

“A Study On Environmental Sustainability Of Indian Companies: A Systematic Review And Meta Analysis”

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Abstract

Corporate Social Responsibility (CSR) is now a critical component of any company's decision-making in the modern world. Big businesses must include CSR practices of any kind into their operations. Every company adopts CSR differently, and a variety of criteria, including size, industry sector, stakeholder expectations, prior CSR involvement, R&D activities, and labor market conditions, influence this choice. The possible advantages of CSR initiatives aid firms in gaining a better reputation as ethical corporations that can successfully gain a competitive edge. To make a focus on the adaption of CSR activity, it was found that India is one, who adopts the CSR activity as by amending the Company Act 2013 in April 2014. The reviews of international literature and publications generate new thoughts ideas, issues, and solutions to understand the conceptualization of corporate social responsibilities of companies based in India towards Environmental sustainability. Globalization and liberalization in the Indian economy has shifted corporate goals from a socio – economic focus towards increasing shareholders value to the benefit of various stakeholders and extensive. This review is conducted to synthesis information on environmental sustainability practices carried out by selected Indian companies and to identify the level of understanding of firms towards statutory CSR provisions and to compare environmental sustainability related CSR practices of these companies. For the same, data was collected from Wiley, Emerald, Web of Science and Scopus reviews. Those studies were selected which were peer reviewed, published in past 10 years, in English language, and were conducted for organizations with mandatory Corporate social responsibility. Companies performing CSR are the participants for the study. The findings of the study suggest the Indian companies selected for the purpose of the study are much aware about the environmental sustainability concept and their CSR practices are inclined toward sustainability of the environment.

Keywords: Corporate Social Responsibility, Companies Act 2013, environmental sustainability, liberalization and globalization.

INTRODUCTION

Nowadays, businesses must be socially conscious. Therefore, it is crucial to carefully and exactly define corporate social responsibility. There is numerous definitions available for the same. The current definition of CSR goes beyond philanthropy. It is not merely a buzzword; rather, it is regarded as a tool for long-term corporate expansion. One cannot conduct business in some societies without being socially responsible, and CSR may be as old as business itself (Asongu, 2007). Businesses in the twenty-first century need to serve the demands of society as a whole in addition to the needs of its customers. A number of stakeholders evaluate businesses using different standards. Governments want businesses to abide by all laws, customers want businesses to provide reliable, safe, and reasonably priced goods and services, and society wants businesses to act morally upright, sustainably, and ethically. Nowadays, it's widely accepted that society and business are interdependent. (Porter, 2006). Companies today are also obligated to evaluate how their actions may affect society. Certainly, businesses must abide by laws governing the environment, worker

safety, and health requirements. Additionally, they must actively support, maintain, and give back to society. Today, businesses are thought to be accountable for the environmental impact they have.

Reviews of "undiscovered public knowledge" (Tran field, Denyer, & Smart, 2003), a term for knowledge that is in the public domain but is not properly evaluated and coherently organized, have been regarded as a crucial exercise to develop policies and expand the boundaries of existing research based on the maximum (re)use of previous research findings. Reviews are significant because it is acknowledged that "most research can only be understood in context, and a key element of that context consists of the results of earlier studies," to be more precise

(Petticrew & Roberts, 2006, p. 3). Based on these assumptions, the current study was conceived to address the need to analyze the practices mentioned in the reviews of environmental sustainability in a more comprehensive fashion, paying particular attention to the specific guidelines followed in these reviews. More specifically, by considering the items of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Liberati et al., 2009), the current study analyses systematic reviews in the field of environment sustainability practices to shed light on the level of awareness among the organizations about environmental sustainability and the practice they follow. PRISMA (Liberati et al., 2009) is a protocol to conduct systematic reviews consisting of a 27-item checklist and a four-phase flow diagram (see Fig. 1), which was developed in the medical field by a group of 29 scholars with the intent to increase the transparency and accuracy of literature reviews. The reason behind the choice of PRISMA (Liberati et al., 2009) over other existing protocols lies on the recognition of its comprehensiveness, its use in several disciplines worldwide beyond the medical fields, and its potential to increase consistency across reviews. The researchers think that the operationalization of systematic reviews in research has significant ramifications for those who 'utilize' their findings. The researchers contend that a thorough assessment of research activity through systematic review in the field of environmental sustainability against the PRISMA checklist would aid in understanding the design and standard of research effort. Overall, the current study intends to provide recommendations to enhance understanding about the environmental sustainability practices carried out by various companies through the use of a systematic evaluation of the literature in the subject. The study will at the end suggest better ways to improve CSR activities to attain environmental sustainability. Here the researchers will analyze the level of awareness among the organizations about corporate social responsibility and its impact on environmental sustainability

Research questions

1. What is the level of awareness among Indian companies about corporate social responsibility?
2. What is the current status of corporate social responsibility in India concerning Companies Act, 2013.
3. What are the practices related to environmental sustainability before and after the implementation of Companies Act, 2013.

