

# CARBON CREDIT TRADING

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## **Abstarct:**

Global warming is the agenda across the globe. Carbon Credit trading is created from the Kyoto protocol Convention (1997). Kyoto protocol made an agreement between 169 countries. It is one of the fastest exchanging market in India. Most of the organizations in India are registered with UNFCCC (United Nations Framework Convention on Climate Change) norms and entered into carbon credit economy. Carbon credits are issued to the companies that reduce their greenhouse gases emission and the companies which underutilises their emission than they can sell their credits to other companies. The unutilised emission is known as credits. The main aim is to exchange the carbon credits in the market. By entering into the carbon credit market there are fewer advantages, difficulties and facing challenges. The business sectors which are using carbon credit trading are transportation, forestry, infrastructure, agriculture, energy supply etc. Carbon credits make a business opportunity. Carbon credit market has become open market. This exploration paper plans to investigate the advantages and difficulties about carbon credits among Indian Industry.

Keywords : carbon credit trading, Kyoto protocol, clean development mechanism (CDM).

## **INTRODUCTION**

Carbon credits are market mechanisms for reducing GHG. Some companies which are not achieving carbon offsets are usually purchase from the companies which are achieved carbon offsets. The companies which are achieved carbon offsets are rewarded with additional carbon credits. 1 carbon credit = 1 ton of Carbon dioxide or its equivalent greenhouse gas (GHG) is an entitled certificate UNFCCC



### Need of carbon credit trading

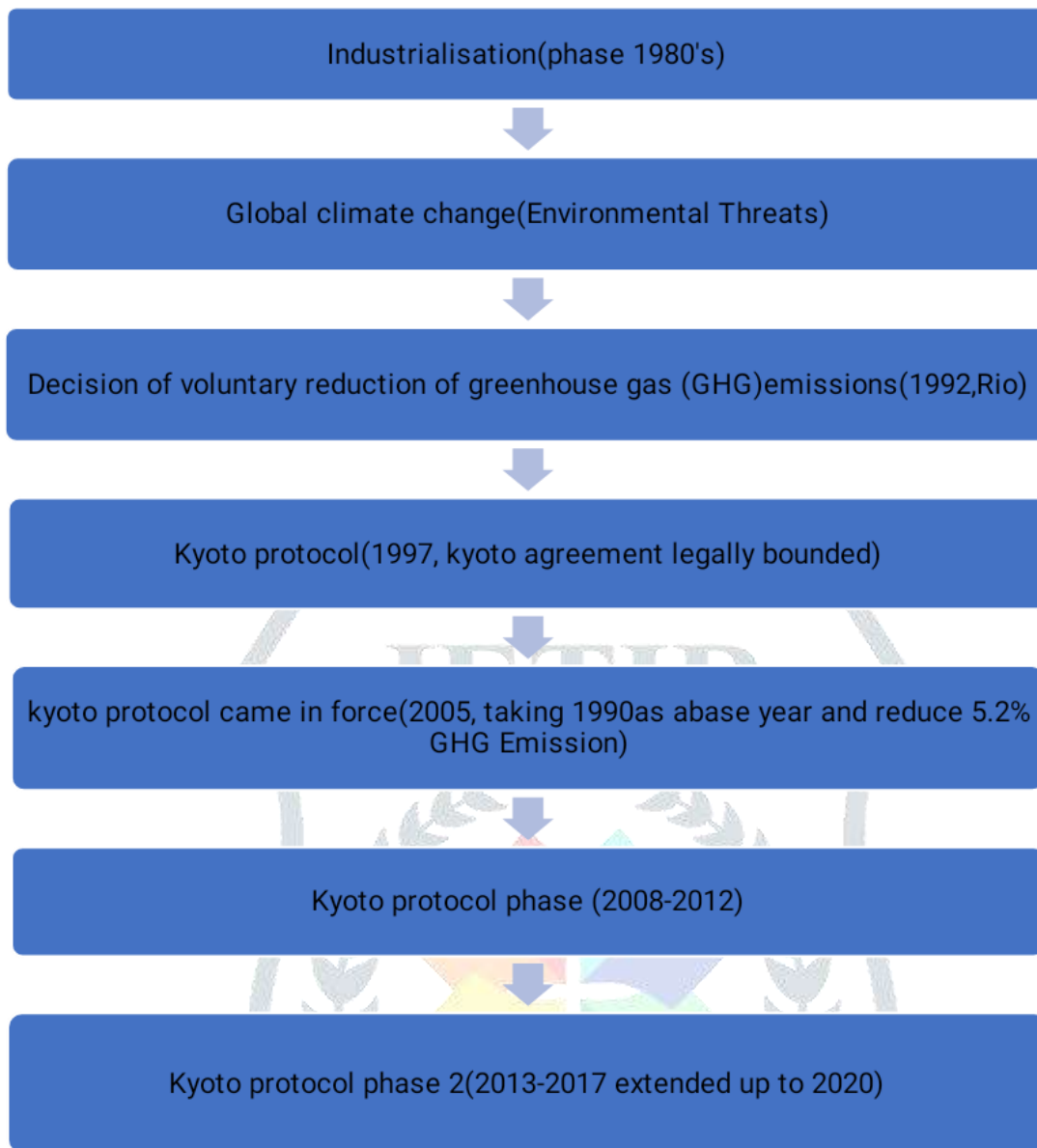
Carbon credit exchanging is one of the approaches to control the green house gases emission. Carbon dioxide is the most significant ozone depleting substance created by ignition of fills, has become a reason for concern. Gases incorporate carbon dioxide, nitrous oxide, methane and hydro fluorocarbons. at the time of emission of these gases into the air, they hold in reflected vitality from the sun and emanate that radiation down to Earth. This would impact on climate change. Today An unnatural weather change, environmental change, ozone consumption, ocean level ascent, biodiversity are completely influenced, somehow, legitimately or straightforwardly, by unsafe 'ozone harming substances. Various human exercises are answerable for it like:

