

Sustainable Development Through Flexibility Mechanisms in Developing Countries:

Chasing a Dream?

Joyeeta Gupta

Structure of presentation

1. Problem, solution and research question
2. The context of the North-South deal
3. The history of project-based emissions trading
4. The pros and cons of AIJ/CDM
5. Case study of 5 NL AIJ projects
6. Case study of 44 NL CDM projects
7. Implications for investor countries
8. Conclusions

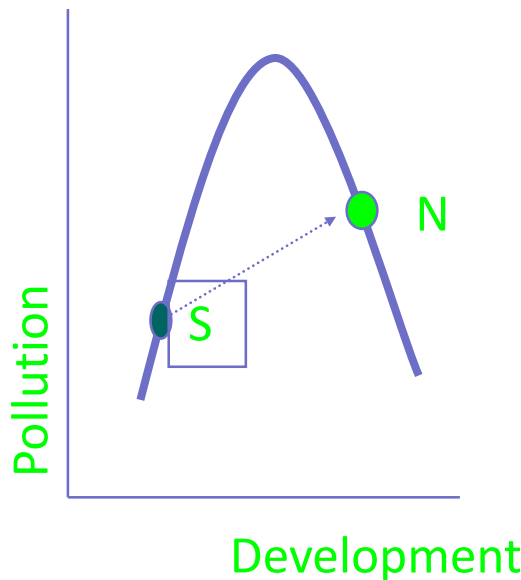
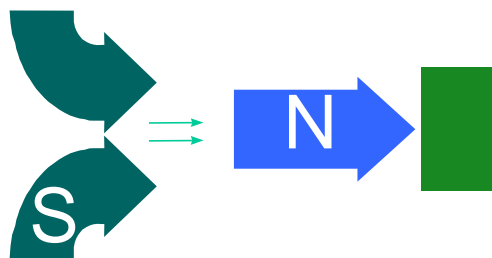


1. Introduction

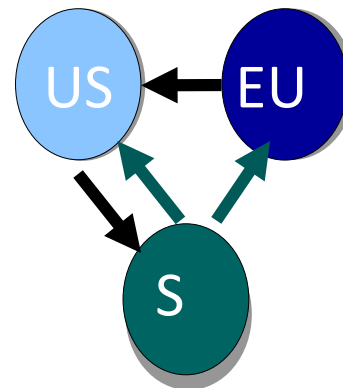
- Problem:
 - GHGs emissions in ICs need to be reduced cost-effectively;
 - The rate of growth of GHGs in DCs needs to be reduced without diverting scarce resources to non-priority areas.
- Solution:
 - A market mechanism to allow investors from ICs to purchase certified emission reductions through investments in DCs that also contribute to sustainable development.
- Research question:
 - Are the flexibility mechanisms aimed at reducing GHGs also capable of contributing to sustainable development? Is AIJ/CDM really a win-win instrument?
 - Specifically applied to 5 AIJ and 44 CDM projects.