REVIEW OF LITERATURE

Corporate social responsibility – Concept and phenomenon

Jean-Pascal Gond, Jeremy Moon (2011) explored other concepts of CSR. In his study, the researcher introduced escalation to the CSR concept, the researcher started with an organization philanthropy concept and ended with political CSR, which was new. According to **Amaladoss and Manohar (2013)**, Corporate social responsibility (CSR) is the commitment made by businesses to consistently support the growth and development of local communities, the labor force, their families, society, the economy, and the country as a whole. Shafiqur Rahman (2011) investigated the evolution of CSR's facets. To reach a conclusion and pinpoint several dimensions, the study conducted a content analysis. The study focused mostly on corporate social responsibility (CSR) definitions from the 1950s to the present, which have provided a perspective. A contextual study of those criteria led to the identification of CSR dimensions. The study identified ten dimensions, namely obligation to the society, stakeholder involvement, improving the quality of life, economic development, ethical business practice, law abiding, voluntariness, human rights, the protection of the environment, transparency and accountability. "A study of corporate social responsibility in India – A study of top 500 companies"-2010 (**Richa Gautam and Anju**

Singh) studied different definitions, dimensions and development of CSR in India .They used secondary data of the companies and content analysis technique to assess CSR practices of Indian Companies. The study suggested that the Business and CSR strategy are on convergent path and more and more companies are not reporting CSR and its gaining increasing importance. The topic under discussion fits within the present understanding of sustainable development and is related to one of the newest developments in management sciences, according to authors Chwistecka-Dudek Halina and Korenkiewicz Aleksandra. Social values can be effectively incorporated into a strategy to create and sustain long-term competitive advantage. The CSR concept is thus a long-term process of managing relationships with groups of stakeholders in order to create value for both them and the owners of the businesses The (Not So) New Corporate Social Responsibility, Paul R. Portney, 2020. An Empirical Perspective discusses the definition of CSR that enables concrete discussion of it; it then identifies the potential pathways by which CSR might result in superior financial performance; it then reviews the empirical data supporting this hypothesis; and finally, it poses the question of whether this much-hyped phenomenon is actually all that new and argues that normative judgments about CSR are more nuanced than one might initially believe. The research paper by Amit Kumar Srivastava, Gayatri Negi, Vipul Mishra, and Sharddha Pandey (2012) focused on understanding corporate social responsibility, exploring its concept, and determining its scope. It used the TATA Group as a case study because Mr. Ratan has exemplified the sense of responsibility towards the uplift of common people, protection of the environment, and development of the country. The survey disclosed the quantity of CSR activities carried out by the corporations and their contributions to societal advancement.

Implementation of Companies Act, 2013 –Mandate CSR

Babalola (2012) had further noted that the 2013 Companies Act's successful implementation had boosted India's philanthropy rates and brought about regional, environmental, and global growth and development. A deeper comprehension of the then-current research may be formed by discussing the various facets of the obligatory Corporate Social Responsibility and its impact on environmental sustainability in relation to selected Indian Companies in the current research study. **McWilliams, Siegel and Wright (2006)** conducted the research study that included reviews about the present status of CSR in India with respect to Companies Act 2013, environmental sustainability related CSR practices of companies before and after implementation of Companies Act 2013. According to Cheng, Lin, and Wong (2016), around 40% of Indian businesses have partnered with regional and state governments to spread CSR initiatives .**Chapple and Moon (2005)** affirmed their point of views on post liberalization and onset of globalization it was found that the Indian companies had faced major social and economic growth which has made it necessary to get learning about the contribution about CSR activities conducted by the companies. A study was conducted laying focus on examining the managerial attitudes towards social responsibility in India. **Crane, Matten and Spence (2013)** reported in their findings about, the CSR in India concerning Companies Act 2013 is found to be the new Act implemented in the Companies Act 1956. The introduction of the new Act has brought significant changes to the working and functioning of the Indian business companies and led to the deployment of Corporate Social Responsibilities into the working of the **Indian** organizations. As per the Companies Act 2013 those companies whose net worth was Rs 500 crores or more, had an annual turnover of about Rs 1000 crores or more and had annual net profits of at least Rs 5 crore are liable to follow the rules and regulations that are laid down regarding the conduction of CSR activities. It was liable for the companies who were falling under these parameters to mandatory make efforts and contribute 2% of their net profits towards the conduction of CSR activities. **Prieto-Carrón, Lund-Thomsen, Chan, Muro and Bhushan (2006)** mentioned that, the Companies Act 2013 made it mandatory for the companies falling under the criteria of provision to create a policy related to the implementation of legally mandated CSR activities into the working of the organizations. It also stated that the policy must conform as per the Schedule VII of the Companies Act, 2013. Hence, it was made mandatory that the business companies made effective policies regarding the implementation of CSR activities into the organization. **Dahlsrud (2008)** concluded that, as per the rulings of the Companies Act 2013 the business units had to allocate and audit the funds and money to carry out CSR activities efficiently. It also emphasized that the conduction of adequate execution was necessary to done for carrying out activities related to different CSR practices. It was also compulsory for the companies to form and issue the yearly financial report related to the conduction of various CSR activities done in the whole year. **Gautam and Singh**

(2010) has reported that, the CSR in India concerning Companies Act 2013 made it mandatory for the business organizations to set up a Trust or Society under Section 8 of the Companies Act 2013 in the working of the companies in the direct administrative control section. **Mani, Gunasekaran, Papadopoulos, Hazen and Dubey (2016)** concluded that, the Act also allowed the business organizations to outsource the CSR activities to the well established social units which are working in the field of CSR activities for about 3 years or more. The chosen institute to carry out the activities related to the CSR practices must carry out activities with no profit motive and must indulge in complete social work. It would be the responsibilities of the institutes to monitor the activities of such non-profit organizations. The Act also propagated that the business companies could make collaborations with other companies to carry out CSR practices. However, it is necessary that the companies must follow the guidelines that are mentioned under the rules under section 18. **McWilliams, Siegel and Wright (2006)** contended that before the introduction of the Companies Act 2013 the CSR practices that were done by the companies were to offset the corporate social irresponsibility. **Kumar, Rahman and Kazmi (2016)** has investigated that, the companies operating in India were highly impacted by India's Corporate Governance philosophy which laid down stress on ensuring transparency and fairness in all the activities that were conducted by them. It was found that ITC Group has also made a consistent effort towards making improvements in the environment. **Nazli Nik Ahmad and Sulaiman (2004)** had reported that the introduction of Companies Act 2013 laid down the provision of spending at least 2% of the net profits as a part of CSR activities. This had led to the emergence of unrest among the companies for a while. Because of this, it was found that most of the companies had contributed less than 2% as a part of CSR contribution. It was found that in the year 2014-15 about 52 companies were falling short of the 2% mark which was reduced to 29 companies in the year 2014-15, however again a rise was found in the year 2016-17 with about 37 companies falling short of 2% mark of contribution towards the CSR activities. It was also found that in the year 2017 only about 36 companies had made efforts and disclosed the spending done in the section on CSR activities.

