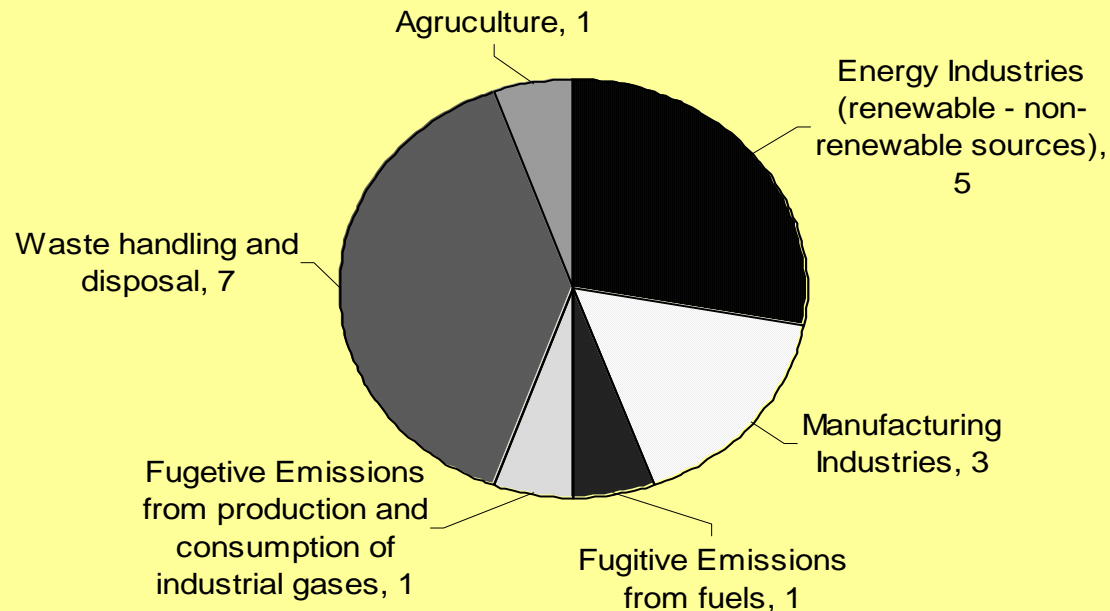


# Status of Approval process for baseline methodologies

- ➔ A CDM Methodology Panel was formed to revise all baseline and monitoring methodologies presented in order to give recommendations to the Executive Board (EB).
- ➔ Up to now **64** baseline and monitoring methodologies were **presented**.
- ➔ Presently final **recommendations** for **36** projects are publicly available.
- ➔ Up to now **16** CDM methodologies were **rejected** (i. e. C-status), 8 in the first round.
- ➔ **18** CDM methodologies have been **approved** so far by the EB (i. e. A-status). Most have not been approved by the **first evaluation**.



# Approved baseline methodologies by project type





# Main reasons for revision / for non approval of the baseline methodology

**Additionality** You have to show that the project activity is not part of the baseline.

- ➔ insufficient / lack of justification
- ➔ wrong use of the term „environmental additionality“

**Choice of one of the following approaches (§ 48 Marrakesh Accords CDM M&P):**

- (a) Existing actual or historical emissions, as applicable; or
- (b) Emissions from a technology that represents an economically attractive course of action, taking into account barriers to investment; or
- (c) The average emissions of similar projects activities undertaken in the previous five years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category.

- ➔ Selection of a wrong approach
- ➔ no decision for one of these approaches
- ➔ lack of clarity which approach is chosen



# Main reasons for revision resp. for non-approval of the baseline methodology

## „most appropriate“

You have to identify the most appropriate approach among the three (see above) for the project activity.

→ insufficient / lack of justification

## Transparency and conservatism

The baseline must be established in a transparent and conservative manner.

→ **transparent:** detailed explanation and justification of assumptions.

→ **conservative:** in the case of doubt, values that generate a lower baseline projection shall be used.

## Project activity is already under construction

→ Project activity economically attractive?

→ Indicates: the project activity is not additional.



# Overview of main reasons for non approval of baseline methodologies

main reasons for non approval	number of projects
<i>no sufficient clarification of the additionality question</i>	8
<i>no clear argumentation for justifying, if the baseline methodology is most appropriate</i>	6
<i>no demonstration that the project activity is not the baseline</i>	5
<i>notes to the baseline calculation</i>	5
<i>no sufficient accuracy in the financial analysis / no application of a specified methodology for cost calculation</i>	5
<i>project boundaries or leakage are not sufficiently defined/ lack of explanation why leakage is negligible</i>	5
<i>lack of transparence and/or conservatism in the methodology</i>	5
<i>wrong use of terms</i>	4
<i>better explanation of the sensitivity analysis / Assessment of uncertainties more detailed</i>	4
<i>presentation of essential information in the CDM-PDD but not in Annex 3 or Annex 4</i>	4



# Small Scale CDM Projects (SSP)

- (i) renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent);
- (ii) energy efficiency improvement project activities that reduce energy consumption on the supply and/or demand side, by up to the equivalent of 15 GW hours per use;
- (iii) Afforestation or Reforestation projects that are expected to result in net human-induced greenhouse removals of less than 8 kt of CO<sub>2</sub> per year and are developed or implemented by low-income communities or individuals (as determined by the Host Country); or
- (iv) other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kt of carbon dioxide equivalent annually.



