



**ORIGINAL RESEARCH PAPER**

**Commerce**

**CARBON CREDIT IN INDIA**

**KEY WORDS:** Head and Neck Cancers, Concurrent Chemo Radiation, Topical application of Honey, Radiation induced Mucositis.

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**ABSTRACT**

The waste from various industries and business and human activities are the main reasons for a change in climatic conditions around the globe. Global Warming has spawned a new form of commerce - the carbon trade. Carbon Credit is a market based mechanism for controlling GHG emission, which are responsible for global warming and climate change. In light of this, in this paper an attempt is made to highlight new economic activity in a form of Carbon Credit in India.

**INTRODUCTION**

It is a well-known fact that waste from various industries, agricultural activities, Decompositions of solid waste and increasing population, etc, are the main reasons for a change in the climatic conditions around the globe. Day by day the cycle of climate on earth is warming and 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 warming is largely due to emissions of carbon dioxide and other Greenhouse Gases (GHG's) from human activities including industrial processes, fossil fuel combustion and deforestation etc. Global warming has spawned a new form of commerce: the carbon trade. This new economic activity involves the buying and selling of "environmental services," including the removal of greenhouse gases from the atmosphere, which are identified and purchased by eco-consulting firms and then sold to individual or corporate clients to "offset" their polluting emissions. While some NGOs and "green" businesses favour the carbon trade and view it as a win-win solution that reconciles environmental protection with economic prosperity, other environmentalists and grassroots organizations claim that it is no solution to environmental problems such as global warming. Carbon credit is a market-based-mechanism for controlling greenhouse gas (GHG) emissions which are responsible for global warming and climate change. Carbon credits are also known as "cap & trade regimes" where the participants can emit a set amount of carbon dioxide over the course of a given time period. If they manage to emit less than that, they can sell their remaining credits to those who are unable to get emissions down to the capped level. Amidst the growing concern and increasing awareness on the need to control pollution, the concept of carbon credit came into being as a part of an international agreement, popularly known as the Kyoto Protocol. The Kyoto Protocol, an international agreement between 169 countries. Carbon credits are certificates awarded to countries that are successful in reducing emissions of greenhouse gases. India comes under the third category of signatories to UNFCCC. India signed and ratified the Protocol in August, 2002 and has emerged as a world leader in reduction of greenhouse gases by adopting Clean Development Mechanisms (CDMs) in the past few years. Carbon prices are normally quoted in Euros per tonne of carbon dioxide or its equivalent (CO<sub>2</sub>e). Other greenhouse gasses can also be traded, but are quoted as standard multiples of carbon dioxide with respect to their global warming potential.

The price of carbon credits is determined by their demand and supply. Day-to-day trading of carbon credits takes place on the Chicago Climate Exchange and European Emissions Trading Scheme. When prices of carbon credit rise due to higher demand from industrialized nations, market incentives motivates further development of projects to increase the supply of credits. The number of companies needing to buy credits is increasing, and the rules of supply and demand pushing up the market price, encouraging more groups to undertake environment friendly activities that create carbon credits to sell.

The price of carbon needs to be high enough to motivate the changes in behaviour and Changes in economic production

systems necessary to effectively limit emissions of greenhouse gases.

However, the global carbon market faces two importance uncertainties which can have a substantial effect on the carbon prices:

- Trading of 'hot air' allowance by Russia and other nations of the CIS block.
- Imposition of mandatory emission reduction obligations on India and China, and subsequent ratification of the Protocol by the United States.

While the first event is keeping carbon credit price low, the second can lead to a sudden And substantial increase in carbon prices, as a major exporter of carbon credits.

**CARBON CREDITS AND BUSINESS**

Carbon credits create a market for reducing greenhouse emissions by giving a monetary Value to the cost of polluting the air. Emissions become an internal cost of doing business and are visible on the balance sheet alongside raw materials and other liabilities or assets.

International treaties such as the Kyoto Protocol set quotas on the amount of greenhouse gases countries can produce. Countries, in turn, set quotas on the emissions of businesses. Businesses that are over their quotas must buy carbon credits for their excess emissions, while businesses that are below their quotas can sell their remaining credits. By allowing credits to be bought and sold, a business for which reducing its emissions would be expensive or prohibitive can pay another business to make the reduction for it. This minimizes the quota's impact on the business, while still reaching the quota.

