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MAPPING THE LITERATURE ON INDIA'S CLIMATE CHANGE INITIATIVES AND INTERNATIONAL RELATIONS: A BIBLIOMETRIC ANALYSIS

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ABSTRACT

There is an increased concern for redefining India's role in defining the climate change policies in the global international scenario. India has emerged as a leader to address the issues pertaining to policies and practices associated with climate change. The present study reviews and analyzes the various studies conducted in the domain and the developments in the past years. The study concludes that the problems to be addressed are extensive and require a proactive approach from all the countries of the world. The study utilized a bibliometric approach to analyze the literature related to India's international relations and climate change policies and practices. The results revealed two very prominent clusters. Cluster one comprising of thirteen items and cluster 2 comprising of 6 items. The study concludes that twenty-first century economic growth agenda is directed towards provision of a sustainable living for the inhabitants of the planet and India can play a major upfront contributor towards its achievement.

Keywords: Bibliometric Analysis, Climate Change, International Relation, India

Introduction

There is a widespread perception that power is shifting in global politics and that emerging powers are assuming a more prominent, active and important role (Hurrell, & Sengupta (2012). Despite the growing population India has been able to sustain a model of growth where environmental concerns are met upfront along with the developmental aspects. Both the Paris climate agreement (UNFCC, 2015) and the Sendai framework for Disaster Risk Reduction (UNODRR, 2015) are important agreements to be accomplished during the 2021-30 decade.

India has emerged as a leader in the international front among the developing nations to abide by the policies related to mitigation and adaptation of climate change. This research thus focusses on the review of studies related to India's international relations and its climate change initiatives.

Research Methodology

The study utilized a bibliometric approach to analyze the literature related to India's international relations and climate change policies and practices. Bibliometric analysis uses a quantitative approach for the description, evaluation and monitoring of published research. This method has the potential to introduce a systematic, transparent and reproducible review process, and thus improve the quality of reviews(Lamboglia, et.al 2021).The study utilizes the mapping techniques which seeks to discover the structures and dynamics of the scientific field under investigation (Zupic and Cater, 2015). The study utilized the co-authorship analysis to evaluate the present body of research and to assess the underlying concepts in the discipline and discover the key clusters. The literature selection was done using the scopus database with the keywords International relation, India and climate change. Next the studies were exported to VOS viewer and analyzed for clustering using both network and density visualization.

Review of Literature

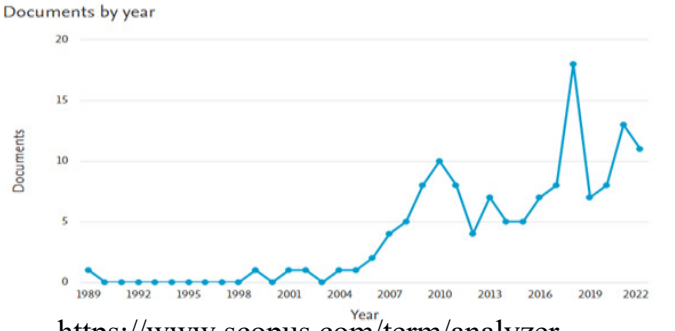
The database search resulted in a total of 136 studies in the field of international relations of India and climate change.

Number of results : 136	
YEAR	
2022	11
2021	13
2020	08
2019	07
2018	18
2017	08
2016	07
2015	05
2014	05
2013	07
2012	04
2011	08
2010	10
2009	08
2008	05
2007	04
2006	02
2005	01
2004	01
2002	01
2001	01
1999	01
1989	01