- Fuel combustion
- Energy industries
- Manufacturing industries and construction
- Transport etc.

### Kyoto Protocol

The need for a reduction in carbon emissions was debated at the United Nations Conference on Environment & development (The Earth Summit) in Rio de Janeiro in 1992, resulting in the adoption of United Nations Conference on Climate Change (UNFCCC), an international treaty on environment. The Kyoto Protocol, 1998, was adopted by the parties to the UNFCCC with the objective of achieving quantified emission limitations through specific policies and measures to minimising like joint implementation, a clean development mechanism (CDM) and international emission trading to boost the cost effectiveness of climate change mitigation. The Kyoto protocol, which came to force and became legally binding on 15<sup>th</sup> February 2005.

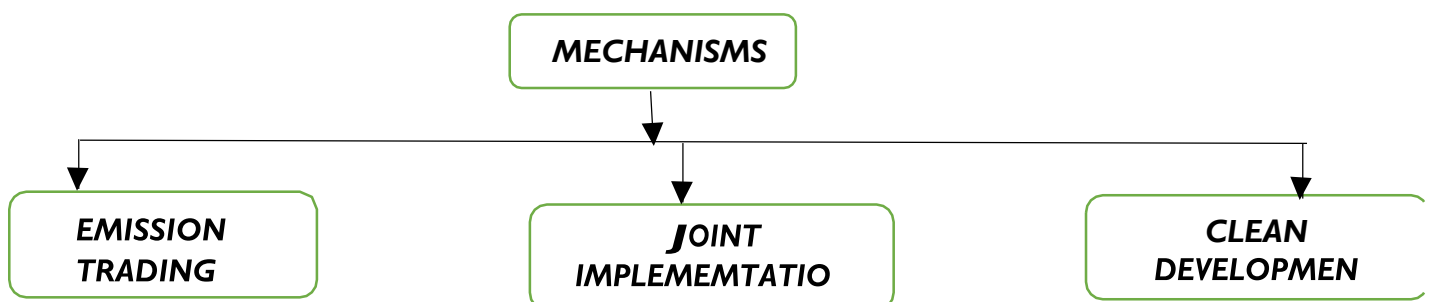
**Conceptual Framework of Carbon Credit**



**Research methodology:**

- *This report is based on secondary data. Secondary data is used only for the references and it has been collected through various journals and websites.*

**Kyoto protocol mechanisms**



**Emission trading:**

Certain specific emission limits are permitted to the countries, but few countries utilizes less than the permitted limit then the excess capacity can sell to the countries which are over utilised than their capacity.

**Joint implementation:**

Emission reduction projects are implemented by the developed countries in another developed countries for the purpose of earning emission reduction units and this emission reduction units can be sold in the market.

**Clean development mechanism:**

Developing nations which did not sign Kyoto protocol are funded with emission reduction projects by developing nations or countries for the purpose of offset their emission obligations. (e.g. solar energy, wind energy etc.)

