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**Prospecting Climatic Hazards in Whitley Strieber's *The Day After Tomorrow*: An Eco-Critical Perspective**

<sup>1</sup>Ms. Shadab Aziz, <sup>2</sup>Mr. Awais Mumtaz Khan, <sup>3</sup>Mr. Farman Ullah

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<sup>1</sup> Lecturer at CECOS University Peshawar.

<sup>2</sup>Lecturer at IQRA National University Swat Campus

<sup>3</sup>Lecturer at IQRA National University Swat Campus

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**Article Info**

\*Corresponding author: (S. Aziz)

Corresponding Author email

[shadabustb007@gmail.com](mailto:shadabustb007@gmail.com)

**Abstract**

Meteorological hazards are the constant changes in the atmospheric patterns due to human alteration of the land. However, the weather processes include heat waves, cold waves, cyclones, hurricanes, and freezing rain. Such changes occur particularly in temperature and wind. Resultantly, these natural hazards caused by human land-changing activities will form another ice age in the upcoming future. Conclusively an ice age is a long period of climatic shifts in the reduction of Earth's atmosphere which leads to the melting of the ice at the poles. Furthermore, the ice age is the coldness of global temperature, and the large areas of the earth are covered by continental ice sheets and alpine glaciers. The main objective of this study is to investigate the impact of human activities causing meteorological hazards. This study is delimited to meteorological hazards which are extracted from the novel *The Day After Tomorrow*. The nature of this research is qualitative and uses eco-criticism theory to examine meteorological issues that are caused by human alteration of the land. The primary source for this study is the text of Whitley Strieber's novel *The Day After Tomorrow*. However, for the secondary source, other research articles and web-based links were carefully gathered to understand and analyze the story and applied theory. The textual analysis technique is used for the analysis and interpretation of the selected text of the novel *The Day After Tomorrow*. For the identification of meteorological issues, the eco-criticism theory by William Rueckert has been used. The analysis of the study gives us results that the meteorological issues are caused by the human alteration of the land including deforestation, burning of fossil fuel, building infrastructure, transportation networks, agriculture, and industrial pollution. To conclude our study, we found that the meteorological hazards are the results of human pollution which has shown massive temperature reduction in recent years as per other reports as well as the concerned news agencies. However, we have learned scientific theories are working to control these hazards. Therefore, we as humans need to be disciplined as well as treat nature the way it is rather than changing it according to our needs. Furthermore, we should remain as a species rather than a nation so that we may control the upcoming ice age.

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**Keywords:**

*The Day After Tomorrow*,  
*Eco- Critical Perspective*,  
*Super Storms*,  
*ice age*,  
*freezing rain*.

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**Introduction**

The world's climate has changed significantly over the past 65 years, with further shifts expected in the twenty-first century due to global warming. As a consequence of climate change, temperatures are rising on many different planets, and the climate crisis has been exacerbated greatly since the advent of the Industrial Revolution. Long-term changes in environmental temperature, precipitation, atmospheric pressure, and humidity define climate change. One of the most well-known international and domestic implications of climate change is the increase in extreme weather events, the retreat of the world's ice sheets, and the resulting rise in sea levels (Barnett et al., 2023).

Before the Industrial Revolution, it was believed that the only natural sources of greenhouse gases (GHGs), such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and water vapor, were forest fires, volcanoes, and seismic activity (Usman and Balsalobre-Lorente, 2022). Scientists have long warned that as greenhouse gas concentrations rise and cause global warming, temperatures will increase, leading to extreme heat and severe consequences for humanity. However, recent data indicates that these predictions were not entirely accurate. As soaring temperatures accelerate the onset of the next ice age, people worldwide could soon be shivering rather than sweating. Currently, massive amounts of freshwater are being dumped into the North Atlantic by melting glaciers, and new research shows that the North Atlantic's cold-water outflow has decreased by 20% since 1950. Additionally, the saltiness of the northern seas has been steadily declining. Disrupting the Atlantic currents, which are just one component of a global system, could result in significant climate changes across the entire world.

The number of people at risk from climatic extremes is rising as the world's population and urbanization increase. Humans are more vulnerable than ever before to climate change and severe weather-related disasters, which are becoming increasingly unpredictable, abrupt, and deadly. The Earth's climate has been warming since the middle of the eighteenth century. Global warming is a direct result of rising CO<sub>2</sub> levels, which have already caused the global temperature anomaly (TA) to rise to almost 1.0°C, leading to detrimental effects on the environment and society. This has been emphasized in recent decades by the United Nations (WMO, UNEP), IPCC reports, and other scientific publications.

It is well known that freezing rain (FZRA) is a serious meteorological hazard that can cause harm to people, property, and the environment while also disrupting various activities, including transportation. To assess the risk of such occurrences, it is essential to understand the frequency, duration, and severity of freezing rain events, as well as the climatic variables influencing the damage caused by freezing rain in different regions. These factors include the volume of precipitation, wind conditions during freezing rain, and temperature variations (both dry and wet bulb).