Descriptive Bibliometric Analysis

Documents by year

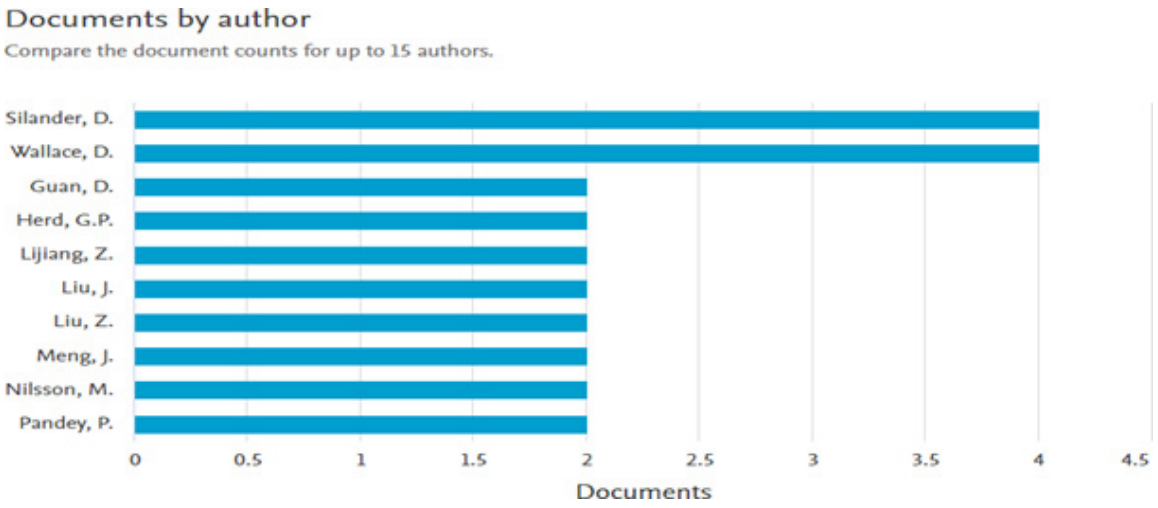
The Bibliometric analysis revealed the database from 1989 onwards to 2022. The number of research articles varied from highest in 2018 wherein 18 articles in the domain were published to 11 documents in 2022.



https://www.scopus.com/term/analyzer

Documents by Author

The results suggest that maximum contribution to the field has been by Silander, D. and Wallace D., followed by Guan D. Both authors Silander, D and Guan D. have contributed four articles to the field of study.



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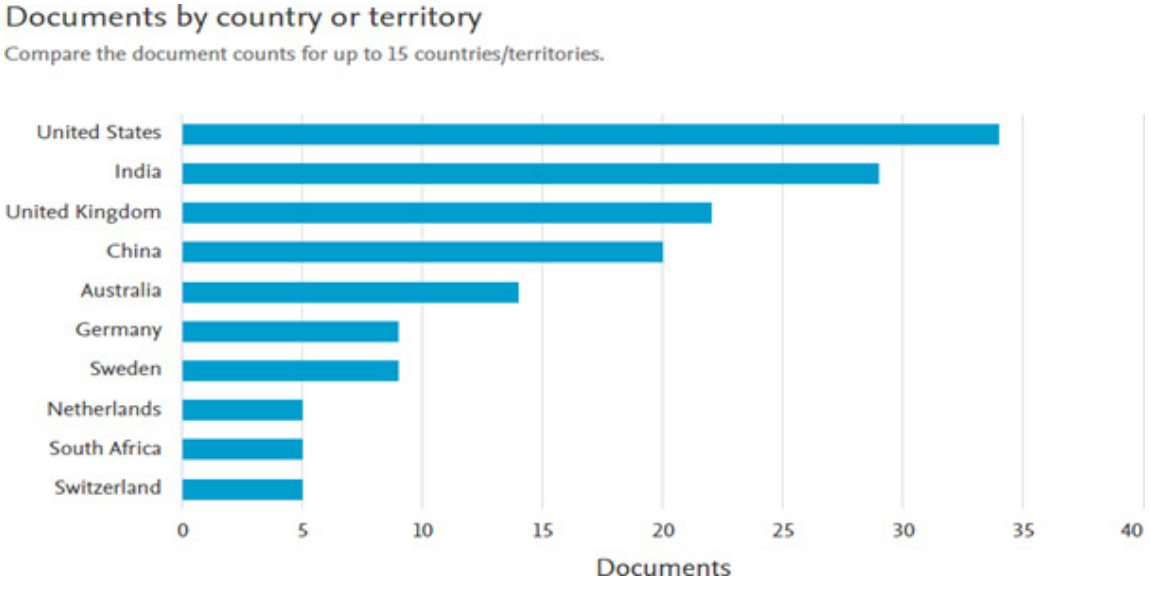
Documents by Country

The search revealed that maximum contribution has been done by US authors followed by India and UK. The total number of documents from US has been around 33 followed by India contributing 28 research articles.



