

COVID-19 Lockdown and Decline in Global Warming

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Introduction:

The Covid-19 lockdown has reduced the emissions for now. Over the past 50 years, the average global temperature has increased at the fastest rate in recorded history. Global warming occurs when carbon dioxide and other air pollutants and greenhouse gases collect in the atmosphere and absorb sunlight and solar radiation that have bounced off the earth's surface. The sources of carbon pollution are coal burning power plants and transportation sector. Scientists agree that the earth's rising temperatures are fueling longer and hotter heat waves, more frequent droughts, heavier rainfall and more powerful hurricanes. The impacts of global warming are being felt across the globe and China has taken the lead in global-warming pollution, producing about 28 percent of all CO₂ emissions. The United States comes in second followed by European Union and India as third and fourth place respectively. Any short-term environmental benefits as a result of COVID-19 come at an unacceptable human and economic cost, and are no substitute for planned and sustained action on air quality and climate. Streets are empty, cities are silent, factories are closed and skies are quiet. Surely this has to be good for the environment? We ask the experts for the facts, and set out the differences between short-term changes and long-term trends in this month's episode of Climate Now. Entire world has come to a virtual standstill, with the majority of countries in some kind of lockdown. Many assume that this is good for the environment.

Related Studies:

1. The Nature paper "Quantification of ocean heat uptake from changes in atmospheric O₂ and CO₂ composition". The study's main finding – that the oceans have taken up 60% more heat than previously thought – garnered a lot of media attention. However, very shortly after publication, problems with their calculations were spotted by other scientists, principally independent climate researcher Nicholas Lewis.
2. "Climate-change-driven accelerated sea-level rise detected in the altimeter era", published in PNAS, which found that the rate of global sea level rise is accelerating. This is the last paper in the Top 25 with an Altimetry score of more than 2,000. In 2017, only the first five papers reached this milestone, while only one paper managed it in 2016 and 2015.
3. Global Warming: Causes, Effects and Solutions, Umair Shahzad, Riphah. In the year 2015. Climate Change and Resource Sustainability, An Overview for Actuaries The Consensus of Scientific Work on Climate Change. John P. Crank, Linda S. Jacoby, in Crime, Violence, and Global Warming, 2015
4. Climate Skepticism by Chunglin Kwa, in International Encyclopedia of the Social & Behavioral Sciences (Second Edition), 2015.

5. The climate imperative: Opportunities for risk managers – the 2020 sustainability and climate risk management report.

Operational Definition:

Global warming: Global warming is the ongoing rise of the average temperature of the Earth's climate system and has been demonstrated by direct temperature measurements and by measurements of various effects of the warming. It is a major aspect of climate change which, in addition to rising global surface temperatures, also includes its effects, such as changes in precipitation. While there have been prehistoric periods of global warming, observed changes since the mid-20th century have been unprecedented in rate and scale.

COVID-19: A mild to severe respiratory illness that is caused by a coronavirus (Severe acute respiratory syndrome coronavirus 2 of the genus Betacoronavirus), is transmitted chiefly by contact with infectious material (such as respiratory droplets) or with objects or surfaces contaminated by the causative virus, and is characterized especially by fever, cough, and shortness of breath and may progress to pneumonia and respiratory failure.

Lockdown: A situation in which people are not allowed to enter or leave a building or area freely because of an emergency. A temporary condition imposed by governmental authorities (as during the outbreak of an epidemic disease) in which people are required to stay in their homes and refrain from or limit activities outside the home involving public contact (such as dining out or attending large gatherings). An emergency measure or condition in which people are temporarily prevented from entering or leaving a restricted area or building (such as a school) during a threat of danger. The government on Monday i.e.; on 23rd March 2020 told local authorities to impose lockdown orders allowing only essential services to operate in 548 districts across 30 states to arrest the spread of coronavirus.

Ozone layer: Ozone sits in the upper atmosphere and absorbs ultraviolet radiation, another type of solar energy that's harmful to humans, animals and plants. CFCs and halons cause chemical reactions that break down ozone molecules, reducing ozone's ultraviolet radiation-absorbing capacity. Ozone depletion occurs when chlorofluorocarbons (CFCs) and halons—gases formerly found in aerosol spray cans and refrigerants—are released into the atmosphere.

