International Journal Of Multidisciplinary Research In Science, Engineering and Technology (IJMRSET)

| ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 4.988

| Volume 4, Issue 5, May 2021 |

Carbon Credit Accounting in Indian Perspective

Dr Vineeta Arora

Assistant Professor, Department of ABST, Govt. Bangur PG College, Pali, India

ABSTRACT: The prices of fossil fuels have been increasing. This not only concerns the scarcity of resources but also develops concerns about environmental degradation; consequences of the increasing percentage of greenhouse gas emissions. These concerns have developed our interest in the development of alternative renewable energy resources. Renewable energy or Non-conventional methods are now being considered as a better source of fuel than nuclear power which can lead to increased of disasters. One of the major component of greenhouse gases ie GHG is carbon dioxide. This carbon dioxide absorbs the heat that should be release into space, causing the planet to become warmer also called as Global Warming. There is a global concern to reduce carbon emissions. One of the main solutions is Carbon Credits. The concept of Carbon Credits Trading has generated out of the Kyoto Protocol. The main idea behind this is to control the emission of green house gases. The concept is used to earn and trade carbon credits between various countries and governments. You've got to pace your way through some climate science and a little bit of market economics to understand why India's entrepreneurs have made such huge investment in plain and simple hot air. Carbon dioxide is today a tradable commodity because some developing countries such as India and China put their foot down and told the developed rich countries that they were squarely to blame for much of the global warming. Europe has a robust carbon exchange today. China, India and Brazil are fighting for a share in the pie to become the biggest sellers of CERs. Indian organization has already committed investment to generate more than 379 million CERs. Worldwide investments have been made that will generate 1.9 billion CERs by 2012. These investments would reduce greenhouse gas emission by 1.9 billion tones. In India there are 591 projects worth rupees 50,000 crore under way. Global climate change is inextricably linked with the enhanced build-up of greenhouse gases. Emissions-trading in the form of carbon credits or CERs is opening up a new vista of trade opportunities with prospect for gradual reduction of emissions, particularly by the developed nations under Annexure-I categories. Various national and international programmes undertaken by the government and voluntarily by the non-governmental agencies have positively impacted on progressive reduction of emissions in many parts of the world. The paper highlights the emerging issues linked to the modalities of emission-trading, together with scope for developing sound accounting procedures for trading carbon credits. The paper discusses the opportunities for developing a sound marketing system of carbon credits with built-in efficiency in transactions, accountability and transparency in reporting systems with focus on India. Paper also underlines the need to comply with the Global Accounting Standards, Tax Planning, access to Multi-commodity Exchange Market, certification, verification and enforcement procedures for proper execution of emission-trading initiatives, aimed at achieving carbon neutrality. A carbon credit is a generic term for any tradable certificate or permit representing the right to emit one tonne of carbon dioxide or the mass of another greenhouse gas with a carbon dioxide equivalent (tCO_2 e) equivalent to one tonne of carbon dioxide. Carbon credits and carbon markets are a component of national and international attempts to mitigate the growth in concentrations of greenhouse gases (GHGs). The quality of the credits is based in part on the validation process and sophistication of the fund or development company that acted as the sponsor to the carbon project. This is reflected in their price; voluntary units typically have less value than the units sold through the rigorously validated 'Clean Development Mechanism'. There are different accounting treatment options under consideration which are impacted by the method with which the carbon credits are acquired, whether by internal creation, purchase or donation to the organization. The different accounting treatment options also consider the intended use of the credits – will they be used for an organization's own compliance purposes or sold to market participants.

I. INTRODUCTION

There is an emerging global consensus that fighting climate change is a major challenge of the 21st century. Changes in the global environment are increasingly challenging businesses around the world. Companies are now expected to integrate environmental concerns into their strategic management. The emergence and popularization of the international climate change debate has created an increasingly relevant focus upon the potential of low carbon opportunities within the corporate sector. Presently, there is a need for awareness of carbon trading since it is a key policy instrument for low carbon business growth. The importance of carbon credit trading is significant in an emerging

| ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 4.988

| Volume 4, Issue 5, May 2021 |

economy like India. Accordingly, the study analyzed the relevance of carbon credit trading in India as well as the opportunities to reduce carbon footprints, which can even help to improve the bottom line of organizations. The air and water chattels we depend after having uncommon financial qualities. It is helpful to audit those monetary attributes of knowledge into why we on the whole endure ecological debasement. There is a level headed clarification for the declining circumstance. We have underestimated our physical condition since it has been a plenteous open great. Open merchandise and enterprises advantage all individuals from society. Since no individual claims the asset a private cost can't be resolved. Choices about open merchandise are in this way political since there is no private market component to manage them. Put another route, there is no conspicuous method to scare people from profiting from these products. Another regular case of an open dissent is national protection. These qualities mean we can't without much of a stretch to make a private market for an open dissent. Political procedures are the methods through which individuals from a general public arrange the sum and nature of an open dissent that will be accessible and how it will be paid for The current natural circumstance gives a reason for continuous monetary training. Nature is a political issue in light of the fact that the quantity of carbon outflows isn't a private decent. Discussion and struggle over how to continue are a necessary piece of the political procedure. Those proposing a market answer for natural debasement are best might uncover an absence of monetary comprehension. Accounting experts can diminish the business apprehension by making proclamations about nature inside the worldview of open merchandise. The societal hazard is too high to just sit tight for what might as well be called a securities exchange collide with address the requirement for direction. Ground breaking experts can't permit free riding natives, organizations, or nations drag us in an emergency. The "small detail within a bigger landscape" outlook must be supplanted with a more edified position. Open activity can make the natural expenses of carbon emanations be disguised by everybody.