**Objectives of the study:**

- To analyse the procedure of carbon credit trading in India.
- To study the various challenges associated with carbon credit trading practices.
- Indian Companies case study of Delhi Metro Rail Corporation Limited.

**LITERATURE REVIEW**

**Trivedi S. (2016)** clarified about ozone depleting substance or carbon advertise. This ozone depleting substance showcase is expanding now -a-days. The scientist additionally analised that this market is rising a few nations, various locales around the world. This new and developing business sector provide viable hazard the executives systems for different associations with outflow limitations and significant chances to associations and their backers with emanation decrease or clean advancement instrument ventures. His exploration likewise give the short review with respect to Kyoto Convention, carbon credit exchanging, nursery impact and rising nursery advertise lastly he additionally portray that how creating nations deal with their vitality assets or boost their chances.

**Kumar K.S.K. (2016)** He specified in his article about carbon exchanging. He clarifiesthat both carbon duties and carbon exchanging are advertise based instruments yetthey can be separated a few measures, for example, natural viability, effortlessness, political adequacy, monetary income and instability. He additionally portray the characterized strategy for the carbon exchanging which incorporates a few stages, for example, Defining a Reasonable Objective – Topping Outflows, Doling out Duty –Designating

Remittances, Encouraging Practical Discharge Decreases – Exchanging, Guaranteeing Responsibility – Observing and Announcing and Guaranteeing Consistence – Compromise. At long last, the principle focal point of his exploration is cost adequacy of carbon exchanging.

## INDUSTRY AND DATA ANALYSIS

### Carbon trading

Carbon trading divided into 2 types

- Carbon cap trade program
- Carbon offsetting

### Carbon cap-trade program

**CAP:** Assignment of an upper threshold limit on the amount of pollutant that can be emitted (measured in assigned amount units or AAU's) by a country.

Emission permits or equivalent number of allowances or credits are issued to emit a specific amount of carbon dioxide to the country.

**TRADE:** trade means exchanging, the countries which reduces their emission than assigned cap can sell the excess credits to the countries which have overutilised.

### Carbon offsetting

the companies which have utilised their assigned cap and need more, then they offset by purchasing from developing nations.

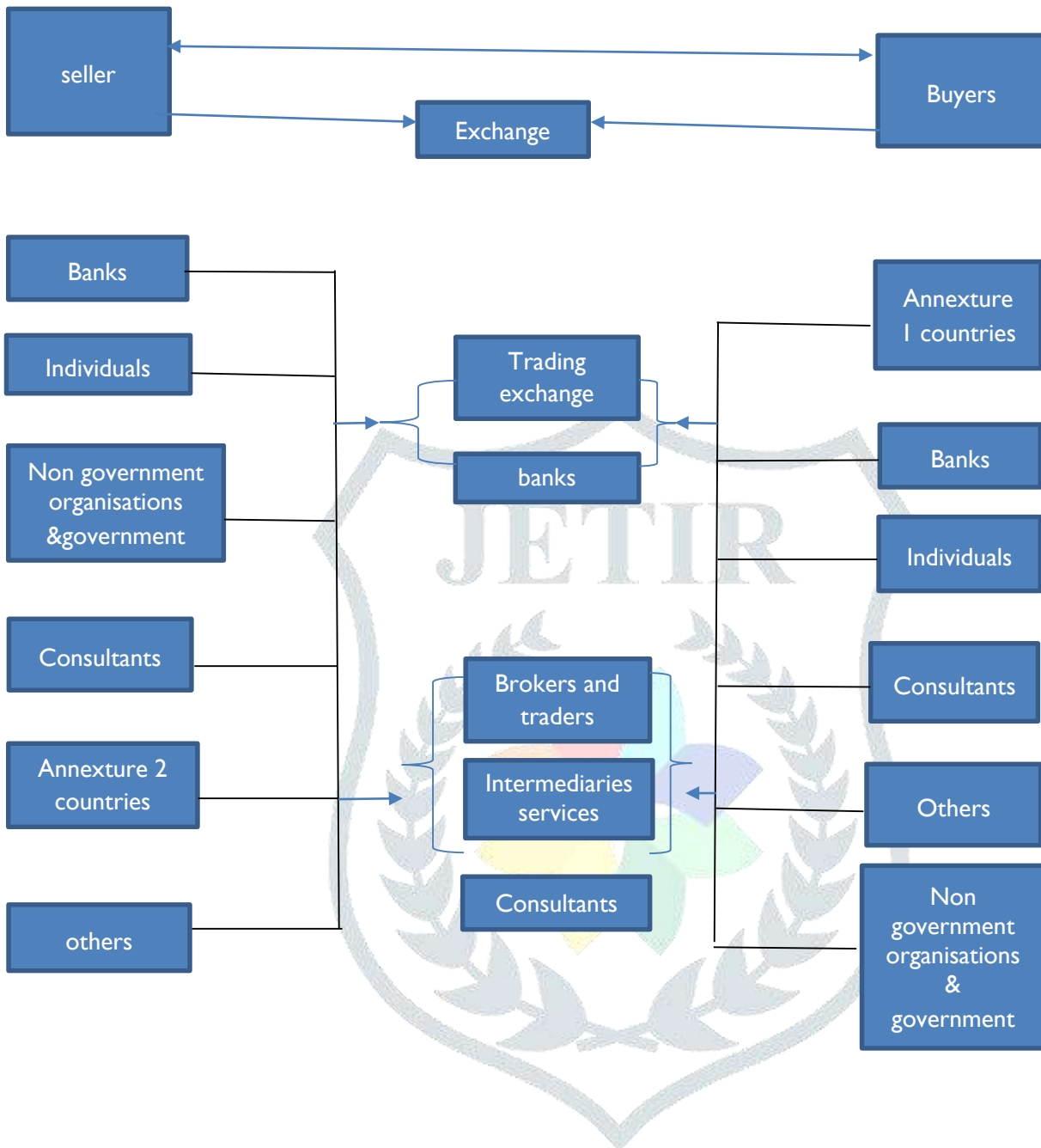
This is a form of investment in the developing nations. **Procedure of**

