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Context

Carbon Market: A Promising Future for India.

Yuvika Gupta¹ Nandita Sharma²

Abstract

As terrorism is threatening the life of humanity, same way, human nature is terrorizing the whole ecology, not only polluting the air we breathe but reaching higher and puncturing the ozone layer. Countries that blatantly pollute the environment must be held liable to at least repair the damage caused by their actions. The Kyoto Protocol decided that, developed countries should pay for their wild ways with emissions while at the same time monetarily rewarding countries with good behavior in this regard. Since developing countries can start with clean technologies, they will be rewarded by those stuck with 'dirty' ones. This is what makes trading in carbon credits such a great business opportunity. Foreign companies which cannot fulfill the protocol norms can buy the surplus credit from companies in other countries. This leads to a flourishing trade in Credit Emission Reduction (CER). In this paper we will study how India being one of the developing countries has

¹ College of Management and Computer Applications, Teerthanker Mahaveer University, Moradabad. Email: <u>yuvika.tmu@gmail.com</u>

² College of Management and Computer Applications, Teerthankar Mahaveer University, Moradabad. Email:<u>nandita.sharma2009@gmail.com</u>

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ratified the Kyoto Protocol and is emerging as one of the leading Carbon traders.

Keywords: Kyoto Protocol, Credit Emission Reduction, Carbon Trading, Carbon Credit, Clean Development Mechanism

Introduction

Day by day the cycle of climate on earth is changing. Global warming has led to season shifting, changing landscapes, rising sea levels, increased risk of drought and floods, stronger storms, increase in heat related illness and diseases all over the world. This has resulted due to emissions of Green House Gases (GHG's) from various anthropogenic activities. Since the inception of Kyoto Protocol in the year 1997, countries all over the world have become more concerned about 'Global Warming'. Industrialized countries are the major contributors to these emissions compared to the developing countries. The Kyoto Protocol provides three mechanisms to help countries meet their GHG (Greenhouse Gas) emissions targets:

- Emissions Trading
- Joint Implementation
- Clean Development Mechanism (CDM)

The protocol provides for developed countries commitment to quantitative emission reduction targets, while developing countries with the opportunity of their participation to Drishtikon: A Management Journal 43 mitigate emissions through the CDM. The efforts put in by the projects to reduce GHG emissions have the potential to qualify as CDM project activity and earn CERs (Certified Emission Reductions) or popularly known as Carbon Credits. These CERs can be traded and sold, and used by industrialized countries to a meet a part of their emission reduction targets under the Kyoto Protocol.

Carbon Credits

Carbon credits are a part of the international emission trading norms. They incentive companies or countries, that emit less carbon. The total annual emissions are capped and the market allocates a monetary value to any shortfall through carbon trading. Businesses can exchange, buy or sell carbon credits in international markets at the prevailing market price. India and China have emerged as the biggest sellers and Europe is the biggest buyer of carbon credits.

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A CER or Carbon Credit is defined as the unit related to reduction of 1 tonne of CO₂ emission from the baseline of the project activity. Let us say that India decided to invest in a new power station, and has decided on a particular technology at the cost of X crore. An entity from an industrialised country (which could even be a company) offers to provide India with slightly better technology, which costs more (say Y crore), but will result in lower emissions. The industrialised country will only pay the incremental cost of the project – viz. Y minus X. In return, the "investing" country will get certified emission reductions (CERs), or credits, which it can use to meet its Kyoto commitments. This is a very good deal indeed – but for the investing country. Not only do they sell developing countries their technology, but they also meet their Kyoto commitments without lifting a finger to reduce their domestic

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emissions. Countries like the US can continue to pollute at home, so long as it makes the reductions elsewhere.

The World Bank has built itself a role in this market as a referee, broker and macro-manager of international fund flows. The scheme has been entitled Clean Development Mechanism, or more commonly, Carbon Trading.

Figure 3: Potential CERs supply till 2012



Source: J. Fenhann et al. UNEP Risoe CDM/JI Pipeline Analysis and Database, April 1st 2008 & World Bank.

