Making the cheap development mechanism clean: How?

CSE, November 2005

http://www.cseindia.org/

CSE and climate change

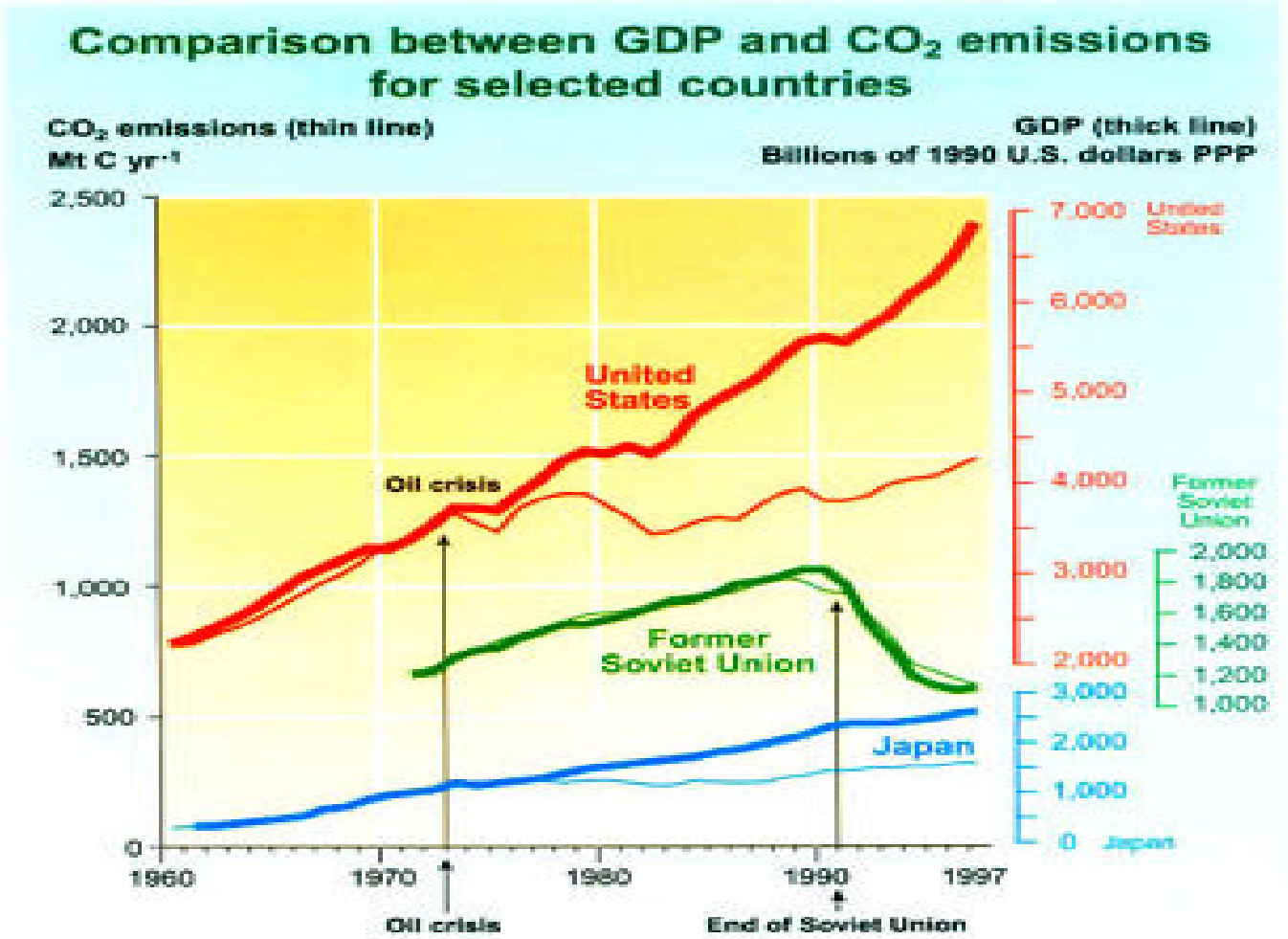
In 1989, CSE published: '*Global Warming in an Unequal World: a case of environmental colonialism*'.

Climate change is about sharing the ecological and economic space of the world.