Objectives of the Study:

The present study had been conducted to investigate the following:

- To study the impact of COVID-19 lockdown on decrease in the level of global warming.
- To study the co-efficient relationship between global lockdown and global warming.

Hypotheses of the Study: The present study is based on the following Hypotheses.

There is co-efficient relationship and level of significance between COVID-19 lockdown and reduction in global warming. And there is co-efficient relationship and level of significance between global lockdown system and its impact on global warming.

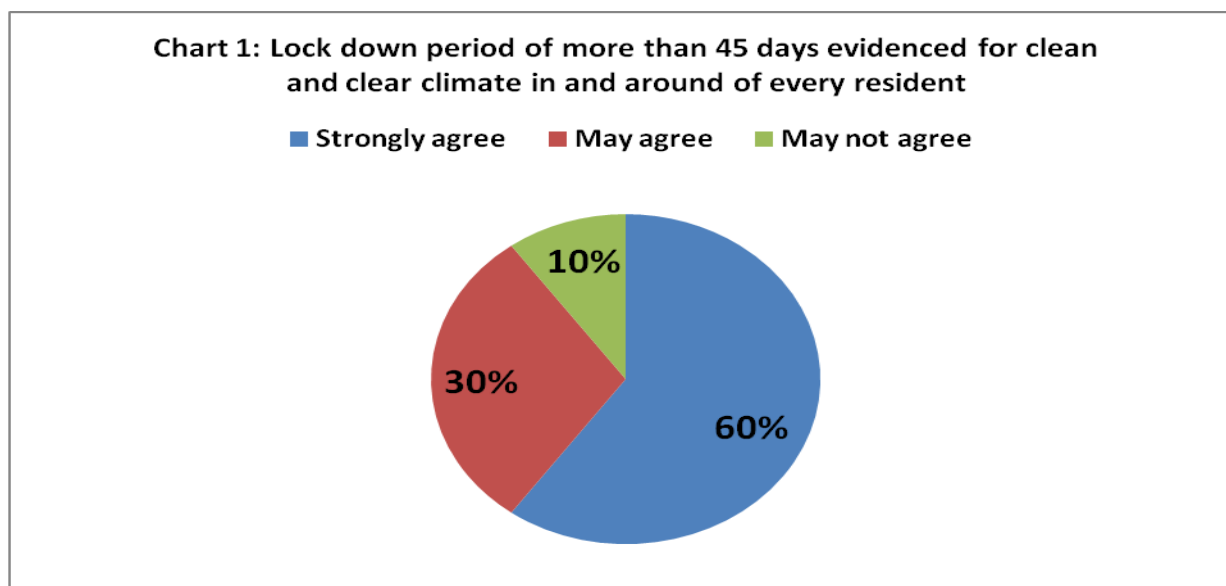
Design and Methodology: In accordance with the objective and stated hypotheses, the design of the present study is of descriptive survey type as it aims to identify the relationship between COVID-19 lockdown and reduction in global warming. The sample of the study was 50 citizens drawn randomly from Bangalore City.

Tool: The rating scale on the impact of COVID-19 lockdown on decrease in the level of global warming prepared by the investigator was administered to collect data.

Result and Discussion: In this study the co-efficient relationship and level of significance between COVID-19 lockdown and reduction in global warming and there is co-efficient relationship and level of significance between global lockdown system and its impact on global warming has been analyzed on the basis of their scores as the levels of high, moderate and low.

Table 1: Lock down period of more than 45 days evidenced for clean and clear climate in and around of every resident.

LEVEL	NO OF RESPONDENTS	PERCENTAGE
Strongly agree	30	60 %
May agree	15	30 %
May not agree	05	10 %
TOTAL	50	100 %

