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# CDM Experiences in Indonesia


**Le Meridien Hotel, Jakarta**

***Renewable Energy & Sustainable Development in Indonesia. Past experiences – Future challenges***

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## TODAY'S PLAN OF PRESENTATION




1. Kyoto Protocol and the CDM Mechanism
2. Issues we have encountered
3. A cross section of our projects
4. About Sindicatum Carbon Capital



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# KYOTO PROTOCOL AND THE CLEAN DEVELOPMENT MECHANISM (CDM)

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# KYOTO PROTOCOL

## Concept

➔ Green House Gas (GHG) have a global effect:
- it makes no difference to the atmosphere where the gases are released
- it also makes no difference where they are reduced

## Scope

➔ Developed countries (so called "Annex 1") to cap and reduce their GHG emissions.

➔ Developing countries ("non-Annex 1") do not have an obligation to reduce their GHG emissions.

➔ Expires on 31 December 2012

## Mechanisms

➔ Defines the flexibility mechanisms, which are based around trade in GHG:
- **CDM** Clean Development Mechanism
- **JI** Joint implementation
- **IET** International Emissions Trading



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# CLEAN DEVELOPMENT MECHANISM (CDM)

## Dual Objectives:

➔ Assist developed countries ("Annex 1") to meet their emission targets

➔ Assist developing countries ("non-Annex 1") to achieve sustainable development

## Additionality *... a key concept!*

➔ Project must provide emission reductions "*that are additional to any emissions that would occur in the absence of the certified project activity*"

➔ Additionality is established on the basis of:
- **Financial Analysis:** additional cost, lower IRR, etc...
- **Barrier Analysis:** barriers preventing the "clean" project to take place:
  - Difficulties to achieve financial closure *(no long term commercial loans)*
  - Technology risk: first of kind in the country *(super-critical coal technology)*
  - Social / market acceptability *(scavengers resettlement for landfill gas to power)*
  - Etc.

## Methodologies

➔ Determination of Baseline Emissions

➔ Monitoring Project Emissions

➔ Calculation of Emission Reductions

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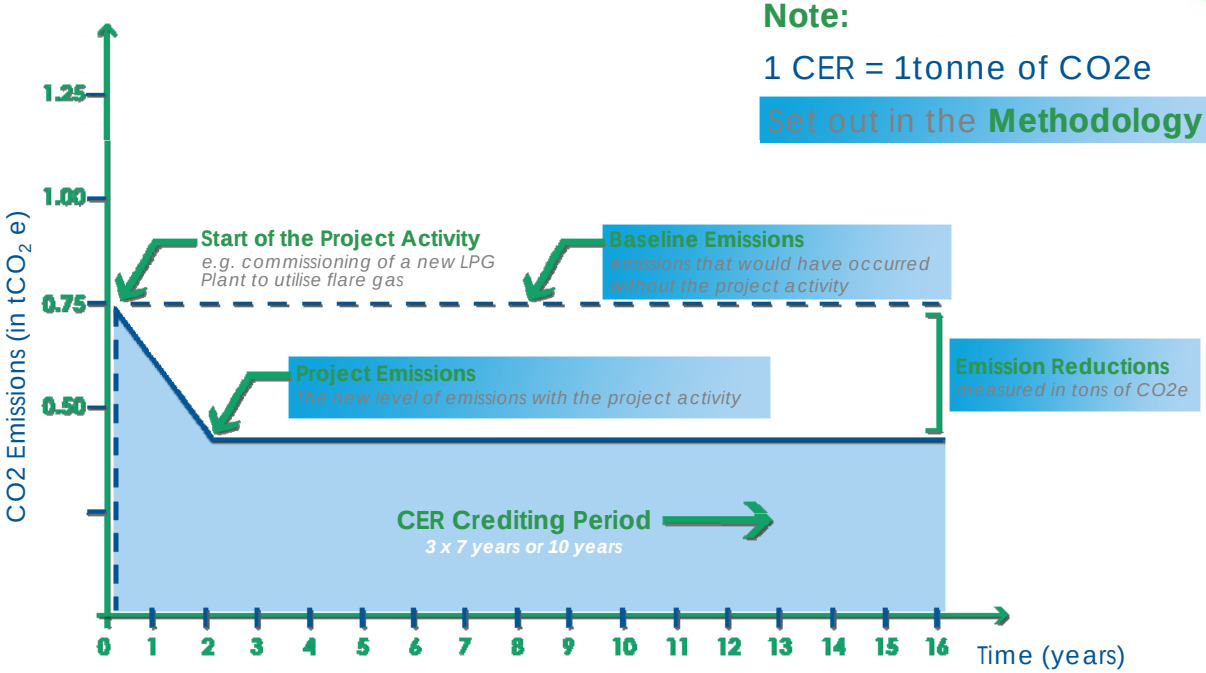
# PRINCIPLES BEHIND CDM PROJECTS

