Original Research Paper

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Accountancy

CARBON CREDIT ACCOUNTING PERCEPTION AMONG FINANCE STUDENTS AND PROFESSIONALS

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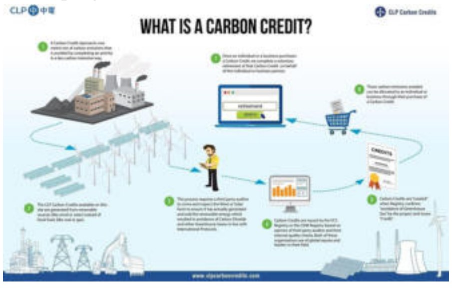
ABSTRACT This paper investigates the perception of carbon credit accounting among finance students and professionals in Uttar Pradesh, India. Surveying 165 participants (100 students and 65 professionals), researcher assessed their awareness, understanding, and attitudes towards carbon credits. Results show moderate awareness, with professionals having a slightly better grasp than students. Both groups, however, lack comprehensive knowledge of implementation and governing policies. The study also tried to reveal a consensus on the importance of carbon credits for a sustainable environment but highlight the need for enhanced education and training. The study emphasizes the importance of integrating carbon credit accounting into academic and professionals training to prepare finance professionals for the growing field of sustainable finance.

KEYWORDS : Carbon credit accounting, Finance students and practitioners, perception, Sustainability, Environmental responsibility, CER (Certified Emission Reduction)

INTRODUCTION: -

Global warming, driven by the increase of greenhouse gas emissions such as CO2 possess significant threats to ecosystems, economies and communities worldwide. Carbon credits are a market-based mechanism created to address this environmental challenge by offering financial incentives for emission reduction. One tone of CO_2 or equivalent gases that an entity is entitled to emit is represented by each carbon credit; thus, carbon credits generate a financial value for emission reductions and encourage companies and nations to spend in green technologies and sustainable practices. They work within frameworks similar to cap-and-trade systems, wherein a limit (cap) is set on emissions and companies can trade (buy or sell) credits to stay within their allotted limits.What is Carbon credit and Carbon credit accounting?

It is a grant which allows a country or organization to produce certain amount of carbon emissions and which can be traded if the full allowance is not used. It is a tradable certificate or permit that represents the right to emit one tonne of carbon dioxide. It is a key component of various market-based mechanisms designed to shrink greenhouse gas emissions, such as cap- and-trade systems and emission offset programs.



Source: https://www.setpoint.ai/wp-content/uploads/2022/02/what-is-carbon-credit- infographic.jpeg

Carbon credit accounting involves the tracking, recording, and reporting of carbon credits within an organization's financial and environmental management systems. It encompasses the identification of carbon credit transactions, monitoring adherence with relevant regulations, and accurately reflecting the value and impact of these credits in financial statements.

History And Background Of Carbon Credits: -

Since its origin, the idea of carbon credit has undergone substantial development, playing crucial role in global efforts to combat climate change. Carbon credits were created in response to escalate worries about global warming and the need for globally coordinated efforts to reduce atmospheric emissions . An overview of development of carbon credits may be seen below. From the Kyoto Protocol to the present, this article examines the history of carbon credits, stressing their effects on the environment.

- **Kyoto Protocol (1997)**

A historic worldwide agreement known as the Kyoto Protocol, required developed countries to scale down their greenhouse gas emissions through legally binding legislation. The production of carbon credits through the Joint Implementation (JI) and Clean Development Mechanism (CDM) programs was one of its main processes. By funding emission-reduction projects in other wealthy or developing nations, these systems allowed nations to earn carbon credits that they could use to adjust their own emissions goals.

- **Emissions Trading System (ETS) Of The European Union (2005)**

Among the foremost and most widely recognized carbon trading schemes in the world is the EU ETS. It was introduced in 2005 as the cornerstone of the EU's climate change approach. The system provides for the trade of emission allowances in order to achieve cost-effective emission reductions and restricts the total quantity of greenhouse gases that may be emitted by amenities covered by the system.