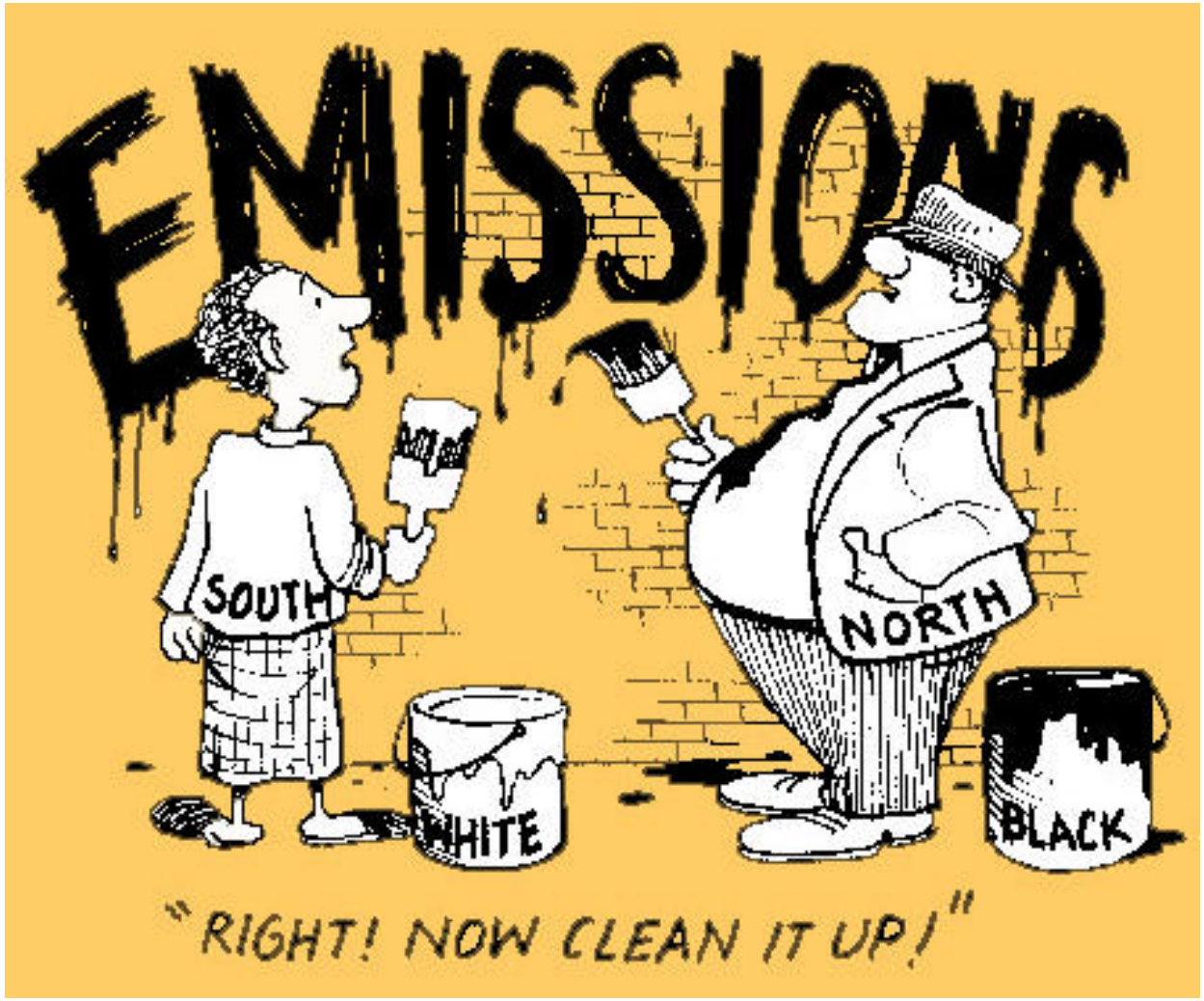
Proposed (in 1989) a per capita entitlement system to share the commons, trade the unused emissions of the South, provide incentives and disincentives to growth with climate-justice.

CSE's work on climate change :
http://www.cseindia.org/programme/geg/geg-index.htm

Climate negotiations are economic negotiations: CO2 and growth linked



Instead, what are the international negotiations on climate about



Sharing ecological space

No proof: but signs of climate change.

We are most vulnerable. Urgent steps needed.

For 450-550 ppmv scenario (with adverse impacts) deep cuts in emissions needed.

We have negotiated after 15 years the Kyoto Protocol: 6 per cent over 1990 levels by 2012.

Too little. Too late.

But even that is difficult to achieve.

Vulnerable. Poor. Pressured

Must review CDM in this context.

CDM is a mechanism of the Kyoto Protocol.

India and China villains

Kyoto targets becoming difficult to achieve.

UK emissions have increased. Now new EU data shows last year emissions increased. No structural changes made to economy for reducing dependence on fossil fuels.

Pressure will grow on India and China to fall into line. Last week G-8 held us ‘responsible’.

Vulnerable. Poor. Pressured.

Review CDM in this context.