Environmental sustainability practices- Important part of CSR

Prieto-Carrón, Lund-Thomsen, Chan, Muro and Bhushan (2006) illustrated their point of view, in the example of the iron ore mining industry in Goa that could be taken into consideration while implementing their initiatives towards making efforts to protect the environment and promote social development. In another survey that was conducted on companies like Infosys Technologies Limited., ITC Ltd., Reliance Industries Ltd. It was found that these companies were actively involved in carrying out activities related to rural growth and development. As per **Chaudhari and Wang (2007)** found that environment sustainability was mostly involved with the decision making related to the protection of the natural environment. Environment sustainability is mostly concerned with the preserving of the capability of the environment to support human life and human life activities. The activities that are conducted under the segment of environment sustainability may vary between the companies. The CSR activities related to the environment sustainability concerns involve the inclusion of a number of activities which has been laid down several companies like Unilever, Tata Group, to identify and reduce the adverse effects of climate change, clean energy generation and supply, sustainable consumption of resources, environment friendly transport facilities, conservation and management of natural resources etc. In this context, Unilever India had taken some initiatives like the introduction of programs like Corporate Leaders Group on Climate Change, Carbon Disclosure Projects' Supply Chain Leadership Collaboration, Roundtable of Sustainable Palm Oil, Sustainable Packaging Coalition, etc. Unilever had also included social, environment and economic sustainability as one of the main elements of the company's objective. Initiatives taken by Unilever had led to the reduction of CO₂ levels by 25% in the year 2012. **Prieto Carrón, Lund Thomsen, Chan, Muro and Bhushan (2006)** showed that the Company has also made an Energy Team survey the introduction of innovative ways of saving energy and engaging employees to meet the environment sustainability CSR practices effectively. **McWilliams, Siegel and Wright (2006)** has reported that the CSR practices that are initiated towards the sustenance of the environment are often termed to be green initiatives which include introducing environment betterment plans like planting more tree drives, promotion of afforestation, making efforts to preserve and conserve water, introducing an initiative to manage and dispose of waste in a responsible manner. **Ciliberti, Pontrandolfo and Scozzi (2008)** concluded that to promote effective CSR practices towards the environmental

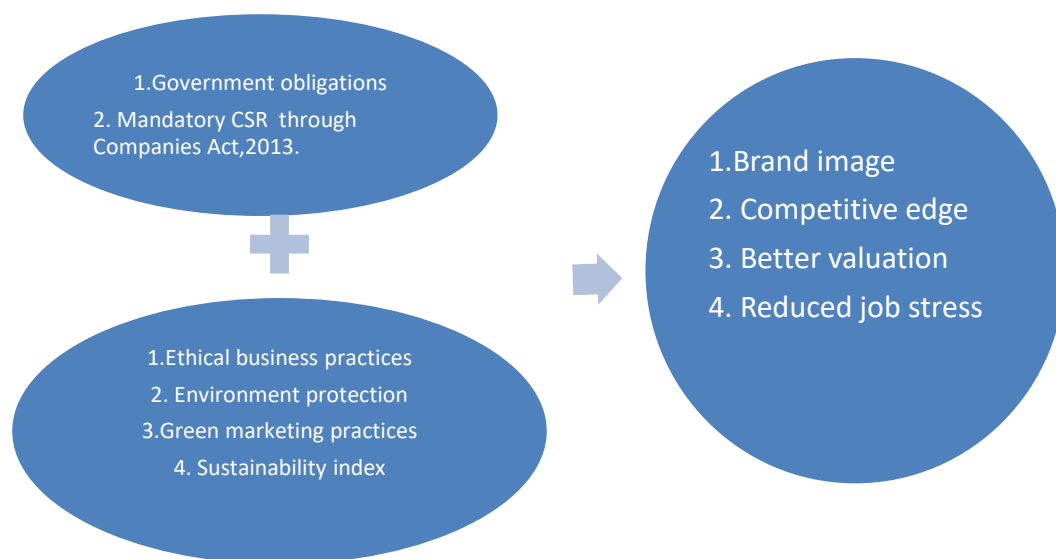
sustainability the Indian companies are making efforts and identifying the issues and problems that are related to environmental concerns. The companies had identified that the environmentally sustainable development and efforts of growth made towards improving the quality of life and making future better by making an ecological balance with the surroundings on which the human, as well as animal life, depends. For this, the companies are making efforts towards developing, growing and diversifying the economy to enhance the capabilities of environmental sustainability levels. Stress is also laid on maintaining and enhancing the international competitiveness towards making the environment more safe and secure. In this context, effective sound steps had been taken by Intel India to maintain and develop environmental sustainability programs and initiatives in India. It was found that Intel considers environmental sustainability and conservation as one of the major CSR aims and practices. The company was found to be celebrating Global Earth Day with full vigor and promoted environmental sustainability programs by holding Environment Day and the Environment Research Contest on this day so that large population could be made aware of the Global Earth Day and on its behalf promote environmental sustainability initiatives among local people, communities and other contestants coming from far-flung regions. It was found that the Intel employees had planted and nurtured thousands of trees in and around Bangalore under the Project Intel for a Better Bannerghatta. **Mani, Gunasekaran, Papadopoulos, Hazen and Dubey (2016)** has explained about Intel that has also contributed towards making a natural park, making awareness about ill effects of use of plastics, promoted litter free places and regions, set up kiosks to impart learning about environmental sustainability measures to local communities. Apart from these Intel has also initiated a program in collaboration with the children under the Children's Love. **Jain and Winner (2016)** have explained that, with the implementation of Companies Act 2013 the awareness about the climate changes and the issues related to the Environmental sustainability have increased. It is found that many companies have included climate change and Environmental sustainability issues as an integral part of their CSR activity policy. The companies were found to be making efforts and contributing increasingly towards improving the environmental conditions and reducing the pollution levels. As per the study conducted by Next Gen to inspect the CSR spending done by top 100 business companies in the financial year 2015-2016 it was found that most of the companies were well aware of the climate changes occurring in the atmosphere and were concerned about environmental sustainability factors and issues. **Jenkins (2009)** asserted that in order to acquire a good image among the local communities, manage the corporation function by reliability and build trust within the employees and consumers Mahindra and Mahindra Company had laid down impounding commitments towards the construction of the green environment. It was found that the company had contributed about INR 63 million in FY 2014-15 as a part of its CSR activity towards the environment sustainability measures. **McWilliams, Siegel and Wright (2006)** concluded that many corporate business units were making initiatives in the environmental sustainability section by introducing water management, measurement, and all water valuation schemes and measures. It was found that companies were found to be highly engaged with the government initiative to achieve the Nationally Determined Commitment (NDC) emissions cuts by about 33% to 35%. To reduce to the NDC levels by considerable amounts of 33-35%, the corporate was found to be laying focus on using more resources that are renewable. **Tiba, S, Van Rijnsoever, F. J., & Hekkert, M. P. (2019)** has done a systematic literature review for corporate social responsibility and responsible entrepreneurship. Here a comparative analysis was done with these two variables. They tried to find out the strength and weaknesses of Responsible entrepreneurship and concluded that till now it was studied that how firms can give benefit to society but now it's vice versa as how the contribution towards society can help in developing a firm. There are various other factors like employee wellbeing, finance factor, other social issues were ignored. **Mani, Gunasekaran and Delgado (2018)** mentioned about many companies that were involved manufacturing and construction sector like Ambuja Cement, ITC, Dalmia Bharat, etc. recognized the harmful impacts of the solid waste that are generated while carrying out construction activities. It was found that the waste that was generated at the time of demolishing the old construction and restructuring the new construction was huge and negatively impacted the environment. Hence, efforts were taken by the construction companies to bring about improvements in the environment by reducing and reusing the old construction material. Most of the companies were found to have been adopting adequate growth models as a part of their CSR activities to create sustainable environments for natural growth and development. The manufacturing companies were found to be exploring the linkages that existed between the supply chains and the generation of waste quantities. This study found that Indian businesses ranked based on their CSR initiatives; The **Karmyog** rated the 500