**Note:**

1 CER = 1tonne of CO2e

Set out in the **Methodology**



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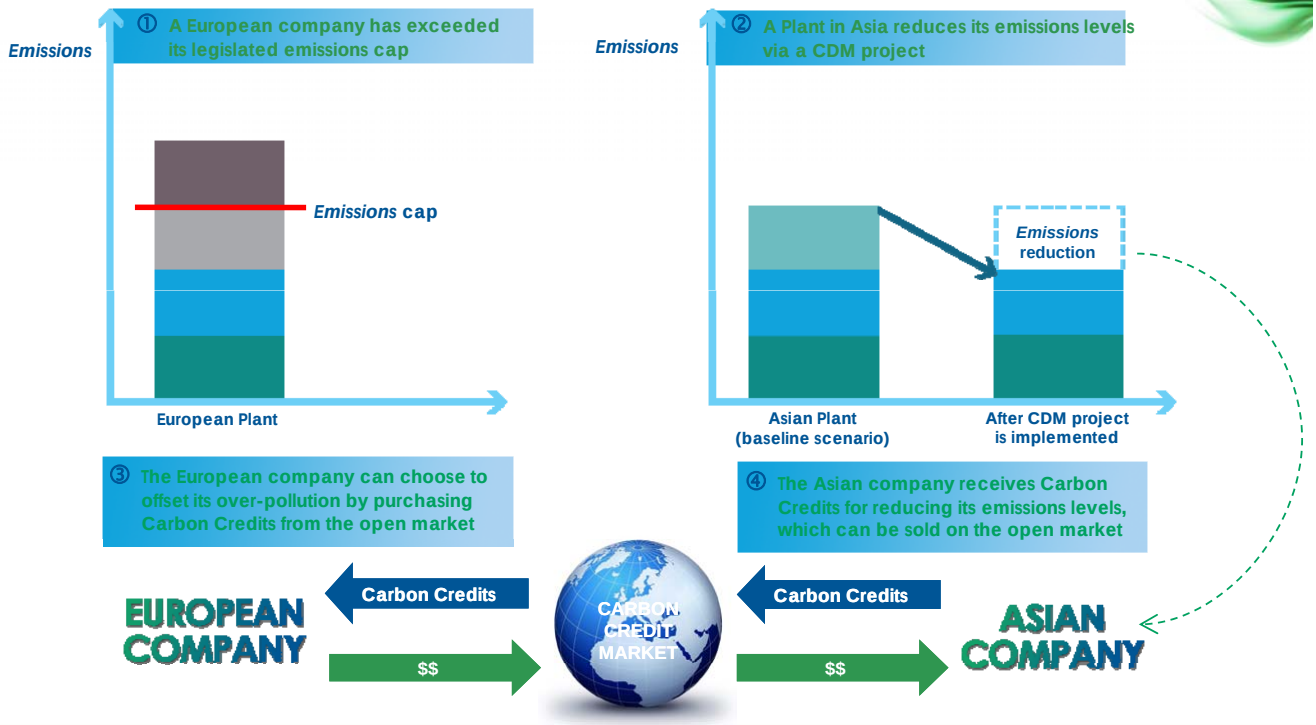
# PRINCIPLES BEHIND CDM PROJECTS

