

Vol 5 Issue 12 Jan 2016

ISSN No : 2230-7850

International Multidisciplinary
Research Journal

*Indian Streams
Research Journal*

Executive Editor
Ashok Yakkaldevi

Editor-in-Chief
H.N.Jagtap

Welcome to ISRJ

RNI MAHMUL/2011/38595

ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board. Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Regional Editor

Manichander Thammishetty
Ph.d Research Scholar, Faculty of Education IASE, Osmania University, Hyderabad.

Mr. Dikonda Govardhan Krushanahari
Professor and Researcher ,
Rayat shikshan sanstha's, Rajarshi Chhatrapati Shahu College, Kolhapur.

International Advisory Board

Kamani Perera Regional Center For Strategic Studies, Sri Lanka	Mohammad Hailat Dept. of Mathematical Sciences, University of South Carolina Aiken	Hasan Baktir English Language and Literature Department, Kayseri
Janaki Sinnasamy Librarian, University of Malaya	Abdullah Sabbagh Engineering Studies, Sydney	Ghayoor Abbas Chotana Dept of Chemistry, Lahore University of Management Sciences[PK]
Romona Mihaila Spiru Haret University, Romania	Ecaterina Patrascu Spiru Haret University, Bucharest	Anna Maria Constantinovici AL. I. Cuza University, Romania
Delia Serbescu Spiru Haret University, Bucharest, Romania	Loredana Bosca Spiru Haret University, Romania	Ilie Pintea, Spiru Haret University, Romania
Anurag Misra DBS College, Kanpur	Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Xiaohua Yang PhD, USA
Titus PopPhD, Partium Christian University, Oradea,Romania	George - Calin SERITAN Faculty of Philosophy and Socio-Political Sciences AL. I. Cuza University, IasiMore

Editorial Board

Pratap Vyamktrao Naikwade ASP College Devrukh,Ratnagiri,MS India	Iresh Swami Ex - VC. Solapur University, Solapur	Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur
R. R. Patil Head Geology Department Solapur University,Solapur	N.S. Dhaygude Ex. Prin. Dayanand College, Solapur	R. R. Yalikal Director Managment Institute, Solapur
Rama Bhosale Prin. and Jt. Director Higher Education, Panvel	Narendra Kadu Jt. Director Higher Education, Pune	Umesh Rajderkar Head Humanities & Social Science YCMOU,Nashik
Salve R. N. Department of Sociology, Shivaji University,Kolhapur	K. M. Bhandarkar Praful Patel College of Education, Gondia	S. R. Pandya Head Education Dept. Mumbai University, Mumbai
Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai	Sonal Singh Vikram University, Ujjain	Alka Darshan Shrivastava Shaskiya Snatkottar Mahavidyalaya, Dhar
Chakane Sanjay Dnyaneshwar Arts, Science & Commerce College, Indapur, Pune	G. P. Patankar S. D. M. Degree College, Honavar, Karnataka	Rahul Shriram Sudke Devi Ahilya Vishwavidyalaya, Indore
Awadhesh Kumar Shirotiya Secretary,Play India Play,Meerut(U.P.)	Maj. S. Bakhtiar Choudhary Director,Hyderabad AP India.	S.KANNAN Annamalai University,TN
	S.Parvathi Devi Ph.D.-University of Allahabad	Satish Kumar Kalhotra Maulana Azad National Urdu University
	Sonal Singh, Vikram University, Ujjain	

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.org



Rajesh Kumari



GLOBAL WARMING: AN EMERGING THREAT



Rajesh Kumari

Assistant Professor, Dept of Geography,
FLT Mata Savatri Bai Phoole Govt. Girls Collage, Rewari.