2. The context of the North-South deal

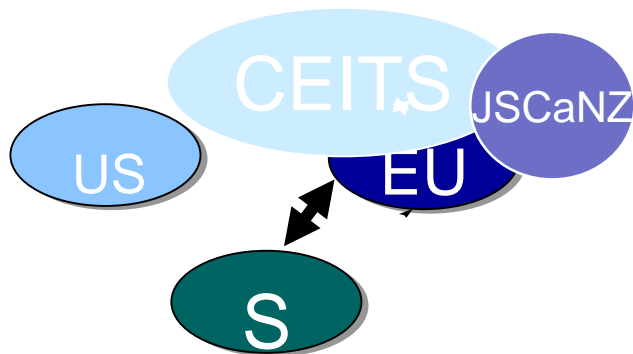
Leadership paradigm



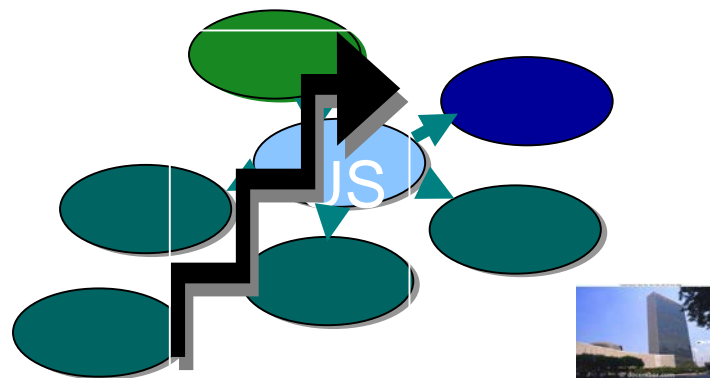
Conditional leadership



Leadership sans US



Inverted U curve may be a zig-zag curve
Leadership competition



2. The context of the North-South deal

- 1992: North reduces emissions and helps developing countries (tech transfer and aid) with new and additional resources (above existing aid)
- 1997: North reduces emissions partly via help to developing countries (new and additional?)
- 2007: North reduces emissions partly via help and climate change is mainstreamed in ODA – diversion of aid to climate change?

3. The history of flexibility mechanisms

- 1992: Permitted but not defined
- 1995: Activities Implemented Jointly – Pilot Phase Launched; still in effect
- 1997: Clean Development Mechanism; Joint Implementation and Emissions Trading
- 2001: Modalities for CDM defined
- Criteria for AIJ projects
 - Complements national priorities;
 - Subject to host country approval;
 - Should result in real, measurable and long-term environmental benefits; and
 - Should be financed through additional resources.

4. Features of sustainable development

- Economic, ecological and social
- Current and future generations

- Hard or soft sustainability
- Means or ends
- Procedural or substantive concept

- What constitutes sustainability? How do you scale down sustainability to project level? Is there a universal standard of sustainability? Who decides?

4. Arguments for and against AIJ/CDM

Highest level

Middle level

Lowest level

- + cost-effectiveness
- + tech. transfer
- ? base-lines
- low-hanging fruit
- credit sharing
- debiting?
- sustainability?
- adaptation fund?

- ± Org. Framework;
- Different bargaining power
- ? Use of ODA
- ? BITs

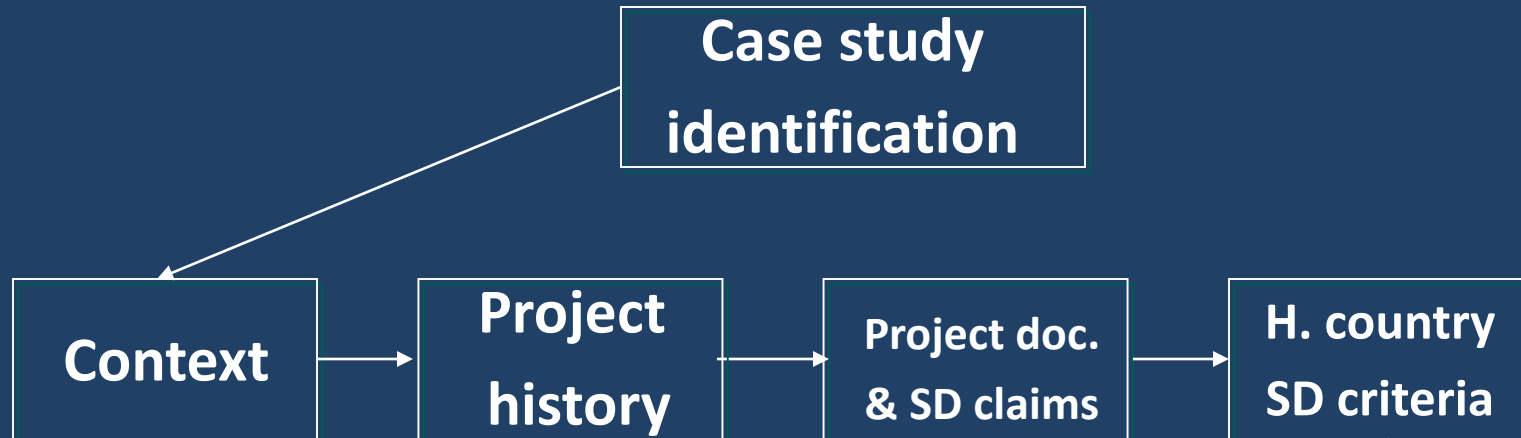
- Incrementalism
- Exports unsustainable model of production/consumption;
- allows slower emission red. in ICs;
- Commodification of pollution rights

6. Netherlands strategy: Key elements

- No large scale adverse impacts on society or ecosystems;
- Follows OECD guidelines for Multinational Enterprises;
- No nuclear projects;
- Large dams must meet WCD criteria;
- Projects that contribute clearly to SD can qualify for higher CER prices;
- Priority projects include: renewable energy, clean & sustainable biomass, energy efficiency, transport, fossil fuel switch and methane recovery and carbon sequestration;
- Capacity building funded by ODA; CDM by environmental funds;