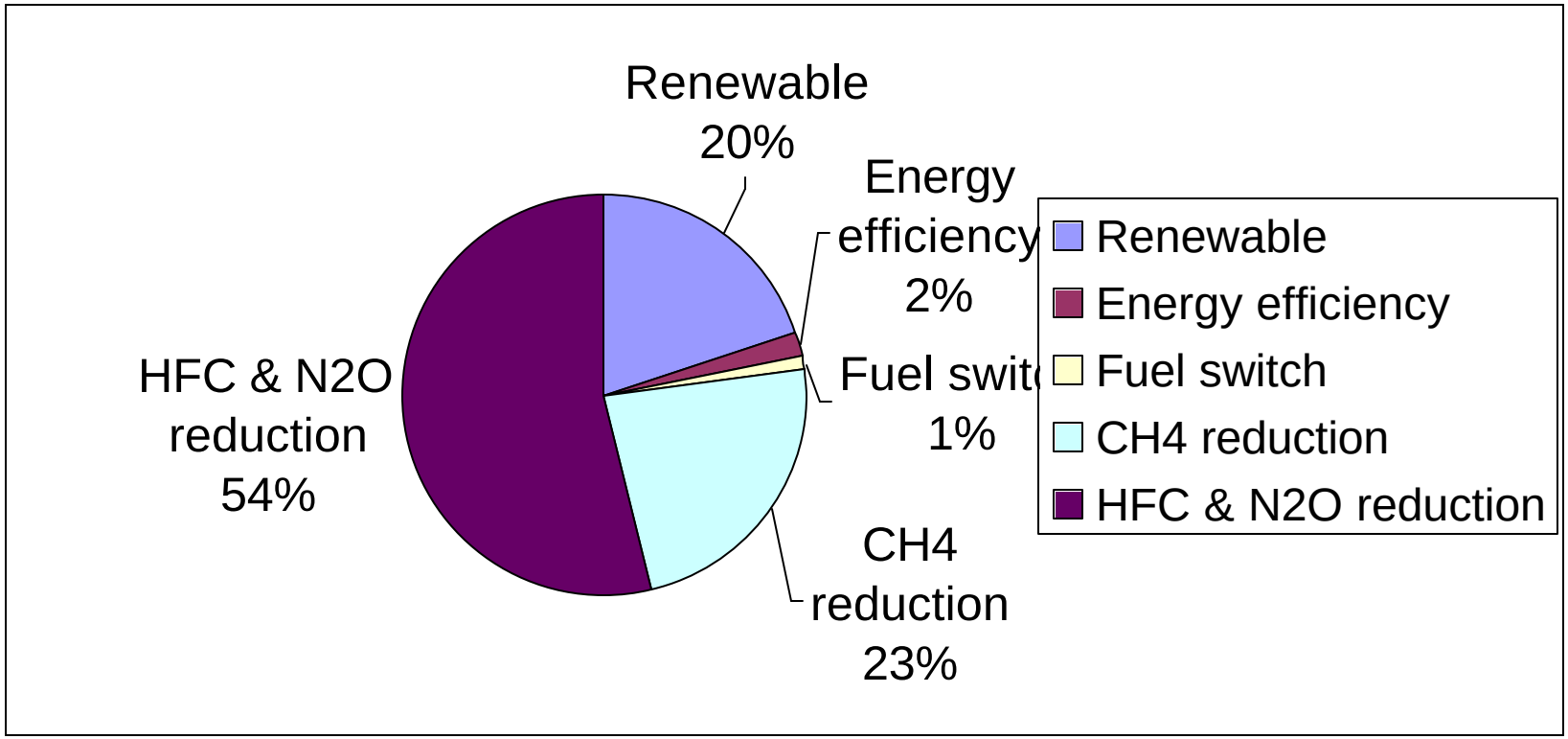
Its stated objectives:

- Give industrialised nations flexibility to meet emission reduction obligations (by investing in projects in the South and taking climate credits in their balance sheet) and
- Promote sustainable development in developing countries.

Emanated from Brazil proposal (pressure from India for equitable climate treaty)

Clean Development Mechanism

Global market



Source : UNEP Risoe Center

CDM in India: growing market

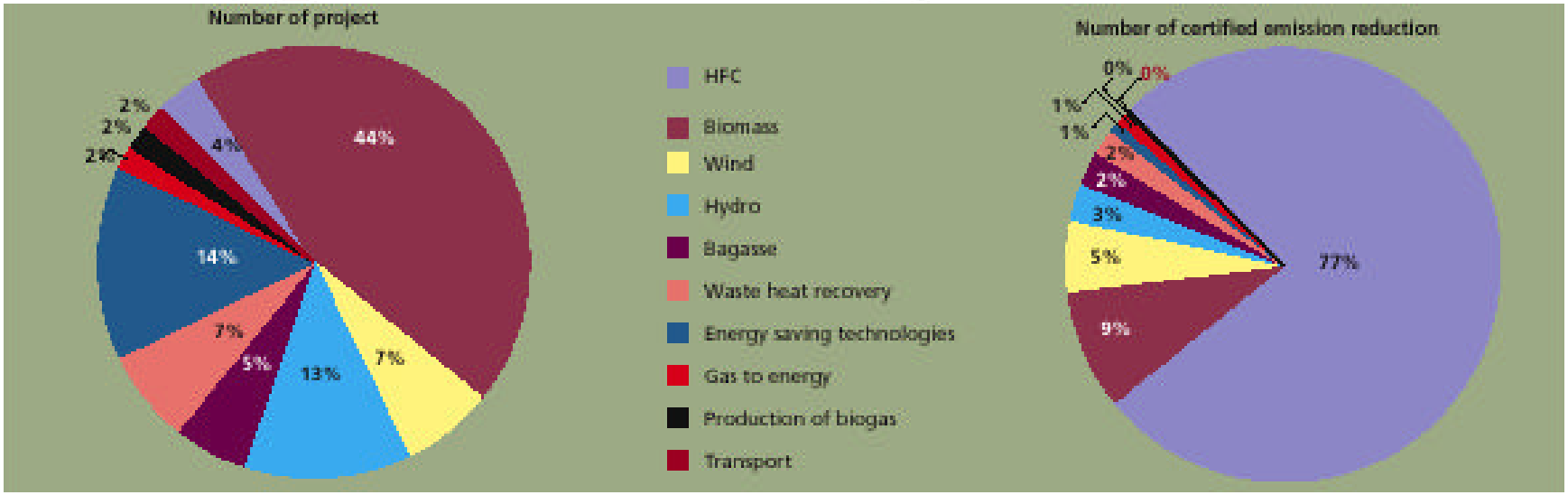
Projects in India

Lots of biomass projects...

