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CARBON CREDIT ACCOUNTING IN INDIAN BUSINESS INDUSTRIES: CHALLENGES

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ABSTRACT

In the era of industries, every machine works on resources of earth and releasing it by product in the atmosphere which directly affect the environment or atmosphere. Every by product or pollution pollutant somehow, related to increase of carbon level in atmosphere. According to Kyoto protocol, the 141 nations sign the protocol and take pledge to control the pollution and also works towards lowering the temperature of earth, but this is industrialization era and any country cannot cut the profit or use of resources by sudden to control pollution. So, carbon credit is introduced. Carbon credit is defined as term a carbon credit is equal 1 ton of carbon released in the atmosphere. Certificates of carbon credit is announcing to the countries which are doing precaution and reducing the emission of carbon. Carbon Credit is the scheme of international industries to control the emission. Carbon credit is actually a parameter to control the emission by connecting it to money. India and china is developing countries and get maximum benefit of this carbon credit scheme. If any company is emit less than the standard parameter, and the difference between them called carbon credit and this carbon credit can be exchangeable between two companies. In last few years, the business of carbon credit reached to six billion dollar and 22-25% business is share of India. In carbon credit accounting, carbon emission reduction (CER) acts as intangible assets, these assets cannot be used in production or in form of materials. CER has net realizable value and non- monetary assets and used to generate future economic benefits. In cost of inventories of CER includes research costs, cost to develop alternative process to reduce emission, cost to prepare design and cost to register in UNFCCC Challenges of India in carbon credit accounting are improper policy for trading of carbon in the international market.

KEYWORDS: *Carbon Credit, Kyoto Protocol, Accounting, CER.*

Introduction

In the era of industries, every machine works on resources of earth and releasing it by product in the atmosphere which directly affect the environment or atmosphere. The core industries are set up in nearby water bodies due to reasonable transportation cost and the availability of the raw materials is also high. In the 1990's mainly the waste materials or by product which of no use was drained in the water bodies or in the open area and there was no air filters which effect the environment and pollution in air, water and in soil even noise pollution so much increased due to industrialization. The major reason of increases of pollution is greenhouse gases and carbon is the most prominent gas for global warming. Every by product or pollution pollutant somehow, related to increase of carbon level in atmosphere. According to Kyoto protocol, the 141 nations sign the protocol and take pledge to control the pollution and also works towards lowering the temperature of earth, but this is industrialization era and any country cannot cut the profit or use of resources by sudden to control pollution.

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Review of Literature

There has much research work already done and a lot of research going on. Nowadays world is more focused towards the sustainable development without much affecting the environment and international agencies and governments of each country framed polices for curing the environment, in curing the earth for the future generation. UNFCCC held a convention and framed Kyoto protocol where developed and developing countries came together on a common platform for resolving the issue of increasing of earth temperature by 2 degree in last two decades and form a carbon credit system. There are some research article which are based on carbon credit accounting and reviewed for better understanding the carbon credit and effect of carbon credit accounting in the economy of a country.

Sedimbi et al. (2017), in article "**Carbon credit accounting: A study"** explained as global warming is a challenge and UNFCC took this issue at the international stage with a objective to put a limit on the concentration of greenhouse gases and Kyoto protocol set limits on emission of GHGs for each country. According to Sedimbi, from three markets based mechanism only CDM (clean development mechanism) is relevant for India and carbon credit is part of CDM. Sedimbi take a case of DMRC and his study gives data as India is 4^{th} largest emitter of GHG in the world. DMRC is first railway project in world to claim carbon credit because DMRC used braking in a regenerative pattern in rolling stock. DMRC reduces consumption of electricity by 30% and these credit converts 1.2 crore per year for 10 years and this initiative reduced GHG of city by 4.5 lakh tone per year. DMRC helped in removing lakh vehicle from roads daily.

Satpathy et al. (2016), "Carbon credit accounting- A study on finance students and professionals in odisha" article gives a view of carbon credit accounting. According to the article, carbon credit accounting is acts as a allowance for reducing the carbon dioxide emission of one ton. The credit is given to the companies which have lower carbon emission rate than standard carbon emission quota. It is concept where pollution control earns credit for company. By Carbon credit awareness about pollution rises and global warming level decrease by using Kyoto protocol, certified emission reduction. Researchers use a sample size of 450 and studies those samples and conclude the result after analysis of 450 samples that majority is not aware or even do not know about carbon credit accounting.

Dilip M. et al (2016), "A study of carbon credit accounting", article is a theoretical article in which main focus on how the pollution affects environment and which pollutants has hazardous effect and reason of global warming. Kyoto protocol is signed by countries to control the temperature of earth and reduce it by 1.5 degree Celsius. In the article also discussed about what are effect of greenhouse gases and objectives of carbon credit trading in India is also discussed in the article.

Objectives of Carbon Credit Accounting in India

Reduce the emission of carbon by introducing new initiative in the industries of automobile like introducing of electric public transport vehicle, increase stake of electric trains and this will increase the carbon credit and use it for further development of industries in sustainable development.

- Using of smog filters in industries will help to reduce the carbon emission which direct helps to increase the carbon credit and also reduce the air pollution.
- India is the largest market for carbon credit and can took maximum benefit of this as India has a geographical area where we can convert a large area into forest, use of dessert for solar energy and coastal line to develop electricity by wind mills and due to these factors reduction of use of coal direct increase the carbon credit for India.

Hypothesis

- India is ready to take challenges of carbon credit accounting to make it profitable with sustainable development.
- India is a populous country but also a bowl of natural resources due to which India has capacity to use the carbon credit maximum benefit.