5. AIJ assessment programme



Our SD framework

- Criteria and sub-criteria for SD
- Scoring system from -2 to +2
- Data (content analysis; stakeholder interviews; site visits/ observations)
- MCA; Local researchers

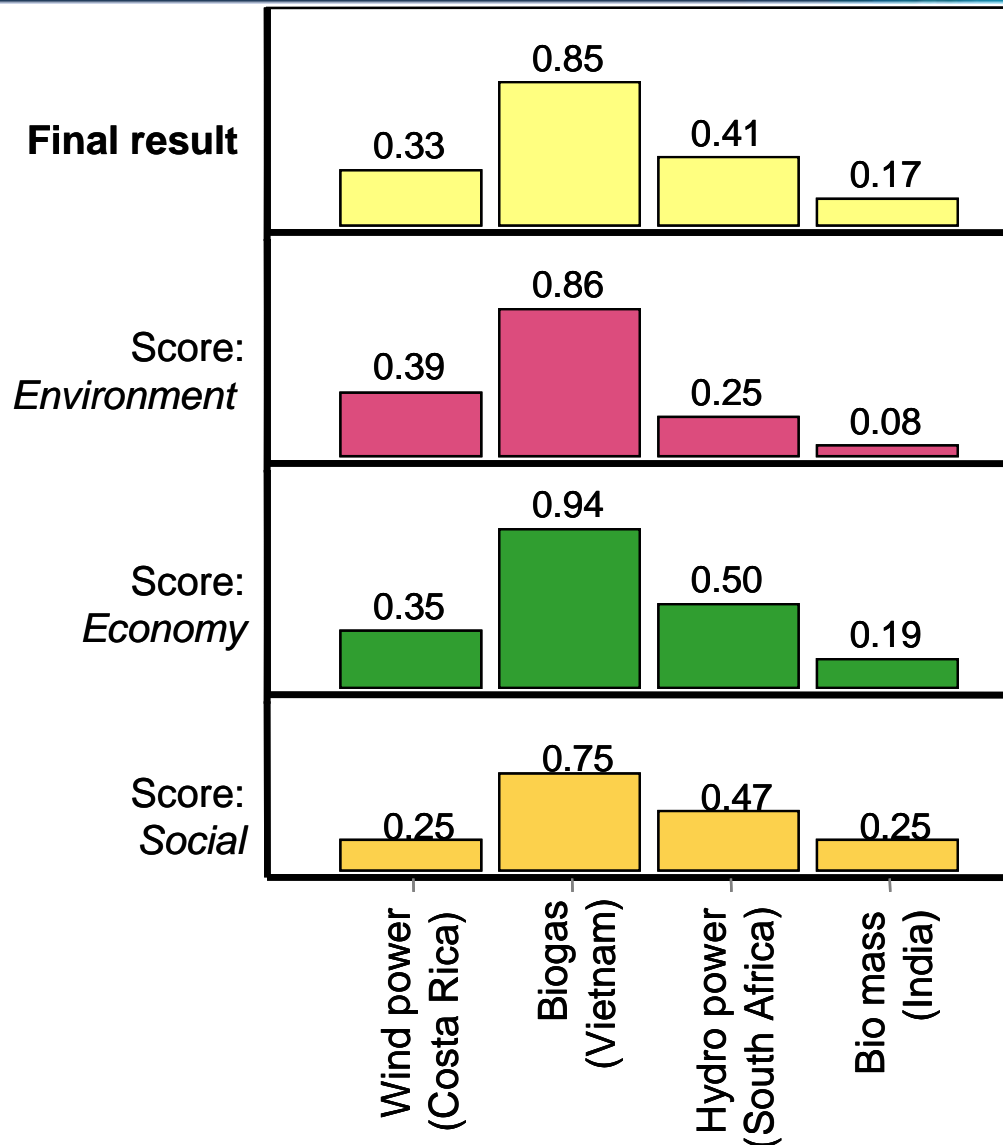
5. AIJ case studies

Host country	Costa Rica	Vietnam	South Africa	China	India
Location	Tejona	Across country	Bethlehem	Shandong	Bihar
Foreign investor	Essent, B.V. & NL Govt.	SNV (PPP/JI)	Nu Planet in both countries	ECN & PPP/JI	NICIS
Host investor	ICE	Min. of Ag. & Rural Devp.	E3	Min. of Science & Shougang	DA & DESI Power
Investment	Wind power	Small-scale Biogas	Mini-Hydro	Sunny greenhouses	Biomass Gasifier
Total cost €million	21.9	2.1	6.4	0.8	n.a.
NI contribution	3.5	2.0	0.8	0.5	0.7
CERs expected kilotonne CO ₂	40	55	33	None	36
Investment/t CO₂	27.5	1.9	9.7	n.a.	n.a.

