

VGC - Care List

Journal Details

Journal Title (in English Language)	Journal of Food, Agriculture and Environment
Publication Language	English
Publisher	WFL Publisher Ltd.
ISSN	1459-0255
E-ISSN	1459-0263
Discipline	Science
Subject	Agricultural and Biological Sciences (all)
Focus Subject	Food Science



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COVID-19 lockdown: Significant impact on India

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Received 14 March 2020, accepted 30 March 2020.

Abstract

From all over the world, with a disease like COVID-19, there was no alternative to lockdown. Lockdown caused the entire world to collapse with India, but there were also some good results from the global recession. Lockdown period in India has helped reduce the prevalence of pollution, fuel and electricity abuse, accidents, deforestation, noise and addicts. The purpose of this article is to illustrate the significant impact of a one-month lockdown on India.

Key words: COVID-19, lockdown, pollution, accident, fuel, electricity, addict.

Introduction

Corona virus disease 2019 (COVID-19) is an infectious disease caused by a new type of virus. The disease originated in Wuhan, China, has since spread globally. On March 11, 2020, the World Health Organization declared the COVID-19 to be a global pandemic. The COVID-19 mainly spread during close contact, coughing, sneezing or exhalation by corona infected person¹⁻³. COVID-19 is rampant in the world. With the introduction of a new type of virus and no drugs available at the outset, most countries have opted for lockdown to prevent COVID-19. According to WHO guidelines to control the spread of COVID-19, travel restrictions, quarantines, social distancing, curfews, workplace hazard controls, means lockdown have been made in almost 200 countries. The first confirmed case in India was on January 30, 2020. On 23 March, union and state governments announced the lockdown of 75 districts where cases were reported. On 24 March, P.M. Narendra Modi announced a complete nationwide lockdown, starting from midnight for 21 days. The lockdown in India has been extended by a few more days considering the COVID-19 ratio. Due to early lockdown, COVID-19 ratio was lower in India than in other countries. WHO also praised India for this decision.

Lockdown results have been very good in India with respect to other countries. Despite the fact that China was the first COVID-19 to come to neighboring countries and India was the second most populous country in the world, even due to lockdown, the less number of COVID-19 infected patients as well as less number of deaths. Every year in India, air, water and noise pollution are becoming more frequent. In every year, air pollution in India is linked to the deaths of millions of people. According to the Indian Environment Agency, approximately 1 million people suffer from road traffic noise, which according to WHO's definition is detrimental to human health. This helped reduce pollution as traffic and companies closed during the lockdown. The significant impact

of lockdown on pollution, fuel and electricity abuse, accidents, deforestation, noise and addicts can be seen.

Methodology

In India, patients with COVID-19 were diagnosed on January 30, 2020, but lockdown began in the country from late March. As a result, COVID-19 spread to almost all the countries, but the number of patients was less in India than in other countries. Given the rapid spread of the virus in crowded places, lockdown was the main route in most countries. In India, almost 100 percent of all aircraft, rail, 95 percent bus and road transport were shut down during the lockdown. All the shops, except grocery store, vegetable market, and medicals were closed completely. Exams from standard 1st to 9th of all schools in the country were canceled while the rest of the class exams were postponed for some time. Except for some government offices, almost all the offices were closed and the idea of work from home was implemented. In lockdown, around 90 percent of the country's population was home. During lockdown, the government announced Rs 1.6 lakh crore in aid. There was a lot of help from all levels of the country. With the help of providing food to the poorest people in the country, some assistance was used for the identification and control of COVID-19 as well as other related activities for minimization of COVID-19.

Literature survey from various articles, research papers, google and media was studied with respect to impact of lockdown due to COVID-19 on the environment and convey the message of need of lockdown and how it will improve the environment which will be beneficial for the health of the society. It will help to inculcate preventive measures in the society as we know prevention is better than cure. This article provides a comparative study and summary of ideas of various research papers from Google Search

Newspaper and various Television Channels and how this situation can help us get clue to overcome other major international issue as well like pollution, global warming etc.

Results and Discussion

Death due to COVID-19: In India the fatality rate for COVID-19 was 2-3% and this rate was much lower than that of other countries. It was found that 30-33% of COVID-19 deaths were between 40-60. Of patients 2-10% are below 40 years of age. Of the dead patients 60-65% in the country are over 60. Also 80-90 percent of patients have diabetes or like hypertension disease. In India, the prevalence of COVID-19 is higher in males than in females. About 85-90 percent of patients had a second illness from before.

