

Executive Summary: UGC Major Research Project

“International Carbon Market and India’s Position: An empirical study of Clean Development Mechanism Projects in India, with special reference to Clean Development Mechanism Projects in Karnataka”

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The concept of carbon market came into existence as a result of awareness of the need for controlling the greenhouse gas emissions. Carbon markets are the climate exchanges for buying and selling of Carbon Credits. Carbon Credits are the emission reduction certificates/emission trading units assigned to the clean energy project sponsors who reduce carbon dioxide emissions. Carbon is now traded like any other commodity in the “Carbon Market”.

The Kyoto Protocol, which is linked to the United Nations Framework Convention on Climate Change, has developed three mechanisms for carbon mitigation, such as emission trading or carbon markets, Clean Development Mechanism (CDM) and Joint Implementation Projects. The Clean Development Mechanism, one among them, is a flexible mechanism which enables an entity in a developing country like India, to effect greenhouse gas emission reductions, have them verified by the Designated Operating Entities, and sell the Certified Emission Reductions (CERs)/carbon credits so achieved by effecting emission reductions, to the developed nations, as a compliance tool to reach their emission targets.

The main objective of this study is to assess the impact of CDM projects on effecting the Greenhouse Gas emission reduction/mitigation by the developing countries like India under the provisions of Kyoto Protocol of UNFCCC. The other related objectives are:

- To study the role of UNFCCC and Kyoto Protocol in the mitigation of carbon emission through various mechanisms like emission trading, clean development mechanism projects and joint implementation.
- To analyze the overview of CDMs and CERs at global level

- To interpret the contribution of India in the growth and development of CDMs and CERs in India.

Major findings of the study include:

- CDM a flexible market mechanism contributed to the development of a global carbon market, allowing developed countries to achieve their emission reduction target. CDM has removed 4 tons of CO₂ per second since 2004. CDM facilitates the transfer of funds and technology and knowledge to developing countries.
- CDM has seen an impressive growth from 2006 to 2012 followed by a sharp decline. The main causes of this decline are not due to the mechanism itself, but due to the restrictions by some buyers on the quantity, type and origin of CERs, economic recession and the level of ambition of Parties to the Convention that are also Parties to the Kyoto Protocol with commitments inscribed in Annex B to the Kyoto Protocol in addressing climate change. Low demand for carbon credits in the wake of economic slowdown has led to a slump in carbon prices.
- India and China, the two countries that have benefited most from the CDM, now facing pressure from EU, which has decided not to entertain CDM projects registered by these developing countries after January 1, 2013 for carbon credits. The EU has said it only considers projects registered by the least developed countries.
- As of March 2015, there 7826 CDM project activities in the globe, out of which 7622 were, registered CDM projects. 2582 CDM projects have issued 1,545,952,932 CERs, that means around 1.54 billion tons of carbon emission was reduced. 33 per cent of the registered CDM projects have CERs issuance to their credit. Potential issue of CERs by 2020 will be 3.965 billion.
- India played a key role in facilitating the development of CDM projects through a proactive National CDM Authority (NCDMA). In respect of total number of CDM projects in India, Maharashtra leads with 384, Gujrat with 369 and Karnataka with 255 projects, the top three states with more number of CDM projects.

India, by ratifying the Kyoto Protocol, supported its participation in the international carbon market. The growing enthusiasm from all sectors, to curb pollution levels and to avail sustainable development benefits of CDM activities, has made India a viable destination for foreign investments and latest clean technology transfers.

Despite considerable progress in Clean Development Mechanism of Kyoto Protocol as an efficient and effective tool to address climate change, the mechanism faces serious challenges like decline in demand for CERs, crisis in CER prices, reduced number of parties participating in the Kyoto Protocol post 2012, reluctance of developed countries to buy CERs, EUETS ban on projects from developing countries, etc.

To address these challenges, Parties are working to develop a new means on strength of the CDM, to collaborate on emission reduction efforts, like new market mechanism, bilateral efforts etc. It is proved that the CDM can incentivize emission reductions at scale and contribute significantly to enhanced sustainable development and technology transfer to the host countries. CDM Executive Board has viewed that CDM mechanism is not only fit for the present, but also an invaluable tool fit for the future.

Through various effective guidelines, the Board is attempting to ensure that best use of the CDM is made by all, that emission reductions continue to happen through it and that the mechanism is sustained in the long term.