- **The Paris Agreement (2015)**

The worldwide campaigns to battle climate change took a major turn when the Paris Agreement came into effect at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC). Global warming is projected to be kept far below 2 degrees Celsius over pre-industrial levels. The agreement compels nations to execute carbon price strategies, such as carbon credits, to meet their nationally determined contributions (NDCs) aimed at limiting emissions.

Literature Review: -

- **Jitendra Kumar Jain (2023) A Study on Carbon Credit accounting and reporting awareness among professionals in Madhya Pradesh**

The researcher has conducted direct research on carbon credit accounting awareness among professionals in Madhya Pradesh. The study demonstrated that even though carbon accounting plays a big part in sustainable growth, its function is still debatable. It also shows that the understanding level is low among academicians compared to professionals. Based on gender, females are less awarded than males. The study also demonstrates that no uniform accounting system is there for accounting and reporting.

- **Imran khan, M Farooq, A Azam (2023) A Study on Carbon Credits Market and Its Accounting Implication in India.**

The research was grounded in carbon credit market and its accounting implications in India. Using an interpretive method, the researcher examined secondary data from many sources national and international with an interpretative approach. The findings indicates that the majority of highly industrialized nations face a lack of carbon credit but in India, there are vast carbon credit market available and its accounting implications with its accounting standards are also easier in comparison with other countries.

- **Rakesh, S, Kamalkar (2022) Understanding carbon trading: Accomplishments and prospects in India and other countries.**

The study was based on understanding carbon trading accomplishments and prospects in India and other countries. The present state of carbon credits and trading in India is reviewed along with the regulatory environment, market trends, and ramifications on the environment and economy of the nation and other countries.

- **The impact of carbon credit reporting schemes and credibility enhancement mechanisms on carbon emissions growth(2021)**

The study examined the impact of variations of current carbon-related reporting schemes across countries. It revealed that the strength of carbon reporting schemes and credibility enhancement mechanisms contribute to curbing carbon emissions growth at the country and the company level. Results demonstrated that the credibility of reported carbon emissions is a critical first step in working towards climate change mitigation. The thesis results constitute empirical evidence that informs both companies regarding the benefits of undertaking carbon assurance and emissions reduction programs in the face of diverse regulatory reporting schemes addressing the function of accounting and credibility enhancement mechanisms in holding countries and companies accountable for carbon emission growth.

- **Sonia & S. (2018) Accounting and taxation issues of carbon credit transactions**.

This paper explored the complex intersections of accounting and taxation from the prospective of carbon credits. It examined how accountants navigate the intricate frameworks and regulations surrounding the recognition, measurement, and reporting of carbon credits within financial statements. Additionally, the paper addressed the tax implications of carbon credits, including their classification for income tax purposes. This paper was based on primary data. Ultimately, this research contributed to a deeper understanding of carbon credit accounting, contributing valuable findings that can inform regulatory developments and support the work of accountants in fostering sustainability within corporate financial reporting.

- **Patnaik, B. C. M., Satpathy, (2016) I., Litt, D., Das, C., & Mohanty, M. S. Carbon Credit Accounting: A study on finance students and professionals in Odisha**.

The study performed empirical research on carbon credit accounting perception among finance learners and practitioners in Odisha, also highlighted their consciousness, attitudes, and challenges they face in adopting these practices. Recommendations included curriculum enhancements in finance programs and targeted awareness campaigns to promote greater engagement and compliance with evolving sustainability standards.

Relevance Of The Study: -

The study is important because it has the potential to address critical gaps in understanding and mindfulness of carbon credit accounting among students and professionals in finance. By shedding light on these perceptions, the research can inform strategies to enhance education and training initiatives within the finance sector, thereby facilitating the integration of sustainability principles into financial practices.

Research Aims:-

1. To know about the carbon credit accounting.
2. To identify consciousness level and understanding of about carbon credit accounting concepts Uttar Pradesh's financial learners and professionals.