# Simplified Procedures for SSP

- (i) a simplified Project Design Document;
- (ii) simplified methodologies for determining a baseline and creating a monitoring plan;
- (iii) the ability to bundle project activities for the Project Design Document, registration and verification to reduce administration costs;<sup>11</sup>
- (iv) simplified provisions for environmental impact analysis;
- (v) lowered registration fee;
- (vi) an automatic ability to have the same DOE verify and certify emission reductions for a specific small scale CDM Project activity.



# Baselines for small scale projects

- Only category where baseline rules have been set by EB. Additionality test through proof of barrier
- 13 project categories with distinct rules
  - Electricity generation by the user; Mechanical energy for the user; Thermal energy for the user; Renewable electricity generation for a grid
  - Supply side energy efficiency improvements – T&D;-Generation; Demand-side programmes for specific technologies; EE and fuel switching measures for industrial facilities; for buildings
  - Agriculture; Switching fossil fuels; Emission reductions by low-greenhouse emission vehicles; Methane recovery and avoidance
- Example: Renewable electricity generation for a grid
  - Average of 1. weighted average emissions of all generating sources serving the system, excluding hydro, geothermal, wind, low-cost biomass, nuclear and solar, and 2. lower of most recent 20% of plants built or the 5 most recent plants;
  - Weighted average emissions of the current generation mix



# Thresholds for small-scale projects and transaction costs

Project type	Annual full load hours	GWh	CERs/year	TAC/ CER (\$)
Hydro 15 MW	8000	120	108,000	0.5
Wind 15 MW	2700	40	36,000	2
Energy efficiency 15 GWh	NA	15	13,500	20
Fuel switch coal to gas below 15kt	NA	NA	23,350	5



# Special rules for CDM Sink Projects

- Only **Afforestation and Reforestation** (“A&R”) projects eligible during the first commitment period. Only projects which involve the planting of land which has not been forested since 1 January 1990 will be eligible.
- Annex I Parties can only use CERs from sinks projects up to an amount equivalent to **1%** of their Assigned Amount, times five.
- Two option for **crediting periods**
  - A maximum of 20 years which may be renewed at most two times, or
  - A maximum of 30 years
- Two alternative **accounting approaches** for sinks credits, both are based on 5 year verification and certification:
  - temporary CERs (“**tCERs**”)
  - long term CERs (“**ICERs**”).
    - > Difference: e.g. replacement process (types if credits), period of validity
- **Baseline:**
  - (a) Existing or historical, as applicable, changes in carbon stocks in the carbon pools within the project boundary;
  - (b) Changes in carbon stocks in the carbon pools within the project boundary from a land use that represents an economically attractive course of action, taking into account barriers to investment;
  - (c) Changes in carbon stocks in the pools within the project boundary from the most likely land use at the time the project starts.”