largest Indian companies in 2007. According to a study, the majority of businesses utilize CSR as a marketing technique. This study found that Indian businesses embraced CSR as a technique for building their brand. That will inspire further businesses to engage in CSR activities. **Sanjay Sharma (2013)** analyzed the mission of CSR and found that successful implementation of the new law requires a well-organized, competent and trained team of experts. **Goel (2015)** found that many of the business organizations were practicing CSR activities been before the introduction of Companies Act 2013 but were laying less focus on the taking measures towards the Environmental sustainability initiatives. It was found that the main cause of environmental degradation were high levels of emissions of harmful gases in to the atmosphere, generation of waste in large quantities, consumption of fossil fuels on large scales etc. **Jain and Winner (2016)** have explained that, with the implementation of Companies Act, 2013 sustainability have increased. The organizations were found to be making efforts and contributing increasingly towards improving the environmental conditions and reducing the pollution levels. As per the study conducted by Next Gen to inspect the CSR spending done by top 100 business companies in the financial year 2015-2016 it was found that most of the companies were well aware of the climate changes occurring in the atmosphere and were concerned about environmental sustainability factors and issues. **Lo & Kwan (2017)** has stated that, many Indian companies were involved in carrying out CSR activities related to environmental sustainability. It was found that many companies who were spending the huge amount of capital as a part of their CSR activities environment-related projects had become a major cause of concern for them. Taking the example of ITC a leading FMCG sector company was found to have formulated a committee namely CSR and Sustainability Committee to carry out the CSR activities related to the environment conservations plans and schemes. In similar lines, it was found that HUL another leading FMCG company had made established collaboration with Unilever India to initiate a water stewardship program to address the water scarcity issues prevailing at global levels. In addition to this, it was also found that Axis Bank had made contributed about Rs. 28 crore as a part of its CSR activity to reduce the GHG emissions. The company has made initiatives to use renewable resources in place of non-renewable resources so that energy consumption of the natural resources could be done efficiently. The efforts laid down by the company had reduced the GHG emissions to significant levels resulting in bringing great improvements in the environment. According to Mani, Gunasekaran, Papadopoulos, Hazen, and Dubey (2016), the Corporations Act of 2003's implementation led to a positive and progressive increase in the area of CSR contributions made by Indian companies. The potential for growth and development in India have greatly risen as a result, across all sectors. The most popular definition of sustainability is "development that serves the demands of the present without having an adverse effect on the needs of the future generation." Additionally, the sustainable performance (SP) principle, which is the most widely adopted, has three dimensions: economic, social, and environmental performance. **Mani, Gunasekaran, Papadopoulos, Hazen and Dubey (2016)** has explained about Intel that has also contributed towards making a natural park, making awareness about ill effects of use of plastics, promoted litter free places and regions, set up kiosks to impart learning about environmental sustainability measures to local communities. Further, all the companies were made to address all the CSR activities which were carried out compulsorily on their official company website in the format prescribed by the committee (**Janggu, Joseph & Madi, 2007**) Moreover, environmental sustainability-related CSR practices showed that to reduce the calamities of climate change, establish ecological balance and create better environment situations, for decreasing the commencement of natural calamities. **Yadava and Sinha (2016)** has suggested that Reliance Group has made initiatives by carrying out CSR activities in the segment of the environment and its conservation. It was found that Reliance Group has started promotional campaigns regarding the maintenance of environmental sustainability so that ecological balance could be well maintained. It has also made efforts towards promoting biodiversity, contributing towards conservation plans of resources and creating awareness about the increase used of renewable resources. **Manaktola and Jauhari (2007)** affirmed their point of views about several big multinational companies have taken initiatives and started to work on shared value projects which will ensure the creation of value among both the communities and businesses. For instance, an initiative has been started by HUL namely, Sustainable Living Plan 2015 which mainly focus making provision of laying down the foundation for the source of 100% of agriculture raw material sustainability till the year 2010. In addition to this HUL also has down provisions for carrying out sustainable tea procurement project as an important constituent of their CSR project. It was found to be serving two motives. First it enabled the company to meet 2% criteria as laid by the directives under Companies Act 2013,