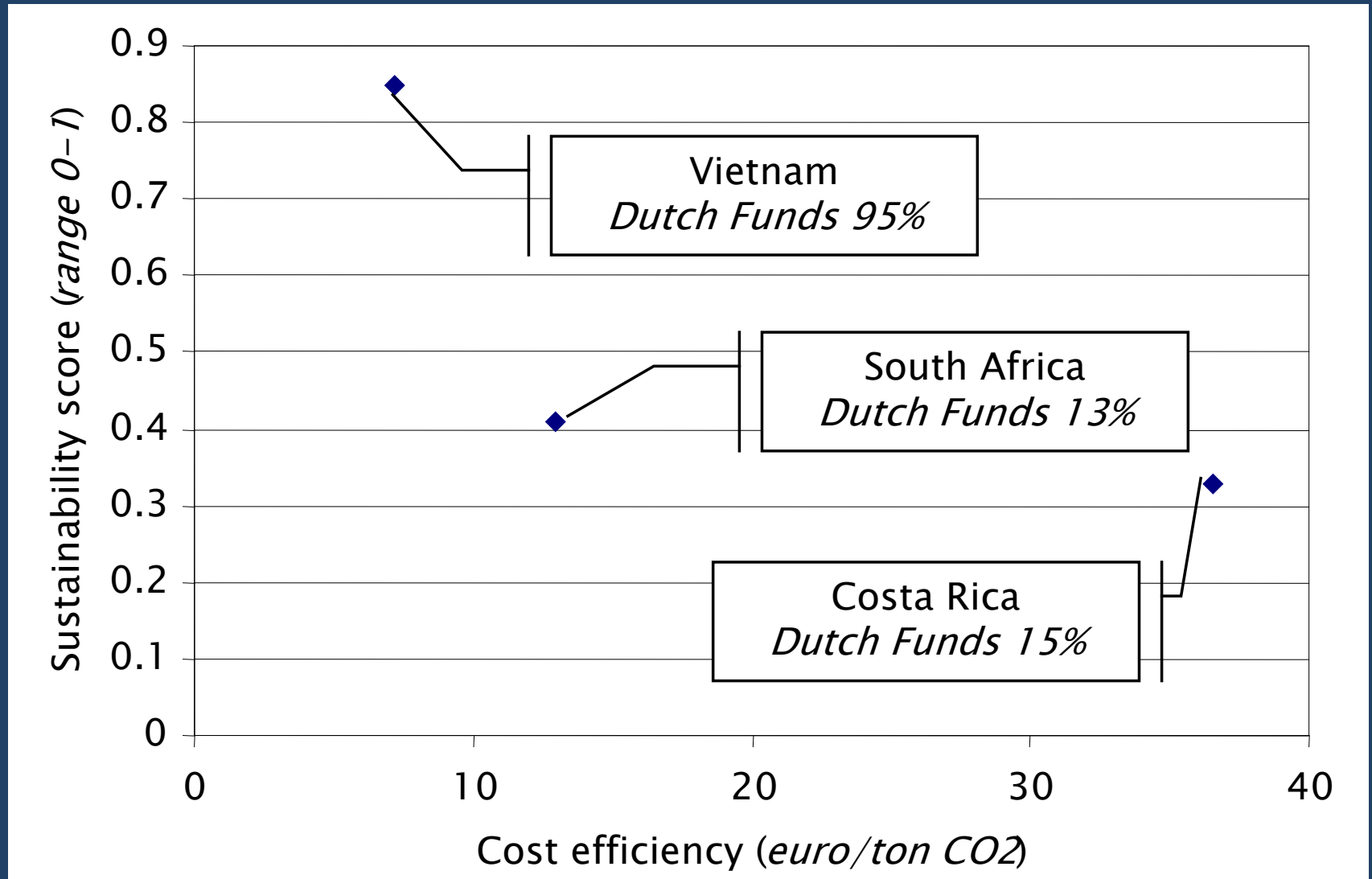
5. The time-line of the projects

Host country	Costa Rica	Vietnam	South Africa	China	India
Initial idea	1992		1997	1997	1997
Developed where	Costa Rica	Vietnam	South Africa	ECN, Netherlands	Joint*
Contract negotiated	2000	2002	2000	2002	1999
Project implemented	2001	Phase 1 implemented (2003-2005)	2006	Still not implemented properly	2001
Current status	Functioning for four years	In Phase 2	Construction completed	Construction complete; non-functional	Provides electricity and supports development;