### carbon credit trading

The technique of carbon credits exchanging begins when a created nation is having nearly significant expenses of residential ozone harming substance decrease; to make an arrangement to set up a spotless innovation venture in another created or creating country having a minimal effort of local ozone depleting substance decrease. After the primary stage, a created nation sets up an undertaking in another created or creating nations where the expense of carbon or ozone depleting substance outflow decrease venture is nearly low under the clean advancement component. In the wake of setting up the venture the created nation would get carbon credits and another nation would get perfect innovation and some financial advantages. Toward the finish of this procedure, the nation having carbon credits is permitted to sell their carbon credits in the worldwide market under the global discharge exchanging standards with the expect to evaluate the outflow decrease and impediment duties under Kyoto Convention. The

fundamental technique of carbon credit exchanging.

**Procedure of carbon credit trading**



**Accounting issues:**

The “Framework for the Preparation and Presentation Statements of Financial “ issued by ICAI, defines an asset. CERs because issuance of CERs is subject to verification do not arise by the DOE appointed by UNFCCC. So, at the time of emission reductions CERs can be treated as contingent assets as per Accounting Standard (AS)29. According to the FPPFS, once an item meets the definition of the term ‘asset’, it has to meet the criteria of recognition of an asset so that it may be recognised in the financial statements. As CERs come into existence when these are credited by UNFCCC, CERs cannot be recognised as assets before that stage.

- Though CERs are non-monetary assets without a physical form, they do not strictly fall within the meaning of 'intangible asset' as per AS 26. Even though CERs are intangible assets these should be accounted as per the requirements of AS 2 Valuation of inventories.
- CERs are inventories for the generating entity, the valuation principles prescribed in AS 2 should be followed for CERs. Costs which are incurred to bring CERs into existence are the costs of certification of CERs by UNFCCC and hence these costs constitute costs of inventories of CERs. UNFCCC imposes two types of levies on the generating entity. Firstly, a specified percentage (presently 2%) of the CERs earned by the entity is deducted at the point of issuance and CERs are issued net of this levy. In addition, a cash payment per unit of CER is imposed by the UNFCCC towards meeting its administrative expenses. Apart from these, the generating entity normally pays a consultation fee for rendering services to certify the CERs. Thus, the costs at which the inventory of CERs should be valued include the consultation fee and the cash payment made to the UNFCCC. The deduction of CERs by UNFCCC increases the per unit cost of the CERs issued to the generating entity. On the other hand, per the guidance note the net realizable value of the inventory of CERs is the estimated selling price in the ordinary course of business less the estimated costs necessary to make the sale.
- On income recognition the guidance note states that as CERs are recognized as inventories, the entity should apply AS 9 (revenue recognition) to recognize revenue in respect of sales of CERs. The guidance note also states that the generating entity should show CERs as part of inventories in the balance sheet separately from other categories of inventories (such as Raw Materials, Work-in-process, etc.) with information on number of CERs held as inventory basis of valuation; number of CERs under certification; depreciation, operating and maintenance costs of Emission Reduction equipment during the year.
- At present there is no authoritative accounting guideline available under generally accepted accounting principles of India or US or international Financial Reporting Standards. Here an attempt has been made to identify alternative accounting treatment of carbon credit trading. However, there is no need to issue a separate accounting standard for carbon trading. A little change in accounting standard no. 2, 9 and 26 can help to bring out a correct accounting of carbon credit.