and secondly, it helped the company to achieve its business targets adequately. According to Verma and Kumar's 2014 longitudinal analysis of social responsibility spending at 30 BSE Sensex companies, the environment is not a top priority for CSR in India. These studies were carried out before the Companies Act of 2013's CSR legislation, thus it's possible that businesses boosted their environmental spending after the regulation took effect. The top 20 Indian companies' CSR spending for the 2014–2015 fiscal year reveals that, after education and healthcare, environmental sustainability is the third most prioritized issue, accounting for almost 20% of total CSR spending (PIB, 2015). **Partnering the National Agenda** Press Information Bureau, Government of India (2015, 29). Ranjan, R., & Tiwary, P. K. (2017) CSR is considered as the ability of each company to respond to the society in which it originates. Today, CSR is no longer seen as a field of philanthropy and philanthropy as in the past, but as a need of society in the face of its challenges and problems. A Comparative Study of CSR in Selected Indian Public & Private Sector Organizations in Globalization Period: A Research Finding. International Journal of Emerging Research in Management and Technology. It analyses factors such as environment performance, economic growth and stability likely based on factors like socio-cultural development. In contrast the environment relies on scale of economic activities and it helps in the development of the society. The social quality is not just because of the sound efficiency of economy but stability also pays an important role which affects the quality of the environment. **Zaharia, et al., 2010.**

CONCEPTUAL FRAMEWORK

The conceptual framework for the current study is a developed using the input and output variable model. The framework illustrates what are different environmental practices carried out by the organizations which are specified by the government regulations through Companies Act,2013 and it gives them expected outcome for the organization. It suggests how the actions of an organization towards the environment will give them long term benefit in terms of value and image.



(Conceptual framework image)

METHOD

The goal of this section is to provide a critical review of previous studies highlighting various environmental sustainability practices of Indian companies and how do they perceive them. For analysis of literary findings of previously conducted studies and presenting a systematic review, a meta- analysis method for combining data from qualitative assessment and research is used in the current study. It allows translating concepts across studies and synthesizes findings in stages-based reporting of the studies reviewed (France et al., 2016).

A protocol was developed in advance to document the analysis method and inclusion criteria. The researchers utilized Scopus, Google Scholar, Emerald, Pro Quest, Tandfonline, and in some cases the website of the journals to search for data published in the selected journals containing the term “environmental sustainability”, CSR practices, Companies Act, 2013 in their titles, abstracts, and/or keywords. The last search was run on 1st July 2022.

Criteria for inclusion

The following criteria were used in this research for selecting studies:

- The studies need to be published between 2005 and 2022 in order to include recent studies
- The studies need to be an original study comprising of survey method, systematic review, meta analysis and empirical review only
- The studies need to include the search words which have been mentioned in Table2
- The studies which were published in English only were included.

Criteria for exclusion

The following criteria were used to exclude studies for the purpose of this research:

- Editorial discussion was excluded in this study
- Newspaper articles were excluded from this study
- Those studies which lacked supporting evidence were excluded in this study
- Studies which talked about the other aspects of CSR practices were excluded. (except environmental sustainability)

Identification of studies

In process of identification of studies, an initial review of literature was conducted based on the title and abstract of the studies. In the initial screening the studies are classified into three primary categories of meeting criteria of the current study, may meet inclusion criteria ,or do not meet the standards.

Data extraction and analysis

Only for the studies meeting the inclusion criteria, they were fully analyzed whether the studies meet criteria for inclusion or not. Also, a database on selected studies meeting the criteria was extracted and databank on parameters of author, country, year of publication, objectives, list of environmental sustainability practices, data analysis, and findings.