ABSTRACT

Global warming refers to the rising average temperature of earth's atmosphere and oceans due to natural or anthropogenic climate change. Global warming is closely linked to the enhanced greenhouse effect which is an increase in the concentration of greenhouse gases(GHG) in the atmosphere leading to an increase in the amount of infrared or thermal radiation near the surface. The enhanced greenhouse effect is leading to rising temperatures, referred to as global warming. Measurements show a global temperature increase of 1.4 °F (0.78 °C) between the years 1900 and 2005. However, for thousands of years now, emissions of GHGs to the atmosphere have been balanced out by GHGs that are naturally absorbed. As a result, GHG concentrations and temperature have been fairly stable. This stability has allowed human civilization to develop within a consistent climate

KEY WORD: Global warming, atmosphere, oceans, climate change, greenhouse gases(GHG), etc.

INTRODUCTION :

Decades have spent figuring out what is causing global warming. They have looked at the natural cycles and events that are known to influence climate. But the amount and pattern of warming that's been measured cannot be explained by these factors alone. The only way to explain the pattern is to include the effect of greenhouse gases (GHGs) emitted by humans. There are several greenhouse gases responsible for warming, and humans emit them in a variety of ways. Most come from the

combustion of fossil fuels in cars, factories and electricity production. The gas responsible for the most warming is carbon dioxide(CO₂). Other contributors include methane released from landfills and agriculture (especially from the digestive systems of grazing animals), nitrous oxide from fertilizers, gases used for refrigeration and industrial processes (CFC), and the loss of forests that would otherwise store CO₂.

Different greenhouse gases have very different heat-trapping abilities. Some of them can even trap more heat than CO₂. A molecule of methane produces more than 20 times the warming of a molecule of CO₂. Nitrous oxide is 300 times more powerful than CO₂. Other gases, such as chlorofluorocarbons (which have been banned in much of the world because they also degrade the ozone layer), have heat-trapping potential thousands of times greater than CO₂. But because their concentrations are much lower than CO₂, none of these gases adds as much warmth to the atmosphere as CO₂ does. In order to understand the effects of all the gases together, scientists tend to talk about all greenhouse gases in terms of the equivalent amount of CO₂.

CAUSES OF GLOBAL WARMING:

Carbon dioxide emissions from fossil fuel burning power plants:

Our ever increasing addiction to electricity from coal burning power plants releases enormous amounts of carbon dioxide into the atmosphere. Every day, more electric gadgets flood the market, and without widespread alternative energy sources, we are highly dependent on burning coal for our personal and commercial electrical supply.

Carbon dioxide emissions from burning gasoline for transportation:

With our population growing at an alarming rate, the demand for more cars and consumer goods means that we are increasing the use of fossil fuels for transportation and manufacturing.

Methane emissions from animals, agriculture such as rice paddies and Arctic sea beds:

Methane is another extremely potent greenhouse gas, ranking right behind CO₂. When organic matter is broken down by bacteria under oxygen-starved conditions (anaerobic decomposition) as in rice paddies, methane is produced. The process also takes place in the intestines of herbivorous animals, and with the increase in the amount of concentrated livestock production, the levels of methane released into the atmosphere is increasing. Another source of methane is methane clathrate, a compound containing large amounts of methane trapped in the crystal structure of ice. As methane escapes from the Arctic seabed, the rate of global warming will increase significantly.

Deforestation, especially tropical forests for wood, pulp, and farmland:

The use of forests for fuel (both wood and for charcoal) is one cause of deforestation, but in the first world, our appetite for wood and paper products, our consumption of livestock grazed on former forest land, and the use of tropical forest lands for commodities like palm oil plantations contributes to the mass deforestation of our world. Forests remove and store carbon dioxide from the atmosphere, and this deforestation releases large amounts of carbon, as well as reducing the amount of carbon capture on the planet.

Increase in usage of chemical fertilizers on croplands:

In the last half of the 20th century, the use of chemical fertilizers (as opposed to the historical use of animal manure) has risen dramatically. The high rate of application of nitrogen-rich fertilizers has effects on the heat storage of cropland (nitrogen oxides have 300 times more heat-trapping capacity per unit of volume than carbon dioxide) and the run-off of excess fertilizers creates 'dead-zones' in our oceans. In addition to these effects, high nitrate levels in groundwater due to over-fertilization are cause for concern for human health.

