

Recent Trends in Library and Information Science

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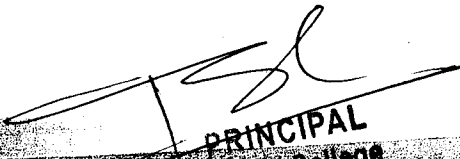
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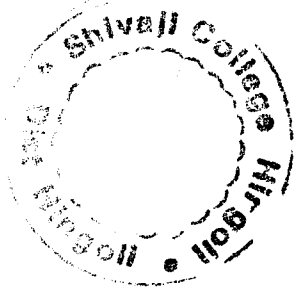
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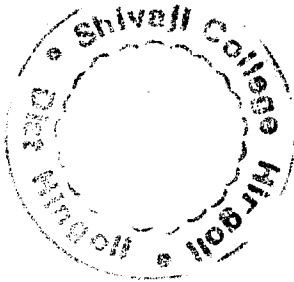


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Research Contribution of Global Warming in Various Country: A Scientometrics Analysis


Dr. Ganpat R. Pawar


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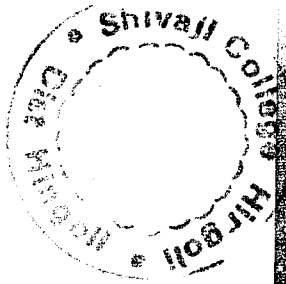
Abstract:

The scientometrics is the study of measuring research excellence and influence, thoughtful the processes of citations, mapping scientific fields and the use of indicators in research strategy and administration. The data collected since from 2011 to 2020 through Web of Science database, which belongs to Thomson Reuters Corporation. The paper is about the scientometric analysis of literature published all over the world and in the web of science database. The data was taken from the web of science database with the topic search query "Global warming". Scientometric analysis of the data, perform as, author wise distributions or most prolific author, year wise growth of literature, publication wise distribution of literature and language wise document published all over world in the web of science in last ten year from 2011 to 2020. The study reveals that 118 countries contributed research in Global warming. Among 2011-2020, the ascendancy of USA (20.14%) found in the research on the Global warming which

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published one fourth of the research among the world. India (2.66%) having tenth position of research publications on Global warming

Key word: Global warming, Climate Change, Greenhouse effect, Scientometric Analysis.

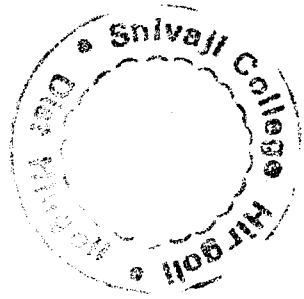
I. Introduction

The scientometric analysis of the literature published in the universe collected in the web of science database found 2941 record or documents. The analysis found that, most prolific country, authors, and publishers documents on the global warming. The Global warming is a major concept discussed in the world and researchers need to know the most prolific author on the concept and major country which is serious on this issue of global warming. In this paper last ten years from 2011 to 2020 data is taken from the web of science database for the scientometric analysis.

II. Global Warming: Climate change of the planet, is alarms for the earth, most of the researchers and environmentalists are stating future danger about changes in the overall climate. Fuel burning in the environment produce major hazards gases like carbon dioxide, methane and nitrous oxides which is central to generate global warming situation. Increasing industrialisation and production of the electricity by coal and fuel, causing foremost harm to the Earth's atmosphere. Peoples are not aware about this situation in future. Global warming is presently happening, and are by no we are experiencing as contemptuous effects. It affects ecosystems and interrupt environmental balance. The rise in temperature on earth is very distressing. The original reason of this global warming is commencing with sunlight reaches on the Earth. The major role of the clouds, atmospheric elements, and ocean's surface they send nearby 30 % of sunlight into the space, whereas the remaining is absorbed by oceans, air and land. Therefore, temperatures absorbed by the surface

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of the planet and atmosphere. The solar energy generation is helpful to cooling the Earth. However, some of the outgoing energy is re-absorbed by carbon dioxide, water vapours, ozone, methane and other gases in the atmosphere and is released back to the surface of Earth. These gases are commonly known as greenhouse gases due to their heat-trapping capacity. While other planets in the solar system of the Earth are moreover boiling hot or excessively cold, Earth's surface has comparatively minor, stable temperatures. Earth enjoys these temperatures because of its atmosphere, such as the thin layer of air that cover and defend the planet environment.

