Discredited: The Voluntary Carbon Market in India

A CSE - Down to Earth investigation
VCM is a sophisticated ecosystem

It involves a multitude of players to ensure that a carbon offset project reduces GHG emissions. But in this cosy carbon club, conversations take place behind closed doors; no one wants to talk about prices. It's a world designed by developers, verifiers, validators and registries to make money.

Worldwide: Annual transactions of the VCM were $2 Billion in 2021
"India's VCM is worth over $1.2 billion. The country has 1,451 projects registered or under various stages of consideration at the 2 leading carbon registries. Carbon credits issued to Indian entities till mid-2023 are worth almost 10 per cent of India's annual greenhouse gas emissions in 2020."
Only rule is secrecy

• Our investigation has been difficult

• No government database on the number of voluntary carbon market projects

• Individual companies can make contracts to ‘sell credits’ and then say that these are under confidentiality clause. No idea of project sites; no information on price; beneficiaries

• We had worked on a database; 1451 projects in different categories

• Used database to identify project developers and project sites; we were still blocked

• But we pushed on…
DISCREDITED
THE VOLUNTARY CARBON MARKET IN INDIA

DTE-CSE INVESTIGATION INVOLVES
40 locations,
5 project categories, 4 states

Project categories:
Improved cookstoves; Afforestation;
Alternate wetting and drying rice
production; Household biogas plants;
Renewable energy

States visited:
Madhya Pradesh; Karnataka;
Telangana; Andhra Pradesh

www.cseindia.org
CASE STUDY 1: IMPROVED COOKSTOVES

- Distribution of clean cookstoves as a business model in the carbon market has picked up in recent years. Over 300 cookstove projects were added to key carbon registries in 2022 alone – mostly in Africa and South Asia.

- We visited several villages in Karnataka and Madhya Pradesh

- **Overestimation:** Developers assume that the target population primarily depends on biomass and that they would shift to low-emission appliances without any incentive for behaviour change. In households we visited we found that people were using multiple sources for cooking; including LPG through the Pradhan Mantri Ujjwala Yojana scheme.

CASE STUDY 2: PLANTING TREES FOR CARBON

- The Araku Valley Livelihood Project with some 6,000 hectares spread over 333 villages across the Araku Valley in the Eastern Ghats of Andhra Pradesh come under the project. Tribal communities in Andhra Pradesh's Araku Valley have set up plantations on their private land.

- Carbon credits earned by the project are owned by a foreign developer – Livelihoods Fund. Through an agreement, farmers have given up their carbon rights for 20 years. Farmers DTE-CSE interviewed were not aware of carbon credits.

- **We found two issues with the project:**
  - **Additionality:** The Integrated Tribal Development Agency says that they also contributed to afforestation since 1990
  - **Who benefits from carbon credits:** The only benefits accruing to tribals are free saplings and trainings.
CASE STUDY 3: MANAGING METHANE

- We studied two projects that are awaiting registration in Verra: Sustainable Rice Productions in Telangana and Sustainable Rice Cultivation for Marginal Farmers in Madhya Pradesh. These projects follow AWD to reduce methane emissions by an average of 43%.

CASE STUDY 4: HOUSEHOLD BIOGAS PLANTS

Globally, over 200 household biogas projects are registered with Verra and Gold Standard. Over 50 projects are from India that have collectively generated 4 million credits.

Issues:

We found that biogas plants, which accrued carbon credits, had been given subsidies by the government, and were paid for by the poor beneficiaries as well.

Underestimating the cost of biogas plants: Carbon credits would earn between US$ 16-56/year (Rs 1319-4617) for seven years; This is a pittance as compared to the capital cost of building a biogas plant (US$ 364 or Rs 30,000) borne by the rural households. There is also the cost of maintenance and labour

Clearly, the credits are being taken by rich polluters on the backs of the poorest; the poor (governments and communities) are subsidizing the rich.
CASE STUDY 5: Renewable Energy Projects

RE projects are the biggest share of the VCM portfolio in India.
675 registered projects for 268 million credits; 148 million retired.

Issues:

Carbon credits issued to renewable energy are a fraction of the project cost: they would represent between 3-5% of the capital cost of the project for the first crediting period.

This means that the project is not being built or has become viable because of this carbon credit. But offsets are being claimed saying that the project has happened because of the money from credits and so emissions reduction achievements are being sold.