The Clean Development Mechanism (CDM) is a course of action under the Kyoto Protocol and the fundamental means by which creating nations can get associated with the carbon showcase. The CDM has two fundamental points: [1]
• To help creating nations to create through undertakings that lessen ozone harming substance outflows.
• To enable creating nations to meet their emanation lessening responsibilities by enabling them to utilize outflow decreases from ventures in creating nations.

A few people and privately owned businesses are not required by law to diminish their carbon emanations. In any case, they are set up to purchase carbon credits from ventures in both created and creating nations. This is on account of they feel in charge of the warming effect of their outflows and need to make a move. Here and there organizations purchase carbon credits since they trust this is useful for their reputation. A purchasers are not reacting to an administrative necessity, this market is known as the deliberate carbon advertises.

All the developed nations which have exceeded the levels of green house gases have to cut the emission rate or borrow carbon credits from developing countries. Hence, trading in carbon credit has been started. Large number of entities in India generating carbon credits and sells them to developed countries through international market. After the implementation of Kyoto Protocol, the opportunity of revenue generation by taking up structured Clean Development Mechanism (CDM) projects has given a new source of revenue for Indian Corporate sector. India is one of the major players in the global market on the supply side of CERs after China.[2]

Environmental degradation and climate change is one of the greatest challenges of this era. Along technological & industrial development emission of green house gases (GHGs) is increasing continuously which is the main factor of global warming. To deal with the issue of global warming a protocol has come into force. The major goal of Kyoto protocol is to reduce GHGs emission by minimizing threats of climate change in order to achieve global targets. To reduce emission of GHGs the environmental carbon trading practices are done on the basis of carbon credits earned at global scale. Carbon credit represents the allowance to emit one metric tonne of carbon dioxide equivalent. Carbon credits are the certificates which are issued for certifying emission reduction. These certificates are traded in the market and purchased by the companies of developed countries which are signatory to Kyoto protocol in order to cut down GHGs emission with the most cost effective way. It is a great source of revenues for the developing countries in terms of sale. But no proper accounting procedure has been followed by the commercial entities due to lack of proper guidelines. Accounting guidelines on carbon credits came into force on July 2009. Carbon credits are intangible assets and they need to be treated as inventory in the balance sheet till they are sold. The objective of this research paper is to discuss about the carbon credit and its accounting aspects. Also it reveals that carbon credits are not only essential to solve the environmental issues but they also act as a huge source of revenues for the developing and non-developed countries. In this context a case study of Delhi Metro Rail Corporation (India) is considered. DMRC has become the first rail project in the world to earn carbon credits by using regenerative braking system in its trains which reduces the electricity consumption by 30%.[3]

II. DISCUSSION

Global climate change is becoming an alarming problem of the 21st century, with global warming as the biggest challenge. Anthropogenic activities have added significant quantities of greenhouse gases (GHGs) to the atmosphere ever since the Industrial Revolution. The agriculture sector is a significant source of GHG emission in many countries. Crop stubble burning or agricultural biomass burning is one of the highest contributors to this emission. In India, around 92 million tons of crop residue is burned every year, causing several negative impacts on the climate as well as on human health. Under the Kyoto Protocol, Carbon trading and Clean Development Mechanism (CDM) are the two robust processes to mitigate the GHG emissions for any country. In this study, we have assessed the overview of world's carbon market and analysed how much carbon credit India may have traded in the world carbon market, if emission from the crop residue burning was stopped in the Indian agricultural sector. Further we have fitted an econometric model to determine the effect of carbon trading on other stock market variable. Global climate change is inextricably linked with the enhanced build-up of greenhouse gases. Emissions-trading in the form of carbon credits or CERs is opening up a new vista of trade opportunities with prospect for gradual reduction of emissions, particularly by the developed nations under Annexure-I categories. Various national and international programmes undertaken by the government and voluntarily by the non-governmental agencies have positively impacted on progressive reduction of emissions in many parts of the world. The paper highlights the emerging issues linked to the modalities of emission-trading, together with scope for developing sound accounting procedures for trading carbon credits. The paper discusses the opportunities for developing a sound marketing system of carbon credits with built-in efficiency in transactions, accountability and transparency in reporting systems with focus on India. Paper also underlines the need to comply with the Global Accounting Standards, Tax Planning, access to Multi-commodity Exchange Market, certification, verification and enforcement procedures for proper execution of emission-trading initiatives, aimed at achieving carbon neutrality. The aspects of Carbon management with focus on carbon neutrality, sustainable energy development and implicit energy security, are also highlighted.[4]