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# BENEFITS TO PLANT OWNER

The benefits to the Plant Owner from developing it's CDM potential include:

**1. Offsetting the cost of new Assets**

- Upgrade of existing equipment at little or no cost

**2. Reduction in O&M Costs:**

- Reduction in Operation Costs through efficiency improvement of new equipment (*especially a reduction fuel*);
- Reduction in Maintenance Costs through the introduction of new equipment, which requires less on-going maintenance and repair;

**3. Increase in Revenues:**

- Registering the projects as CDM activities will provide new streams of *foreign* revenue from the resulting Carbon Credits;
- *Additional* generation capacity will provide revenue from electricity sales.



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# IMPLEMENTING THE CDM

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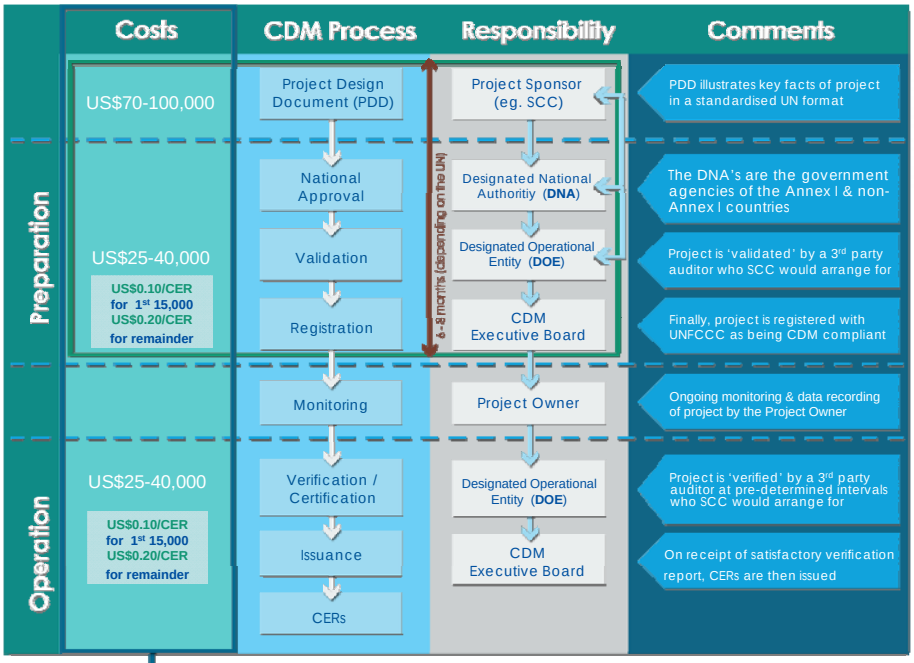
# EXECUTION – *The CDM Process*




