

CARBON CREDITS

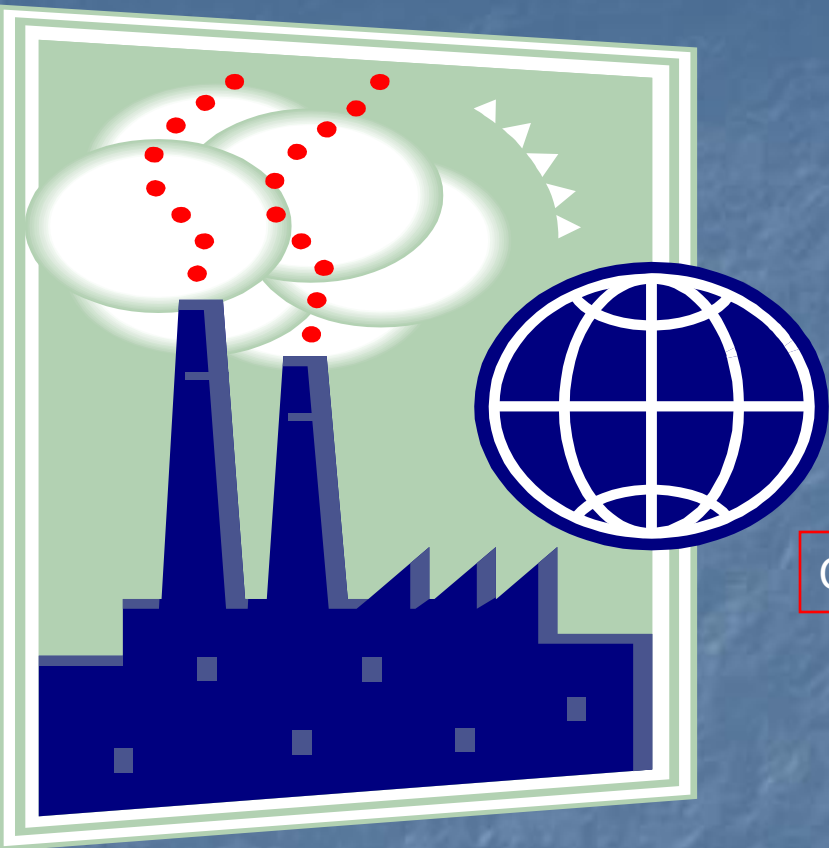
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Introduction with Carbon Credits

- Industrial growth boon for a nation Now its proving to be curse not only for the Nation but also for this Earth and Universe.
- Pollution, earlier a subject matter of Environmentalist now becoming a talk of Industrial Street.
- More production = More pollution
thereby emission of Carbon & GHGs (such as CO₂, Nitrous Oxide, Ozone..) causing Global Warming
- To counter this Carbon Credits comes in to picture.



