

CDMs for Sustainable Development?

A People's Perspective

CDM WORKSHOP
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New Delhi

What is Clean Development Mechanism?

- The **Clean Development Mechanism (CDM)** is an arrangement under the Kyoto Protocol allowing industrialised countries with a greenhouse gas reduction commitment (called Annex 1 countries) to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries.

Objectives of CDM

UNFCCC:

- “The purpose of the clean development mechanism shall be to assist parties not included in Annex I in **achieving sustainable development** and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in **achieving compliance with their quantified emission limitation and reduction commitments** under Article 3”.

Sustainable Development: Go! Definition

- ***Social well being*** – The CDM project activity should lead to alleviation of poverty by generating **additional employment, removal of social disparities** and contribution to **provision of basic amenities** to people leading to improvement in quality of life of people.
- ***Economic well being*** – The CDM project activity should bring in **additional investment consistent with the needs of the people.**
- ***Environmental well being*** – This should include a discussion of **impact of the project activity on resource sustainability and resource degradation**, if any, due to proposed activity; **bio-diversity friendliness; impact on human health; reduction of levels of pollution in general;**
- ***Technological well being*** – The CDM project activity should lead to **transfer of environmentally safe and sound technologies that are comparable to best practices** in order to assist in up-gradation of the technological base. The transfer of technology can be within the country as well from other developing countries also.

Objectives of Study

- To acquire an **overall perspective** of CDMs in India
- **Primary assessment of 8 CDM project sites in tribal areas with a focus on community perception:** To critically understand the impact of CDM projects on people's livelihood, ecosystem, Health, Agriculture (Crops pattern, seeds variety), income level with specific impact on women and children.
- **To recommend alternative measures for pro-poor community based CDM projects**

Methodology

- Desk Study of CDM Projects under the UNFCCC (420)
- Case studies of specific projects in the tribal dominated belt of 4 States: AP, Orissa, Jharkhand, Chhattisgarh (8 sites)
- Selection of Projects based on the following criteria:
 - Typology of projects
 - CDM project size
 - Project proponents

Data Collection

- Study of Project Design Documents of Registered Projects under the UNFCCC: 420 upto June (353) across 22 states & UT
- Field based Case Studies: 8 (7)
- Group Discussion with community/ community reps.
- Interview and personal observation
- Stakeholder Interviews: *village sarpanch(s); residents of predominantly tribal colonies or settlements near the project site; employees/operational heads of the company carrying out the CDM biomass contractors supplying to the project in case of renewable energy projects; farmers/cultivators in the case of biomass based projects*

CDMs: Overall Insights from desk study

- India second to China in CDM projects registered accounting for 24.76% of the world's total of 1882 projects. (03-11-09)
- Maharashtra(42) AP, (41)Karnataka(41) have the highest number of CDMs followed by UP(34) TN (32)
- CDM projects cornered by giant companies
- Large share of unilateral projects (without involvement of finance and technology from Annex I countries)
- Himachal Pradesh, Karnataka, Bihar,AP and Madhya Pradesh have 1 NGO each as project proponents

CDMs in the Project Area

- **AP**: 41 of which **50% biomass based using agricultural residues**. The energy generated is all sold to APTRANSCO.
- **Chhattisgarh**: 28: **equal number of energy efficiency and biomass projects** . Energy efficiency: waste heat recovery in **sponge iron production** of iron and steel plants: 22 companies (all private) Biomass mainly **rice husk based** as Chhattisgarh is the rice bowl of the country.
- **Orissa**: **10 Most related to energy industries**: waste heat recovery etc., industrial processes, hydro based and solid waste management. Four projects owned by a Govt PSU called OCL India Ltd. thereby having a major stake in CDM projects in the state. However there is no biomass based project in the state.
- **Jharkhand**: 3 all related to **waste heat recovery** in sponge iron plants. All owned by **three major iron and steel companies** and implemented in the most backward Sariekela Dist of Jharkhand.

Case studies:Projects

- Kohinoor **sponge iron** Project at Sariekela in Jharkhand
- ITC Pulp and paper project on **energy measures** in Khammam District, Andhra Pradesh
- Varam **biomass** project at Vizianagaram, Andhra Pradesh
- Samal **hydro project** at Angul, Orissa
- Kolab **hydro project** at Tentuligumma, Malkangiri, Orissa
- ITC's **SF** project
- 14MW **Rice Husk Power Project** at Raigarh District, Chhattisgarh
- 25MW Waste Heat Recovery based (**sponge iron**)captive power generation at Raipur, District, Chattisgarh

CASE STUDIES-CASE 1

Waste Heat Recovery project: Sponge Iron

- Name of the company- M/s Kohinoor Steel Private Ltd.
- Location of the CDM project- Village Kuchidih, Sariekela dist, Jharkhand
- Nature of project- Energy Industries
- Crediting period- 21 yrs. (7X3)
- 18 acres of land acquired from around 23 farmers at a pittance

Environment Impacts

- Releases carbon dust, fly ash, charcoal etc. Settled everywhere. Resulted in depleting livelihood resources primarily *Mahua*, *lac* and *kendu* leaf which have been sustaining these communities since ages .
- Toxins from Carbon /dust/ smoke has resulted in the loss of pasture land and livestock. Paddy production has almost halved to an extent that it cannot suffice for the entire year. Fisheries which had a thriving production is now lost. Carbon has settled on the pond bottom which has depleted the pond productivity.
- Flowering of mango has visibly reduced.
- NTFP collection from the adjacent forest is no longer a way of their life. Bidi leaves are gradually disappearing.