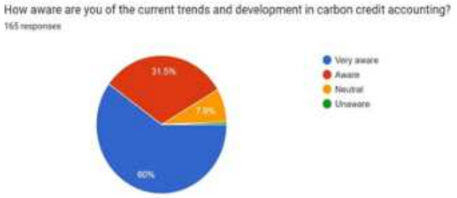
Scope Of The Study: -

The research is restricted to the vicinity of Uttar Pradesh's capital region Lucknow, providing foresight into the perspective of finance learners and practitioners drawn are from commerce, management and finance streams respectively. The research relies solely on quantitative data collected through an online questionnaire. Data collection is conducted over a specified period, ensuring the findings reflect the perception during that timeframe.

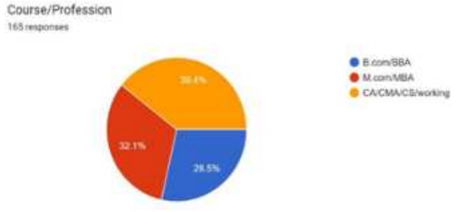
Research Methodology: -

This study employed a structured surveys to gain a comprehensive understanding of the perspective of carbon credit accounting among finance students and professionals. A total of 165 participants were surveyed, consisting of 100 students of graduation and post-graduation and 65 professionals working in different finance sector like Bankers, CA, CMA and self-employed etc. A structured questionnaire was formulated to assess the standard of consciousness among various finance learners and practitioners in the field of carbon credit accounting. This survey covers themes connected to carbon credits and consists of both multiple-choice and Likert-scale. Respondents of both genders were taken as the exemplar for survey. Finally Summarized the data to identify trends and patterns.

Data Analysis And Interpretation: -



The above pie chart is showing that only 60% (99 out of 165) are very aware of the current trends and developments in carbon credit accounting



Source: Primary Data

The above pie chart is showing that 28.8% are Graduate students, 32.1% are of Post Graduate students and 39.4% are of professionals.

Table1: Respondents Composition

	Graduates	Post Graduates	Professionals	Total
Male	15	31	53	100
Female	32	22	12	65
Course/ Profession	B.com/BBA	M.com/MBA	CA/CS/Working	165

In the above table only 39.3% (65 out of 165) respondents are female who filled the questionnaire.

Table 2: Analysis Of Data

Attributes/ Elements	Total Score					
	Graduates		Post graduates		Professionals	
	Male	Female	Male	Female	Male	Female
Are you familiar with the concept of "Carbon credit accounting"?	22	58	46	76	160	21
Do you believe carbon credits have significant impact on the environmental conservation?	23	18	51	112	95	24
How important do you think it is for finance students to understand carbon credit accounting?	51	78	62	108	104	32
Do you believe that integrating carbon credit accounting into financial curriculum enhances students' understanding of environmental sustainability?	46	72	51	101	95	15
Do you have any awareness about CDM mechanism that reduces carbon emissions?	26	11	68	15	95	29
How aware are you of the current trends and development in carbon credit accounting?	11	4	57	7	85	15
Are you aware of any standards related to carbon credit accounting?	9	3	59	1	195	12

Would you interested in taking specialized course on carbon credit accounting?	22	19	49	15	81	22
Have you ever attended any workshops or seminars specifically focused on carbon credit accounting?	1	9	56	5	65	19
Are you aware of any carbon disclosure projects?	21	54	46	72	79	21
Do you think there is need for more research and awareness programs on carbon credit accounting?	43	84	37	79	126	17
Total score	275	410	582	304	1180	228
Ideal score	825	1760	1705	1210	2915	660
Least score	165	352	341	242	583	132
% of total score to ideal score	33.3%	23.29%	34.13%	25.12%	40.48%	34.54%
No. of respondents	15	32	31	22	53	12

Source: Primary Data

The Perspective Of Respondents In Relation To Various Characteristics Of Carbon Credit Accounting And Perceived Impact Of Carbon Credit System

This study's primary objective was to determine how well-versed financial learners and practitioners were in carbon credit accounting. A questionnaire about the ICAI's carbon credit accounting standards, the importance of carbon credits in relation to climate change, CDM projects and environmental conservation, the necessity for students to comprehend carbon credit accounting, was mailed to the participants in order to assess their perceptions.