Rapid Industrial Growth



Increased energy consumption



Increased CO₂ and other GHG emissions



Global Warming due to increased concentration of GHG



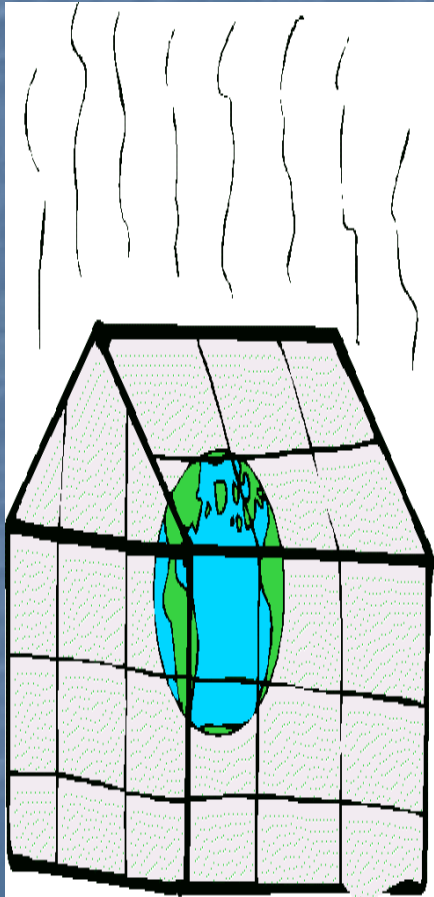
Climate Change

Increasing
sea level

Changes in wind
and precipitation

Changes in Crop
yields

Purpose of Carbon Credits



- Key idea is to encourage companies to reduce the emission of carbon and Green House Gases (GHGs)
- UNFCCC came out with concept of Certified Emission Reductions (CER) based on the Industry standards.
- Companies emitting lesser carbons than industry standard gets Credits by way of CERs
- carbon credit is equivalent to one tonne of carbon dioxide or its equivalent GHG.
- Carbon credits are “Entitlement Certificates” issued by the United Nations Framework Convention on Climate Change (UNFCCC)
- The potential buyers of carbon credits shall be corporates in various Annexure I countries that need to meet the compliance prevailing in their countries as per the Kyoto Protocol

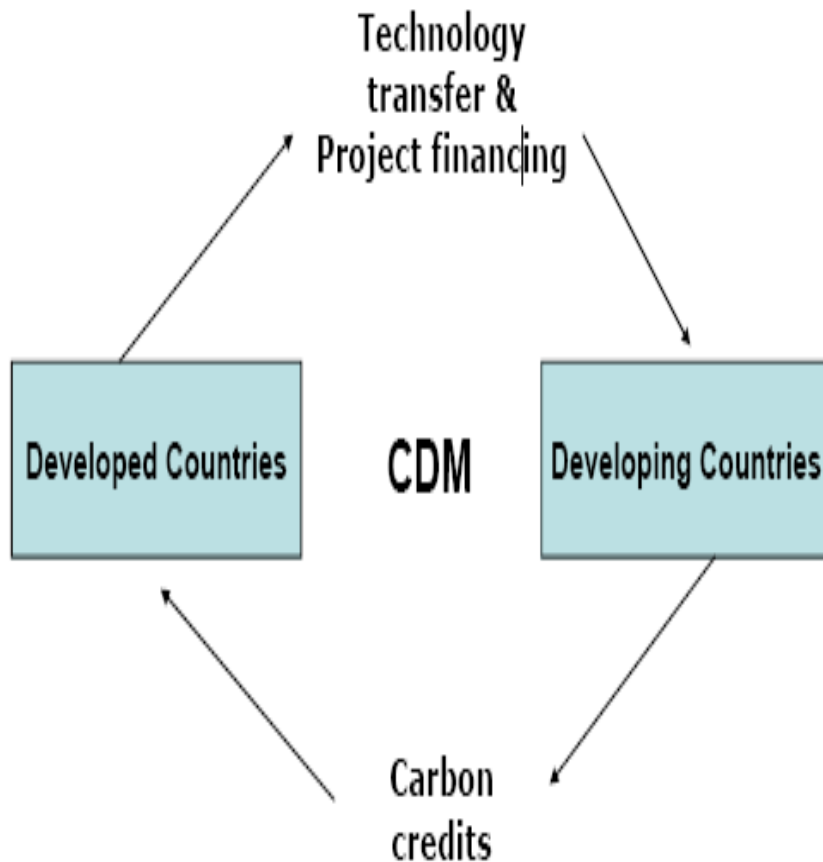
Measures to control Pollution

- United Nations Framework Convention on Climate Change, popularly known as UNFCCC, held at Rio de Janeiro to control carbon emissions / GHG by Industries.
- 165 countries signed the Kyoto Protocol and agreed to reduce the carbon emission and GHGs to the level what was in the year 1990.
- The Convention divides countries into two main groups
 - Annexure- I Countries
 - Non-Annex I Countries
- Annex I (developed countries) agreed to reduce their GHGs by 5.2 % below 1990 levels in 1st commitment period 2008 – 2012

Kyoto protocol of UNFCCC

- The Kyoto Protocol is binding on 'industrialized' or 'developed' countries.
- The protocol commits developed countries to specify targets for reducing their greenhouse emissions
- The Kyoto Protocol provides mechanisms for countries to meet their emission targets
- KP Provides three mechanisms to supplement national actions to achieve real, long term measurable cost effective GHG reductions:
 - Clean Development Mechanisms (C D M)
 - International Emission Trading (IET)
 - Joint Implementation (JI)