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Capacity (MW)</th>
<th>Capacity cost (₹ crore)</th>
<th>Emission reduction estimated per year (tCO2-eq)</th>
<th>Potential money from emission reduction in 1st crediting period (₹cr)</th>
<th>Carbon finance as % of total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydropower project by Jaiprakash Hydro Power Ltd</td>
<td>300</td>
<td>1,650</td>
<td>1,052,463</td>
<td>620.95</td>
<td>37.6</td>
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<tr>
<td>Renewable solar power project by ReNew Solar Power Pvt Ltd</td>
<td>927</td>
<td>6,386.2</td>
<td>1,767,281</td>
<td>220.91</td>
<td>3.6</td>
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<td>Bundled solar photovoltaic project by ACME Solar Holdings Pvt Ltd</td>
<td>1207</td>
<td>6,403</td>
<td>2,078,589</td>
<td>259.82</td>
<td>4.0</td>
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<td>Solar Energy Projects by SB Energy Pvt Ltd</td>
<td>2260</td>
<td>13,820</td>
<td>4,354,646</td>
<td>544.33</td>
<td>3.9</td>
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<tr>
<td>Wind Based Power Generation by Myraah Energy (India) Ltd</td>
<td>233</td>
<td>1,343</td>
<td>479,448</td>
<td>59.93</td>
<td>4.4</td>
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<td>Energising India solar energy projects by Azure Power India Pvt Ltd</td>
<td>480</td>
<td>2,721</td>
<td>852,639</td>
<td>106.58</td>
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<td>250 MW Wind Power Project by Myraah Energy (India) Ltd</td>
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<td>1,890</td>
<td>598,039</td>
<td>74.75</td>
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<td>Solar power project in Rajasthan by Azure Power India Pvt Ltd</td>
<td>600</td>
<td>2,150</td>
<td>1,138,724</td>
<td>71.17</td>
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<td>3,561</td>
<td>921,296</td>
<td>115.16</td>
<td>3.2</td>
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<tr>
<td>Ghoni Solar Renewable Power Project by Greensko Group</td>
<td>500</td>
<td>3,725</td>
<td>996,010</td>
<td>124.5</td>
<td>3.3</td>
</tr>
</tbody>
</table>

*Total cost is specified by the project developer in the project document. ** Emission reduction per year are estimated by project developers and mentioned in the project document: the price per tonne of emission reduction is assumed ₹1.5 for solar and wind power projects, and ₹3.5 for hydropower projects.

Source: Jay S. So, Barbara K. Hoya, Micah Elston, (2023, May), Voluntary Registry Credits Database v8, Berkeley Carbon Trading Project, University of California, Berkeley (May 2023)
Our conclusions / recommendations

- Entire purpose of this market seems to be to serve the interest of the retinue of project developers; auditors and others who make a profit out of the lucrative carbon business.

- This market is not about mitigating emissions; this is not the purpose of the design of the current voluntary market

- In fact, it could end up increasing emissions in the world. The buyers – say the airline company; oil company or a luxury goods brand – would continue to emit; increase their emissions, by saying that they have bought credits and so are “carbon-neutral”.

- But, as our investigation shows, these credits are over-estimated or have not led to the change that was claimed. So, this is a double jeopardy

- **Our climate risked world does not need this shady, secretive business of creative carbon accounting**
COP28: Agenda for Carbon Markets

1. **Ensure transparency**: details of projects; price of each credit; beneficiary – simply rules of good governance

2. **Pay the price of real change**: Design the market to invest in projects that will lead to real reduction in emissions;
   - Renewable Energy: offsets pay for 3-5% of cost – does not make project viable/happen
   - In biogas projects, carbon markets pay 2-7% of capital cost.
   - In nature-based solutions (planting trees) poor not getting cost of labour or land
   - Immoral business as the rich who are claiming offsets are being subsidized by poor governments and poor people

**Put a floor price to carbon credits** ([Rwandan government proposal US$30 or even higher](#))
Design of carbon markets

3. Do not shortchange people or the Planet

• Household devices (chulhas) – even if given free (which we found is not the case) would add up to only 20 per cent of what the developer would earn over the 5–6-year lifespan of the project

We cannot expect behaviour change unless people benefit annually; what is the incentive for households to use the device; to not cut the tree or to utilize biogas energy?

Follow the original Zimbabwe government proposal to share substantial proceeds directly with communities
All the Kings men: complicated is not good

4. **Keep it simple**: current design is to benefit the army of verifiers; developers; auditors, registries. And even then, they cannot even add up the maths of carbon credits to get it right.

In fact, the name of the game is to over-complicate the design so that there is no accountability, and it is open for fudge and fraud

Example:

Even a child in India will tell you that a mere ‘gift’ of an improved cookstove does not add up to its use and so emission reduction...

**The business is opaque for a good reason. It has secrets to keep.**
Fundamental flaw

5. In whose credit?

- Under the Paris Agreement (unlike Kyoto Protocol) all countries have emission reduction targets (Nationally Determined Contributions)

- India has a commitment to reduce emission intensity of its economy; to augment non-fossil fuels to meet 50% of its electricity by 2030; to have additional forests for carbon ‘sinks’

- But....

- We have already signed 675 renewable projects for 268 million tonnes of CO2e; will these go to India’s account? ‘Offsets’ have already been claimed against them so can these be in our account?

- Bulk of tree plantation is on land outside forests (TOF); what happens when we account for our additional sinks? Which trees do we not count?
Redesign carbon markets for real change

• Voluntary carbon market must be aligned with India’s (and other countries’) NDC. Emission reductions must be counted as domestic offsets

• Exports for offsets – voluntary or ‘official’ must be for projects which are expensive for the country to undertake; where there is real change possible

• Otherwise, countries will ‘sell’ their low-hanging fruit and cheap emission reduction options, and then be left with the reductions that they cannot afford. They will continue to emit…We will all lose.

• Bottomline: design carbon markets to work for the Planet and People.