Kohinoor sponge iron plant , Jharkhand



Crinkled leaves of lac plant



Dumped iron ore by Kohinoor



Flyash mound in kohinoor

People's perception

- Lost land and livelihood
- Threat from wild animals from the forest
- Cultural Loss
- The youth working for the company as daily labourers said that the company does not maintain any standards for ensuring occupational health and safety.
- Company hires outsiders not locals, outsiders paid more
- No compensation package when accidents take place as they are were not on the company's permanent rolls.
- No grievance redressal system as the company is hands in glove with the local police and administration
- PHC constructed but closed most of the time; medicines inadequate

CASE 2-Pulp and Paper CDM Project, Sarapaka, Andhra Pradesh

- Name of the company- Indian Tobacco Company, Paperboard and Special Papers Division(ITC PSPD), Bhadrachalam
- One of India's **largest conglomerates**: tobacco, food & agriculture, paper, packaging, hospitality and IT.
- **Six CDM projects** have been approved at the Bhadrachalam plant, with five for energy measures and one for a fuel switch to biomass.
- **More than 1.2 million credits** being generated through CDM projects by ITC
- One additional A/R project as part of a social forestry programme
- Adjudged to be the greenest paper mill in India in 2004 in CSE study due to various energy and water conservation measures at site
- Carbon positive since 2005 and water positive since 2002

ITC's perspective

- Development work in water, education and healthcare
- Water: plant draws substantial amount of water and has therefore a water conservation programme; all effluents are treated before release; free borewells dug, provides 3 lakh litres of water per day to Sarapaka
- Education: built classrooms, toilets, hostels and provided benches
- Health: initiatives by doctors from company hospital, health camps in district with specialists from Vizag and Hyd.
- Funds four NGOs in the region for community development.

People's perception

- Sarapaka village comprises 3 colonies of STs, BCs and Oriyas
- Response overwhelmingly negative in the ST and Oriya colonies
- BCs: employed directly or indirectly in the ITC plant, access to hospital facilities, schools; however complained about smell and health problems
- STs: very few jobs, earlier initiatives for providing water and fertilizers stopped 2 yrs ago, no piped water, insufficient borewells.
- Oriya: biggest problem stems from a heavily polluted stream running through the colony affecting human and livestock

Perception of Sarpanchs

- Ex-Lady sarpanch attended stakeholder meetings but of little value
- Current sarpanch : chemical engineer form Osmania
- ITC had signed an MoU with the state government to spend 10% of their profits for the development of Sarapaka
- No jobs to tribals even though plant is in tribal area
- Both unaware of CDMs

“ITC is a huge company to be located in a tribal area. I do not consider this as a job opportunity, it is more like slavery ... A number of surrounding industries have been started, but ITC has not looked after Sarapaka. They are draining the energy from the community and taking away our land, forest and water”

PDD: key components of SD

- **Social well being:** ‘... **reduction in coal consumption** in the industrial processes can be used for more important usages such as electricity generation for domestic consumption at rural areas. Further, as there is an expected reduction in electricity consumption from the project activity, same could be made available for other purposes where the demand is more than the supply.
- **Economic well being:** As the project activity reduces steam and electricity consumption it is expected that there would be **marginal reduction in energy cost associated with pulp production**.
- **Environmental well being:** reduced emission from coal usage leads to **indirect avoidance of environmental destruction and pollution associated with coal mining and coal transportation**. There is no additional adverse environmental impact from the project activities.
- **Technological well being:** The project activity leads to **enhancement of technical skills of the employees** and their ability to learn about new technologies through research and development. With the advent of the ‘first of its kind’ technology in the country, the other pulp and paper units in the country will be encouraged to explore energy efficiency technology leading to conservation of energy.

CASE 3

Biomass Renewable Energy Generation Project

- Name of the company- Varam Power Projects
- Capacity: 6 MW energy generation(less than 15 MW)
- Location: Chilakapalem Village, Srikakulam Dist. AP
- Dependent on agricultural waste by products: Rice husk, bagasse and juliflora according to PDD
- Accessing 4-5 villages for raw material.

Impacts? Waste to electricity

- Plant employees, fuel wood suppliers, the Panchayat Sarpanch and representatives of the local community generally satisfied
- Local community happy as **more than 300 daily wage labourers from the village had been employed directly by the plant,**
- Little environment impact felt, generation of dust experienced but resolved

The key issues:

- Use of biomass by people and locally for cottage industries
- Flouting PDD-Change in fuel mix, from juliflora to casuarina detrimental to bio diversity and food security: Casuarina 70% was used. Provided incentives to collect casuarina; **farmers tended to shift from rice cultivation to casuarina**
- fly ash generated is transported to brick manufacturers as raw material.