The kind of CDM projects in India, sector-wise

But the money goes to...

HFC projects attract most CERs



What we learnt: HFC-23

- Gujarat Fluororochemicals limited (GFL) near Godhra sold 3 million certified carbon reduction (CER) units each year.
- Bought by Netherlands government assisted by Rabobank. Other players: Ineos Fluor: technology supplier (British government endorsement) and Sumitomo Corporation; plant maintenance (Japan government).
- SRF Fluorochemicals next in line. Project to be cleared by CDM board. Expected sale of 3.8 million CERs each year. Sold to Shell Trading Group+KFW Germany+EDF trading UK

Price unknown

Rabobank says: “do not give names of clients”.
Ineos Fluor says: not buyers but owners of the CERs.
Deal confidential.
Sumitomo: unreachable. Companies say: No comment.

Take cheapest: US$ 5 per CER

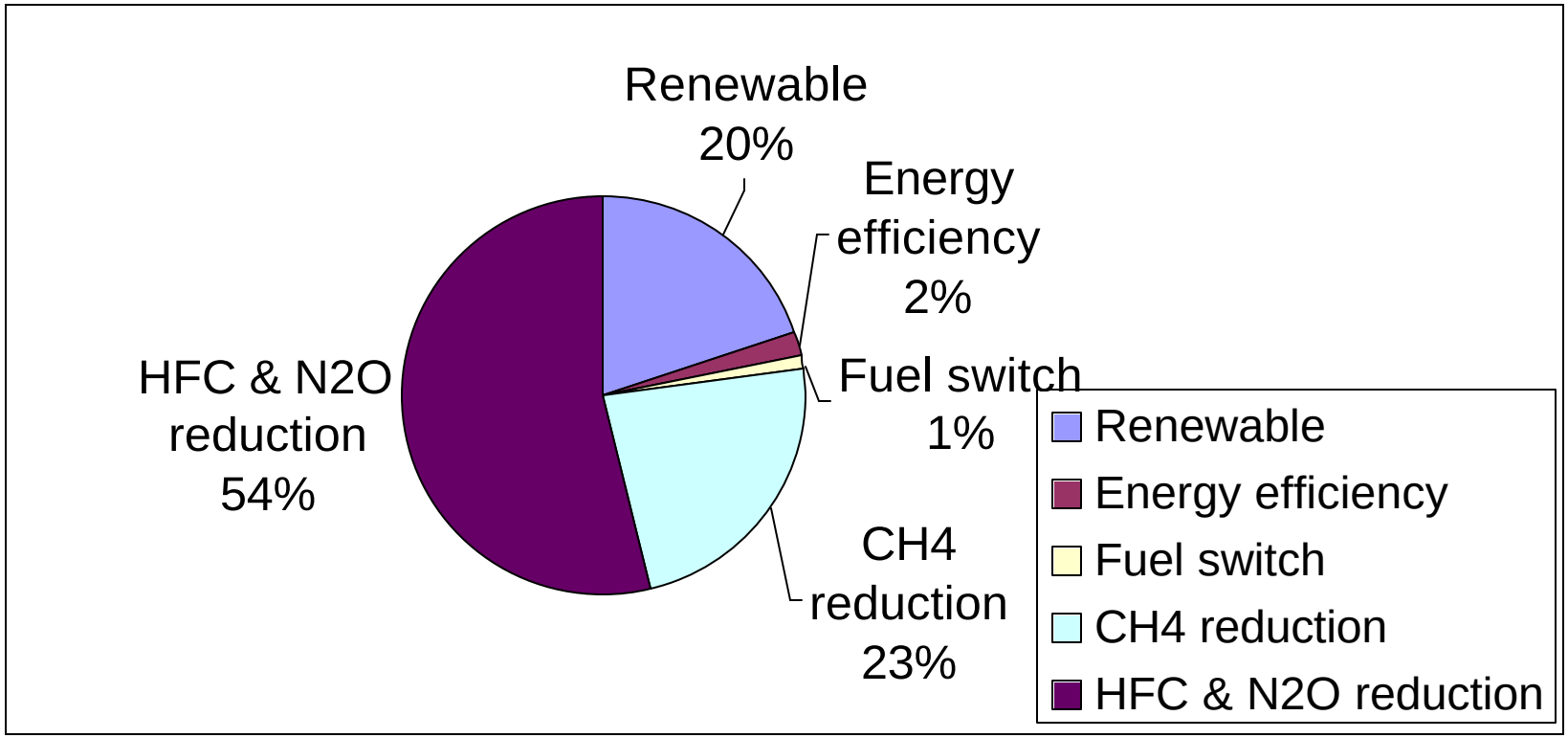
- GFL= **Rs 68 Crore (US$14.7 million)annually**
  Rs 680(US$147 million) in 10 years
- SRF= **Rs 86 Crore(US$19 million) annually**
  Rs. 860 Crore (US$ 190 million) annually
  (Rumoured in corridors of UNFCCC that sold for US$ 17 per CER)

HFC-23: What have they sold?