The responses were analyzed in accordance with the Likert scale by giving ranking as 5, 4, 3, 2,

1. Here 5 for fully aware, 4 for partly aware, 3 for aware, 2 for neutral and 1 for not aware. The weight of the comparable replies was multiplied by the total number of responses to determine the final score. Low to moderate awareness of carbon credits was reported by the majority of participants. A sizeable portion viewed them as a useful instrument for encouraging environmental responsibility. However, some finance practitioners exhibited a good attitude towards learning about carbon credit markets. Overall, the perception leaned towards recognizing carbon credits as an essential instrument for reducing the effects of climate change.

Perception Calculation: Ideal And Least Ratings For Respondents

The table below shows the quantification of ideal score and least score. To identify the Ideal score the no of questions is multiplied by the highest value (5) and the no. of respondents from that particular group. Least score is figured by multiplying the no of question with minimum value (1) and the no. of respondents from that group.

Table 3: Counting Of Ideal Score And Least Scores Of Respondents

Section	Equation	Ideal score	Equation	Least score
Male Graduates	11*5*15	825	11*1*15	165
Female Graduates	11*5*32	1760	11*1*32	352
Post Graduate Male	11*5*31	1705	11*1*31	341
Post Graduate Female	11*5*22	1210	11*1*22	242
Male Professional	11*5*53	2915	11*1*53	583
Female Professional	11*5*12	660	11*1*12	132

Source: Primary data

Findings:

1. The table-2 highlights that, the current case's male and female experts' real score for carbon credit accounting are 342, 410, 582, 304, 1180, and 228 as opposed to the ideal score of 825, 1760, 1705, 1210, 2915, and 660. The percentage of actual scores to ideal scores are 33.33, 23.29, 34.13, 25.12, 40.48 and 34.54 respectively. Male professionals had a higher level of awareness regarding carbon credit accounting, followed by male graduates.
2. A majority of respondents, particularly finance professionals demonstrated awareness of carbon credits while finance learners showed interest but lacked in-depth understanding. This shows a knowledge gap in formal education to real world applications.
3. Despite the indispensable role of Clean development Mechanism (CDM) projects in carbon credit generation, participants showed lack of adequate understanding of CDM initiatives, suggesting a need for more outreach and case-based learning in educational modules.
4. It was also found that insight level among male professional in Uttar Pradesh is more than that of female professional by 5.94 %. On the other hand, consciousness level among post graduate male is more than that of post graduate female.
5. It is also found that consciousness level is positive by women graduates as compared to all respondents. This indicates that plurality is not attentive of carbon credit accounting.
6. The pie chart 2 is also showing that only 60% (99 out of 165) of total respondents are eminently attentive of carbon credit accounting. So, it is necessary to increase the percentage level of participants.

Suggestions:-

1. Carbon credit accounting should be introduced in the academic syllabus and this help in creating awareness among academicians, professionals and students.
2. More scholars and researchers should work on this concept and a great analysis should be conducted because this will give us the accurate financial reporting of carbon credit credits.
3. Also accounting standards regarding carbon accounting should be formed. So, a uniform accounting system must be framed for recording, measuring carbon credits.

CONCLUSION:-

The finance industry's focus on carbon credit accounting is growing due to the increased emphasis on environmental responsibility and sustainability on an international basis. According to this study, professionals and students studying finance have substantial knowledge and understanding gaps, indicating the need for improved instruction and training. Finance experts realize the value of carbon credit accounting, but bringing it into practice presents significant obstacles. To ensure that the upcoming generation of finance professionals is ready to successfully incorporate sustainability into their practices, it is imperative that these issues be addressed through focused educational initiatives and professional development programs. The importance of carbon credit accounting will only increase as the globe struggles with climate change, thus it's critical that the financial sector has the skills and resources needed to manage it effectively.

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