Clean Development Mechanism



- The purpose of CDM is reduce to emissions and also contribute to sustainable development in developing countries
- The CDM is administered by the CDM Executive Board (CDM Board) which reports and is accountable to the Conference of Parties (COP)
- A Carbon emission reduction (CER) is given by the CDM Executive Board
- One CER is equivalent to one tonne of carbon dioxide reduced

International Emission Trading (IET)

- Emissions trading (ET) is a mechanism that enables countries with legally binding emission targets to buy and sell emissions allowances among themselves
- Each country has a certain number of emission allowances (amount of carbon dioxide it can emit) in line with its Kyoto reduction targets
- The IET allows industrialized countries to trade their surplus credits on the international carbon credit market

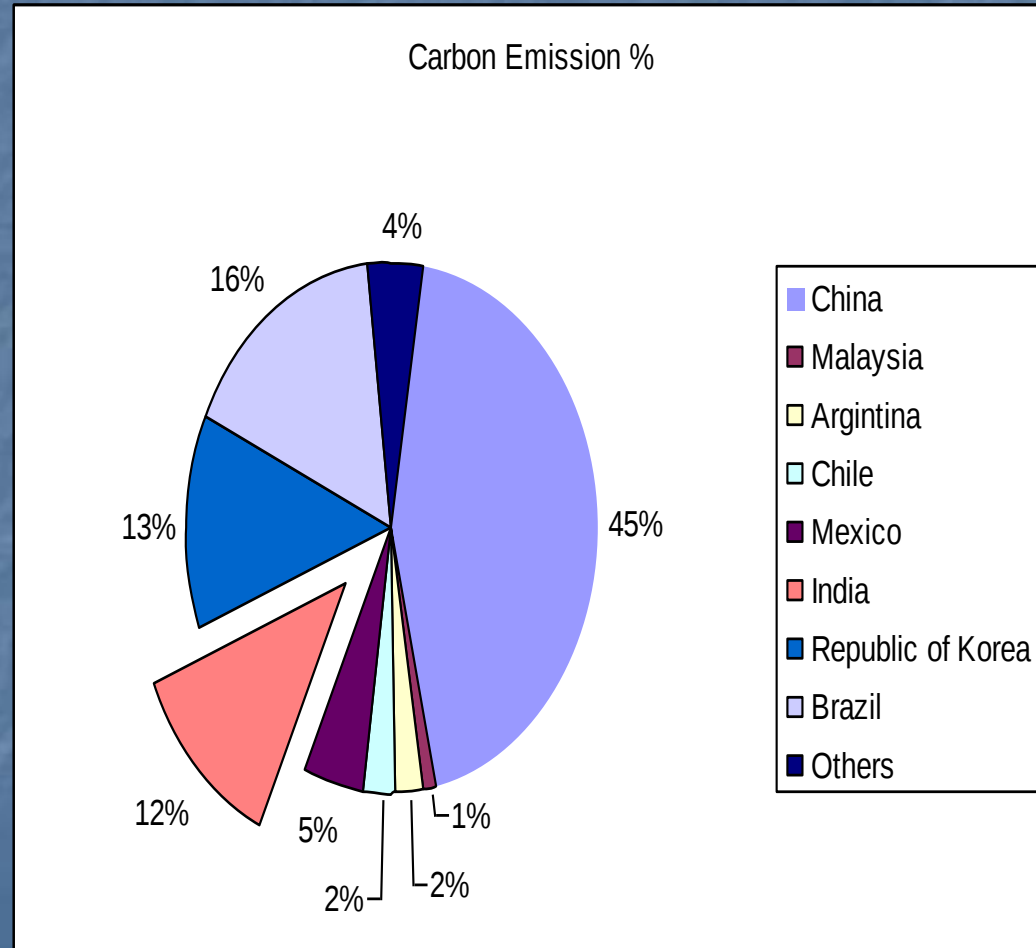
Joint Implementation (JI)

- Under Joint Implementation (JI) a developed country with relatively high costs of domestic greenhouse reduction would set up a project in another developed country.
- Under the Clean Development Mechanism (CDM) a developed country can 'sponsor' a greenhouse gas reduction project in a developing country where the cost of greenhouse gas reduction project activities is usually much lower, but the atmospheric effect is globally equivalent
- The developed country would be given credits for meeting its emission reduction targets, while the developing country would receive the capital investment and clean technology or beneficial change in land use

Facts & Figures

■ Major CERs Suppliers

- China (45%)
- Brazil (16%)
- Korea (13%)
- **INDIA (12%)**
- Mexico (5%)



Facts & Figures contd...