Clean Development Mechanism- Indian Scenario

The Clean Development Mechanism (CDM) is an arrangement under the Kyoto Protocol allowing industrialized countries with a greenhouse gas reduction commitment to invest in emission reducing projects in developing countries as an alternative to what is generally considered more costly

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emission reductions in their own countries.

India comes under the third category of signatories to United Nations Framework Convention on Climate Change (UNFCCC). India signed and ratified the Protocol in August, 2002 and has emerged as a world leader in reduction of Clean Development greenhouse gases by adopting Mechanisms (CDMs) in the past few years. According to Report on National Action Plan for operationalising Clean Development Mechanism(CDM) by Planning Commission, Govt. of India, the total CO2-equivalent emissions in 1990 were 10, 01, 352 Gg (Gigagrams), which was approximately 3% of global emissions. If India can capture a 10% share of the global CDM market, annual CER revenues to the country could range from US\$ 10 million to 300 million (assuming that CDM is used to meet 10-50% of the global demand for GHG emission reduction of roughly 1 billion tonnes CO2, and prices range from US\$ 3.5-5.5 per tonne of CO2). As the deadline for meeting the Kyoto Protocol targets draws nearer, prices can be expected to rise, as countries/companies save carbon credits to meet strict targets in the future. The Indian market is extremely receptive to Clean Development Mechanism (CDM). Having cornered more than half of the global total in tradable certified emission reduction

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(CERs), India's dominance in carbon trading under the clean development mechanism (CDM) of the UN Convention on Climate Change (UNFCCC) is beginning to influence business dynamics in the country. India Inc pocketed Rs 1,500 crores in the year 2005 just by selling carbon credits to developed-country clients. Various projects would create up to 306 million tradable CERs. Analysts claim if more companies absorb clean technologies, total CERs with India could touch 500 million. Of the 391 projects sanctioned, the UNFCCC has registered 114 from India, the highest for any country. India's average annual CERs stand at 12.6% or 11.5 million.

India's carbon market is growing faster than even information technology, bio technology and BPO sectors. As per the Prime Minister's Council on Climate Change, the revenue from 200 projects is estimated at Rs. 97 billion till 2012. Carbon, like any other commodity, has begun to be traded on India's Multi Commodity Exchange and has become first exchange in Asia to trade carbon credits. As the deadline for meeting the Kyoto Protocol targets draws nearer, prices can be expected to Rise, as countries/companies save carbon credits to meet strict targets in the future, informs Hari Kishan Burle, General Manager, Business Technology Services,

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Wipro Technologies.

How does MCX trade carbon credits?

Multi Commodity Exchange (MCX) is an independent commodity exchange based in India. It was established in 2003 and is based in Mumbai. The turnover of the exchange for the period April–Dec 2008 was INR 32 trillion.

MCX played a vital role in providing a reference price. This is the place where no. of buyers and sellers link with each other and seller used to sell Certified Emission Reductions (CERs). MCX use effective tool for transacting carbon assets such as cost, effort, standardization. Those who knew about the possibility of earning profits, adopted new technologies, saved credits and sold it to improve their bottomline.

Many companies did not apply to get credit even though they had new technologies. Some companies used management consultancies to make their plan greener to emit less GHG. These management consultancies then scouted for buyers to sell carbon credits. It was a bilateral deal.

However, the price to sell carbon credits at was not available on a public platform. The price range people were getting used to be about Euro 15 or maybe less per tonne of carbon. Drishtikon: A Management Journal 49 Today, one tonne of carbon credit fetches around Euro 22. It is traded on the European Climate Exchange. Therefore, you emit one tonne less and you get Euro 22. Emit less and increase/add to your profit.

MCX is the futures exchange. People here are getting price signals for the carbon for the delivery in next five years. Our exchange is only for Indians and Indian companies. Every year, in the month of December, the contract expires and at that time people who have bought or sold carbon will have to give or take delivery. They can fulfill the deal prior to December too, but most people will wait until December because that is the time to meet the norms in Europe.