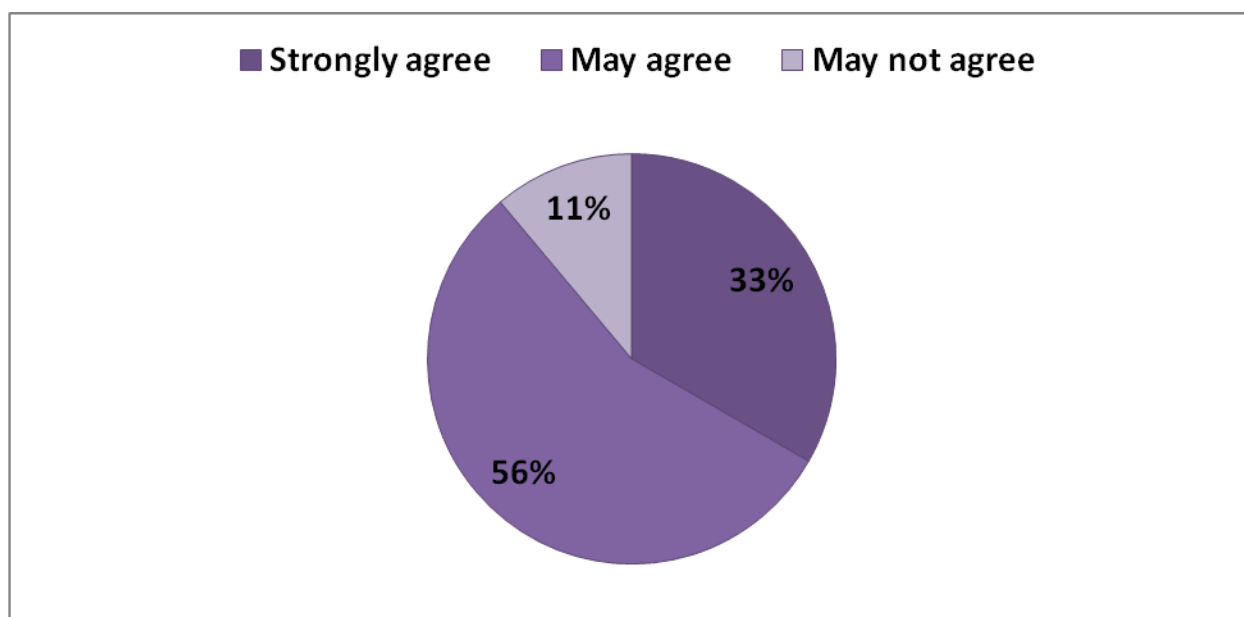


A perusal of table 1 and chart 1 reveals that out of the total percentage of respondents 60 percent strongly agree, 30 percent respondents say that they may agree and 10 percent said that they may not agree. It indicates that majority of the residents evidenced the clean and clear environment in and around of their residential places.

Table 2: Lock down situation developed strong belongingness and indirectly contributed to decline global warming.

Level	NO OF RESPONDENTS	PERCENTAGE
Strongly agree	15	56 %
May agree	25	33 %
May not agree	05	11 %
TOTAL	50	100 %

Chart 2: Lock down situation developed strong belongingness and indirectly contributed to decline global warming.