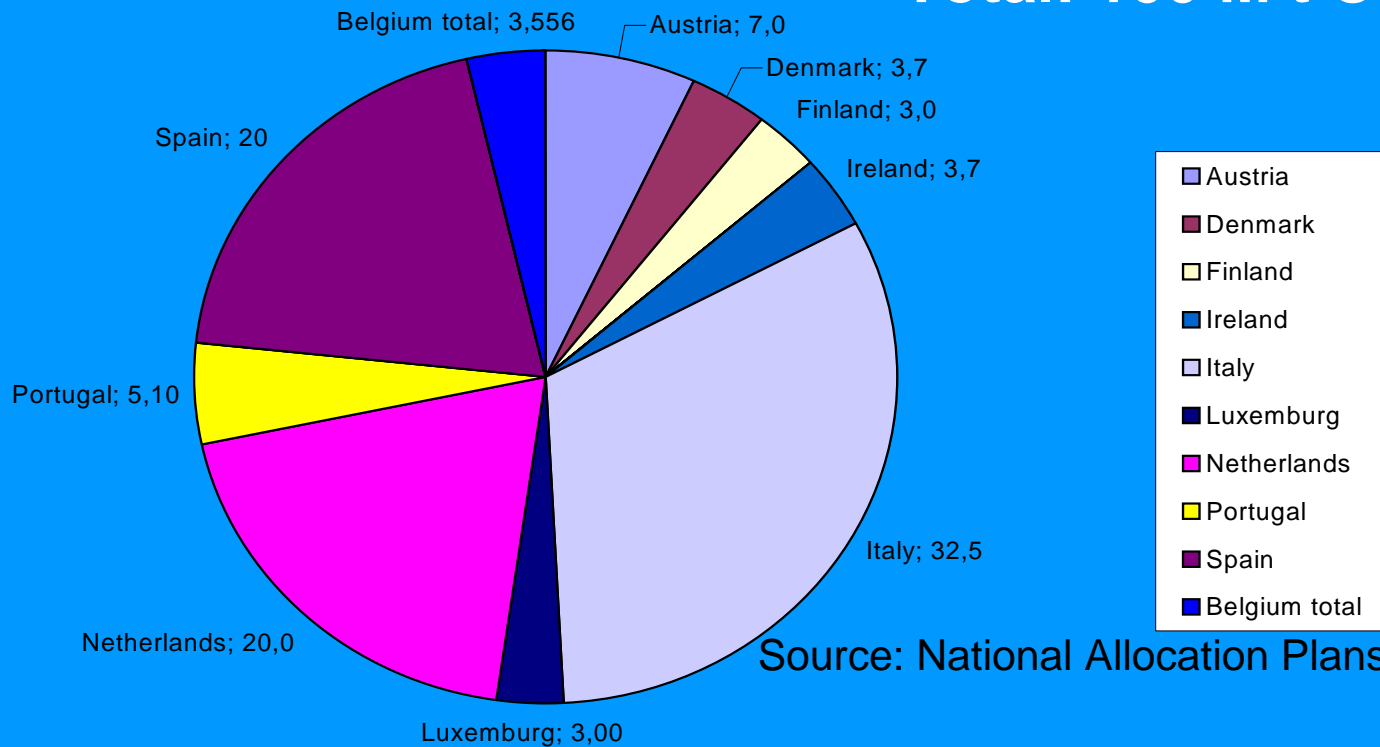
# The EU Linking Directive

- Final agreement: April 2004
- Accounting of CERs, ERUs in EU ETS
- Not dependent on ratification of Kyoto Protocol
- Restricted use of CERs / ERUs by operators (% defined in NAP)
- No nuclear, no sinks projects are eligible
- World Commission on Dams for Large hydro-power >20 MW
- Use of CERs from 2005
- Use of ERUs from 2008
  - Baseline has to reflect *acquis communautaire*
  - Cancellation of equivalent number from operator (direct) or registry (indirect)