CASE 4

Samal hydro electric project

- Company- OPCL (Orissa Power Consortium Ltd.)
- Capacity: 20 MW
- Impacted village- Kulei, Angul district, Orissa state
- Community- ST/ SC/ BC
- The generated power is to be sold to the PTC India Ltd, a power trading and utility company and in turn to be sold to West Bengal.
- MoU was signed between the company and the VDC (Village development committee) of Kulei village stating obligations and promises of the company towards bringing development in lieu of the land acquired by the community.



Samal hydro power house



Community meeting at Samal, Angul, Orissa

MOU: Key Promises made

- 13.02.2005- OPCL **acquired 18 Acre 50 decimal land** for setting up the hydro power plant at Gram Kulai.
- OPCL promised several facilities for 40 affected families whose land was acquired for the power plant.
- **Employment for the families** as per eligibility required for temporary/ permanent staff.
- **Tap water** for the village.
- Renovation of the village **meeting place, repairs of the village temple**
- Developing proper **drainage system**
- Experienced contractor from the village must be given preference for offloading work of OPCL.
- In case of any violation of the above, VDC may take action

Other promises made

- Landscaping, levelling of area, proper disposal of construction waste
- Accomodation of employed labourers in temporary shelters
- Drinking water and sanitation facilities with septic tanks for skilled and unskilled labourers at the permanent colony to be set up.
- Ensuring no direct drainage to the river.

Commitments in the PDD

- Supply of free fuel to the labourers by the contractor / developer to avoid cutting of trees from the nearby forests
 - **NONE: Community purchases 2-3 quintals of coal for Rs 300 per month to meet their fuel requirements.**
- Health care for the employees
 - **NONE: Hospital facilities 14 kms away**
- Development of green belt around the power house and colony to develop the site to enhance its ecological and aesthetic aspects
 - **NONE**

Blatant negligence of promises

- No permanent job given to a single person from the village . Only temporary jobs: 200 benefitted from construction work
- No drinking water facility developed. Septic tanks etc not developed
- Temple not constructed(the trade union constructed the existing temple)
- Proper road and drain not constructed (existing road in the village was made as part of the Pradhanmantri Gram Sadak Yojna)

CASE-5

Hydro-electric Projects: Middle and Lower Kolab

- Name of the company- Meenakshi Power Ltd
- Location of the CDM project- Village Tentuligumma in the Koraput; village Udegiri, Malakangiri dist.
- Nature of project- Renewable (Hydro)
- Crediting period- 10 yrs. (2007-2016)
- Two run-of-the-river hydroelectric projects with capacities of 25 MW and 12 MW on the river to generate electricity for West Bengal state grid system through the PTC India Ltd.



Hydro Power Station Tentuligumma (25 MW)



Discussion with community members on Hydro Power Project

Clearance by panchayat based on promises made

- Providing street light to the village : NO
- Provide free electricity supply to panchayat office: NO
- Construction of temple in the panchayat, IN PROCESS
- Provide job opportunities to village youth(Provide permanent employment to 60 skilled and 60 unskilled) 12 YOUTH DEPUTED SECURITY GUARDS
- Construction of community hall for the panchayat village: IN PROCESS
- Park for panchayat village: NO
- Hospital, Veterinary dispensary,: NO
- Special higher education facilities for children: 2 TEACHERS TO SUPPORT GOVT
- Water supply to panchayat: TO TENTIULIGUMMA ASHRAM SCHOOL ONLY
- Post office: NO

Other insights

- Some benefit due to infrastructure development: roads and communication facilities during the construction phase
- Also employment opportunities created during this period
- destruction in terms of depleting agricultural productivity due to quarry dust, metal pieces, chips etc which has accumulated in agricultural fields due to neglect by company
- Project built on government forest land

General Observations

- Discrepancy between Govt. indicators of SD and PDDs
- Most projects violate promises made for sustainable development (still obtain clearance-PCB,EIA, DoE)
- Government concept of SD itself is vague
- Some projects have negative environment impacts threatening livelihood
- Forced acquisition of land at low prices with little economic returns
- Renewable Energy projects have less environment impacts
- Bio mass projects tend to deprive communities for access to bio mass for livelihood
- Top mgmt officials are not aware of CDM. Mechanism of getting registered is flawed-consultants hired for PDD
- Communities are not aware of CDMs. Most stakeholder meetings overlook community participation

Way forward

- The basic challenge is to create an opportunity to pursue a **low carbon pathway** in a way that the development needs of a large majority of the poor are coupled with reduction of emissions. (**CDM – instrument for energy access as DEOs**)
- CDMs today are market driven to a degree by which they militate against the interest of the poor. This must not be allowed to happen.
- CDM processes must be modified to give **equal importance to reduction of emissions and sustainable development objectives.**

Action Taken

- Sent note to the EB for review on:
Small Scale Projects' in the context of Clean Development Mechanism: Critical overview and suggestions for improvement in the Indian Context
- The importance of the Non Profit Sector for community based small scale project
- Issues with current small scale projects
- Recommendations

THANK YOU!