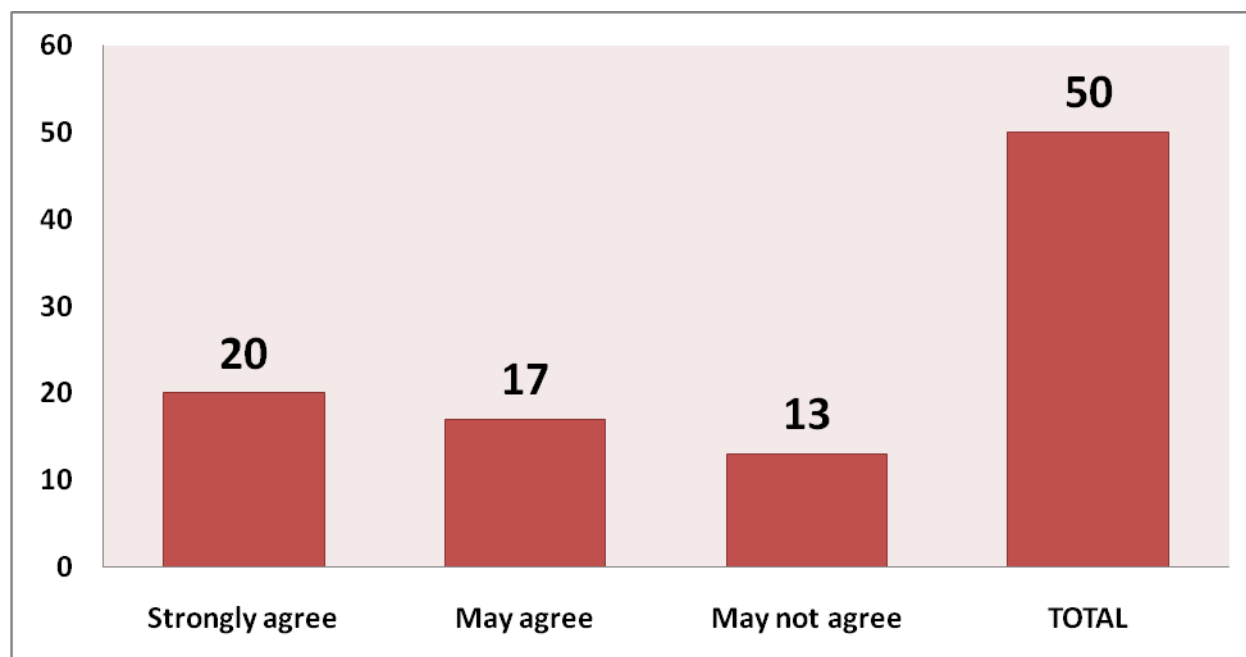


A perusal of table 2 and chart 2 reveals that out of the total percentage of respondents 56 percent they agreed strongly as they felt as they strong belongingness in contribution in decline in global warming in one or other way. There are 56 percent of respondents just they agree and 11 percent of respondents they were agreeing of strong belongingness.

Table 3: Every nation should required to practice of lock down period even in normal circumstances helps in decline in global warming despite of rapid economic growth.

Level	NO OF RESPONDENTS	PERCENTAGE
Strongly agree	20	
May agree	17	
May not agree	13	
TOTAL	50	100 %

Chart 3: Every nation should require to practice of lock down period even in normal circumstances helps in decline in global warming despite of rapid economic growth.



A perusal of table 3 and chart 3 reveals that out of the total fifty respondents 20 were strongly agree, 17 were may agree and 13 were may not agree. It indicates that regarding decline in global warming and economic growth; it can be pursued that there is a mixed opinion among the respondents.

From the study it can be concluded that among three variables such as complete lock down, Decline in global warming and Hurdle to economic growth. As the purpose of the study was to find whether there is correlation between complete lock down and Decline in global warming. Then, Correlation between complete lock down and hurdle to Economic growth.

There is moderate degree of positive correlation between two variables such as Complete lock down and Decline in global warming. Then 'r' is less than 6 times of PE, the

value of 'r' is not significant. This result refers that when there is a complete lock down which leads to decline in global warming extent to the availability of clean oxygen in and around of residential places.

On the other hand, there is high degree of positive correlation between the variables such as Complete lock down and Hurdle to Economic growth. Then 'r' is more than 6 times of PE, the value of 'r' is significant. This result refers that there is complete lock down will be hurdle to Economic growth but there will be the solutions to find the way to make economic growth with proper measures of sustainability development techniques.

Findings: The following are the important findings of the present investigation:

- The Lock down period of more than 45 days evidenced for clean and clear climate in and around of every resident is a strongly agreed factor.
- The Lock down situation developed strong belongingness and indirectly contributed to decline in global warming is just an agreed by majority of the respondents.
- The lock down period procedure even in normal circumstances were not agreed by the respondents but a few among them agreed to be once in a week is good to be the environment protection.

Implications of the Study:

When there is a complete lock down which leads to decline in global warming extent to the availability of clean oxygen in and around of residential places. there is complete lock down will be hurdle to Economic growth but there will be the solutions to find the way to make economic growth with proper measures of sustainability development techniques. The lock down period procedure for a stipulated time once in a week to be followed by every nation in the world even in normal circumstances helps in decline in global warming despite of rapid economic growth.

References:

- 1) Global Warming: Causes, Effects and Solutions, Umair Shahzad, Riphah.
- 2) The Hindustan Times news dailies.
- 3) The Economic Times.
- 4) The Internet Search Engine.
- 5) <https://www.ugc.ac.in>
- 6) <https://www.researchgate.net>