- HCFC-22 manufacture (replaced CFC and is also under Montreal Protocol) generates by-product HFC-23.
- HFC-23 is potent global warming gas.
- Projects are designed to incinerate the gas (burn) it.
- Globally very popular as well. HFC-23 projects bulk of CERs sold: 24 per cent of CERs sold

Clean Development Mechanism

Global market



Source : UNEP Risoe Center

Sweet deal

Cheapest-most reliable deal for North

Costs companies almost nothing: SRF Rs 13 Crore(US$ 2.8 million) investment; GFL comparable.

More than 100 million CERs every year can be bought in burning HFC-23 globally.

Rich countries want to buy cheap emissions but only if reliable. Process designed for certification so that they are assured.

Process: carbon accounting

1. Project proponent hires consultant to do project design document and works out sale of CERs with private parties.
2. Indian government (national CDM board) clears projects for sustainable development criterion)
3. Private validators hired by company (11 validators cleared by global CDM board as its designated operational entities). These validators look at report of consultant. Clear project. Take to board.
4. Global board gives approval based on validators report and registers project.
5. New auditors appointed by Project proponent to certify the reductions each year…
6. CERS issued by Board. Exchanged for money.

More details : Detailed CDM Project Approval Guide

Deals are private-private. Auditors certify that project is meeting all requirements. Certify that carbon reduction is additional to what would have been without project. Certify that carbon reduction is **real**.

Creative carbon accounting?

1. Auditors have to make sure environment impacts are studied; stakeholders consulted; all requirements met.

What we found?

Creative? Or Cut and Paste?

Excerpts from official Project Design Document :

A meticulous record of stakeholder consultations is a prerequisite for approval. Yet companies appear to cut-paste from each other's stakeholder consultations.

GFL:

The Labour Union leader:

Source : GFL Project Design Document on UNFCCC website

a) stated that in whatever the firm does it must not in pursuit of profits compromise on principles of sustainable development;
b) enquired what would be the employment generation potential of the project and the skill levels;
c) enquired if there were any specific restrictions on emissions from such incinerators;
d) enquired as to what are the likely occupational health and safety impacts of the project;

SRF :

Source : SRF Project Design Document on UNFCCC website

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Creative? Or Cut and Paste?

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G.3 Report on how due account was taken of any comments received

GFL clarified to the Sarpanches:

a) that the proposed project design would adhere to the best environmental performanc standards prescribed anywhere in the world though the current designs being explore conform to the EU Directives. Moreover, prior to implementation of the project an EI would be conducted and a suitable EMP drawn up and implemented to ensure minim adverse environmental impacts.

b) GFL clarified that though the proposed system requires about 60 M3/day of water near 45m3/day of water would be recycled and only 15 m3/day of water shall be drawn fro external sources a makeup water. Moreover, as regards general water scarcity in th region, GFL has in the past contributed to construction of water management structure and shall continue these initiatives to improve water management in the regio Moreover, in this direction GFL had commissioned a study by Gujarat Industrial an Technical Consultancy Organization on the groundwater situation and to identify sites f construction of check dams.

c) GFL clarified that the wastewater shall be neutralized, treated in BOD/COD reactor thickeners and recycled. While the solid waste that is generated shall be disposed of in a approved secure landfill site at Nandesari.

d) GFL specified that nearly 30 to 40 new jobs are likely to be created on account of th project activity and nearly 90% of these new jobs would involve unskilled labou Moreover, GFL assured the Sarpanches that where possible employment would be offered to local people.

G.3. Report on how due account was taken of any comments received:

>> SRF clarified to the members present:

a) that the proposed project design would adhere to the best environmental performance standards prescribed anywhere in the world though the current designs being explored conform to the EU Directives. Moreover, prior to implementation of the project an EIA would be conducted and a suitable EMP drawn up and implemented to ensure minimal adverse environmental impacts.

b) SRF clarified that though the proposed system requires about 25 M3/hour of water most of the water would be recycled and hence only a small quantity shall be drawn from external sources as makeup water. Moreover, as regards general water scarcity in the region, SRF has in the past contributed to construction of water management structures and shall continue these initiatives to improve water management in the region. Suggestions were made by members to create check-dams to divert surface run-off from nearby springs into the groundwater aquifer.

c) SRF clarified that the wastewater shall be neutralized, treated in BOD/COD reactors, thickeners and recycled.
SRF specified that a few new jobs are likely to be created on account of the project activity and nearly 90% of these new jobs would involve unskilled labour. Moreover, SRF assured the Sarpanches that where possible employment would be offered to local people.

Source : GFL Project Design Document on UNFCCC website

Source : SRF Project Design Document on UNFCCC website

Process credible?

Down To Earth reporters visited projects:

1. Lack of transparency: no access (or difficult to get access)..
2. Villagers complain of pollution.Depletion of groundwater.

Cannot confirm. But fact is that process of certification not credible. Will this help?

Indian government is party to these projects. What does this do to its reputation?

SD: not responsibility of validators

Validator does not check sustainable development criteria. Says so.

			so the baseline is zero destruction.		
D.5. Monitoring of Sustainable Development Indicators/ Environmental Impacts *It is checked that choices of indicators are reasonable and complete to monitor sustainable performance over time.*					
D.5.1. Does the monitoring plan provide the collection and archiving of relevant data concerning environmental, social and economic impacts?	/1/	DR	The DNA of India does not warrant monitoring of sustainable development indicators.		OK

Source : DNV Ltd. Validation report for SRF Ltd

Sustainable development?

National CDM board certifies project meets sustainable development criterion.