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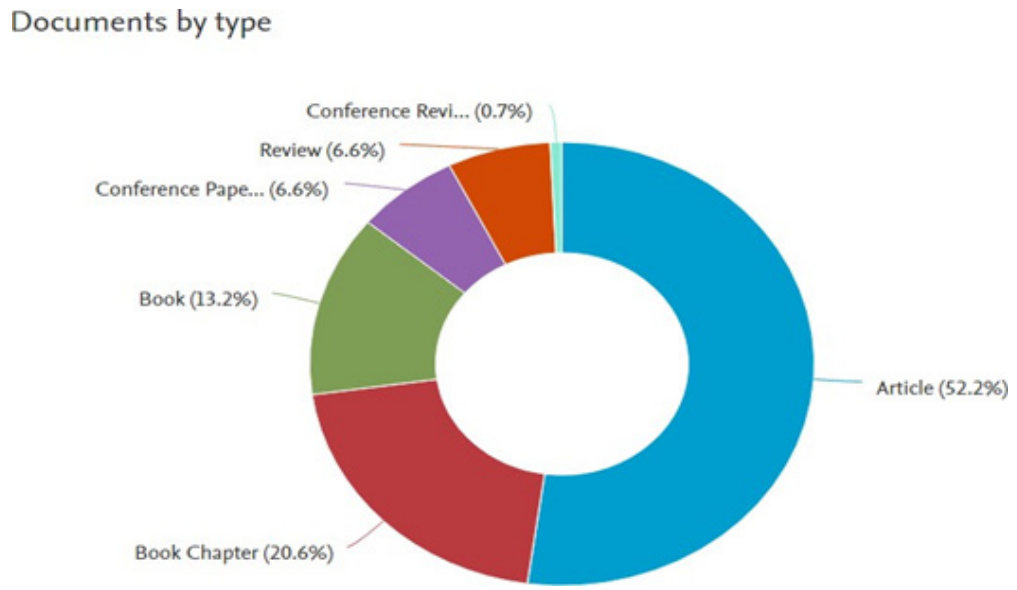
Documents by Type

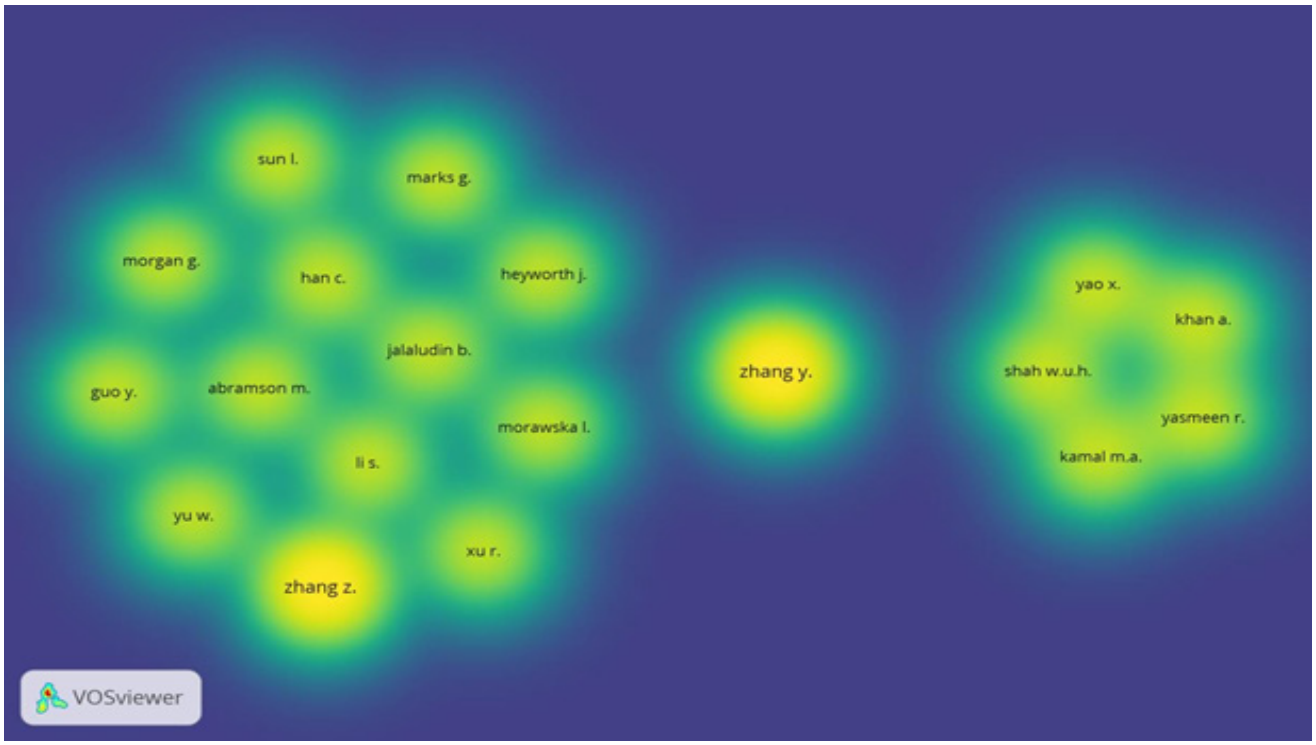
As per the type of articles the maximum contribution has been done by research articles (52.2%) followed by book chapters (20.6%) and books (13.2%), Conference papers (6.6%), review articles (6.6%) and conference review (0.7%).