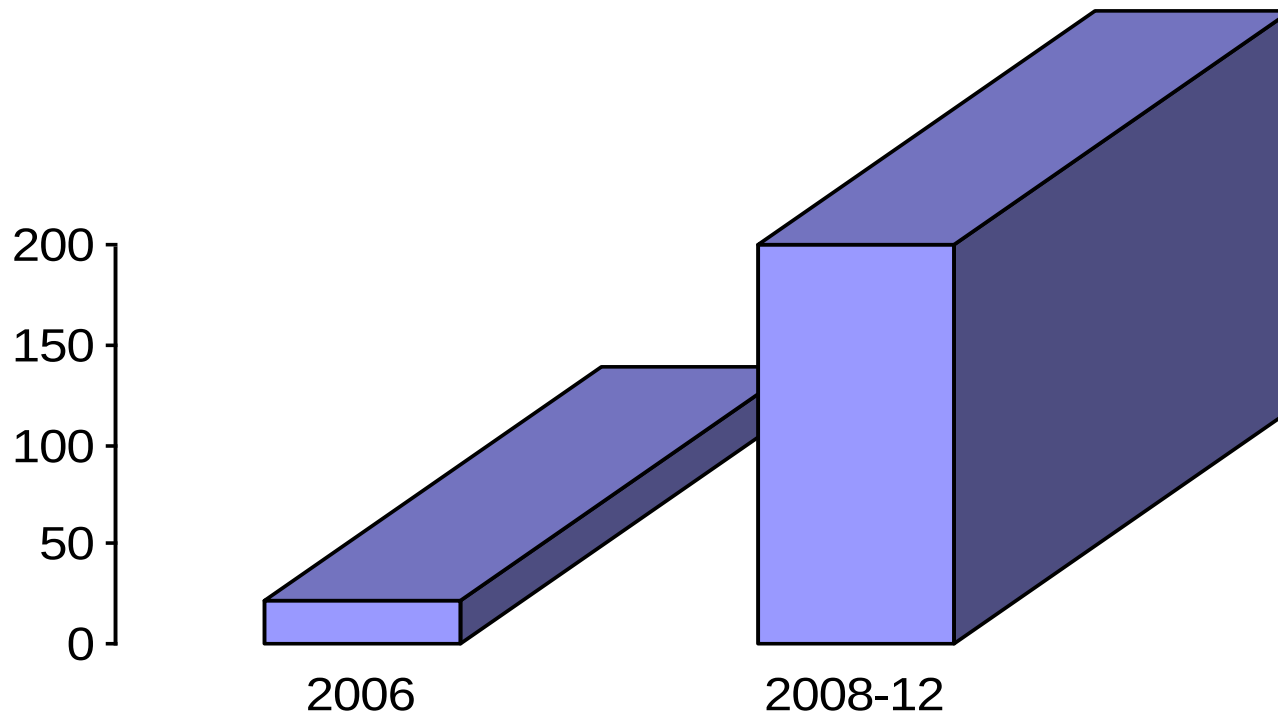
- India going to be a Key Player in the Carbon Credit Market
- More and More awareness required in India to bring it from 4th Position to 1st.
- No fixed norms of emission reduction by government so far.
- Developed countries can buy only up to 25% of its shortfall from developing countries.
- A global Carbon Market is estimated to be around US\$30 billion & forecasted that trading in carbon credits would touch US\$ 100 billion by 2010.
- Total issued CERs with India as a host country till now stand at around 34 million, around 1/3rd of the total CERs issued by the UNFCCC

Facts & Figures contd...

- The companies in India registered with UNFCCC include Gujarat Ambuja Cement, Jindal Vijayanagar Steel, Indian Rayon & Industries, Triveni Engineering, Balrampur Chini Mills, SRF Ltd, Gujarat Fluorochemicals, Birla Corporation Ltd, DCM Shriram Consolidated Ltd, Oswal Woolen Mills, Tata Steel, Usha Martin Ltd, JK Cement, Birla Cement and Kalpataru Power Transmission Ltd (KPTL) among others
- These projects have a potential to earn euro 2.486 billion at the prevailing rate of euro 20.72 per tonne of CER (on June 17' 08) in the European carbon trading exchanges
- Ninety more projects, which have obtained Government clearance, could reduce over 120 million tonnes (mt) of Certified Emission Reductions (CERs) by 2012.
- Each CER stands for one tonne of carbon dioxide reduction and can be traded on global exchanges.