## **Taxation Issues of CERs**

The tax treatment of credits is an issue that has been a subject matter of considerable debate. Tax issues may arise at the time of entitlement of the credit, since the same could be viewed as a benefit arising from the carrying on of a business specifically taxable under section 28(iv) of the Income-tax Act ('Act'), or on its sale, where questions may arise whether the receipt is on a capital or revenue account and in the case of the former whether there could be capital gains.

### **CERs as Business Income:**

Section 2 (24): In *CIT v. G.R. Karthikeyan* (1993) 200 ITR 866 (SC) it explains that even if a receipt does not fall within the ambit of any of the sub-clauses in section 2(24), it may still be income if it partakes the nature of income. Hence sale of CERs is included in the definition of income. Section 28(vii): If an assessee received any compensation for not carrying out any activity in relation to any business, such compensation is taxable under section 28. If it is considered as Business Income then it is taxable at normal rate and eligible for set off against business losses.

### **CERs as income from capital gains:**

CERs will be treated as capital assets. As there would be no cost of acquisition for self-generated CER credits, section 55(2) of the Income Tax Act will come into operation, and total sale consideration will be liable for Capital Gains Tax (long term/short term) according to the period of holding. If it is considered as income from capital gains then concessional tax rate will be put if held for more than 36 months.

### **CERs as income from other source:**

A source of income which does not specifically fall under any one of the other four heads of income is to be computed and brought to charge under section 56 under the head "income from other sources". If it is considered as income from other source then it is taxable at normal rates. Many researchers claim that Income from sale of CERs should be accounted for under the head Business & Profession and in case of sale of Intangible, it would be taxable under the head Capital Gains though most companies in India are recording earnings from carbon companies in India are recording earnings from carbon credit trading as Income from Other Sources. Trading in CER is carried out either in spot market or in futures. Service tax will be applicable on account of dealing in CERs on the exchange platform and in case of contracts resulting in delivery VAT will be applicable.



Typically carbon credits in India are sold to overseas buyers; hence there would be no VAT applicable on these goods.

### **A Case of Delhi Metro Rail Corporation**

India has a large potential to earn carbon credits. India is currently the fourth largest GHG emitter in the world, although its per capita emissions are less than half of the world's average. India has generated 1,77,360,206 CER's through CDM till 2014 and India stands second in the world in terms of CDM projects registered and issuance of CER's next to China. Delhi Metro Rail corporation has become first ever railway project in the world to claim carbon credits because of using regenerative braking in its rolling stock. DMRC reduces 30% electricity consumption with regenerative braking system in its trains. DMRC claimed 4,00,000 CERs for a 10 year crediting period starting December, 2007 when the project was registered by the UNFCCC. This converts to 1.2 crore per year for 10 years. DMRC has also been certified in June, 2011 by the United Nations body as the first Metro Rail and Rail based system in the world to get carbon credits for reducing GHG emissions as it has helped to reduce pollution levels in the city by 4.5 lakh tons every year, thus helping in reducing global warming. DMRC so far has helped in removing more 91 thousand vehicles from the roads of Delhi on daily basis. Accordingly DMRC's second CDM project has been developed, based on the shift of public travels in cars/buses and other means of road transport to the metro trains. Further, in Phase-III, lifts and escalators designed with regenerative braking are proposed so as to use the data for claiming carbon credits.

### **FINDINGS**

India is the Largest country of carbon credit trading. Most of the organisations are benefited by trading their credits to other countries. The companies which are registered under UNFCCC norms only, can sell their credits to other countries. Business sectors can sell carbon credits by offsetting their carbons. As there is no specific accounting standard, companies which are buying and selling those carbon credits are facing problems in accounting and taxation. Benefits gained by organizations on implementing carbon credits trading practices. There have been numerous advantages picked up by the associations on actualizing carbon credits exchanging rehearses. The fundamental advantage of carbon credits exchanging has been the improvement in social.

### **CONCLUSION**

Separate monetary bookkeeping standard must be built up. Carbon credit system helps the nations in natural upgradation. Carbon trading helps the business not for monetary benefits but for improvement in social.

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