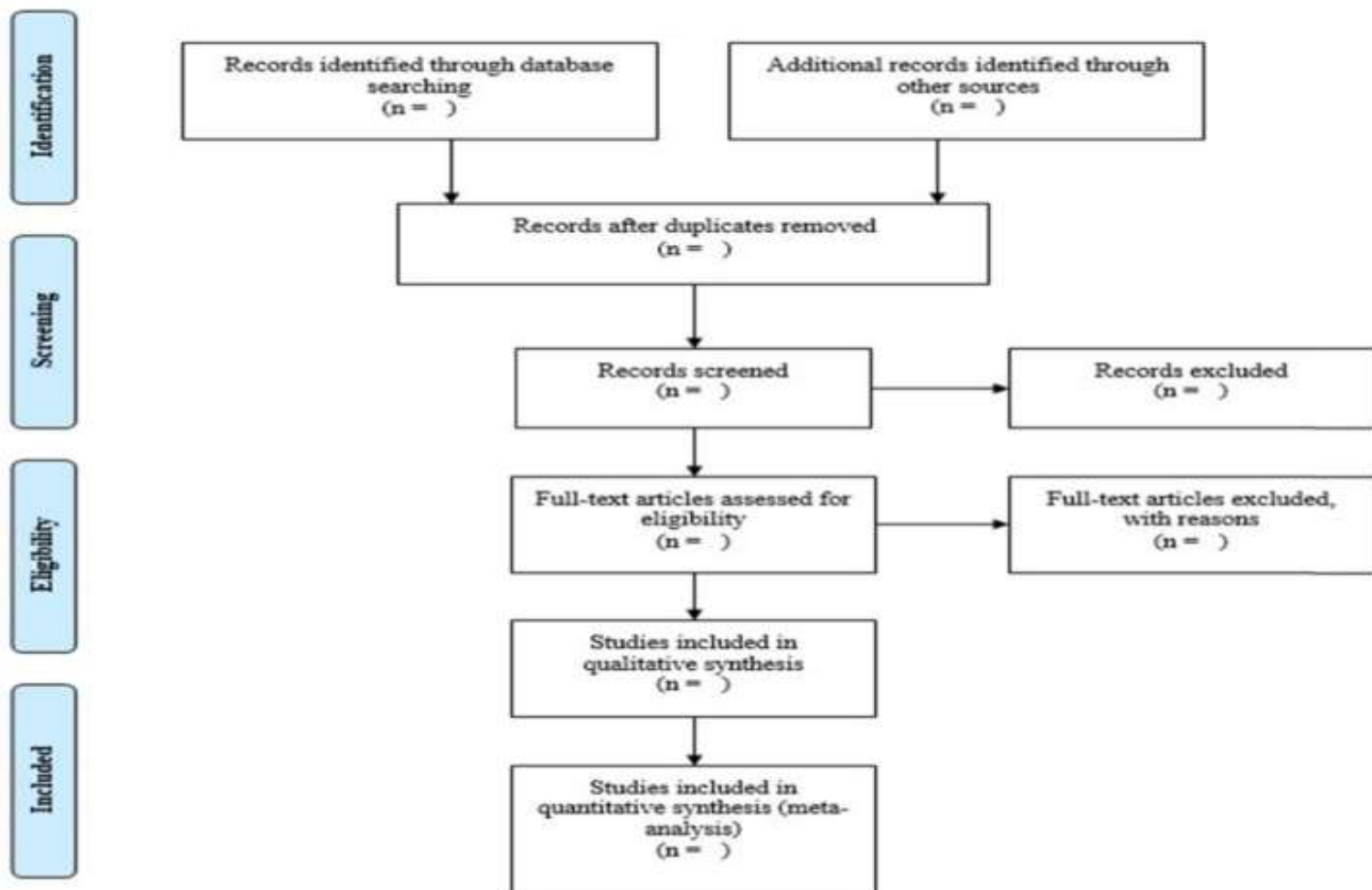


Figure 1: PRISMA flow diagram

RESULT AND DISCUSSION

Searches

The search yielded more than 2000 citations, of which 60 were fully reviewed after applying criteria of inclusion and exclusion criteria. Of these studies, 40 met all inclusion criteria and were reviewed.

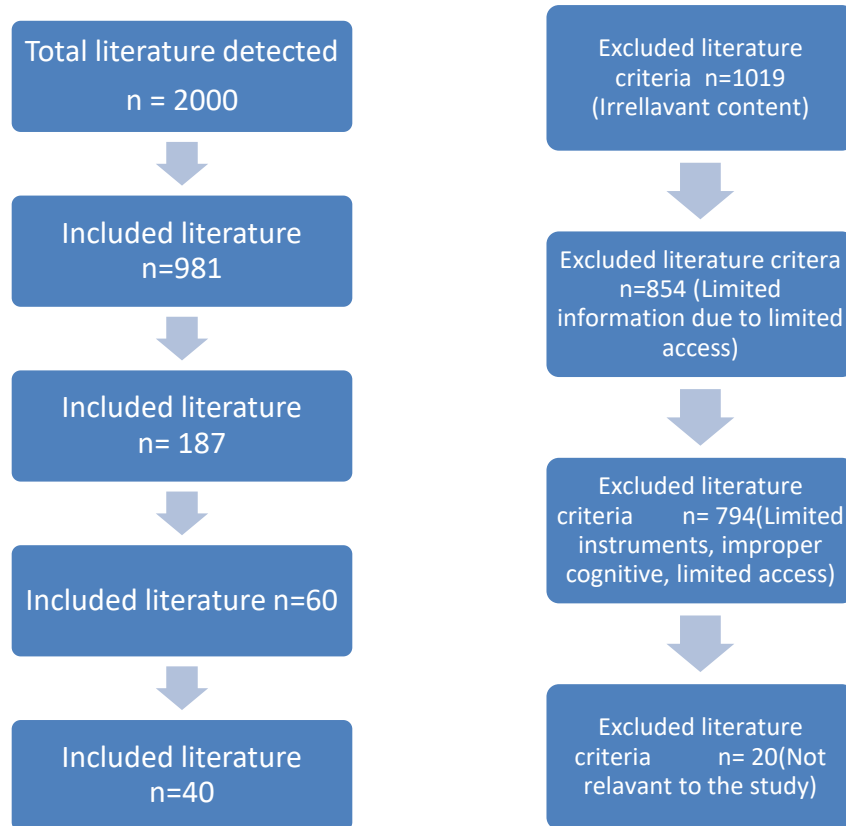


Table.1 reports the journals name and year of publication of included reviews. The results show that conducting review systematically is growing over time. More than 75% of the reviews were conducted since 2013 and only less than 9% of them were conducted before 2009. Moreover, highly ranked journals, based on ABDC ranking system, published more systematic review papers.