# European government expressed interest in Kyoto Mechanisms 2008-2012 (M t CO<sub>2</sub>e /a)

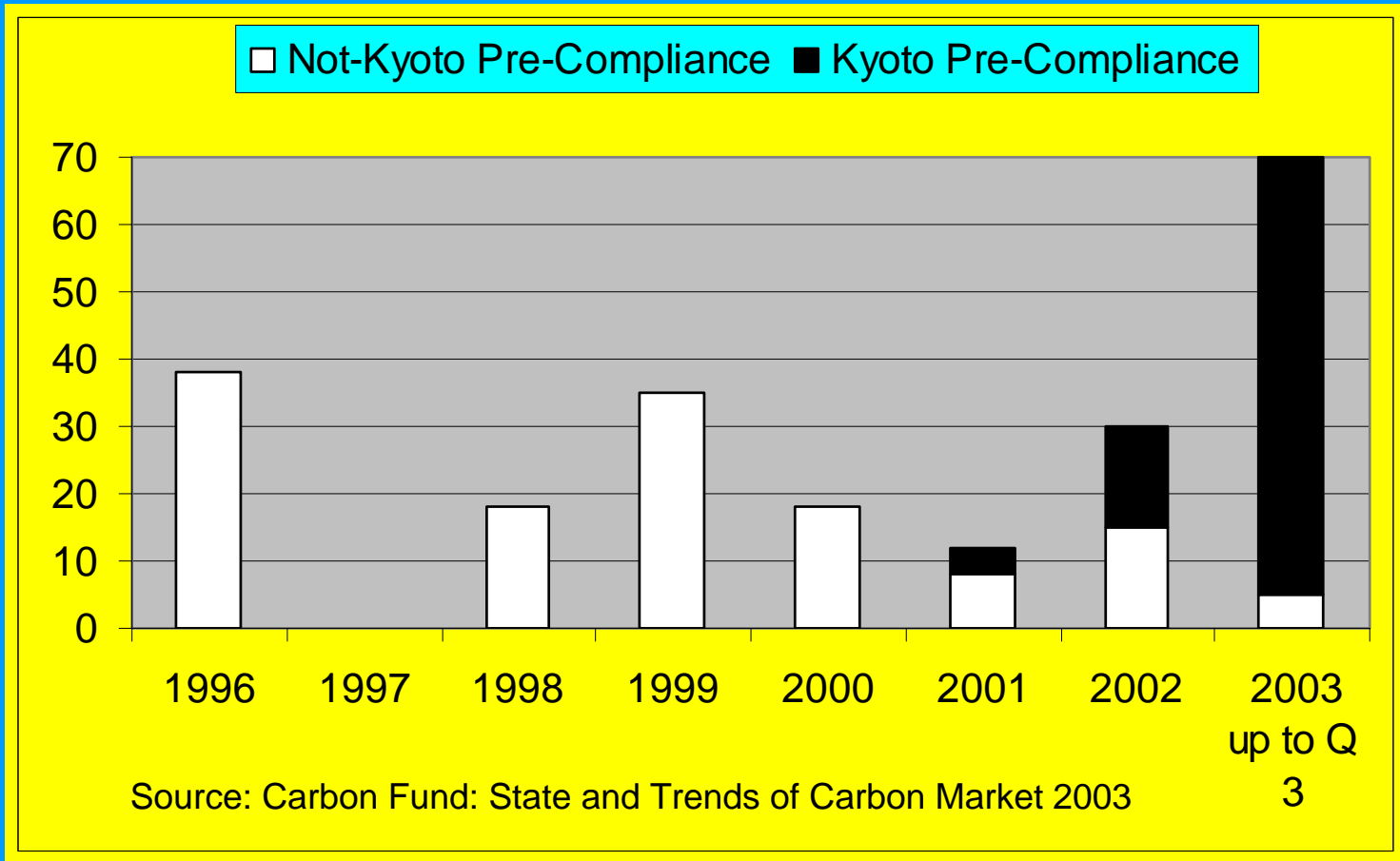
Total: 100 M t CO<sub>2</sub>e / a



Source: National Allocation Plans

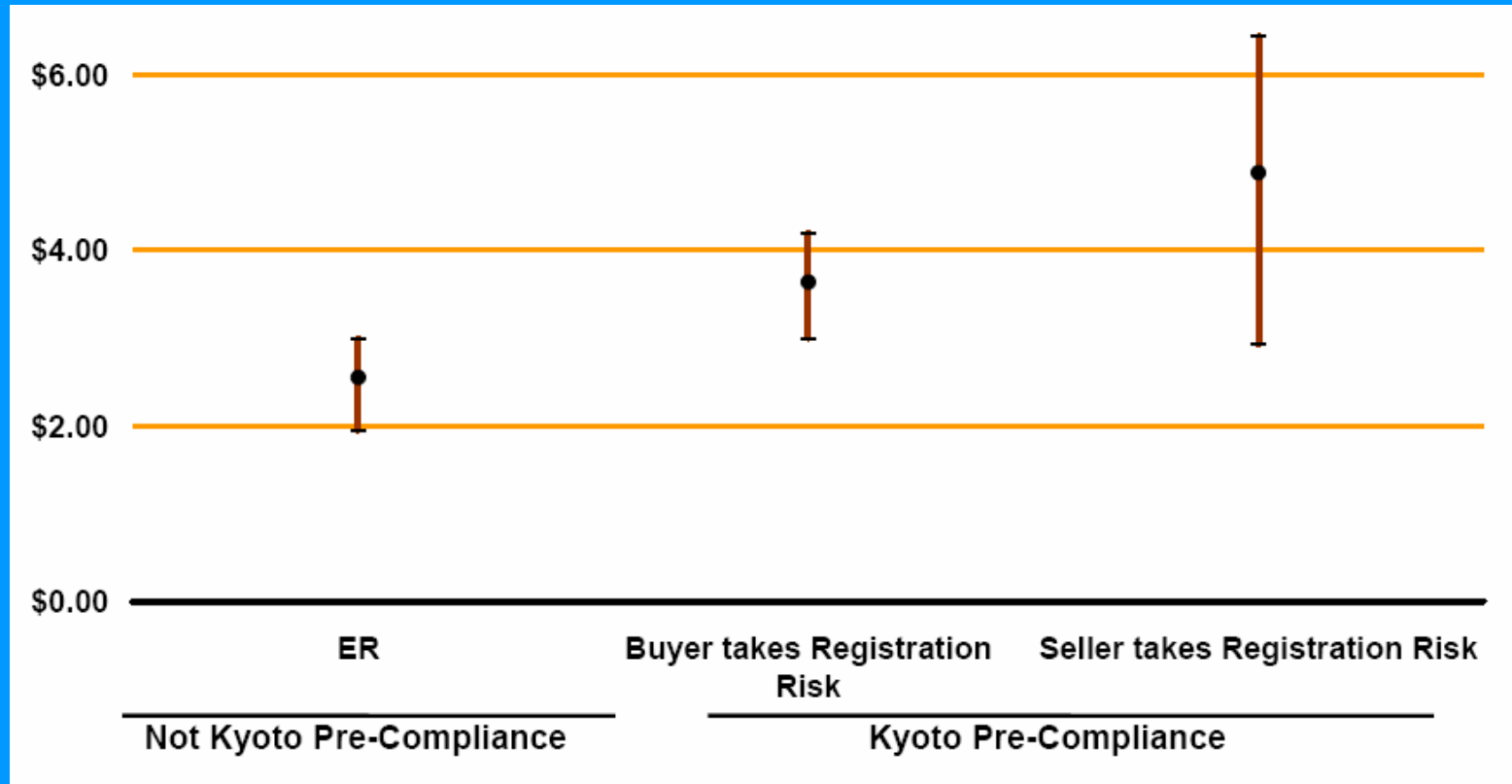


# Volume of project-based emission reductions per segment (M tCO<sub>2</sub>e)





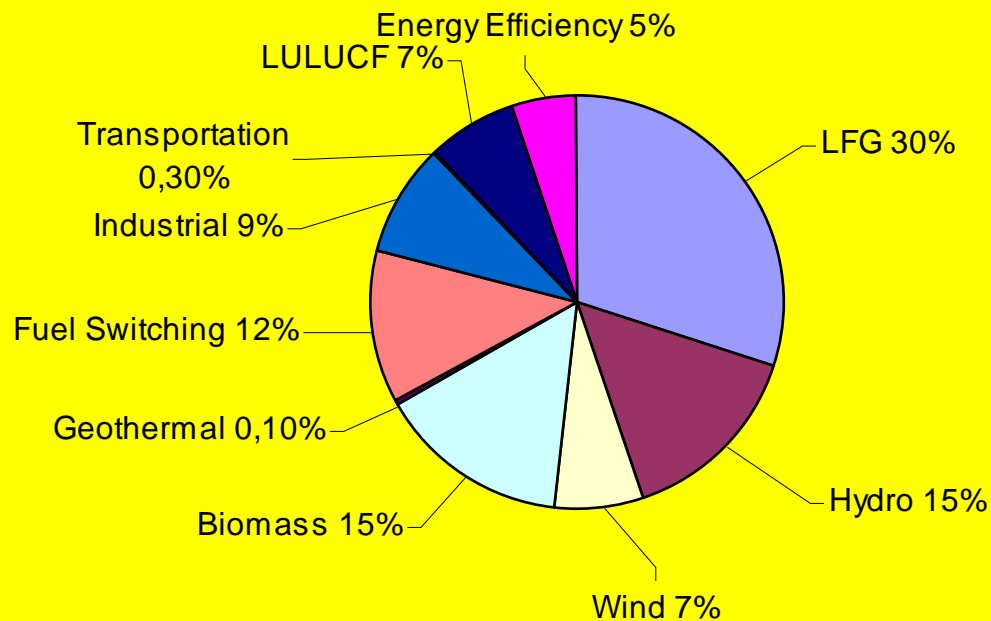
# Prices for non-retail project-based ers 2003 (in U.S.\$ per tCO<sub>2</sub>e)





# Technology Share of Emissions Reduction Projects 2002 – 2003

in percent of total volume contracted



Source: Carbon Fund: State and Trends of Carbon Market 2003



# Conclusion

- Aim of CDM to increase cost effectiveness
- Complex CDM Project Cycle
  - Baselines
  - Additionality
  - Approval
- Strict interpretation of Marrakech of Executive Board
- First baseline and monitoring methodologies approved
- Increased demand from EU countries
- Projects implementation will need lead time



Host countries have to act now!



# Awareness Raising Workshop

## Part 2: CDM Infrastructure in the Host Country

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# Presentation Overview

- Participation requirements for Host Parties
- Designated National Authorities
  - Role of DNA
  - Existing DNA
  - Structure of DNA – Example Indonesia
  - DNA funding options
- Project Idea Note



# Participation Requirements for CDM Host Countries

- Ratify Kyoto Protocol  
(Para. 31a MA)
- Designate a National Authority  
(Para 20a MA)
- CDM-Sink-Projects: Select and report to the Executive Board a definition of "forest" (Para. 8 Decision 19/CP9)



# Actors in CDM

- Project Developers
- Executive Board
- **Designated National Authority (DNA)**
- Designated Operational Entities
- CER Purchaser



## Role of the DNA according to Marrakech Accords

- Decide on Sustainable Development (SD) Criteria
- Confirm voluntary participation of Project Participants
- Confirm SD contribution of the project and issue letter of approval for the purposes of validation and registration
- Reporting to UNFCCC Secretariat