The long-term average of weather, often spanning 30 years, is referred to as climate. Climatic zones, which are regions with similar climatic conditions, are typically vast. Weather hazards, on the other hand, are often isolated, short-term events that have the potential to cause significant disruption and damage.

According to the IPCC Sixth Assessment Report (AR6) Working Group II (WGII), global warming and human-driven climate change are harmful. The report states that "beyond natural climate variability, human-induced climate change has caused widespread adverse impacts and related losses and damages to nature and people." As natural and human systems are pushed beyond their capacity for adaptation, the increase in weather and climate extremes has had some irreversible effects (high confidence) (IPCC 2012, European Commission 2021).

## **Research Methodology**

### **Nature of the Research**

This study's approach to examining the ecological impacts of weather hazards in *The Day After Tomorrow* makes it unique. When using a qualitative approach, a researcher chooses to forego statistical and numerical data in their study. The goal of qualitative research is to better understand human experiences by identifying questions based on descriptive explanations of how and why certain phenomena occur. As a methodological tool, the outcome is a textual analysis of the researcher's narrative. This research paper employs eco-criticism theory to examine meteorological hazards and their effects on literature and global weather.

### **Sources of Data Collection**

Whitley Strieber, the author of *The Day After Tomorrow*, serves as the primary source of information for this study. To comprehend and analyze the narrative and applied theory, additional research papers, journals, and literary works have been meticulously selected as secondary sources for online data collection. To provide a comprehensive understanding of the findings, the researcher has thoroughly examined the work of other experts and critics specializing in meteorological hazards.

### **Analysis**

The textual analysis technique is used for the analysis and interpretation of the selected text of the novel *The Day After Tomorrow* by Whitley Strieber, while eco-criticism by William Rueckert serves as the theoretical framework.

### **Theoretical Framework**

To identify the meteorological hazards of the global ecological crisis, this study primarily examines *The Day After Tomorrow*. Further analysis of the study supports the prospect of another ice age in Whitley Strieber's novel. Researchers using qualitative data analysis have highlighted the importance of literature in illustrating meteorological hazards leading to another ice age. This study examines the eco-critical effects of grand theories on *The Day After Tomorrow*. Our eco-critical analysis of *The Day After Tomorrow* explores how weather threats transform into the next ice age using William Rueckert's eco-criticism theory.

William Rueckert's eco-criticism thesis holds that human activity is the root cause of all weather-related dangers. According to Rueckert, eco-criticism is a relatively recent field of critical research, having been established in the mid-20th century. Many elements of this philosophy, which focuses on examining how humans interact with nature, can be seen in contemporary literature. The relevance of eco-criticism has increased dramatically as the global climate crisis intensifies. The environment on Earth has suffered extensive harm in recent centuries due to human activity.

For instance, the ozone layer, which envelops the globe and shields it from space's atmospheric effects, has been damaged by carbon emissions from industrialization and mass farming. Many animal species have gone extinct as a result of habitat destruction caused by the expansion of towns and cities. Climate change activists are now urging nations to commit to reducing emissions and safeguarding the environment before it is too late. Rueckert asserts that it is the responsibility of both the natural sciences and the humanities to work together to raise awareness and provide solutions for environmental and climate crises.

### **Analysis and Discussions**

#### **Ecological Disaster**

Any catastrophic occurrence affecting the natural environment that results from human activity is referred to as an ecological disaster or environmental disaster. It outlines that there are two main types of disasters-natural disasters which are caused by environmental hazards, and examples include floods, tornadoes, cyclones, volcanic eruptions and landslides. The second type is man-made disasters, which result from human factors like fires or industrial accidents.

Resultantly our novel comes under natural disasters with referring anthropogenic activities. Furthermore, the natural category being divided into six disaster groups which are Biological, Geophysical, Meteorological, Hydrological, Climatological and Extra- Terrestrial. Consequently, at the very start of this novel, it is showed that Jack Hall is collecting samples of ice pores at Atlantic which made him realized about the upcoming changes in weather patterns leading to meteorological hazards. Moreover, he is shocked due to these constant atmospheric changes will face them a greatest ecological disaster ever recorded in history.

#### **Meteorological Hazards**

Meteorological (weather) processes, particularly those involving wind and temperature, are what cause meteorological risks. This covers hurricanes, cyclones, freezing rain, heat waves, and cold waves. However, in the novel the entire globe is facing frequent changes in the global weather, which is causing a huge meteorological hazard including, cold wave, freezing rain in almost every part of the universe. The climatologist Jack Hall is convincing the globe that it's a good time to think ahead by making alliances, ask for help and take a look at this long-term perspective.