Carbon Accounting

Carbon accounting relate to measure amount of carbon dioxide equivalents emitted by entity. It is used by industries to create the carbon credit commodity trade on carbon market. Comparable, example for production based upon forms of carbon accounting can be found in industries environmental report or carbon footprint calculators. Sustainability measurement as an instance of ecological modernization discourse and polices are provided a outline for carbon accounting to take carbon related decision. However, studies for carbon accounting challenge this hope pointing to the social related character of carbon conversion factor. [1][2]

Carbon Credit

It is a generic term for any tradable certificate or permit representing the right to emit 1 tons of carbon dioxide or the equivalent amount of a carbon credit greenhouse gas. Carbon credit and carbon market are a component of a countries. Attempts to mitigate the growth in concentrations of greenhouse gases. 1 carbon credit is equal to 1 tons of carbon dioxide. Carbon trading is an application of an emission trading approach. According to Environment Protection Authority of Victoria defines a carbon credit as a “generic term of assign a value to a reduction or offset of greenhouse gas emissions.” The goal of carbon accounting is define to low emission or less carbon intensive approaches than those used when there is no costing to emitting. These carbons off setters purchase the credits from an investment fund or a carbon development company that has aggregated the credits from individual projects. Work as trading company between two industries or two countries to import or export the carbon credit. There two type of market for carbon credit- (1) compliance market credit (2) verified market credits.

Carbon Credit Accounting

According to Kyoto protocol, the 141 nations sign the protocol and take pledge to control the pollution and also works towards lowering the temperature of earth, but this is industrialization era and any country cannot cut the profit or use of resources by sudden to control pollution. So, carbon credit is introduced. Carbon credit is defined as term a carbon credit is equal 1 ton of carbon released in the atmosphere. Certificates of carbon credit is announcing to the countries which are doing precaution and reducing the emission of carbon.

Carbon Credit is the scheme of international industries to control the emission. Carbon credit is actually a parameter to control the emission by connecting it to money. India and china is developing countries and get maximum benefit of this carbon credit scheme. If any company is emit less than the standard parameter, and the difference between them called carbon credit and this carbon credit can be exchangeable between two companies. In last few years, the business of carbon credit reached to six billion dollar and 22-25% business is share of India. In carbon credit accounting, carbon emission reduction (CER) acts as intangible assets, these assets cannot be used in production or in form of materials.

CER has net realizable value and non- monetary assets and used to generate future economic benefits. In cost of inventories of CER includes research costs, cost to develop alternative process to reduce emission, cost to prepare design and cost to register in UNFCCC. Challenges of India in carbon credit accounting are improper policy for trading of carbon in the international market.[1][5]

Carbon Emission in World Perspective

All countries are contributing to the rise, with emission in china up 4.7%, in the US by 2.5% and in India by 6.3% in 2018. The EU’s emissions are near flat, but this follows a decade of strong falls. World carbon project introduce the UN climate summit in Katowice, Poland where nearby 200 countries are working to turn the vision of improve the healthy climate change agreed in paris in2015 into action. The report estimate Co_2 emission will rise by 2.7% in 2018, sharply up on the plateau from 2014-16 and 1.6% rise in 2017. The rise is due to increasing cars on the roads and a renaissance of coal use and means the world remains on the track to catastrophic global warming. The emission trend can still be turned around by 2020, if cub are made in transport, industry and farming.

Carbon Emission in India Perspective

India is a developing country and like every developing country India is also a hub of industries. In the era of industrialization, India also become a honeycomb of industries specially of core industries which are source of major pollutants but to compete with other countries its important to have core industries. Due to these factors, our surrounding and our environment affected badly and pollution in the environment is increased day by day. India signed Kyoto protocol and take pledge to overcome the pollution and also reduced the carbon footprints. Carbon credit is scheme form which India can get maximum percentage share. DMRC is the best example for use of carbon credit as DMRC get the carbon credit of 1.2 Crore each year for next ten years.[3]

Major Factors of Global Carbon Emission

- Growing of core industries rapidly.
- Growing number of cars on roads.
- Renaissance of coal use.
- Spreading of social modernization also results in hike of carbon emission.

The problem of carbon emission can be resolve by cutting down the use of transport for social modernization, and cutting the edge of industries carbon emission and also cutting down the farming carbon emission as in north India part, burning of byproduct of rice results in hike of carbon emission. [6]

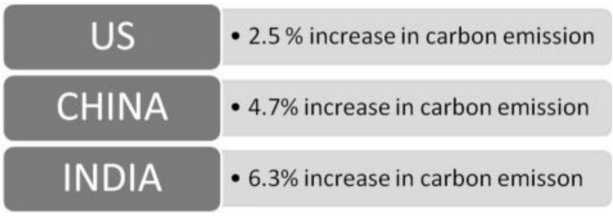

Figure 1: Share of countries in global carbon emission.

Global carbon project launched in Paris in year 2015 called Paris agreement to reduce the temperature of earth and mission 2020 started where even 1.5 degree Celsius increase will destroy the earth. [7] In the era of exponential, every industry grows exponentially and weather condition and environment get worse exponentially deteriorating. Every country needs to do some solution of global warming and the solution must be exponential so that solution works on global warming and save the earth and billion people life to get effected.[8][9]

Conclusion

From the latest data, global carbon emission in 2018 is 37.1 billion tones and India has share of 6.3%. India can have maximum benefits of carbon credit due to the status of developing country. By using innovative methods and imitative like introducing of smog towers in cities and smog filters in industries to reduce the carbon emission in the environment and use of electric public vehicle and increase of stake of electric trains can also remove cars from roads and leads to increase of carbon credit of India.

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