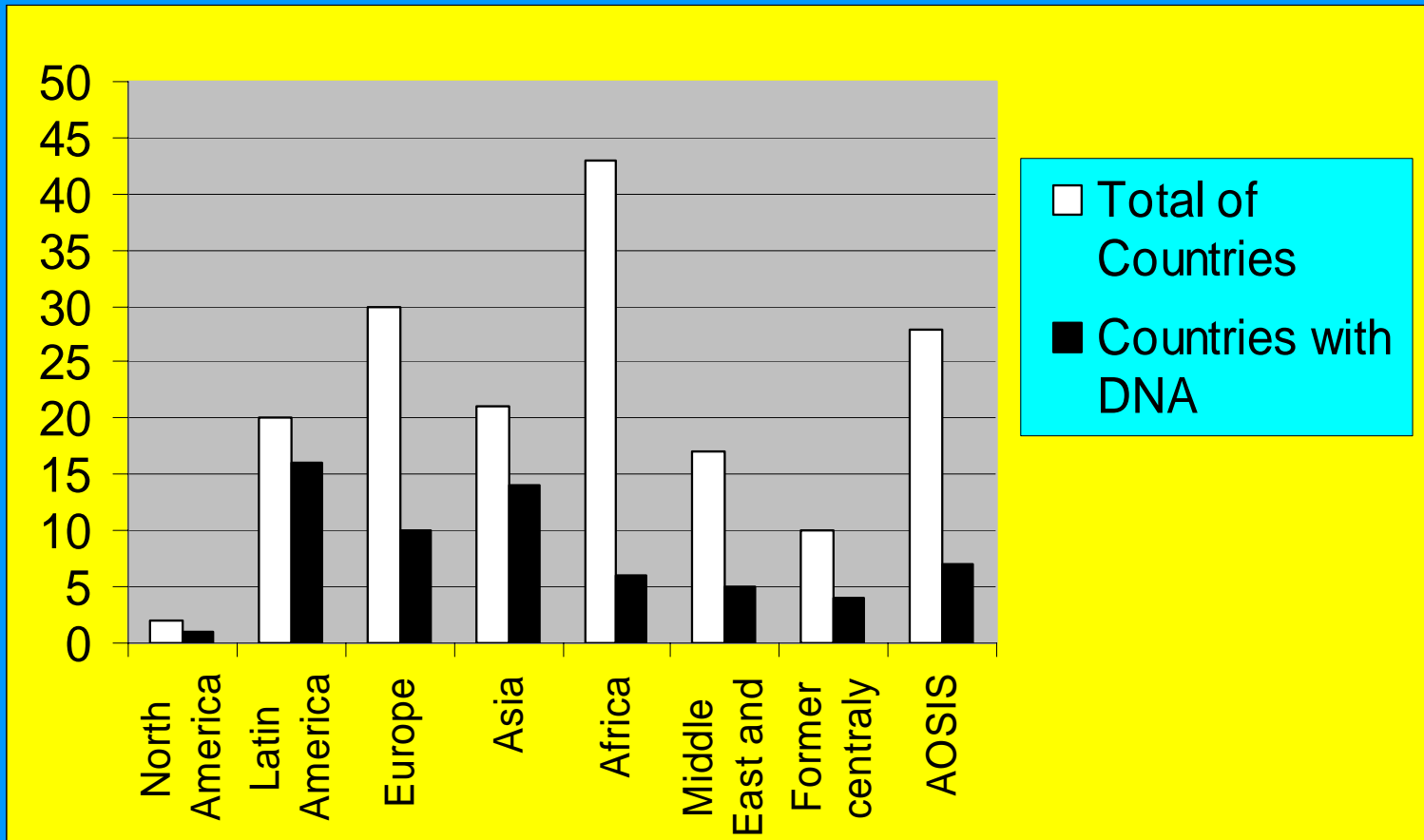
# Additional Role of the DNA

<b>Functions</b>	<b>Desired Outputs</b>
<b>Information Database</b>	<b>Facilitating communication between actors; Projects portfolio; Partner matching data; Appropriate Technologies data; Data CD-ROM</b>
<b>Information Dissemination/ Training</b>	<b>Web site development; Newsletter Seminars and training manuals for project developers</b>
<b>Policy Development Support</b>	<b>Regional networking; Consensus building; Policy documents Simplified rules for small projects</b>
<b>Project Development Support</b>	<b>Project CDM packaging; Project documents/updates; Standardized methodologies; Assessment of the project potential unilateral CDM</b>
<b>Operational Entity Support</b>	<b>National Accreditation; Seminars Promotion</b>
<b>Credit Sharing Support</b>	<b>Model contracts; Negotiation capacity</b>
<b>Marketing</b>	<b>Web site hosting; Road-shows</b>



# DNAs According to Region

Total number of DNA: 65 (September 2004)





# National Authorities in Latin America

Country	Date of setup	Type	Approval competence	Website (update)	Staff	Funding source
Argentina	1998	Two-tier (govt.)	Env. Ministry	✓2002	1	Nat. govt.
Bolivia	1997	Govt.	Env. Ministry	-	0	-
Costa Rica	1994	Independent	✓	-	3	2002-mixed 2002-private
Ecuador	2000	Two-tier *	Env. Ministry	-	0	-
El Salvador	2000	Govt.	Env. Ministry	-	?	Nat. govt.
Guatemala	1996	Two-tier *	Env. Ministry	✓1998	3	Private
Honduras	1999	Independent	✓	✓ 2002	>1	Foreign govt.
Panama	1999	Independent	Env. Ministry	-	1	Nat. govt.

