

# Climate Change, Workplace Accidents and COVID-19

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**Received:** 13-Mar-2023, Manuscript No. jcwf-23-23690; **Editor assigned:** 15-Mar-2023, Pre QC No. jcwf-23-23690 (PQ); **Reviewed:** 22-Mar-2023, QC No. jcwf-23-23690 (Q); **Revised:** 25-Mar-2023, Manuscript No. jcwf-23-23690 (R); **Published:** 01-Apr-2023, DOI: 10.35248/2332-2594.22.11(3).1-2

## Abstract

The diverse impacts of the pandemic and climate change on employee health and wellbeing call for the development and implementation of improved strategic solutions. With an emphasis on the effects of severe air temperatures and natural disasters, this review's first objective is to evaluate how climate change affects occupational accidents. Its second goal is to analyse the pandemic's significance in this situation. Our findings indicate that the effects of climate change on workers include physical and psychological effects while they are at work as well as changes to the working environment and circumstances. All of these effects can lead to stress, which raises the likelihood of having a work accident.

**Keywords:** Work accidents • Climate change • Covid-19 • Natural disasters • Air temperature • Mental health

## Introduction

The International Labour Organization's (ILO) Decent Work Agenda includes Occupational Safety and Health (OSH) as a fundamental component. The ILO asserts that "work can only be decent if it is safe and healthy" and defines "Decent Work" as the right to productive employment in conditions of freedom, equity, security, and human dignity. However, the WHO/ILO Global Monitoring Report estimates that 1.9 million deaths worldwide occurred in 2016 as a result of work-related illnesses and injuries, the majority of which were caused by respiratory and cardiovascular conditions. Workplace injuries and illnesses not only hurt the victim and his or her family, but they also have significant negative economic effects on society [1]. According to the International Social Security Association (ISSA), the cost of nonfatal workplace accidents accounts for 4% of global economic output. According to some studies, occupational accidents have been declining in recent years. This trend has been attributed to preventive measures and policies implemented by businesses and government agencies, as well as to increases in the population's employment in the service sector (where the risk of work accidents is lower) [2]. These improvements in employee health, nevertheless, might not last. The effects of climate change, in particular, have the potential to reverse this downward trend because they expose workers to severe weather and natural disasters and because they have psychological effects and create uncertainty [3]. The COVID-19 pandemic has also had a significant negative influence on worker health and may do so going forward. Although most nations have developed health prevention and promotion strategies, the effects of climate change and the pandemic on employees' health and wellbeing necessitate the definition and implementation of new strategic interventions [4]. As a result, research on the effects of climate change and COVID-19 on occupational health is required. This research will need to take into account new classification guidelines, lockdowns, and changing labour conditions (such as the rise in the number of employees working remotely).

The objectives of this review are to first determine how climate change impacts occupational accidents, with a particular emphasis on the effects of severe air temperatures and natural catastrophes; and second, to examine the part that the workplace plays in these accidents [5].

## Climate change and workplace accidents

Few researchers have looked at how climate change may affect occupational health, despite the fact that its effects on human health have received considerable attention. Based on an examination of the scientific literature that was published between 1988 and 2008, a researcher developed a Preliminary Framework in 2009 [6]. They identified seven different types of climate-related risks: (1) elevated ambient temperature, (2) air pollution, (3) UV exposure, (4) extreme weather, (5) vector-borne diseases and expanded habitats, (6) industrial transitions and emerging industries, and (7) changes to the built environment [7]. They advised more research into risk control mechanisms in their conclusions, along with fresh acclimatization techniques. There hasn't been many research done to determine how climate change is affecting workplace accidents [8-10]

## Conclusions

The COVID-19 pandemic and its associated effects on daily life, wellbeing, and health are having an impact on society at the same time. Though few studies have concentrated on worker health, several have examined how climate change is affecting human health. This review demonstrates how the effects of climate change on workers have an impact on them physically while they are at work (e.g., exposure to extreme temperatures), psychologically (e.g., increased anxiety after exposure to a natural disaster), and by changing their working conditions. All of these factors can lead to stress, which in turn raises the risk of experiencing a work accident. There is disagreement on how the COVID-19 pandemic will affect workplace accidents, however it has been noted that employees who interact with the public, particularly those in the healthcare industry, would experience more negative psychological effects. It has also been demonstrated that this strain influences the likelihood of having an accident. Only articles concentrating on the synergistic effect of heat due to the requirement to wear COVID-19-specific PPE, either outdoors or in inadequately acclimatized inside situations, were discovered in relation to the combined impact of climate change and the pandemic on occupational health. The findings of these research lead us to the conclusion that new preventive services must be established, workers must be trained, and new priorities must be set in order to adjust working conditions to these new conditions. The evaluation and/or regulation of the environmental conditions in workers' homes should be prioritized for preventative services in the context of climate change, considering the rise in telework during the pandemic.

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