GFL says: empowerment of communities.. redistribution of wealth..SRF says; will plant trees (where and how?)

Need clarity on what meets SD criterion.

China is taxing HFC-23 projects so that it can invest in sustainable development. Why not us?

Biomass: new generation power?

Generation of power by burning biomass – from agricultural residues to wood of *prosopis juliflora.*

- 24 projects in line to be cleared:
- 44 per cent of India's CDM portfolio
- 700,000 CERs: Rs 16 crore each year (conservative estimate).

First registered project is Kalpataru Power Transmission in Rajasthan.

- Sell to Netherlands government 313,743 CERs over 7-10 years; Rs 1 crore per year.
- Will burn mustard sticks; rice husk, saw dust..
- Down To Earth refused entry.. Great project?

Economics and ecology: about biomass

Environmental impact; sustainable development criterion will depend on biomass availability

Case of 7.8 Kalpataru Power Transmission biomass plant: making sense of economics (Calculation is based on the monitoring report of the project)

Last 23 months :

Sold power at 22.49 Crore (67.73 million KWh @ assume rate state power purchase Rs. 3.32/unit)

Sold CERs at 1.09 Crore (48,636 CERs @ US$ 5 per CER assumed)

Total revenue: Rs 23.58 crore

Biomass consumed : Rs 7.4 crore (rate of Rs 800 per tonne or Rs 1.09 per kWh (because of low capacity utilisation as stated in report)

Without CERs, the plant would earn for its operating costs, capital and profits:

Rs 2.23 kWh

With CERs, the plant earns:

Rs 2.39 kWh

Assuming Rs 800/tonne of biomass consumed in a highly inefficient plant

Surplus biomass?

All PDDs say that biomass is ‘surplus’

But

All PDDs also justify the additionality criterion of the CDM project saying that the cost of biomass is going up (*juliflora* from Rs 450 to 1000 etc) and therefore, economics only work, if CDM project happens.

Remember most states have preferential tariffs for biomass already.

Economics: sustainable?

1 MW/hr of power needs 1 to 1.5 tonnes of biomass.

7.5 mw plant (at 100% capacity): 65,700 tonnes- 98,550 tonnes/each year.

If the biomass is bought at Rs 800 per tonne, the plant spends Rs 0.80 per kWh on its raw material.

If the biomass is bought at Rs 1200 per tonne, the plant will spend 1.20 per kWh on its raw material.

Questions:

a. Is the rural area benefiting from the sale of biomass?
b. Is the sourcing of biomass on sustainable manner?

Competitors are poor

Power projects compete with poor women firewood for raw material; farmers fodder for raw material…or can lead to illegal felling for raw material.

Price and availability critical decisions. We need to know if this sourcing is putting stress on very poor (already stressed by drought etc..vulnerable to climate change).

What we found?

Case : R K Powergen, Karnataka: heavily guarded project. Under certification. 20 mw project.

Down To Earth found:

- Evidence of wood being used in biomass project;
- Widespread allegation of illegal timber felling – contractors paid to bring raw material (remember cost of legal raw wood too expensive if transportation costs added).
- Local communities angry. Say they do not benefit. No jobs. Firewood difficult to get. Water depletion. Power sold to grid. They get nothing.

How do we know?

..that this is not an isolated example.

4 project design documents prepared by Ernst & Young should tell us what is happening on ground. What people say?

- Ritwik 6MW Biomass Project
- Indur, 7.5MW Renewable Source Biomass project,
- Perpetual 7.5MW Non-conventional Renewable Source
- Sri Balaji 6MW non-conventional Renewable source

Do they???

Really-really creative copy paste

representative of local NGO and biomass suppliers to express their views on the project and the summary is presented as below.

Village Sarpanch (head of locally elected body) expressed his happiness about the implementation of project in his village since the project activity has created employment opportunities for the villagers and also for creating an additional means of revenue for local farmers/biomass waste suppliers which will positively help to improve living standard and the socio-economic condition of the village. Other benefit mentioned by the Secretary of gram panchayat is additional revenue from the project activity in terms of tax to gram panchayat, which will be utilized for the development of the village. One of the local body (Zilla Parishad, ZP) member expressed that by various means the village has been benefited by the project activity, specifically the project has created additional source of income for poor farmers of the nearby area. Poor farmers are getting reasonable monitory gains for harvesting the available biomass and supplying it to project activity.

Representative of local NGO's, after having a better understanding of the project activities, found that the project was not affecting the surrounding environment as due care was taken by the project promoters for controlling the air and water pollution and disposal of effluents generated during the project activity. They appreciated the efforts of RESL for developing green patches and plantation within the plant premises.

Representative biomass suppliers also expressed their happiness about project implementation by RESL in this area, which has provided them an opportunity of small business. They also suggested that the project will provide employment opportunities for local labors, skilled and unskilled workers by preventing their

Project Design Document of Rithwik 6 MW Biomass Power Project, M/s Rithwik Energy Systems Limited, March 2005, p30

Source : Project Design documents on UNFCCC website

village, representative of local population, representative of local NGO and biomass suppliers to express their views on the project and the summary is presented as below.