**For 100,000 CERs/year:**
initial cost ~ **US$95–140,000**
recurring cost ~ **US$40–60,000** *per monitoring period*



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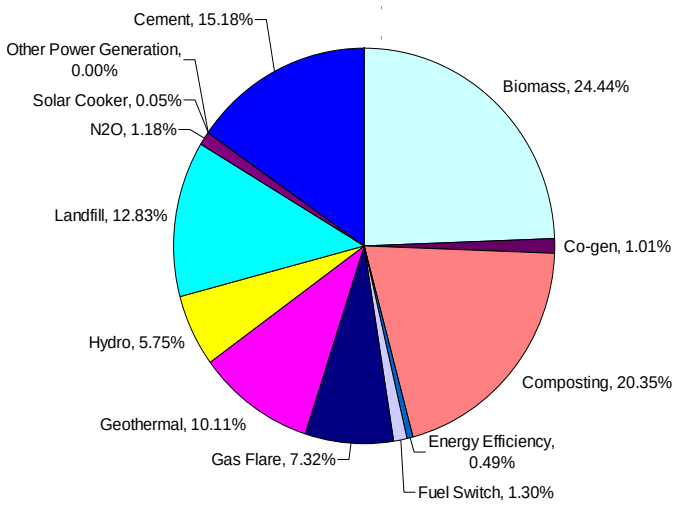
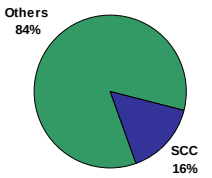
# THE UPTAKE OF CDM IN INDONESIA HAS BEEN SLOW BUT IS PICKING UP PACE...

Indonesia has 22 projects registered so far, compared to 371 for China and 386 for Inda



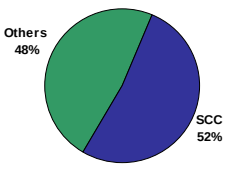

**Breakdown of CDM projects in Indonesia – at validation and submitted for registration**

## Registered




**Total 2,493 kCERs / Annum Registered**

## CERs Produced




**Total 1,010 kCERs */ year Already produced**

**SCC share of the market**

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# Challenges to carbon and carbon finance

- **Post 2012 uncertainty**
  - We are all betting on a market post 2012 but what will it look like? High quality CERs / VERs? Host countries? HFC23 and N2O? Who are the buyers?
- **Closing window to get money back**
  - This emphasizes the impact of delays in project implementation, registration and issuance
  - Flying start vs consideration of CDM
- **EB Process:**
  - Retrospective application of rules by EB
  - Meth complications
  - Increasingly stringent monitoring rules – resulting in delays / non-issuance of some CERs from existing operational projects
- **Additionality**
  - Most project rejections are down to proof of additionality and consideration of the CDM
  - Becoming more of an art than a science



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# CROSS-SECTION OF SCC PROJECTS

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# TAMBUN LPG Plant

| | |
|---|---|
| **PROJECT** | Construction of an LPG Plant to process flared gas. |
| **OWNER** | PT Odira Energy Persada |

| | | |
|---|---|---|
| **CDM** | SCC's scope: | Finance, CDM Accreditation & Commercialisation |
| | Emission Reductions: | 400,000 $tCO_2$ per year |
| **Timeline** | Contract Signed Feb 07<br>Project Registered Feb 08<br>First Credits Sold June 08 | |
| **STATUS** | Registration completed<br>900,000 VERs sold ; CERs forward sales at >EUR16.00/CER<br>130,000 CERs issued & Sold, 170,000 further in Verification | |



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# BANGKOK Landfill

| | |
|---|---|
| **PROJECT** | 5,000 Tonne / day waste<br>Construction of gas recovery and 30MW Power Generation. |
| **OWNER** | GR Tech Limited |

| | | |
|---|---|---|
| **CDM** | SCC's scope: | Finance, OBC System © design<br>CDM Accreditation & Commercialisation |
| | Emission Reductions: | 1,200,000 $tCO_2$ per year |
| **Timeline** | Contract Signed Aug 08<br>Project Registered Feb 09 | |
| **STATUS** | Largest Landfill in SE Asia<br>Construction commenced | |

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# KABIL 2
# Gas Engine Power Plant

**PROJECT** 11.4 MW Gas Engines, Batam

**OWNER** PT Indo Matra Power – ***a fast growing IPP***

| | | |
|---|---|---|
| **CDM** | SCC's scope: | Accreditation & Commercialisation |
| | Emission Reductions: | 40,000 $tCO_2$ per year |
| | | |
| **STATUS** | PDD | Completed |
| | Validation | April – May 2008 |
| | Registration | June 2008 |
| | 1st CERs | October 2008 |