Say, if the Indian buyer thinks that the current price is low for him he will wait before selling his credits. The Indian government has not fixed any norms nor has it made it compulsory to reduce carbon emissions to a certain level. So, people who are coming to buy from Indians are actually financial investors. They are thinking that if the Europeans are unable to meet their target of reducing the emission levels by 2012, then the demand for the carbon will increase and then they may make more money.

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So investors are willing to buy now to sell later. There is a huge requirement of carbon credits in Europe before 2012. Only those Indian companies that meet the UNFCCC norms and take up new technologies will be entitled to sell carbon credits.

There are parameters set and detailed audit is done before you get the entitlement to sell the credit. In India, already 300 to 400 companies have carbon credits after meeting UNFCCC norms. Till MCX came along, these companies were not getting best-suited price. Some were getting Euro 15 and some were getting Euro 18 through bilateral agreements. When the contract expires in December, it is expected that prices will be firm up then.

Examples of Carbon trading in India

Jindal Vijaynagar Steel: The Jindal Vijaynagar Steel has recently declared that by the next ten years it will be ready to sell \$225 million worth of saved carbon. This was made possible since their steel plant uses the Corex furnace technology which prevents 15 million tonnes of carbon from being discharged into the atmosphere.

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Powerguda in Andhra Pradesh: The village in Andhra Pradesh was selling 147 tonnes equivalent of saved carbon dioxide credits. The company has made a claim of having saved 147 MT of CO2. This was done by extracting bio-diesel from 4500 Pongamia trees in their village.

Handia Forest in Madhya Pradesh: In Madhya Pradesh, it is estimated that 95 very poor rural villages would jointly earn at least US\$300,000 every year from carbon payments by restoring 10,000 hectares of degraded community forests.

Figure 2: Companies That Stand to Lose From More Carbon Trading



Source: Energy Information Administration - Carbon emissions by sector and fuel type

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Legal aspect of Carbon Trading in India

The Multi Commodity exchange started future trading on January 2008 after Government of India recognized carbon credit as commodities on 4th January. The National Commodity and Derivative Exchange by a notification and with due approval from Forward Market Commission (FMC) launched Carbon Credit future contact whose aim was to provide transparency to markets and help the producers to earn remuneration out of the enviourment projects. Carbon credit in India is traded on NCDEX only as a future contract. Futures contract is a standardized contract between two parties to buy or sell a specified asset of standardized quantity and quality at a specified future date at a price agreed today (the futures price). The contracts are traded on a future exchange. These types of contracts are only applicable to goods which are in the form of movable property other than actionable claims, money and securities. Forward contracts in India are governed by the Indian Contract Act, 1872.

Under the present provision of the Forward Contracts Regulation Act, the trading of forward contracts will be considered as void as no physical delivery is issued against these contracts. To rectify this The Forward Contracts

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(Regulation) Amendment Bill 2006 was introduced in the Indian Parliament. The Union Cabinet on January 25, 2008 approved the ordinance for amending the Forward Contracts (Regulation) Act, 1952. This ordinance has to be passed by the Parliament and is expected to come up for consideration this year. This Bill also amends the definition of 'forward contract' to include 'commodity derivatives'. Currently the definition only covers 'goods' that are physically deliverable. However a government notification on January 4th paved the way for future trading in CER by bringing carbon credit under the tradable commodities.

Conclusion

Thus, we can say that, through the stabilization of greenhouse gas concentrations in the atmosphere an organization/country can earn money. We can also conclude that, there is a great opportunity awaiting India in carbon trading. In the new regime, the country could emerge as one of the largest beneficiaries accounting for 25 per cent of the total world carbon trade. The Indian market is extremely receptive to Clean Development Mechanism (CDM). Having cornered more than half of the global total in tradable Certified Emission Reduction (CERs), India's dominance in carbon

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trading under the clean development mechanism (CDM) of the UN Convention on Climate Change (UNFCCC) is beginning to influence business dynamics in the country.

So this paper suggests that, Indian business managers should advise their corporations to come forward to participate in the CDM and voluntary carbon market. The national concern of environmental protection need to be integrated with the climate change agenda as well as India will be facing multifaceted challenges for the future generation.

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