#### **Interpretations**

##### ***Extract 1***

"There were no factories sewing pollutants when it had happened ten thousand years ago and hundred and twenty thousand years ago when it had been so ferocious that it had led to a full-fledged ice age, the automobiles had not exactly been invented."

##### ***Analysis***

Through his scientific beliefs, Jack Hall consistently raises awareness of the fact that human activity is mostly responsible for meteorological threats. Additionally, he highlights industrialization by characterising it as a complicated process. According to him, factories, mass-produced automobiles or cell phones, vast warehouses, forklift trucks, and enormous container ships may come to mind when one thinks about industrialisation. A number of technical advancements brought about by industrialisation enhance production and enable people to produce more items more quickly, resulting in the availability and affordability of commodities, meals, and even medications.

As a result, the novel's effects are far broader. Because industrialization affects how we live and work, it includes both material and social components. We are living above and beyond nature by using machinery to produce food and things artificially. As Jack Hall argues in the book, many believe that we have struck the incorrect balance between industrialization and nature, and that we must immediately begin preserving the natural world and our planet in order to have a better future. Overproduction, waste, pollution, and the depletion of natural resources are all common outcomes of industrialization. It involves hazardous machinery and a risky working environment.

##### ***Extract 2***

"Now Vorsteen chimed in with some gimcrackery. The only force strong enough to affect global weather is the sun. 'OH, yeah, buddy, that and you're big, beautiful SUV and a few billion other smoking machines. As it has been pointed out earlier in the literature review that the anthropogenic activities s is constantly trying to increase the meteorological hazards that will turn into next ice age".

**Extract 3**

“Something like 300 million trees, many of them hundreds of years old and as solidly rooted as trees could be, had been uprooted across the continent”.

**Analysis**

Every year, millions of hectares of forest are destroyed by forest fires worldwide. However, other natural calamities like droughts and floods are also increasing in frequency and contributing to deforestation as climate change worsens. This is a vicious cycle: climate change becomes worse when there are fewer trees. Carbon dioxide is absorbed and stored by trees. Carbon dioxide and other greenhouse gases are released when forests are removed or simply disturbed. About 10% of global warming is caused by the destruction and loss of forests. Without halting deforestation, we will be unable to combat the climate issue. Deforestation raises the atmospheric concentration of carbon dioxide, which raises the surface temperature of the Earth. Thus, global warming is caused by deforestation.

**Extract 4**

“Too bad that every hundred thousand years which was the blink of an eye in earth time, made almost not one damn bit of sense to anybody except a scientist”.

**Analysis**

Global warming which is leading to meteorological hazards predicting another ice age had become the problem of scientists not societies. Jack Hall is telling us that this not the issue which will suffer only scientist, but the entire universe will be affected. Therefore, it is our collective duty to sort out the concerned controversial issue rather than leaving it on the Scientist only.

**Conclusion**

The meteorological hazards in *The Day After Tomorrow* from an eco-critical perspective. The eco-critical examination of meteorological hazards in *The Day After Tomorrow* is examined using eco-critical methodologies. The findings reveal that anthropogenic activities have an ecological impact on global weather leading to the next ice age. The author included the concept of meteorological hazards in the novel because global weather faces a lot of issues due to meteorological hazards. Similarly, Jack Hall faces meteorological hazards in the novel. Current research on meteorological hazards reveals that the global atmosphere is more vulnerable to ecological disasters such as meteorological hazards.

Weather catastrophes are often caused by extreme weather conditions such as drought, snow, or rain. These influence how the world's atmosphere and weather are formed. Drought, heat waves, cold waves, tornadoes, hailstorms, cyclonic storms, and blizzards. Tectonic movements, lunar activity, deforestation, soil erosion, air pressure, ocean currents, pollution, global warming, mining, seismic waves, etc. are all causes of weather dangers. Landslides can be caused by mining, deforestation, agricultural operations, etc. Wildfires may also harm animals and plants.

Seek out and connect with social support.

1. The study has repeatedly shown that resources, support from others, and early intervention may all play a significant role in assisting individuals in overcoming the harmful consequences of a traumatic incident.
2. Considering that a natural catastrophe may affect a whole community, it may diminish your support network. But, as Jack Hall suggests in the book, simply interacting with one person may have an impact.
3. Because forests may be life-saving resources during and after catastrophes, including food, wood for reconstruction, wood fuel, medications, and a way for impacted people to make a living, we should oppose destruction. Trees and forests that are well cared for help lessen the effects of calamities.
4. The researcher will attempt to learn more about how meteorological dangers are portrayed in literature through this study. There is no end to this representation, though, therefore as a research study, the subsequent studies must attempt to address the other causes of association with climatic threats.
5. This research will provide a light way to the following researchers who are interested in working on meteorological hazards in this novel.

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