Data Search

Data is search by the search query title search "global warming" on the web of science database and found the total records as 2941 it includes all types of documents published and stored in the web of science database fig no. 1

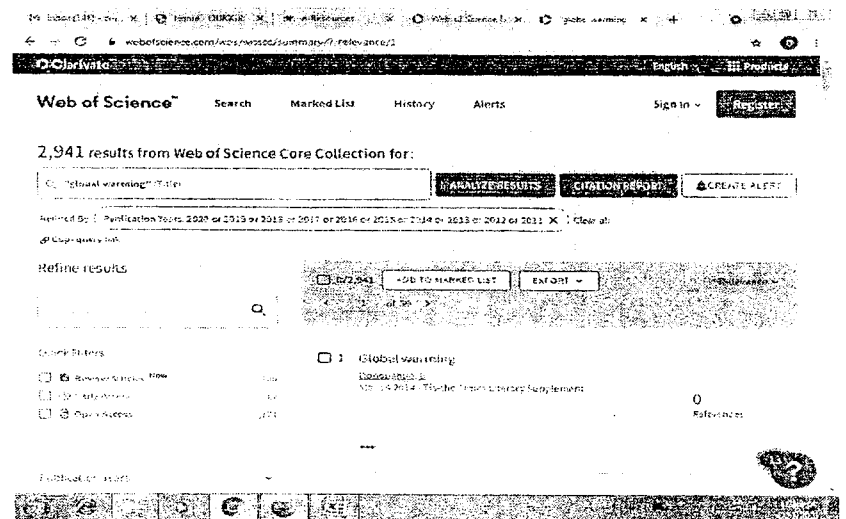


Figure 8 Search by title in web of science database found 2941 records.

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1. To study the year-wise growth of world global warming research output.
2. To discover document wise research output.
3. To identify the most preferred language for publication.
4. To analyse authorship trend of publication.
5. To know the most productive countries in the world.

V. Data Analysis and Interpretation:


Data analysis and interpretation year –wise growth of publication. The year-wise analysis of global warming literature for the year 2011-2020 is display in the table.

A. Year wise Distribution of the Documents.

Table no.1. Year wise growth of published documents.

Year	No. of Documents publish	Percentage
2020	424	14.4
2019	395	13.4
2018	327	11.1
2017	275	9.4
2016	243	8.3
2015	246	8.4
2014	242	8.2
2013	234	8.0
2012	282	9.6
2011	273	9.3
Total	2941	100

Year published documents data is given in the table and as table no 1 show that, in the 2011 273 documents was published web of science, and in 2020 there was 424 documents published, so there is 5.1 percent


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growth last 10 year. In the 2019 published document was 395 and there was 4.1% growth from the 2011. Also, in the year 2018 published document was 327 and 1.8% was growth rate from the 2011. Very a smaller number of documents was published in the year was 2013 published document was 234.

Growth of Published documents

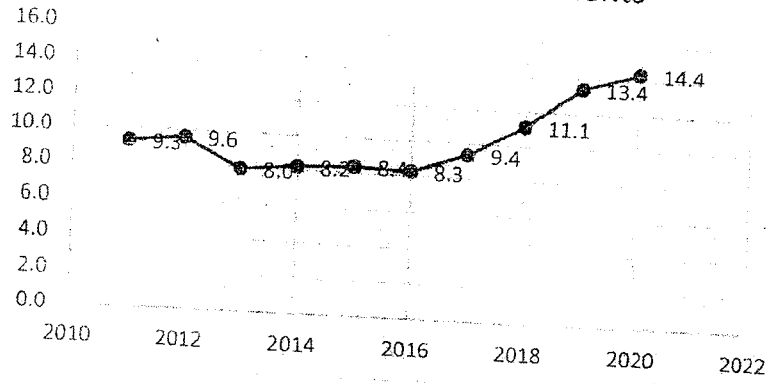


Figure 9 year-wise growth of published document.

B. Document Wise Analysis

Research outputs are published in various forms. It is tabulated in the table2.

Table no.2 document wise analysis.

Document types	No. of Documents	Percentage
Articles	2305	78.37
Editorial Materials	149	5.07
Review Articles	129	4.39
Book Reviews	120	4.08

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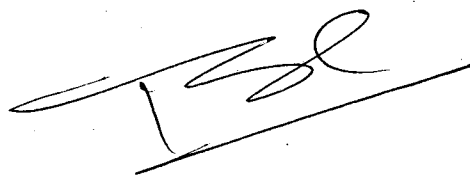
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News Items	62	2.11
Corrections	45	1.53
Letters	45	1.53
Meeting Abstracts	37	1.26
Proceedings Papers	29	0.99
Early Access	12	0.41
Book Chapters	5	0.17
Reprints	1	0.03
Retracted Publications	1	0.03
Retractions	1	0.03
Total	2941	100

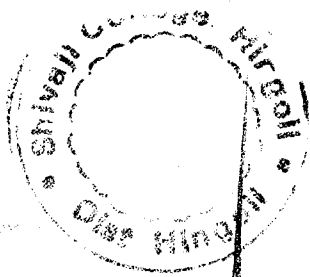
The table no 2 shows that, there most of the document are published in the form of journals article. Out of the 2941 document article was published as 2305 (78.37%). Editorial materials were published 149 (5.07%) and review article 129 (4.39%) and book review 129 as (4.39%) book chapters was published very less as 5 only and proceedings paper are 29. Therefore, it is evident that, on the global warming mainly journals article was published from last ten year as 98.64%, and other form of the documents are not published more.