Threats of global warming:

The effects of global warming are the ecological and social changes caused by the rise in global temperatures.

Rise in sea levels worldwide

Scientists predict an increase in sea levels worldwide due to the melting of two massive ice sheets in Antarctica and Greenland. However, many nations around the world will experience the effects of rising sea levels, which could displace millions of people.

1. Ongoing sea level rises have already submerged several low-lying islands in the Sundarbans.
2. Villagers in India's North Eastern state of Meghalaya are also concerned that rising sea levels will submerge neighbouring low-lying Bangladesh, resulting in an influx of refugees into Meghalaya.

Extreme climate events

The severity of storms such as hurricanes and cyclones is increasing. It comes up with the firmest evidence so far that global warming will significantly increase the intensity of the most extreme storms worldwide. The maximum wind speeds of the strongest tropical cyclones have increased significantly since 1981, according to research published in Nature. And the upward trend, thought to be driven by rising ocean temperatures, is unlikely to stop at any time soon.

Precipitation (rain and snowfall) has increased across the globe, on average.

Massive crop failures

Higher temperatures, altered precipitation and transpiration regimes, increased frequency of extreme events, and modified weed, pest, and pathogen pressure. In general, low-latitude areas are at most risk of having decreased crop yields. According to recent research, there is a 90% chance that 3 billion people worldwide will have to choose between moving their families to milder climes and going hungry due to climate change within 100 years. Climate change is expected to have the most severe impact on water supplies. Shortages in future are likely to threaten food production, reduce sanitation, hinder economic development and damage ecosystems.

Widespread extinction of species:

According to research published in Nature, by 2050, rising temperatures could lead to the extinction of more than a million species. And because we can't exist without a diverse population of species on Earth, this is scary news for humans.

Ocean acidification:

About one-third of the carbon dioxide emitted by human activity has already been taken up by the oceans. As carbon dioxide dissolves in sea water, carbonic acid is formed, which has the effect of

acidifying the ocean, measured as a change in pH. Furthermore, as the temperature of the oceans increases, they become less able to absorb excess CO₂.

Disappearance of coral reefs:

Coral populations will collapse by 2100 due to increased temperatures and ocean acidification. The 'bleaching' of corals from small but prolonged rises in sea temperature is a severe danger for ocean ecosystems, and many other species in the oceans rely on coral reefs for their survival.

Oxygen depletion

The amount of oxygen dissolved in the oceans may decline, with adverse consequences for ocean life.

Summary

Global warming is the burning issue worldwide now a day. The evidence that humans are causing global warming is strong. The causes are mainly from us, the human race, and the effects on us will be severe. Global warming effects are real, global, and measurable. With the increasing population, technology and progressive nature of human being there is increase in power needs. All these result in increase in concentration of greenhouse gases in the environment leading to global warming. It will not affect the health, food chain, and ecosystem but may lead to extinction of life on the planet.

REFERENCES:

1. Bindoff, N.L., *et al.*, in *IPCC AR4 WG1 2007*. "Executive summary". Chapter 5: Observations: Oceanic Climate Change and Sea Level.
2. Crowley, T. J.; North, G. R. (May 1988). "Abrupt Climate Change and Extinction Events in Earth History". *Science* 240 (4855): 996–1002.
3. Harrabin, Roger (1 February 2007). "How climate change hits India's poor". BBC News.
4. Schneider, SH, *et al*, in *IPCC AR4 WG2 2007*. "19.3.2.1 Agriculture".p. 790.
5. Singh, Savindra: Environmental Geography. ed.2011, PryagPustakBhawan, University Road, Allahabad
6. US National Research Council (2008) (PDF). *Understanding and Responding to Climate Change*. Board on Atmospheric Sciences and Climate, US National Academy of Sciences.p. 4.

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Book Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ International Scientific Journal Consortium
- ★ OPEN J-GATE

Associated and Indexed, USA

- Google Scholar
- EBSCO
- DOAJ
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database
- Directory Of Research Journal Indexing

Indian Streams Research Journal
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.isrj.org