Source: own research and information from text Figueras and Olivas (2002)

\* = Independent secretariat but government approval body



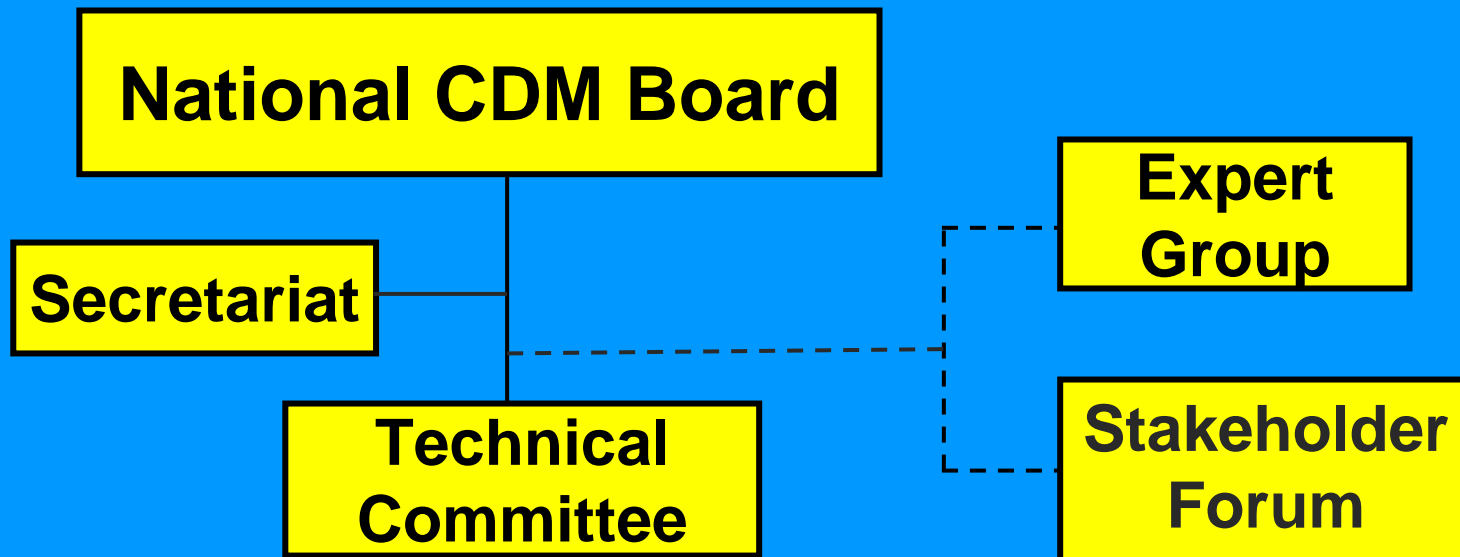
# DNA Approaches

- Single government department model
- Two tier
- Inter-Departmental government model
- FDI-piggyback model
- Outsourcing model



# Designated National Authority

## Two tier: Indonesia





# Tasks in the CDM Project Cycle

Project Idea Note (PIN)

Project participant

Preliminary Approval of PIN

DNA/National Board

Project Design Document

Project participant

*Checks conformity with:*  
\* Sustainable Development,  
\* Environmental Impact Analysis,  
\* Voluntary participation  
\* Consultation on project

Technical  
Committee

Stakeholder Forum

Official Approval of PIN

DNA/National Board

Project Design Document

Validation...

Operational Entity (OE)  
Executive Board



# Task of the National CDM Board

Consists of e.g. **7 Members and 1 Chair** of government representatives of relevant Ministries

- Grant (or refuse) recommendation for Project Proposals
  - Recommendation based on evaluation by Technical Committee.
- Approve and deliver the results of document tracking, project monitoring and evaluation, annual report to UNFCCC Secretariat
- Develop policies and guidelines for the DNA for promotional functions (i.e. communication, capacity building)
- Organise Internal Coordination Meeting and Decision-making Meeting
- Organise Stakeholder Forum meeting (sent invitations to the potential participants)
- Make personnel decisions for the Secretariat



