# CDM in Thailand
## case studies

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# Outline

- This presentation is based on preliminary results of a research **"Finance from CDM and Justice Perspectives"** conducted by TCJ and the Lower North Natural Resources Group [April - August 2011]
- Three Sections:
  - **Situation and trend** of CDM projects in Thailand
  - **Two Case studies** of CDM projects
    - electricity generation from rice husk
  - **Lessons learned** from the case studies

# SITUATION & TREND

of

# CDM Projects in Thailand

# Situation & Trend

- Thailand still has **limited CDM projects** already **trading carbon credits**
- **Policy makers** see potential for **income generation** and **technology-transfer**
- **Business sector** see **new income sources and positive image** for the organization
- BUT we must not forget! Originally CDM aims to increase **"GHG reduction activities"** which is in line with **"Clean" and "sustainable" development** at the same time create investments in developing countries

# Situation & Trend

- Thailand Greenhouse Gas Management Organization (TGO) established 6 July 2007
  - **DNA** (Designated National Authority) for CDM mechanism under the Kyoto Protocol
  - Screening and promoting CDM projects development
  - Issuing "Letter of Approval" (LoA) for CDM projects
    - to get LoA, projects must pass certain "Sustainable Development Criteria" which was stablished by TGO
    - LoA is required for projects registering with the CDM Executive Board (CDM EB) to get CERs for trading carbon afterward.

# Situation & Trend

- "Sustainable Development Criteria" established by TGO: 4 main categories, 24 indexes

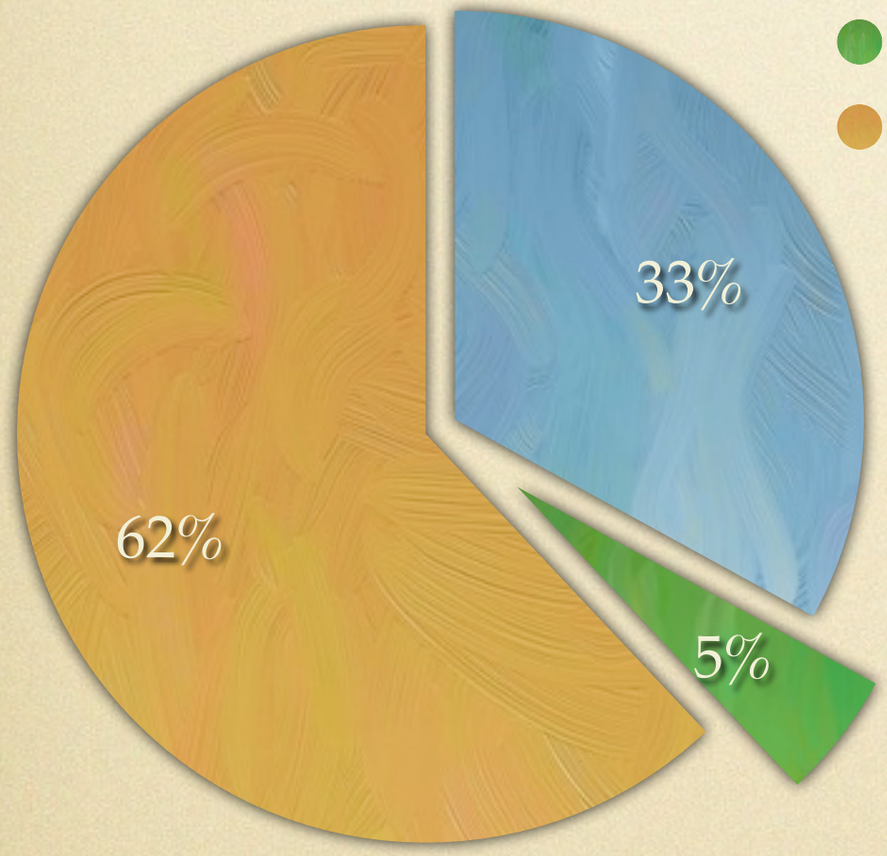
1. Natural Resources & Environment
   - Environment: GHG reduction, pollution
   - Natural resources: water management & use efficiency, soil & coastal erosion, increasing green area, etc.
2. Social
   - public participation, social&cultural development, health of workers and communities
3. Development & Technology Transfer
   - technology development, plan after crediting period, human resources development
4. Economic
   - jobs creation, increase income of stakeholders, use of renewable energy, energy efficiency, use of domestic materials.