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Representative biomass suppliers also expressed their happiness about project implementation by

Clean Development Mechanism Simplified Project Design Document for Small-scale Project Activities (SSC-CDM-PDD) Version 2, Indur 7.5MW Non-Conventional Renewable Source Biomass Power Project, p29

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representative of local population, representative of local NGO and biomass suppliers to express their views on the project and the summary is presented as below.

Village Sarpanch (head of locally elected body) expressed positive views about the setting up of project in their village since the project activity has opened doors for the creation of employment for the educated and uneducated villagers and also for creating an additional means of revenue for local farmers/biomass waste suppliers which will positively help to improve living standard and the socio-economic condition of the village. All other stakeholders in the project expressed their satisfaction that the area has been benefited in terms of development by the project activity, specifically the project has created source of income for poor farmers of the nearby area. Poor farmers are getting reasonable monitory gains for harvesting the available biomass and supplying it to project activity.

Most of the representative biomass suppliers also expressed their happiness about project set up in the

Biomass: way of future

Important projects: win-win possibilities

Grow wood to burn. Employment and carbon credits in growing. Carbon credits in burning.

But currently: not meaningful.

Only private sector projects. Only interested in assured price by state government. CDM icing on cheap cake. Work to get cheaper and cheaper biomass. Will lead to depletion..more climate impacts.

Needs supportive policy for community involvement.

But this needs higher CDM price. More for planting trees. More for energy generation.

Cheap deal. Not good for sustainable development.

Issues

1. Only private sector involved; no public project, no community projects. Why?
2. 74 per cent of CERs portfolio is harvesting fugitive gases. No taxes for sustainable development. Why?
3. No policies to drive projects that lead to more effective climate policies in India. Why?

Convoluted UN rules. Made for corrupt and bad policies

1. **Additionality:** defined as emissions reduced as below those that would have occurred in the absence of registered CDM activity.

   Result of this is convoluted and expensive methodologies to establish that project is additional.

   Result is creative accounting (read corruption)

   If government has law to mandate lower emissions, then project will not qualify for CDM

   Result is perverse incentives to governments not to do anything.

2. Kyoto **baselines**: Protocol is based on taking emission reductions over current (or specified year baseline).

   Cheap options are in the highest end of baseline. No incentive to governments to reduce emissions.

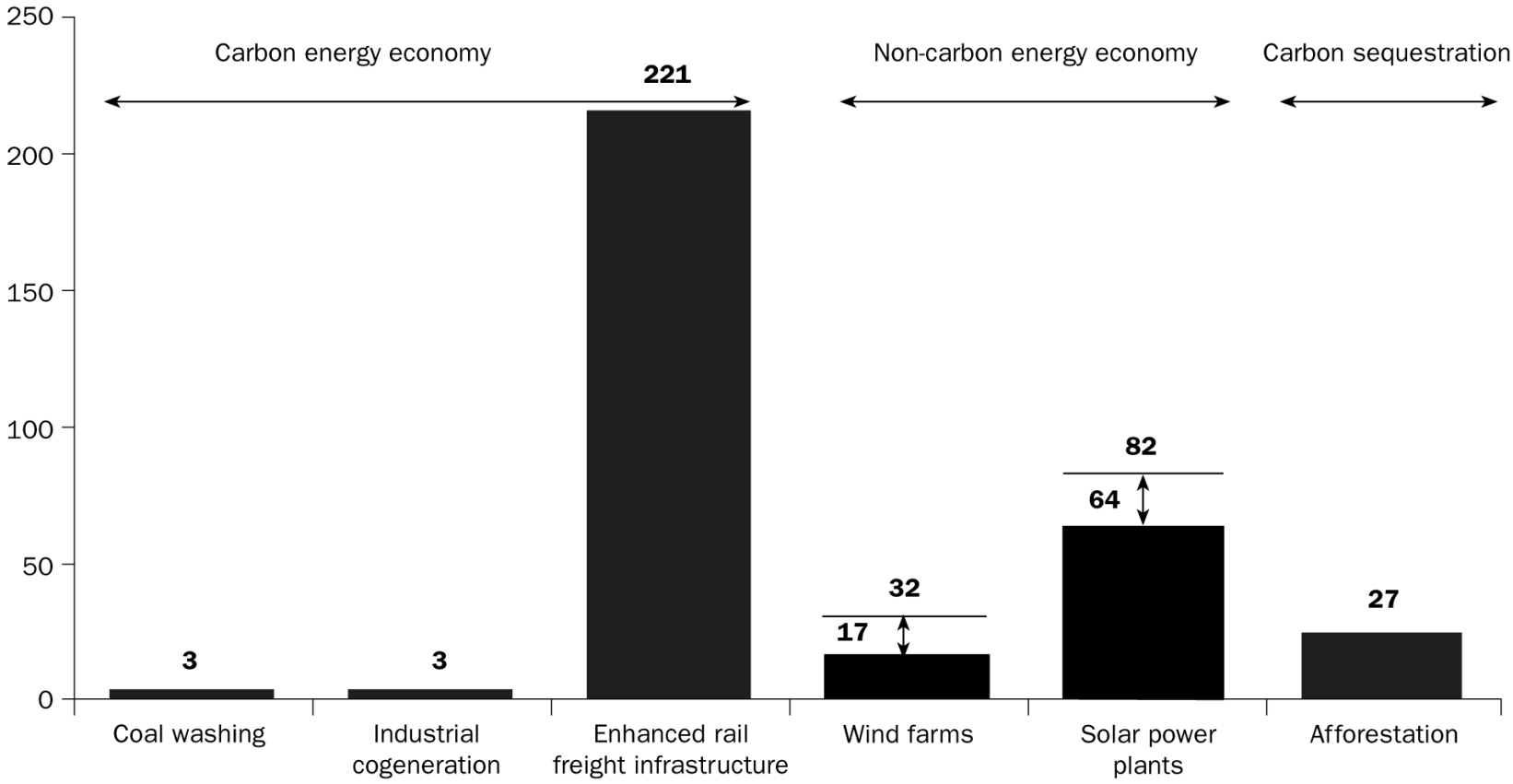
Procedures: non transparent. Non accountable. To keep cheap

Price: non transparent market. Keeps buyer in control.