5. Scores on sustainability indicators



5. Proportion of Dutch Funds



6. CDM projects

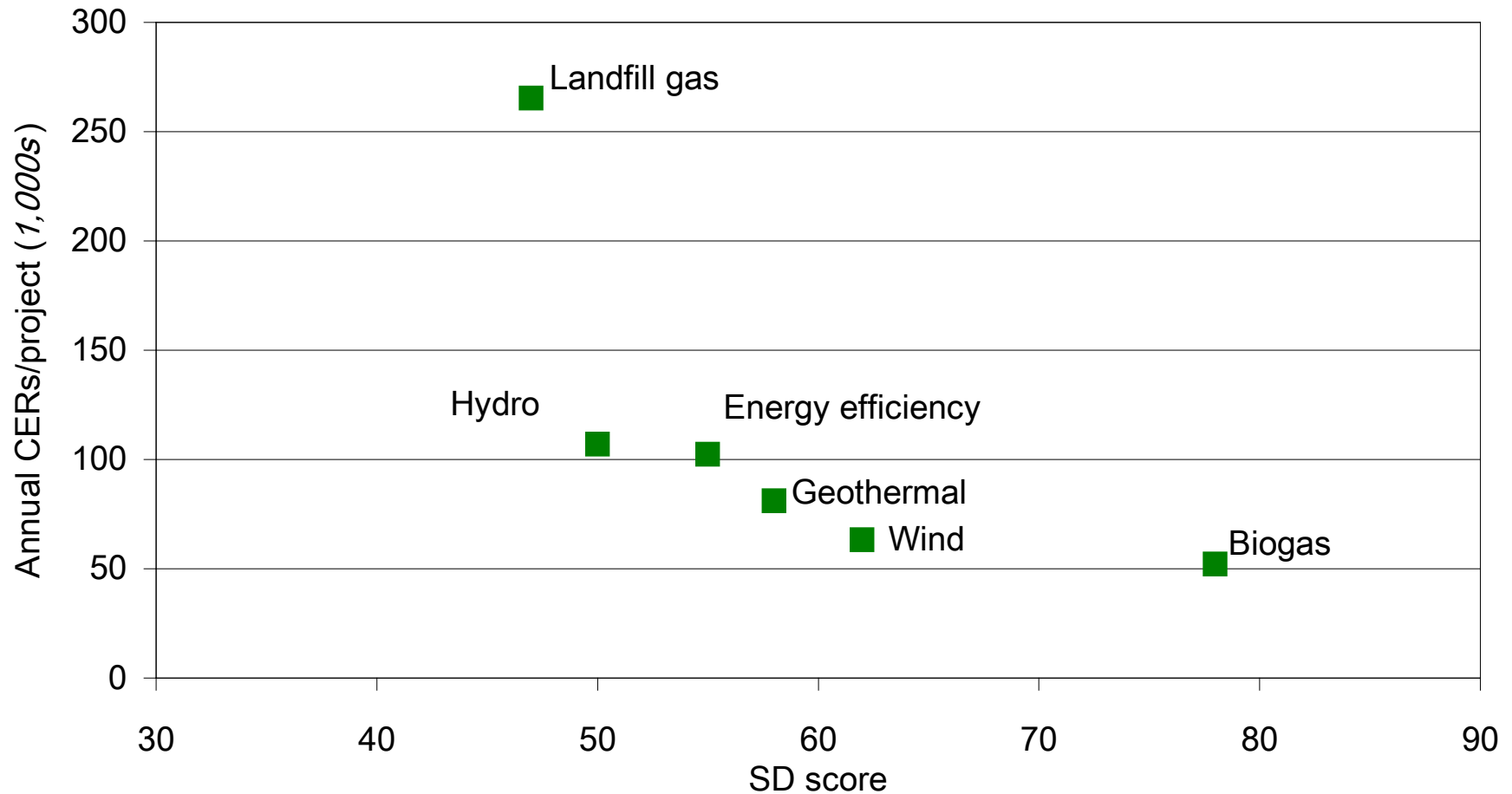
- 44 representative projects studied out of 150
- Method
 - Assessed SD contribution as stated in project documentation;
 - Assessed responses from host country DNAs on expected SD contributions from the projects;
 - Combined assessment