- Rating rage from -1 to +2; a project must receive aggregating positive mark from each category to ensure it contributes to sustainable development of the country

# Situation & Trend

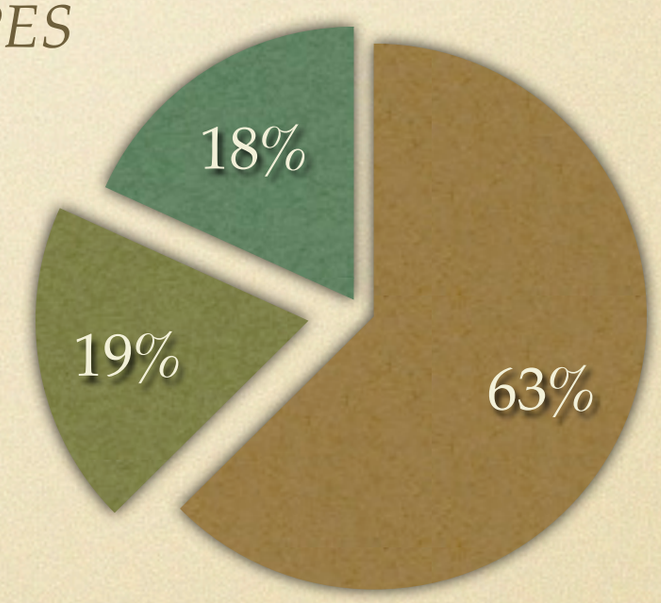
- As of 28 September 2011, **146 CDM projects have received LoA from TGO = 8.79 million tCO2e/year**

*BY STATUS OF PROJECTS*




- **Registered with EB, no CERs (48 projects)**
- **Registered with EB, received CERs (7 projects)**
- **Not registered yet (91 projects)**

*BY FUEL TYPES*




Biogas Biomass Others

Source: http://www.tgo.or.th/index.php?option=com_content&view=category&id=60&Itemid=13

# Situation & Trend

- By operations - can divide into 2 groups
- CDM projects extended from existing operations
  - increase efficiency of industries
  - make use of by products
- CDM projects as new operations/economic activities
  - currently 21 new projects operation for electricity received LoA
    - bagasses: 4 projects
    - rice husk: 14 projects
    - palm empty bunch/palm shell: 3 projects

# Situation & Trend

- **Problems observed with CDM energy projects**
- Problems with **quality of fuel material use and consequential environmental impacts**
  - e.g. in case of increase demand and price of rice husk therefore supply shortage - projects may be forced to use other materials which may cause higher pollution
- Problem with projects **sites & proximity to communities**
  - proximity with communities due to distance from materials (lower cost of transportation etc.)
  - communities concern of environmental & health impacts

# Situation & Trend

- Under Environmental Act (BC2535) - power plants generating from 10MW and above require **Environmental Impact Assessment with public hearing process**
- But, **EIA does not guarantee no impact**
- Plus, some projects **avoid conducting EIA and public hearing** by specifying their projects with 'slightly' lower than 10MW
  - At least 9 projects specify electricity generation capacity at **9.0 - 9.9MW** (just 1.0 - 0.1MW lower than what would require this EIA process)
- **Effective safeguard by the current system?**
- **Sustainable Development Criteria working?**
- **What about trust, and justice?**
  **These projects are right next to communities.**