The review of literature was done by taking account of six factors. The factors identified were Carbon Credit Accounting, Kyoto protocol, Carbon Trading, Credits, 6missions Trading, and Clean development mechanism. A survey was done so as to find out the awareness of carbon credit accounting. Since it is a latest topic to ponder upon not much of its basic concept have been touched and looked upon. Theoretical research has been made in the context in aid to carbon emission, controlled and simultaneously credits earned by sundry designs of solar still in India .Carbon accounting is a social activity undertaken to keep a check of amount of carbon dioxide equivalents which will not be released into atmosphere as a result of variability pro0ects under Kyoto protocol mechanism. Missiontrading system is often called as cap and trade. The main motto of this principle is to reduce pollution and fight against global climate change. Sovereignty versus egalitarianism has been highlighted to provide a pragmatic answer to the equity debate. Then mixed with international emissions trading the constructive approach stands out for offering the developed countries huge amount of emoluments for participation in the lowering of greenhouse gas effect. Global warming has been the foremost and front runner theme which paves more insights to have climate finance in the agenda. &resent scenario is more pertains to financial selected professionals to leverage capital for emission free trading and clean energy.A significant additional change in economy through the crawling of socially responsible investment has been inadequately looked upon.[5]

III. RESULTS

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. Carbon trading is an effective tool to earn extra benefits for developing countries and non developed countries. Clean Development Mechanism is also an effective source of technological and economic development for developing countries with environmental upgradation. Although India is the largest beneficiary of carbon trading, it still does not have a proper policy for trading of carbons in the market. For appropriate functioning and development of carbon markets and carbon trading practices, separate financial accounting standard must be established.[6]

IV. CONCLUSION

India being a developing or "Non-Annex country" has no restrictions to be followed with regards to carbon emission i.e. there is no cap prescribed on how much carbon it can emit. However, it can trade in carbon credits. Various companies have already made a mark in this field by entering into Carbon Trade and Clean Development Mechanism Projects. They are deriving benefits in terms of better technological knowledge and carbon trade profits.[7]

The purpose of this study on Analysis of Carbon Credits is to:

- Understand the meaning of Carbon Credits.
- Understand the working of Carbon Credits market.
- Identify the procedure needed to enter into the Clean Development Mechanism.
- Understand the Regulatory framework.
- Understand Accounting and Taxation aspects of Carbon Credit.
- Gain knowledge of how the Indian companies can gain these credits.
- Identify the various sectors/companies which can benefit from Carbon Credits
- Identify areas of opportunities for a Chartered Accountant in Carbon Credits

V. CONCLUSION

Carbon credits are a key component of national and international emission trading schemes that have been implemented to mitigate global warming. Credits can be exchanged between businesses or bought and sold in international markets at the prevailing market price. Credits can be used to finance carbon reduction schemes between trading partners and around the world.

- The "currency" for this trade is called Carbon Emission Reduction (CER) commonly called as Carbon Credits.
- One unit of CER is equivalent to the reduction of one metric tonne of CO_2 or its equivalent. Symbolically: 1 CER= 1 tonne of CO_2 (or equivalent gases) Carbon Credits have been given the recognition of an intangible commodity and can be traded on the commodities market. Trading of carbon credits happens in the form of CERs or Certified Emissions Reductions. CERs are in the form of certificates, just like a stock. A CER is given by the CDM Executive Board to projects in developing countries to certify that they have reduced greenhouse gas emissions by one tonn of carbon dioxide per year.

REFERENCES

1. Alberola, E., Chevallier, J. and Chèze, B. (2008) The EU Emissions Trading Scheme: Disentangling the Effects of Industrial Production and CO2 Emissions on Carbon Prices. Social Science Electronic Publishing, 116, 93-126.
2. Bharti, A., & Saha, B. (2011). Carbon credit from composting of municipal solid waste. International Journal of Environmental Technology and Management, 14(1-4), 203- 219.
3. Joy, A. Green Economy In India: Journey Through Carbon Credit Mechanism ,Assistant Professor, Dept. Of Commerce, Nirmala College, Muvattupuzha, Issn-2456-4052 (Online)
4. Jamal, M. A. Carbon Credit-A Bird's Eye View. Mansanet-Bataller, M., Pardo, A. and Valor, E. (2007) CO2 Prices, Energy and Weather. Energy Journal, 28, 73-92.
5. Wara, M. (2007). Measuring the clean development mechanism's performance and potential. UCLA L. Rev., 55, 1759.
6. Xiaohong, C., & Zhiyun, W. (2010). Empirical Research on Price Mechanism of European Carbon Emissions Trading [J]. Science & Technology Progress and Policy, 19, 041.
7. http://www.business-standard.com/article/companies/7-indian-companies-among-top-200-carbonclean-firms-116081701492_1.html PMR2012. India's Organizing Framework for Scoping of PMR activities.