C. Language Wise Analysis

Language was distribution of the document present the researcher that, which language is more popular in this field of study and which is a research language of the field. As shown in the table no. 3 language wise distribution of the documents published on the global warming concepts was most of the literature published in the English language as expected English language is a international language for the communication and in this database also most of the document were published in English language as 2901 (98.64%). Second



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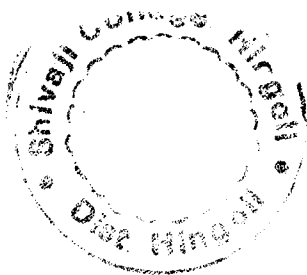
News Items	62	2.11
Corrections	45	1.53
Letters	45	1.53
Meeting Abstracts	37	1.26
Proceedings Papers	29	0.99
Early Access	12	0.41
Book Chapters	5	0.17
Reprints	1	0.03
Retracted Publications	1	0.03
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Total	2941	100

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second rank is china and tenth rank is India, so there is more scope to India to discover on the field of global warming to guide the world.

Table no 4. Country wise distribution of the documents.

Ranking	County Name	No. of Documents	Percentage
1	USA	863	20.1
2	Peoples R China	568	13.3
3	England	275	6.4
4	Germany	244	5.7
5	Australia	185	4.3
6	Japan	157	3.7
7	France	146	3.4
8	Canada	137	3.2
9	Italy	115	2.7
10	India	114	2.7
11	Spain	112	2.6
12	South Korea	102	2.4
13	Norway	84	2.0
14	Sweden	78	1.8
15	Switzerland	76	1.8

E. Most Prolific Authors or Author ranking

Top five author of the global warming in the world, as shown the table no. 5 rank first is Anonymous as 29 documents published and rank two is Xie SP with 23 Document, rank 3 is Huang P with 18 documents,

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9	Italy	115	2.7
10	India	114	2.7
11	Spain	112	2.6
12	South Korea	102	2.4
13	Norway	84	2.0
14	Sweden	78	1.8
15	Switzerland	76	1.8

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G. Most Prolific Publisher

In the figure no 3. Most prolific publisher in the world on the term of global warming as shown, in the figure, Elsevier 573, and springer nature 573 are with same rank and number of documents published in web of science database. Wiley published 287 documents, Amer geophysical union 154 document were published, Amer metrological society 142 documents. It is evident that from the figure that, most prolific publisher is Elsevier and springer nature by the no of published documents on the global warming.

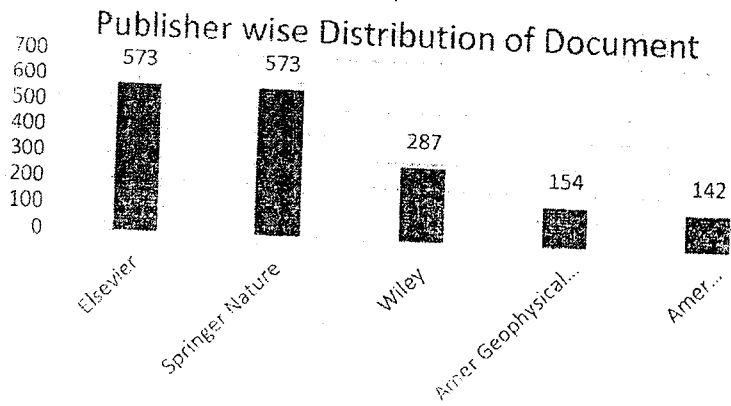


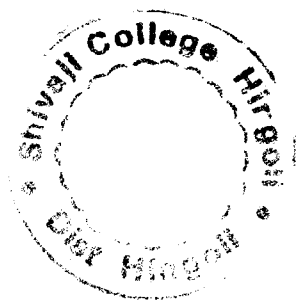
Figure 10 most prolific publisher

Findings of the study

- Growth of the global warming literature during 2011-2020 shows gradual rate of increase.
- Most of the publications are article (78.37%) followed by editorial material (5.07%) and review article (4.39%).

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Research Contribution of Global Warming in Various Country...

- Most prolific author on the Global warming is Anonymous 29 documents and Xie SP 23 documents
- Most favourite language in the world is English (98.64%).
- Rank first journals is Journal of Climate as core journal and Climate Dynamics rank second with 90 documents.
- In the country wise contribution USA contribute majority of the publications followed by China and UK.
- Ranking country wise India stands tenth position on the global warming research publication.


Conclusion

The present study "Research Contribution of Global Warming in various Country 2011- 2020" is focused on publication trends and most prolific journals and author, published in the web of science database. It exposes that there is an incredible growth in the world output on the term global warming literature during 2011-2020. USA and china are major player in the field of global warming and producing large no. of publications. India stands at the in the tenth position among other countries total 117 country was published document on the global warming.

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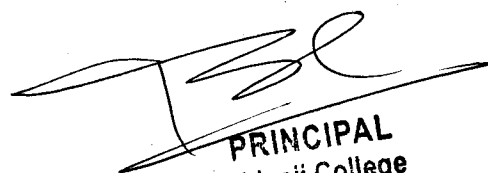
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