Air pollution: Air pollution in India is a serious health issue⁴. Of the most polluted cities in the world, 21 out of 30 were in India in 2019^{5,6}. Due to lockdown, it reduced environmental interference by people, unfair activity as well. This helped air, water and overall environment to improve further. Air is most important constituent of the environment in which increasing the amount of CO₂, CO, N_xO, hydrocarbon, SO₂, SO₃ and other gases in every year. Air pollution in India is a serious health issue. The 51% of pollution is caused by industry, 27% by vehicles, 17% by crop burning and 5% by Diwali festival fireworks. According to WHO, air pollution contributes to the premature deaths of 2 million Indians every year. However, during the lockdown, the volume of waste gases, emitted gases dropped almost 10-12% lower during lockdown period compared to the yearly volume (Table 1). India's total greenhouse gas (GHG) emissions in 2014 accounted for 5.55% of global GHG emissions. It is estimated that emissions will decrease by 0.55 GHG in lockdown time.

Table 1. Approximately reduced emission in lockdown period.

Gas	Emission of gas per year in India (million metric tons) (A)	In a lockdown period approximately reduced emission by 10-20% of (A) million metric tons
CO ₂	3000-3202	300-320
CO	4500-4700	450-470
N _x O	4800-5000	480-500
Hydrocarbon	3600-4000	360-400
SO ₂	48000-50000	4800-5000

Cutting trees: Food and Agriculture Organization's 2016 State of the Forests report 25 millions trees are cut down per year. Lockdown has prevented 2.5 to 3 million trees from cutting. This will make India's environment healthy and pollution free.

Sedimentation: Over the years, many toxic chemicals have been released from the industry in rivers and oceans. This has led to a huge increase in water pollution and the water flora, microorganisms. It is also at risk for human health. During the lockdown the transport in the ocean as well as fishing was restricted. Therefore, the sedimentation process helps to settle down toxins, many constituents of water, and impurities. Improved water level copy of rivers, seas and oceans.

Noise pollution: Unwanted sound (noise) can damage physiological health. During the lockdown, reduced a total of 55

decimals of sounds generated due to aviation, rail, industries and road traffic closures.

Fuel saving: Almost 95% of traffic was closed during lockdown time, saving considerable fuel. Diesel consumption in the country rose to 83.5 million tons while petrol consumption rose to 28.3 million tons during 2018-2019. It is estimated that due to the one month lockdown, fuel savings of 8-10% annually in India as well as world with respective per year used that.

Table 2. Approximate fuel saving during lockdown period.

Fuel	Petrol used per year (million tons)	Saving fuel during lockdown period (million tons)	Saving Rupees during lockdown due to fuel (Cr)
Petrol	28.3	2.8-2.9	313-314
Diesel	83.5	8.3-8.4	248-249

Accident: The Global Status Report on road safety 2013 estimates that more than 231,000 people are killed in road traffic crashes in India every year. Approximately half of all deaths on the country's roads are among vulnerable road users - motorcyclists, pedestrians and cyclists. It is estimated that due to a one-month lockdown, the rate of accidents has decreased by 99% per month in India or around the world, thus reducing the annual death rate by approximately 10-12%⁷. In India, the reduction in deaths due to accident may be 20,000-25,000.

Electricity: India is the world's third largest producer and third largest consumer of electricity^{7,8}. During the 2018-2019 year, the gross electricity generated by utilities in India was 1,372 TWh. According to a survey conducted in India, 41% of electricity is used for industrial use. India's profits from the company are huge. One month's lockdown has cost, India a lot of financial loss, but lockdown time has saved about 40-45 TWh of electricity.

Addiction: Just about one in 180 individuals with alcohol dependence and one in 20 persons with illicit drug dependence report getting in-patient treatment. Nationally, it is estimated that there are about 8.5 Lakh people who inject drugs⁹. A lot of people in lockdown stayed away from alcohol, tobacco and drug abuse, so it would definitely help to improve their health.

Conclusions

Millions of corona virus affected patients have been found in the world, and many have been found in the other countries as compare to India. In India, the death toll was around 2.0. while in other countries it was 5-6. In other countries the number of patients was more than one lakh, while in India were thousands. It is estimated that lockdown reduces the level of toxic gases in air, water or soil by up to 10-12% and improves its level in the environment and climate. The lockdown reduced the rate of cutting trees, accidents, fuel consumption and addiction to people. Lockdown also reduced the number of deaths due to pollution, accidents and addiction by millions.

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The first part of the report is a general
 introduction to the subject of the
 investigation. It is followed by a
 description of the methods used in the
 study. The results of the study are
 presented in the next section, and
 the conclusions are drawn in the
 final section.