# Task of Secretariat

- Facilitates the evaluation process of the submitted project proposals
  - Assist the Board in facilitating Technical Committee evaluate project proposals, particularly in the implementation of sustainable development criteria and indicators, compliance to environmental regulations and taking stakeholders' comment into account.
  - Assists the Board in organising Stakeholder Forum Special Meeting for proposed projects that have not held public consultation or need additional consultation with their Stakeholders.
  - Assists the Board if there were appeals
- Manages office administration of DNA
  - Stores any documentation on project activities
  - Prepares tracking document and annual report
  - Organise Board meetings
  - Conducts other administrative functions
- Executes the promotional functions determined by the Board
  - Develops capacity building programs for CDM stakeholders
  - Conducts promotional and marketing activities
  - Facilitates communication and collaboration between foreign CDM investors and project proponents as well as other stakeholders
- Makes a list of Experts (roster) complete with their expertise and will update the list with the newest information on the availability of experts
- Actively identifies stakeholders of the proposed projects to be discussed in the Stakeholder Forum Meeting



# Task of Technical Committee

- Evaluates project proposals based on sustainable development criteria and indicators. May ask for inputs from the Expert Group and other Stakeholders.
- Presents its evaluation report (recommendation) to the Board through the Secretariat.
- Provides input to the Board relating to the implementation of the DNA's promotional functions.
- **Membership:**
  - Members of Technical Committee work with the invitation from the Board according to the characteristics of project proposal under evaluation
  - Chairman of Technical Committee is held alternately by one of the representatives of technical ministries according to project proposal under evaluation
  - Technical Committee membership ends when:
    - Not attending two meetings consecutively
    - Replaced by the institution he/she represented
    - Resign
    - Violate *DNA Code of Conduct*
    - deceased or disabled thus unable to perform her/his duties



# Function of Expert Group

- Assists Technical Committee if requested by Technical Committee through the Secretariat
- Provides additional evaluation on the project proposal if requested by the Board through the Secretariat
- Provides a second opinion on the Technical Committee's evaluation if requested by the Board through the Secretariat



# Function of Stakeholder Forum

- is an informative consultation forum to convey information on the proposed CDM project and accommodate comments as well as complaints on the project
- provides input on project proposals if requested by the Board
- may assist project proponent in gaining support among stakeholders for the proposed project
- is rather a participative and open multiparty discussion than technical experts discussion on proposed project
- is held at local level and its notes of meeting have to be included in PDD as attachment



# Type of Stakeholder Forum

## Electronic Forum.

- The Board through the Secretariat spread the information via internet on CDM activities in Indonesia and on proposed projects under evaluation, as well as accommodate comments and critics on the projects. Comments and critics for the proposed project should be delivered at least 30 days after all necessary documentation, completed application form along with PDD, notes of local level stakeholder meeting arranged by project proponent, is posted in DNA website.

## Stakeholder Forum Special Meeting. This meeting is held if:

- Project proponent has not carried out any public consultation for a reason acceptable to the Board
- Public consultation has been carried out but still left some contraversies on the proposed project
- Special Meeting is requested by at least two institutions, or more than 10 stakeholders



# Stakeholder Forum Participants

- Representatives from various stakeholders related to the implementation of CDM :
  - Representatives from government as well as non-government institutions, business association, educational institutions or organizations that have the duty, responsibility or expertise related to CDM implementation
  - Representatives from the community who live or work in the project site
- Includes people that are affected, positively as well as negatively, by the proposed project.



# Non-government Funding Options for DNA

- Seek start-up funding for first year
- Impose submission fee for projects (% of expected value of CERs)
- Impose levy for certified CERs
- Exempt first Small Scale projects
- Recycle surplus revenue into capacity building



# Project Idea Note (PIN)

Approximately 5 pages providing indicative information on:

- the type and size of the project
- its location
- the anticipated total amount of GHG reduction compared to the “business-as-usual”
- scenario (which will be elaborated in the baseline later on at PDD level)
- the suggested crediting life time
- the suggested CER’s price in US\$/ton CO<sub>2</sub>eq reduced
- the financial structuring (indicating which parties are expected to provide the project’s financing)
- the project’s other socio- or environmental effects / benefits



## Available PINs

- **Netherlands:**  
[www2.vrom.nl/Docs/internationaal/CDM%20Netherlands%20Annex%20A.pdf](http://www2.vrom.nl/Docs/internationaal/CDM%20Netherlands%20Annex%20A.pdf)
- **For Forest Projects:**  
[edcintl.cr.usgs.gov/carbonseq/cd/Planning\\_Training/BioCarbonFundPINTemplate.doc](http://edcintl.cr.usgs.gov/carbonseq/cd/Planning_Training/BioCarbonFundPINTemplate.doc)



# Discussion

- What is the status of the DNA?
- Which approach was chosen?
- What are the approval procedures?
- How are stakeholders involved?
- How is the DNA funded?
- Does a (translated) Project Idea Note exist?