Sr.no	Author Name	Name of Journal	Publisher
1	JP Gond (2011)	Economics & Society	Taylor & Francis online
2	Amaladoss and Manohar (2013)	Corporate Social Responsibility and Environmental Management	Wiley
3	S Rahman (2011)	Proceedings: Economics & Finance	Science Direct
4	Richa Gautam and Anju Singh	“Global business and management research”	GBMR
5	Paul R. Portney (2020)	“Review of environmental economics and policies”	University of Chicago journals

6	Amit Kumar Srivastava, Gayatri Negi, Vipul Mishra, Sharddha Pandey(2012)	IOSR journal of business and management	
7	Babalola (2012)	European Journal of Economics, Finance and Administrative Sciences	Euro journals
8	McWilliams, Siegel and Wright (2006)	Journal of management studies	Wiley library
9	Cheng, Lin and Wong (2016)	Journal of management and governance	
10	Chapple and Moon (2005)	Business and Society	Sage publishers
11	Crane, Matten and Spence (2013)	Corporate Social Responsibility: In Global Context	
12	Prieto-Carrón, Lund-Thomsen, Chan, Muro and Bhushan (2006)	International affairs-Volume 8	Wiley
13	Dahlsrud (2008)	Corporate social responsibility and environment management	Wiley
14	Mani, Gunasekaran, Papadopoulos, Hazen and Dubey (2016)	Resources, Conservation and recycling	Science direct
15	Kumar, Rahman and Kazmi (2016)	SAGE Open	Sage publisher
16	Nazli Nik Ahmad and Sulaiman (2004)	Environment disclosure in Malaysia annual reports: A legitimacy theory perspective	Emerald
17	Chaudhari and Wang (2007)	Communicating Corporate Social Responsibility on the Internet: A Case Study of the Top 100 Information Technology Companies in India	Sage
18	Ciliberti, Pontrandolfo and Scozzi (2008)	“Integrating Corporate Social Responsibility in the Management of Supply Chains”, in 21st Century Management A reference Book (ed. Charles Wankel),	Sage Publication, ISBN: 978-1-4129-9.
19	Jain and Winner (2016)	CSR and sustainability reporting practices of top companies in India	Springer
20	Jenkins (2009)	A ‘business opportunity’ model of corporate social responsibility for small- and medium-sized enterprises. Business ethics	
21	Tiba	Corporate Social Responsibility and Environmental Management	Wiley Online Library

22	Sanjay Sharma (2013)	Redefining Corporate Social Responsibility in an Era of Globalization and Regulatory Hardening	
23	Goel (2015)	Linking Corporate Social Responsibility Reporting with Corporate Performance: Evidence from Selected Companies in India.	
24	Lo & Kwan (2017)	Corporate social responsibility and environment management	Wiley
25	Janggu, Joseph & Madi, (2007)	The Current State of Corporate Social Responsibility Among Industrial Companies in Malaysia	
26	Yadava and Sinha (2016) has	Journal of business ethics	
27	Manaktola and Jauhari (2007)	Exploring consumer attitude and behavior towards green practices in the lodging industry in India	Emerald
28	Ranjan, R., & Tiwary, P. K. (2017)	International Journal of Scientific & Technology Research	
29	Zaharia, et al., (2010).	CSR development in post-communist economies: employees' expectations regarding corporate socially responsible behavior—the case of Romania. Business Ethics:	

Table 2: Search term

Table 2 Search terms for inclusion of studies

Corporate social responsibility and environmental sustainability

Using any of the following terms:

Companies Act 2013, Social practices, environmental conservation, Green technology, mandatory CSR, organizations

Environmental sustainability AND

Using any of the following terms:

Corporate social responsibility, most preferred CSR practices, society, protection of environment.

Exclusion and inclusion of studies

Studies were excluded because they did not involve any practices of organization targeting environmental sustainability (n = 20). The searches attempt to find relevant publications that are thorough in terms of studies connected to social responsibility, environment protection, and the Companies Act, 2013, with a balance between specificity and sensitivity. Based on inclusion and exclusion criteria, papers published between 2005 and 2022 are taken into consideration for the current review. The bibliographies of the studies that were chosen are then further examined as part of the systematic review to identify pertinent references.

CRITICAL APPRAISAL

For the sustainable development of the business through CSR, the companies should inform and educate the stakeholders. Proper internal communication and transparency should be maintained. This would strengthen the legal framework and voluntary commitment for preserving the environment in the long term. Evaluating the level of awareness and motivation of companies to comply with CSR, the study found that most corporate users carried out CSR activities. For this, the companies made donations, made provisions for school renovations in villages, mid-day meals etc. (McWilliams, Siegel & Wright, 2006). The donations or sponsor events provided by the corporate impounding that philanthropic acts were directly related to CSR practices could be carried out in an adequate manner (Jamali & Karam, 2018). The researcher analyzed that the companies had many initiatives like Go Green, Plant More Trees, Keep Environment Save, etc. to save and conserve the environment (Henderson, 2007). While some of the corporate were also found to be carrying out CSR practices to bring positive changes and improvements in the local communities and societies. Some of the companies were found to be collaborating their CSR activities with the Non-Profit Organizations (NGOs) and working together to carry out social development and environmental sustainability activities. Irrespective of the size sector and company goals, the companies were found to be implementing CSR practices into their working operations and the business firms so that development initiatives could be done at local community levels safeguarding the environmental interest. While focusing on analyzing the facts relevant to the present status of CSR in India with respect to Companies Act 2013, the researcher found that with the introduction of Companies Act 2013, significant changes to the working and functioning of the Indian business companies were visible and resultantly led to the deployment of Corporate Social Responsibilities in the working of the Indian organizations. It was also found that the CSR activities in India must follow the rules and regulations that were laid down in the Companies Act 2013. Hence, for the active following of the CSR practices the introduction of a Trust or Society under Section 8 of the 2013 Companies act was done so that the direct administrative control could be exercised on the working of the organizations.