CER Sale Transactions from India

Indian CERs transacted (in billion Rs)



Role of Chartered Accountants

- CAs have key role to play
- awareness as how to make money from it
- Future Trading in CERs commonly known as Carbon Trading
- Carbon Market is not much explored in India by Retail Investors
- Bringing more Indian entities with less carbon emission and getting them registered with UNFCCC

How to make Money from Carbon Credits

- Multi Commodity Exchange of India Ltd. (MCX) entered into a strategic alliance with Chicago Commodity Exchange (CCX) in September 2005 to initiate carbon trading in India.
- The tie-up would provide immense scope and opportunity for domestic suppliers to realize better prices for their carbon credits
- India being a major supplier of carbon credits, the tie-up between the two exchanges is expected to ensure better price discovery of carbon credits
- There is no counterparty risk as the Exchange guarantees the trade
- The price discovery on the Exchange platform ensures a fair price for both the buyer and the seller.
- For trading purposes, one allowance or CER is considered equivalent to one metric tonne of CO₂ emissions
- Available contracts: Dec 2008 to Dec 2012
- Trading Unit: 200 ton of carbon credits
- Price quote: Rs. per ton

Carbon trading in India

- MCX is FIRST in Asian Countries to trade in Carbons
- Sellers and intermediaries can hedge against price risk
- No counter party risk as the Exchange guarantees the trade
- Price discovery on the Exchange platform ensures a fair price for both the buyer and the seller
- Recent Development : NCDEX is going to open Carbon trading from 10th Day of April 2009 to bring more competition in the carbon trading, which is Fifth Exchange in the World of Carbon trading.
- Trading lot of 500 CERs as against 200 CERs of MCX.

Carbon Trading Mechanisms

- For trading purposes, one allowance or CER is considered equivalent to one metric tonne of CO₂ emissions
- These allowances can be sold privately or in the international market at the prevailing market price
- These trade and settle internationally and hence allow allowances to be transferred between countries
- Each international transfer is validated by the UNFCCC
- Each transfer of ownership within the European Union is additionally validated by the European Commission.

Exchange Timings	Contract Size	Tick size
MCX 10:00 AM to 11:30 PM.(IST)	200 tons	0.50 rupees
ECX (ICE) 12:30 PM to 10:30 PM.(IST)	1000 tons	1 cent
Price Movement	ECX (Euro)	MCX (Rupees)
Average Price movement in a day	0.39 Euro	38
Maximum price movement in a day (2007)	4	228
All time high (2007)(per ton)	26	1482
All time low (2007) (per ton)	11.8	672.6

Hedging the Price Risk

An Example

- Suppose Z & Co. wants to buy carbon credits at the end of year 2008. The current price is Rs.1300 per tonne and it expects the prices to up to Rs.1400 per tonne. To save itself from such an increase in price, the company decides to hedge on exchange platform.
- Buy at Exchange @ 1300 and then square off at the year end @ 1400. Earn profit of Rs.100. Later in future buy carbon credits at OTC market @ 1400. The net purchase price will be locked at Rs.1300.

Carbon Trading : How It Works?

- Buyers : — Annexure I (Developed countries)
- Suppliers : — Non annexure I (Developing countries)
- *An Example:*
- British Petroleum in UK emitting more than the accepted norms of UNFCCC
- Tie up with Subsidiary in India or China Under CDM
- The credits arising out of the use of the new technology are sold to counterparts in Europe
- Thus a carbon credit market is created

Challenges

- The lag between domestic and U N clearance
- Availability of new and advanced technology emitting lesser carbons and GHGs
- Laxity in Clearance and approval from National C D M Authority at the Environment Ministry
- Risk to the CER issuance and complete C D M approval cycle .
- Most CDM projects by their very nature take a long time to generate the CERs
- Lack of transparency related to prices in the Indian carbon credit market , which has kept sellers at the receiving end with no bargaining power

Questions

n

Answer



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THANK YOU

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