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# SCC – Project Pipeline

| Title | Host Country | Status | Type | Methodology |
|---|---|---|---|---|
| **Tambun LPG Associated Gas Recovery and Utilization Project** | **Indonesia** | **Registered** | **Fugitive** | **AM9** |
| **Mianyang Landfill Gas Utilisation Project** | **China** | **Registered** | **Landfill Gas** | **ACM1** |
| Multi Nitro Indonesia Nitrous Oxide Abatement Project | Indonesia | At Validation | N2O | AM34 |
| Malea Run-of-River Hydro Power Plant Project | Indonesia | Awaiting Validation | Hydro | Revision AM19 |
| Tomboli Run-of-River Hydro Power Plant Project | Indonesia | Awaiting Validation | Hydro | Revision ACM0002 |
| Huai'an Wang Yuan Landfill Gas Utilisation Project | China | At Validation | Landfill Gas | ACM1 |
| Xuzhou Landfill Gas Utilization Project | China | At Validation | Landfill Gas | ACM1 |
| Suzhou Landfill Gas Utilisation Project | China | At Validation | Biogas | ACM1 |
| Dahua Hydropower Project | China | At Validation | Hydro | ACM2 |
| Geli Bridge Hydropower Project | China | At Validation | Hydro | ACM2 |
| Nahuihe Hydropower Project | China | At Validation | Hydro | ACM2 |
| Malinghe Hydropower Project | China | At Validation | Hydro | ACM2 |
| Yongkang Small Scale Hydropower Project | China | At Validation | Hydro | AMS-I.D. |
| Duerping Coal Mine Methane Utilization Project | China | At Validation | Coal mine methane | ACM8 |

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# SINDICATUM CARBON CAPITAL

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## SINDICATUM CARBON CAPITAL

SCC is a specialist end-to-end developer of climate change projects.

**SCC takes the risk out of developing CDM projects:**

- We manage all aspects of the CDM registration project (UN and host country)
- We implement best-in-class abatement and monitoring technology
- We meet up to 100% of project costs (if required)
- We sell Carbon Credits generated to get *best international market price*
- We share an agreed proportion of Carbon Credit proceeds with the Asset's owner

**Our interests are aligned with plant owner's**

- We are not only doing consultancies or intermediation – we invest our own development funds into every project
- We do not earn any fees – we only earn a return when credits are issued & sold
- SCC is already producing Carbon Credits from projects in SE Asia and will sell 1,000,000 Carbon Credits from the region this year

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# SCC - Capabilities

SCC has the full range of capabilities to originate, accredit and commercialize CDM projects.

**Origination**

- offices in 15 countries – major operations in London, Beijing, Shanghai & Jakarta
- teams develop, plan & execute projects in partnership with Project owners
- teams are predominantly local engineers – with backgrounds in industries they cover

**Accreditation & Compliance**

- SCC's Climate Change team; in-house Carbon Credit regulatory experts
- Key to translating a physical project into a Carbon Credit activity

**Commercialisation**

- London-based team with carbon market expertise
- Proprietary price analysis software that enables SCC to regularly outperform the market

**Key Sectors**

- Power Generation
- Oil & Gas
- Industrial Emissions
- Landfills
- Coal Methane
- Biomass
- Plantations



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# SCC – Resources

SCC brings together strengths in *Development*, *Finance* and *Technology*.

**Development**

- Team of over 100 engineers, technicians & CDM regulatory specialists
- Teams are located on the ground – *where the projects and their owners are*

**Finance**

- Strong institutional support
  - *Keystone investments from major financial institutions*
  - *+/- $300M Fund to invest in select projects*
  - *Exclusive partnership with investment institutions in Middle East and Asia.*
- Ready access to capital through Fund and financial markets

**Technology**

- Sindicatum Carbon Technology (a SCC subsidiary) procures & deploys cutting edge technology for carbon credit projects (eg. vent-air methane)

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# THANK YOU

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