- Within EU traded at US$ 27.7/tonne of carbon dioxide equivalent. WB advertises price at US$ 5/ tonne
- In EU, after 2008 the cost of not meeting emissions standards set at 100 Euro/ tonne C02 **plus** price of carbon credit. This is the upper limit price of the CER's
- Sellers(south) take all the risks of investment
- Sellers pay the costs of preparation, validation, verification, registration and certification to consulatants, DOE's and the UNFCCC.
- Sellers sign contracts (Emmission Reduction Purchase Agreements) with penalties for non-delivery of CER's on the seller
- Yet CER's are still considered "risky" and get peanuts.

The low hanging fruit is all in Carbon

Estimated emission reduction costs in India (US $/tonnes of carbon saved)



What we should do?

1. Make CDM part of our future negotiation strategy;
2. Demand next commitment period from North so that long-gestation projects can be part of CDM (after 2012)
3. Demand reform in CDM procedures so that there is transparency; accountability of different players (penalties on consultants and DOEs);

Reform CDM

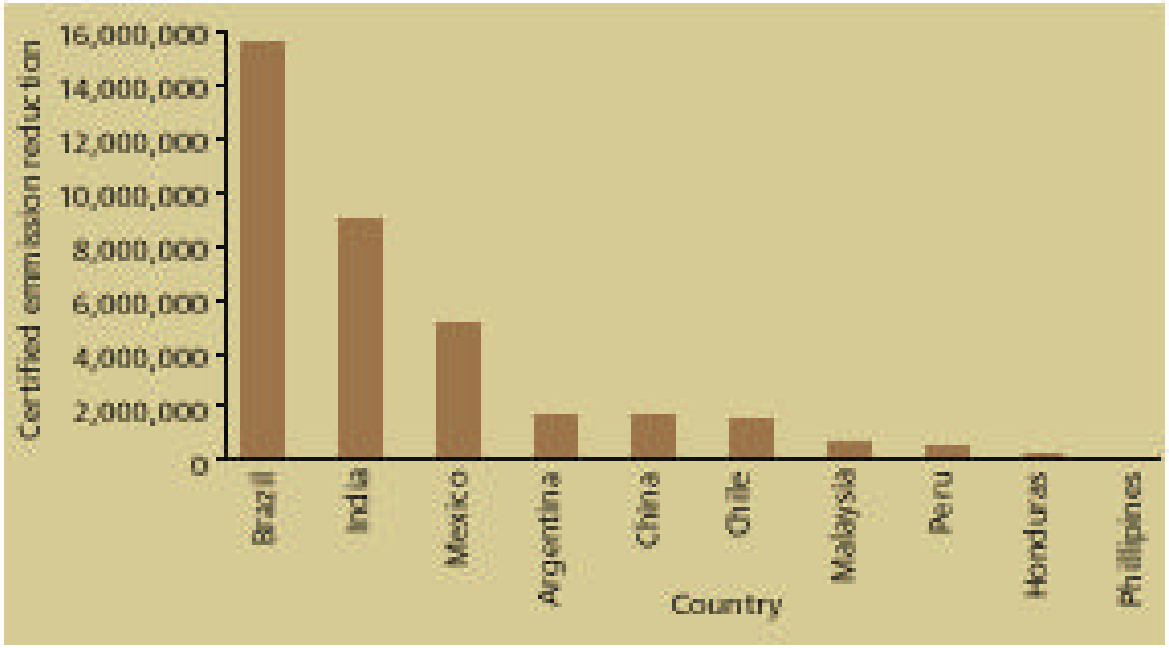
4. Demand price negotiations have to be made public, otherwise will lead to corruption (remind UN of Food for Oil);
5. Demand simpler procedures (less convoluted methodologies for additionality..etc) so that meaningful projects can work.
6. Demand CDM has to be subservient to government policies..and laws..not mercenary parallel process

Our side of deal

7. We do not take on commitments. Next round is US-Australia round. But we participate through a meaningful – socially and ecologically effective CDM.
8. We take sustainable development criterion seriously..We tax HFC-23 and alike projects. We develop portfolio of projects that will assist us in dealing with carbon economy.

Banana republic or nation with respect?

- India is a prime destination for CDM. But if we keep thinking about South Korea, Brazil..we cannot develop our policies.
- Negotiate to get better deal. Make a difference. Needs spunk in Indian negotiations.



More information

Read Down To Earth cover story “Black as the carbon they deal in” for in-depth information on Clean Development Mechanism(CDM)

http://www.downtoearth.org.in

Frequently asked questions and background information on CDM and climate change