While critically evaluating the CSR performance of Indian companies on environmental sustainability, the researchers found that many companies in India used to carry out CSR activities in the environmental sustainability section. It was also found that many companies have established big gardens theme parks, introduced eco-friendly manufacturing and packaging techniques, etc. to help to conserve the environment in a constructive manner. The researchers also analyzed that the companies were highly active in carrying out CSR practices that were related to environmental sustainability. The companies collaborated with the local people and NGOs to provide clean up the localities and provide adequate storage and cleaning facilities so that the preservation of the environment could be done in an adequate manner. While making a comparison between the environmental sustainability related CSR practices of companies before and after the implementation of Companies Act 2013, the study found that the CSR activities were conducted by the corporate before the implementation of Companies Act 2013 also. The CSR activities were carried out by the companies were less focused on the conduction of environmental sustainability activities. However, after the introduction of the Companies Act 2013, the companies started focusing on this section also. It was found that the significant reason of degradation of the environment and deteriorating condition of the surrounding was due to the presence of high levels of harmful gases that were emitted by the various manufacturing and other industries. While making a comparison between the CSR thematic priorities and suggested ways through which the companies can enhance corporate social responsibility initiatives for sustainable environmental development, the researcher found that the company's had introduced various measures like anti-environmental legislations, plantation schemes, etc. so that the corporation could carry out effective environmental sustainability activities. The organizations introduced clean-up sessions, imposed fines, increased waste handling costs, increased damaged assets evaluation procedures with reduced value, introduced legal claims to ensure that the working of the companies could be regulated in an adequate manner, introduced regulatory delay, reduced public regard, and reduced sales, etc. (Dahlsrud, 2008). Along with that, the substantial financing was also increased so that the conduction of the CSR activities related to environmental sustainability could be carried out in an adequate manner. While making a comparison between the

total CSR spending and environmental sustainability-related spending of the companies for the 2014-15, 2015-16 and 2016-17 financial years, the researcher found that the Companies had made immense efforts in the various years, and the contribution of companies towards the implementation of CSR activities had increased from 2014-15 to 2016-17 financial years (**Charles Jr, Schmidheiny & Watts, 2017**). In the 2014-15 financial years the contribution of corporate towards the CSR activities was found to be about Rs. 5620031675.94 crores on an average basis. The contribution done by the companies in the year 2015-16 increased considerably to about Rs. 3879472425.00 crore. (**Belkaoui & Karpik, 1989**). This helped the companies to introduce CSR practices and activities like construction of the natural park, spreading awareness about ill-effects of use of plastics, promoted litter free places, regions, set up systems to impart learning about environmental sustainability measures to local communities, etc. The introduction of these measures helped to improve the conditions of the environment in a positive manner to great levels. In addition to this, it was found that the contribution made by the companies in the year 2016-17 was about Rs. 937800000.00 crores. The investment of huge amounts of capital in the section of environment sustainability helped in improving the environment in a positive manner (**Zeghal & Ahmed, 1990**). This also enabled the conduction of activities like construction of rainwater harvesting tanks, solid waste management units, introduced community plantation days and planted more trees, carried out activities related to spread awareness about segregation of waste, health, and hygiene, etc. which helped to spread the environmental sustainability in a constructive manner.

FUTURE RESEARCH DIRECTIONS

The research which was related to the systematic literature review on environmental sustainability practices by Indian companies was found that the practice of CSR activities is necessary to bring about inclusive growth in India's industrial and corporate sector which would help to provide benefits to the society and community development to a great extent. Ministry of Corporate Affairs had issued Voluntary Guidelines on Corporate Social Responsibility, had taken efforts and introduced introductory measures so that the effective collaboration of the concept of the Responsibilities could be done with environmental sustainability and community accountability. In addition to this, it was also found that National Voluntary Guidelines (NVG) on Social, Environmental and Economic Responsibilities of Business, 2011 had also initiated steps to bring about constructive changes to incorporate CSR practices so that common development of all the sectors could be done adequately (**Dahlsrud, 2008**). These also included community development initiatives and strategic CSR activities so that positive changes could be brought in the working of the communities. Based on the shared value concept, the activities proposed by the industries would also help to conduct environment sustainability activities in an adequate manner. In addition to this, various rules and regulations were laid down so that maintenance of CSR practices related to the community development and environmental sustainability could be carried out properly (**Chaudhari & Wang, 2007**). This principle of NVG was subsequently translated into a mandatory provision of Corporate Social Responsibility (CSR) in Section 135 of the Companies Act 2013. It was observed by the 21st Report of the Parliamentary Standing Committee that annual statutory disclosures on CSR required to be made by the companies under the Act would be a sufficient check on non-compliance. Hence, by following the guidelines prescribed by the various governing bodies the corporate could adequately provide services and initiate programs which would help in the growth and development of the community and maintenance of an environment in a sustainable manner. In addition to this, it was also found that when the researcher referred to the previous facts and researchers related to the Corporate Social Responsibility and its implications on environmental sustainability it was found that these researchers did not include much evaluation part. Most of the research studies were based on varied sectors like community development, sports, health care, etc. (**Belkaoui & Karpik, 1989**). However, the present research study mainly concentrated on covering the environmental sustainability aspect which was covered under schedule 7 (vi) of section 135 of the Companies Act 2013 of the CSR practices that were carried out by corporate in India. It was also found that after the implementation of Companies Act 2013, CSR practices are done by corporate in India had undergone multiple changes. The current research tried to figure out the various changes faced by the corporate and the implications of such changes on the community and environment (**Banerjee, 2008**). The future research will be based on a quantitative study where the researchers will study the impact of CSR environmental sustainability practices by the firms.

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