
Global Warming And Climate Change And Its Socio-Economic Impact On Lucknow

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Abstract

Global warming is the long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere. This term is not interchangeable with the term "climate change."

Since the pre-industrial period, human activities are estimated to have increased Earth's global average temperature by about 1 degree Celsius (1.8 degrees Fahrenheit), a number that is currently increasing by more than 0.2 degrees Celsius (0.36 degrees Fahrenheit) per decade. The current warming trend is unequivocally the result of human activity since the 1950s and is proceeding at an unprecedented rate over millennia.

Keywords: - Climate, Global, Impact, Variability, el-nino, la-nino, Atmosphere

Introduction

Climate change is a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates. These changes have a broad range of observed effects that are synonymous with the term. Changes observed in Earth's climate since the mid-20th century are driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature. Natural processes, which have been overwhelmed by human activities, can also contribute to climate change, including internal variability (e.g., cyclical ocean patterns like El Niño, La Niña and the Pacific Decadal Oscillation) and external forcings (e.g., volcanic activity, changes in the Sun's energy output, variations in Earth's orbit).

Scientists use observations from the ground, air, and space, along with computer models, to monitor and study past, present, and future climate change. Climate data records provide evidence of climate change key indicators, such as global land and ocean temperature increases; rising sea levels; ice loss at Earth's poles and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods, and precipitation; and cloud and vegetation cover changes.

Lucknow is the capital city of Uttar Pradesh and it has always been a multicultural city. Courty manners, beautiful gardens, poetry, music, and fine cuisine patronized by the Persian-loving Shia Nawabs of the city are well known amongst Indians and students of South Asian culture and history. Lucknow is popularly known as the The City of Nawabs. It is also known as the Golden City of the East, Shiraz-i-Hind and The Constantinople of India.

IMPACT OF GLOBAL WARMING AND CLIMATE CHANGE

The city witnessed the longest heatwave from March to April this year, recording an average daily temperature of 40 degrees Celsius. This was 3-6 degrees above normal. Is this extreme weather condition the impact of global warming or climate change? Climate experts stand divided on the issue with some saying it is global warming while others calling it climate variability due to cities turning into concrete jungles.

According to experts, the unusual extreme weather conditions which earlier used to occur once in two decades have become more frequent in the past few years, and need to be researched. The last 15 months have witnessed extremes of hot and cold conditions. "There is no denial that this unusual weather change is the result of global warming. The accumulation of greenhouse gases in the atmosphere, deforestation and land-use changes are some of the reasons why the short-lived spring season has turned into summer," said climate expert and scientist at Birbal Sahni Institute of Palaeosciences Mayank Shekhar.

He said that in Uttar Pradesh, between 2015 and 2019, forest land of 163 hectares was diverted for non-forestry purposes under the Forest Conservation Act, 1980. However, the majority of the state is agrarian. Massive plantation programmes have been implemented throughout the state in recent years to boost forest and tree cover but more needs to be done. The reason behind such heat in April is a change in the behaviour of western disturbances which were nearly absent. Also, jet streams could be another factor that needs to be researched. "Jet streams are strong wind bands that flow from west to east throughout the world. In the upper atmosphere, jet streams are narrow bands of strong wind. Sometimes, in response to natural climate patterns, the jet stream becomes abnormally wavy which leads to such heatwave," added Shekhar.

Director of Lucknow University weather monitoring station Prof Dhruvsen Singh said, "Besides global warming, it is also a radiation impact as everything around us is now concrete. Natural heat absorbers like ponds, forests and green spaces have vanished." Meanwhile, environmentalist Venkatesh Dutta said, "From the beginning of this century in 2000, the last 20 years have recorded weather extremes. There are no pre-monsoon showers in north India now, which indicates there is a slight problem in cloud activity, the nature of western disturbance has changed too. This can be called an impact of climate change."

Mark Maslin (2004) has explained global warming and its most critical and controversial issues facing the world 21st century. He has explained some topics and its correlation with environment, global warming and its impact on climate change and explaining proposed solutions he has also includes a chapter on local solution and give important steps that state as well as individual should go together hand in hand then and then they can achieve goal. H.V. Jadhav, Dr.H.S Purohit (2007) - has explained the environmental Pollution has assumed global dimensions. Economic developments and rapid industrialization has brought changes in climatic conditions, global warming depletion of resources. Global warming to spread this awareness. Now a day's major issue of the world is global warming because of the Green House Gases (CHG) effect, climate change & tsunamis. These environmental issues related to be controlled & monitored. The law of environmental protection required to be strictly implemented & to create a health surrounding. In this book 32 chapters are given very simple & self explanation. A. Usha (2007) - in this book climate change of the is one of the most serious threats faced by the world today. Climate change is one of the greatest environmental, social, economical threats facing the planet. Human activities that contribute to climate change include burning fossil fuels,

agriculture and land use changes like deforestation. Kyoto protocol to United Nation framework convention on climate change (UNFCCC) is only first step to address the serious global threat of climate change. This book given an idea about environment, its pollution and subsequent climate change. It also gives clear understanding about the subject policies adopted by the states for the prevention of climate change and for protection of environment. It explicates for protection of environment. It focused on principle of sustainable development prevention of environmental degradation on and climate change. Rajitha Tandikonda (2008) - this book contains 9 chapters. Each chapter contains global warming and its impact on earth. Global warming is a term used to described the increase over time in the earth's average temperature as a result Green House Gases (CHG), CO₂, Methane. This causes global average temperature rise in day to day. Kyoto protocol is an international agreement linked to UN framework on climate change. In the article "The Political Economy of Global Warming & its changing strategic role" author Dipankar Dey explains that global warming is accepted as major threat to world economy. Prosanta Ghosh in his article, "global warming & information technology" opines that information technology & network can play on vital role along the sake of other direct means for solving the global warming threat. He suggested that we can reduce domestic power consumption by remotely controlling the household electrical equipment switch them of off when not in use. Most of the things can be carried out from anywhere & anytime just by connecting these wireless data network. This is going to reduce the green house gas emitted from cars to a great extent. Michael Jffery (2009) - have discussed the environmental degradation and its impact such as climate change. They have dealt with precautionary principle and polluter pays principle in detail.

The study is undertaken with the following main objectives:

1. To study the global warming and climate change and its socio-economical Impact on Lucknow.
2. To highlight detail information about global warming and climate change and its impact Lucknow.
3. To study the causes and effect of global warming.
4. Discuss the role of sustainable development in betterment of socio-economical condition of Lucknow

To suggest important measures to improve the existing position of Environmental condition

The present study is a doctrinal research and relevant information and data published on climate change have been interpreted both quantitatively as well as qualitatively. The study is based on primary and secondary sources. As far as primary sources are concerned, the reports and surveys, conducted by various national and international organizations are used. As secondary sources, existing literature and established journals both national and international are of main concern. Also, internet, books encyclopaedias, e-sources and working paper by research institutes are referred.

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