https://www.scopus.com/term/analyzer

Cluster Analysis

The results revealed two very prominent clusters. Cluster one comprising of thirteen items and cluster 2 comprising of 6 items. The first cluster comprises of studies from authors like Han C., Xu R., Zhang Y., Yu W., Zhang Z., Morawska L., Heyworth J., Jalaludin B., Morgan G., Marks G., Abramson M., Sun L., Li S., Guo Y in 2021 whereby a global observation with regard to air pollution and health effects have been measured. The second cluster relates to authors like Yao X., Shah W.U.H., Yasmeen R., Zhang Y., Kamal M.A., Khan A who have analyzed the impact of trade on energy efficiency in the global value chain. Both the studies utilized the global data to decipher the impacts of climate change.



Discussion

Wallace & Silander (2018) have examined the various strategically important dimensions that address the global climate change and its impact on the human society. The study also upholds the various strategies related to mitigation, adaptation and capacity building. It also states the differentiated aspects of the climate change policies in terms of security and community concerns.

Sullivan, K. (2015) studied India's ambivalent projection of self as a global power and analyzed the rise of India beyond the west. The study focused on India's increasing international influence and also provides a critical evaluation of India's desire to work with other nations and achieve the dimensions of sustainability.

Studies by Levin et al. (2009) have reflected the four basic characteristics of global problems which aid in the problems overpowering the solutions. The first issue stated is the complexity of the global problem which results from the natural and social systems of the global environment. The second aspect relates to solutions may result into differential unintended impacts of these on the various nations. The third impact is associated with the scientific uncertainty of the environmental problems and the last is primarily cumulative in nature. Analyzing the long term impact of the solutions provides may thus be a major consideration for nations in different stages of the developmental stage.

The report by Levin et al. (2015) acts as a guide for countries to prepare and design the intended nationally determined goals for various countries. It also includes the technical guidance and practical implications for carrying out the process. It also lists out the general steps in the choices in preparing and designing the goals for the various countries in different stages of development.

Similarly Levin et al. (2012) also reflect that most of the policy relevant work on climate change has ignored a holistic view of the problem and addressed only the narrow objectives stated in the policy documents. Schäfer, et al.(2011) have investigated the coverage of climate change matters by newspapers around the world for a period of 1996-2010.

Shabaz et al.(2021) have identified import substitution as one of the first stepping stones to address the issue of sustainability and accordingly, designed a a multipronged SDG framework for India. Similar studies by Khalid et al. (2021) have also identified the role of India as being the benchmarking country for other Asian countries to follow. Similar studies by Asensio (1997) and Norman (2010) have stressed on the use of information systems to address the issue of various sustainable development goals. Betson and Waarlick (2006) also suggest the incorporation of technological solutions for the achievement of these gals.

India's stand during the Paris Agreement in 2015 where the world agreed to keep warming to no more than 2°C above pre-industrial levels has proved to be an important milestone. Evidently, India has previously been hesitant to sign the contract (Westcott, 2017) but stood as a supporter of most of the clauses for this agreement. The development needs of India and its historically low per capita emissions have been persuasively emphasized in international negotiations, despite the country's long-standing advocacy for the need to reduce carbon emissions. In India, however, both policymakers and the general people now recognize the moral, political, and economic incentives to continue adhering to the Paris Agreement as air pollution has practically reached crisis levels over the years.

Since developmental diplomacy relies on proactive efforts and working towards the welfare of all hence India can visibly contribute to not only self-development but also assisting the smaller nations to achieve their sustainable development goals ESCAP (2015).

The review thus suggests that India has a strong position to take leverage of its information technology strengths and emerge as a leader among the developing economies in the pursuit of sustainable development goals.

Conclusion

The study thus concludes that there has been a wide arena of research in the field with multiple dimensions contributing to India's international relations and climate change. India can lead the category of developing nations by leveraging upon its unique strengths and opportunities. The twenty-first century economic growth agenda is directed towards provision of a sustainable and dignified living for the inhabitants of the planet and India can play a major upfront contributor towards its achievement.

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