For example, consider a business that owns a cement plant putting out 10,000 tonnes of greenhouse gas emissions in a year. Its government is an Annex I country that enacts a law to limit the emissions that the business can produce. So the plant is given a quota of say 8,000 tonnes per year. The plant either reduces its emissions to 8,000 tonnes or is required to purchase carbon credits to offset the excess. After costing up alternatives the business may decide that it is uneconomical or infeasible to invest in new machinery for that year. Instead it may choose to buy carbon credits on the open market from organizations that have been approved as being able to sell legitimate carbon credits.

**ANALYZING INDIAN SCENARIO**

India is ensuring that new technologies for energy savings are adopted so that it becomes eligible for more carbon credits. India is selling their credits to their counterparts in Europe. India is likely to emerge as the biggest sellers and Europe is going to be the biggest buyers of carbon credits. Global carbon credit trading in year 2010 was estimated at \$ 5 billion, with India's contribution at around \$1 billion. India is one of the countries that have surplus credit to offer to countries that have a deficit.

India has generated some 30 million carbon credits and has roughly another 140 million push into the world market. Waste disposal units, plantation companies, chemical plants and municipal corporations can sell the carbon credits and make money.

India being a developing country has no emission targets to be followed. However, it can enter into CDM projects. Industries like cement, steel, power, textile, fertilizer etc emit green houses gases as an outcome of burning fossil fuels. Companies investing in Windmill, Bio-gas, Bio-diesel, and Co-generation are the ones that will generate Carbon Credits for selling to developed nations. Polluting industries, which are trying to reduce emissions and in turn earn carbon credits and make money include steel, power generation, cement, fertilizers, waste disposal units, plantation companies, sugar companies, chemical plants and municipal corporations.

Carbon Credits projects requires huge capital investment. Realizing the importance of carbon credits in India, the World Bank has entered into an agreement with Infrastructure Development Finance Company (IDFC), wherein IDFC will handle carbon finance operations in the country for various carbon finance facilities.

- The agreement initially earmarks a \$10-million aid in World Bank-managed carbon finance to IDFC-financed projects that meet all the required eligibility and due diligence standards.
- IDBI has set up a dedicated Carbon Credit desk, which provides all the services in the area of Clean Development Mechanism/Carbon Credit (CDM).
- In order to achieve this objective, IDBI has entered into formal arrangements with multi-
- lateral agencies and buyers of carbon credits like IFC, Washington, KfW, Germany and
- Sumitomo Corporation, Japan and reputed domestic technical experts like MITCON.
- HDFC Bank has signed an agreement with Cantor CO2E India Pvt Ltd and MITCON
- Consultancy Services Limited (MITCON) for providing carbon credit services. As part of the agreement, HDFC Bank will work with the two companies on awareness building, identifying and registering Clean Development Mechanism (CDM) and facilitating the buy or sell of carbon credits in the global market.

According to the latest report by research firm Crisil, Indian projects are estimated to Receive 246 million CERs by December 2012, a three-fold rise from 72 million in November 2009. This will fix India's second position in the global CER market. But industrial houses in the country are discouraged due to a drastic decline in demand from European countries.

The Indian government has approved 1,400 projects as part of the CDM that could attract around \$ 6 billion (Rs 28,000 crore) into the country by 2012, through sale of CER certificates. The National CDM Authority (NCDMA) in India has accorded Host Country Approval to 1,455 projects. These projects have seen an investment of \$33.7 billion (Rs 1.6 lakh crore). If all these get registered at the CDM executive board, it will earn developers 600 million CERs by 2012. At a conservative \$10 per CER, the figure works out to a little over \$6 billion.

By, switching to Clean Development Mechanism Projects, India has a lot to gain from Carbon Credits:

- It will gain in terms of advanced technological improvements and related foreign investments.
- It will contribute to the underlying theme of green house gas reduction by adopting alternative sources of energy
- Indian companies can make profits by selling the CERs to the developed countries to meet their emission targets.

## CONCLUSION

Countries are finding ways to earn carbon credits not only to reduce the amount of greenhouse gasses produced, but also to

open up access to a new market. A push toward bio fuels is one method being used to attain carbon credits. Vehicles using bio fuels release a significantly smaller amount of carbon emissions than similar vehicles that burn the more common fossil fuels. Because of this, bio fuel production is a start for countries to earn carbon credits. Utilizing other renewable energy sources such as solar and wind power is also earning carbon credits for India. Hence, India is already a strong supplier of Carbon Credits and can improve on it.

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