6. Projects Assessed

	Projects in sample	Average of CERs/project/year (Ktonnes CO ₂ -eq.) ¹	Capacity (MW)
Biogas	3	52	15 ²
Biomass	5	27	24
Coalmine methane	1	2,877	120
Energy efficiency	6	102	n.a.
Fugitive gas capture	1	220	n.a.
Geothermal	1	81	20
HFCs	2	5,706	n.a.
Hydro	12	107	35 ⁴
Landfill gas	7	265	5 ⁵
Wind	6	63	36
Total	44		

6. Trade-off between sustainability & emission reduction



6. Contribution to sustainable development

- Large contribution: 7 project types – biogas, coalmine methane (China), energy efficiency (Moldova), hydro and wind power (Colombia), landfill (Costa Rica).
- Medium contribution: 10 project types
- Low contribution: 12 project types – HFC 23, geothermal (Philippines), biomass (Brazil), hydropower (Ecuador, Honduras), landfill (Argentina, South Africa), wind power (Costa Rica, Philippines)

6. Contribution to sustainable development

- Direct contribution – the contribution that results from the GHG reduction component: high likelihood of achievement;
- Indirect contribution – the contribution that is focused on contextual improvement for local communities based on their needs: uncertain likelihood of achievement; not monitored at present; not reason for breach of contract

6. CDM and sustainable development: Country positions

Table ES.1 Host country assessment of CDM projects

SD criteria <i>(Operational SD approach)</i>	Needs & Priorities <i>(Context specific)</i>	Environmental Impact Assessment / national legislation <i>(Compliance driven)</i>
Brazil China Colombia India Indonesia the Philippines South Africa Sri Lanka	Costa Rica Honduras Jamaica Moldova Nepal Nicaragua Peru	Argentina Chile Ecuador

7. Challenge to investors: Buy CERs without SD?

- In principle, sustainable development is something host countries determine, so if they say – yes; there should be no problem.
- However, if we don't want a race to the bottom, conscientious investor countries could:
 - That verification takes SD into account: expensive
 - A premium could be paid for SD benefits: ?
 - A lower sum for CERs that do not achieve SD benefits
 - Investors become careful of stating the SD component

6. CDM and ODA

Ideological level

Organization level

Project level

+ ODA leverages
SD; synergy
- ODA diverted
- ODA subsidises
market mechanism

+ ODA helps
cap. building
esp. in poorest
countries;
- ODA diverted
from DC
priorities to
help IC
purchases

- ODA
subsidizes
market mech.
- ODA levels
below 0.7%;

8. CDM and SD: An Illusion?

- An illusion
 - When SD is dependent on host country approval and there is competition between host countries;
 - When contract success is not based on achievement of the SD component;
 - When SD component is not verified:
 - When IC buy CERs without checking SD component;
 - When SD component is vague and all-encompassing
- A fact:
 - When SD is translated into quantitative goals that can be measured??
 - When contract success and CER approval is based also on achievement of SD component;
 - When ICs purchase CERs that have a clear SD component;
 - When a percentage of the project costs are used for the SD component;

Acknowledgements

- Harro van Asselt, Pieter van Beukering, Tjasa Bole, Luke Brander, Sebastian Hess, Kim van der Leeuw, IVM, Vrije Universiteit Amsterdam
- Wytze van der Gaast and Friso de Jong, Groningen Universiteit
- Anandya Bhattacharya, Phung Thanh Binh, James Blignaut, He Guizhen, Ma Hua, Rakesh Jha, Han Jingyi, Steve Mack, Pham Khanh Nam Franz Rentel, Mariamalia Rodriguez, Shirish Sinha, Tran Vo Hung Son Shi Yajuan Sun Yamei, Lu Yonglong from the case study countries
- Lucy Naydenova, Ton van der Zon, Ton Boon von Ochssee from the Dutch Ministries
- Antonie de Kemp, Henri Jorritsma, Jan van Raamsdonk, Piet de Lange and Emina van den Berg from the Inspection on Development Cooperation.