# Situation & Trend

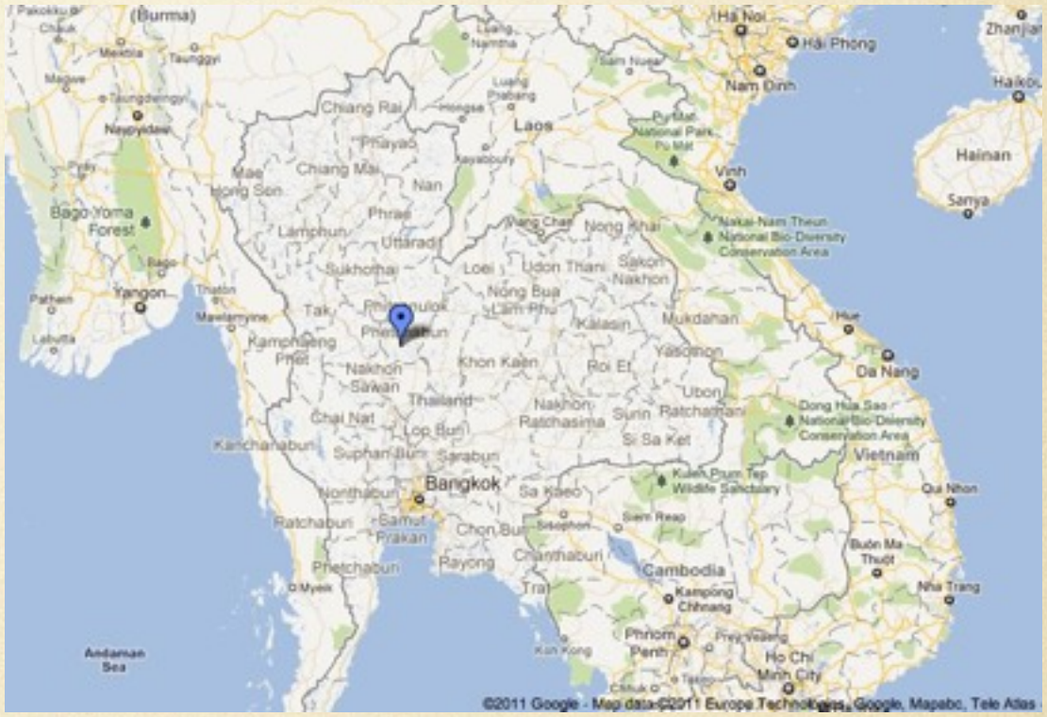
- **Contribution to TH emission reduction as a whole?**
  - Number of current CDM projects granted LoA is not small
  - BUT still very little comparing to the country's total GHGs emissions.
  - Are there other legal mechanisms or economic instruments which can deliver more effect GHGs reduction? Will focus on CDM projects undermine other possibilities or resources
- **Economic additionalities to the local - not clear**
  - Most biomass and biogas related projects in Thailand are not going for CDM
  - incentives to use agricultural by products already exist; plus government already subsidizes these renewable energy generation

# CASE STUDIES

## Two CDM Projects

## Electricity Generation from Rice Husk

# [Cl] A.T. Biopower, Pichit




- **A.T. Biopower Co.Ltd.**
- Site: Pichit province
- Power Generation from rice husk from sourcing from different locations
- **Capacity: 22 MW**
- LoA: 30 January 2007
- Registered with CDM EB: 18 June 2007
- **Received CERs:** 4 June 2008 (among the first 7 projects in Thailand to receive CERs)
- **77,292 tCO2e/year**
- **EIA Conducted**: environmental impacts within standards; 40 trucks per day will not disturb communities

# [C1] A.T. Biopower, Pichit

- In reality
- **Public hearing within EIA process**
  - Selective participants: mostly proponents
  - Selective stakeholders: use governance boundary instead of proximity (e.g. count people from villages further away instead of nearby villages who are probably opposing the project)
- **Conflicts within communities** between the proponents and opponents heightened
- **The 'Power Plant Community Fund'** established under National Power Committee legislation to improve quality of life and environment (compulsory for any power plants selling electricity to the national grid)
  - benefits selective stakeholders
  - most community members have difficulties accessing the fund

# [C1] A.T. Biopower, Pichit

- **Environmental impacts** after operation started:
  - **dust** in communities evidently visible
  - houses need to shut doors/windows
  - dust from trucks transporting rice husk
- Not what EIA result said... !

