Aggregator Business Model for Carbon Credits Monetization

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<table>
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<th>Climate Change &amp; Kyoto Protocol</th>
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<td>With concentration of Green House Gases (GHGs) &amp; increased Carbon footprint, Climate Change is a REALITY with serious consequences (Global Warming, weather disturbances)</td>
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<td>Kyoto Protocol was an International treaty adopted in Japan in Dec 1997 under United Nations Framework Convention on Climate Change.</td>
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<td>The major feature of the Kyoto Protocol is that it sets binding targets for developed countries for reducing greenhouse gas (GHG) emissions.</td>
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<td>Introduced Market Mechanisms to meet targets and thereby giving rise to Carbon Credits</td>
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<td>Concept of Market Mechanism and offsets</td>
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### WHAT ARE CARBON CREDITS?

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<th>Icon</th>
<th>Description</th>
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<td>Measurement of GHG Emission Reduction (1 Carbon Credit = 1 Tonne of CO2e emission)</td>
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<td>Devised as a market-oriented mechanism to reduce Greenhouse Gas Emissions.</td>
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<td>Certificates issued to Entities in developing countries that reduce their GHG emissions</td>
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<td>Carbon credit is a tradeable commodity whose price as on date is around 5 U.S. Dollars</td>
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<td>Can be earned by any organization like local bodies, smart cities, government departments who are involved with green projects</td>
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CARBON CREDITS – OPPORTUNITIES AND BENEFITS

Additional Source of Revenue with no additional Capital Investments

Carbon Credits proceeds act as Carbon Financing to the Projects (that contribute to emission reductions) which can be used to reduce the net project costs.

Source of Earning Foreign Exchange

Improve goodwill and international reputation for pursuing innovative initiatives that contribute to cleaner planet
Can the concept of Carbon Credits be used to make revenue by institutions like Urban Local Bodies, Panchayati Raj Institutions, Government Departments or Industries?
Started working on Carbon Credits 03 years ago.

In the first phase, Indore Smart City had successfully registered 3 Projects viz:

- Wet Waste Management (Composting),
- Bio-Methanation and
- Solar Energy Production

under VCS mechanism along with validation, audit, verification process and generated **1.70 lakh Carbon Credits** for the period 12 Oct 2017 to 30 June 2019. Total revenue of approximately **Rs 69 lakhs was realised** from these credits.

Indore got the unique recognition of being the **first Urban Local Body in South Asia** to tap Carbon Finance

In the 2nd Verification (for the period 1st July 2019 till 31st December 2020) of the same projects, **Rs. 8.34 Crore revenue** was received in September 2021.

New projects such as Sewage Treatment Plant, Decentralized composting, Forestry, Plastic Recycling, LED Lighting etc have been registered in respective eligible carbon credit mechanisms.
## Eco Friendly Projects to Earn Carbon Credits

### Renewable Energy Projects
- Solar PV Rooftops, Windmills
- Small Scale Hydel Projects

### Energy Efficiency Projects
- Energy efficient cook stoves
- LED Lighting projects

### Transport
- Metro Rail, Bus Rapid Transport System,
- Electric Vehicle

### Waste Handling and Disposal
- Solid Waste Management (Waste to Energy, Compost formation projects),
- Sewage Treatment Plants, Biogas based projects, Animal waste management.

### Afforestation & Reforestation
- Large scale Plantation activities, Commercial plantations,
- Reduction in deforestation.

### Plastic Collection & Recycling
- Activities involving collection and recycling of plastic materials from the environment.

### Industrial Interventions
- Installation of Carbon emission mitigation mechanisms

### Cattle Management
- Go-Cast,
- Gobardhan Scheme,
So, making money through Carbon Credits seems fairly simple and easily achievable!!

But then where is the difficulty??
Why is not everybody making money out of it?
ENTRY BARRIERS IN CARBON CREDITS TRADING

- High Project Registration Charges (e.g. ~$10,000 in VCS Mechanism)
- Complex Process Flow (requires a dedicated team)
- Multiple Carbon Credit Mechanisms like VCS, CDM, GCC, GS etc.
- No Open Trading Platforms for Carbon Credits
- High upfront charges in appointment of DOE, Auditor & Issuers
- Fluctuating Carbon Credits Market
CARBON CREDIT MECHANISMS

CDM - Clean Development Mechanism, driven by UNFCCC (United Nations)

VCS - Verified Carbon Standard, driven by VCS Board, USA.

GS CER - Gold Standard, driven by GS Board, Switzerland

GS VER - Gold Standard, driven by GS Board, Switzerland

GCC - Global Carbon Council

Global Emission Standard

Plastic Credits
Indore Smart City Development Limited (ISCDL) to provide Consultancy Services to Client Organizations (including Urban Local Bodies, Rural Local Bodies, Smart Cities, Industries, Government Departments etc.) that have done or are currently involved with or are planning to implement some projects that lead to reduction of Carbon Emissions.

Entry barrier issues like high-upfront payments, complex process flows and trading in an opaque volatile market to be taken care by ISCDL

Revenue Sharing of the proceeds of Carbon Credits
Consultancy Model for Monetization: Process Flow

**CLIENT**

1. Signing of Agreement between ISCDL and Client Organization
2. Project Identification with Consultancy of ISCDL
3. Template Preparation
4. Project Data Gathering in specified template
5. Feasibility Check & Project Validation
6. Identification of Mechanism
7. Project Registration (Registration Cost (C1) to be borne by ISCDL)
8. DoE Auditor Appointment (Audit Cost (C2) to be borne by ISCDL)
9. Audit of Registered Projects
10. Project Verification

**ISCDL**

1. Submission of Project to Regulatory Authority
2. Issuance of Carbon Credit Certificates
3. Trading of Carbon Credits & payment of Issuance Fees (Issuance Fees (C3) and Bank Charges (C4) to be borne by ISCDL)
4. Issuance of Carbon Credit Certificates
5. Net Revenue = Proceeds of Carbon Credits – \{Registration Fees (C1) + Auditor Fees (C2) + Issuance Fee (C3) + Bank Charges (C4)\}
6. Sharing of Net Revenue as per agreement with the Client
AGGREGATOR MODEL : BENEFITS TO CLIENTS

- Additional Source of Income from existing assets/projects
- No charges to be borne by Client
- Benefits of Aggregation: bundling leading to increased net revenue

Thank You