# [C2] Buasommai, Roi-Et

- **Buasommai I Biomass Power Plant**
- Site: 2 km from center of Roi-Et province
- Power Generation from rice husk
  sourcing from already existing Rice Mill
- **Capacity: 9.9 MW**
- LoA: 16 February 2011
- **Registeration with CDM EB: in process**
- (No CERs for trading yet)

# [C2] Buasommai, Roi-Et

- In reality
- Rice Mill operated since 1998 - already causing impacts (dust, water pollution, health - skin and eye irritations) thus local opposition
- Rice Husk Power Plant started operation in 2008 - locals believe it has worsen the already existing problems
- So far, **no systematic study on the extent of the existing problems and how much the new Rice Husk Power Plant has contributed to the existing problems**

# [C2] Buasommai, Roi-Et

- Public consultation and field visit: selective participants, mentioned only positive implications of the project, mentioned jobs for the locals
- Did **NOT** give information regarding CDM nor carbon market to the communities (assuming not necessary to know?)
- Locals can't access power plant jobs due to limited education qualification; can only work in the Rice Mill
- The 'Power Plant Community Fund' has not addressed community's priority need (e.g. request for more medical personals to help find out the causes of people' sickness not responded; instead the company uses the Fund to build new building for community herb project).

# [C2] Buasommai, Roi-Et

- Community proposed improvement
  - ***Project approval criteria*** must ensure all other related factors are consider (in this case - the existing problems from the rice mill to which the new project should not contribute)
  - ***Comprehensive monitoring of impacts*** should be compulsory even though this project do not require EIA (notice generation capacity 9.9MW, i.e. 0.1MW lower than requirement)

# LESSONS

from case studies of

# CDM Projects in Thailand

# {1} Conflicts - Heighten Participation - Problematic

- Already supporters vs opponents
- But projects heighten conflict by benefiting only selective groups?
  - public participation/consultation
    - the Power Plant Community Funds
- Selective stakeholders not legitimate; should prioritize by proximity with projects
- Projects owners and relevant agencies should ensure transparent and just participation and decision making process

# {2} Information for decision making - not comprehensive

- Selective (positive) information from project owners and lack of discussion on negative implications - affecting decision making
- Need to discuss CDM and carbon credits since it is core of the project

# {3} Positive Economic Implications - not clear

- Buasommai claimed for jobs creation for the locals was not feasible
- Increase in rice husk price (therefor increase farmers' earning from selling rice husk to the power plant) has been because general increase in demand of the whole country, not directly attributable to the CDM project
- The Community Power Plant Fund established under the existing national legislation - therefore not additionality of the CDM project

# {4} Environmental Impacts - Persist

- Environmental problems, pollutions, health impacts on communities from these two projects have been evident
  - even though one had undergone EIA process and another not
  - the problems persist with no systematic approach from projects owners to tackle them - even though one had already got CERs and the other is undergoing registration process with CDM EB

# CONCLUSION

- LoAs given to CDM projects should, theoretically, guarantee certain higher (environmental/sustainability) standards than normal projects.
- However, it has been evident that these projects still cause problems like other non-CDM development projects.
- TGO need to reform project approval process and criteria by **putting communities at the center**; and adhere to **transparency, participation, and justice**.
- Otherwise, CDM projects will not create additionalities to the Thai society but instead will further aggravate social and environmental problems in the communities.

# Thank You

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