

## **Ecological Challenges of 21<sup>st</sup> Century In “The Drowned World”**

*Jameela Fathima & Edith Paulin*

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### **ABSTRACT:**

Ecological challenges encompass a range of environmental and sustainability issues that impact the ecosystems, biodiversity, and overall environmental well-being of our planet. In the 21st century, these ecological challenges remain a pressing concern as the world grapples with a complex and interconnected web of environmental problems.

Written by J.G. Ballard in 1962, "The Drowned World" is a work of post-apocalyptic science fiction. The novel is set in the year 2145, portraying a world submerged in floods resulting from climate change. The central character, Dr. Robert Kerans, is a biologist participating in a scientific expedition aimed at studying environmental transformations.

"The Drowned World" stands as a remarkable example of science fiction literature, offering a vivid and imaginative portrayal of a society confronting natural crises.

### **KEYNOTES**

Ecology, environment, climate change, global warming, drowning world, submerging.

### **INTRODUCTION**

In the 21st century, humanity faces an array of pressing ecological challenges that have captured the collective consciousness of societies across the globe. As we confront the increasingly dire consequences of climate change and environmental degradation, the relevance of J.G. Ballard's 1962 science fiction novel, "The Drowned World," has become strikingly apparent. This seminal work offers a prophetic exploration of a world transformed by climate change, where a once-familiar landscape, in this case, London, has succumbed to rising sea

levels and has been submerged beneath the ocean. As such, "The Drowned World" serves as a powerful and thought-provoking allegory for the ecological challenges of the 21st century, offering insights into the consequences of climate change and the unpredictable alterations to Earth's ecosystems.

This research paper delves into the ecological challenges of the 21st century as depicted in "The Drowned World," shedding light on how the novel's narrative and themes can be interpreted as a reflection of contemporary environmental concerns. Through an analysis of the novel's portrayal of a climate-altered world and its effects on both the natural environment and human society, this paper aims to draw parallels between Ballard's fictional vision and the real-world ecological challenges of our time. By doing so, it seeks to illuminate the novel's enduring relevance in the context of modern environmental discourse and the urgency of addressing the ecological issues that shape our world today.

## **ECOLOGICAL CHALLENGES OF 21ST CENTURY:**

Environmental issues encompass the adverse consequences of human actions on the natural world.

Some of the pressing contemporary environmental problems that demand immediate attention are as follows:

**Climate Change:** In the present context, climate change stands out as a paramount concern. It has emerged prominently over the past few decades, largely driven by the release of greenhouse gases. The repercussions of environmental shifts are far-reaching, including phenomena like glacier melt, alterations in seasonal patterns, and the escalation of diseases.

**Global Warming:** The accumulation of greenhouse gases resulting from activities such as the combustion of fossil fuels, vehicular emissions, and the use of chlorofluorocarbons has led to an increase in the Earth's temperature, commonly referred to as global warming.

**Ozone Layer Depletion:** The ozone layer, a critical layer of concentrated ozone gas, shields us from harmful ultraviolet radiation from the sun. However, this vital protective layer is deteriorating due to substances like chlorofluorocarbons (CFCs) used in industries and everyday products (e.g., aerosol cans). The chlorine in CFCs is responsible for the destruction of the ozone layer, resulting in an ozone hole and exposing both humans and wildlife to harmful UV rays, which can lead to skin diseases, including cancer.

**Water Pollution:** Water pollution occurs when hazardous substances are introduced into rivers, oceans, lakes, and ponds, causing physical, chemical, or biological changes in the water. This pollution depletes oxygen in water bodies, leading to the death of aquatic organisms. Since water is essential for life, it is our foremost responsibility to safeguard it from pollution.

**Air Pollution:** Emissions from industries, vehicles, and the increased use of fossil fuels have given rise to air pollution. Gaseous emissions have contributed to global temperature increases and heightened health risks for individuals.

**Solid Waste Management:** Solid-waste management encompasses the proper handling of solid waste, from its generation and storage to collection, transfer, processing, and disposal. It aims to ensure that waste disposal methods do not have harmful effects on the environment.

**Deforestation:** Deforestation involves the rapid depletion of forests and trees, which play a vital role in providing oxygen, raw materials, and regulating the Earth's temperature.

Commercial deforestation has significantly altered the planet's climate and caused the loss of various plant and animal species, adversely affecting biodiversity.

**Overpopulation:** The global population is burgeoning, with estimates exceeding seven billion. This population growth has led to resource scarcity, and if the trend continues, sustaining such a vast population will become increasingly challenging. Overpopulation is closely linked to other environmental issues, including pollution, waste management, deforestation, climate change, and global warming

**JG.BALLARD THE AUTHOR OF THE DROWNED WORLD:**

J.G. Ballard, a celebrated author, is best known for his non-genre autobiographical novel "Empire of the Sun." However, the majority of his literary work falls within the science fiction realm, albeit in a manner that defies easy classification. Even in his most speculative works, clear genre labels don't quite fit, and his more mainstream writings consistently incorporate elements of fantasy and speculation. Ballard was a short story writer, a period that climaxed in 1960, Set amid desert landscapes, in a moodily-depicted near-future world situated in a larger, declining universe.

J.G. Ballard became closely linked with the New Wave movement of science fiction early in his career, primarily through his apocalyptic or post-apocalyptic novels, which included "The Drowned World" (1962), "The Burning World" (1964), and "The Crystal World" (1966). However, in the late 1960s and early 1970s, Ballard shifted his focus to a diverse collection of short stories often described as "condensed novels," as seen in works like "The Atrocity Exhibition" (1970).

In Ballard's literary works, he explores and criticizes the changing nature of media, providing perspectives on how we experience the "natural" world and climate change. His characters often gravitate toward environments where they undergo disruptions, allowing them to reevaluate their connection to time on a larger scale, be it in evolutionary, geological, or cosmic terms. This aligns with the imperative of the anthropogenic concept, urging us to reexamine our relationship with time.

### **THE DROWNED WORLD:**

The novel opens with a grim anticipation of increasing heat. Dr. Kerans stands on the Ritz hotel balcony, observing the altered sun and vegetation in a world shaped by environmental catastrophe. His usual routine is disrupted as he contemplates his detachment from the military unit he's part of. Kerans enjoys the solitude of the luxury hotel as he contemplates the transformation of the world outside. His relaxed demeanor contrasts with the unsettling changes in the environment and his own appearance, marked by bleached hair and sun-damaged skin.

Riggs often seeks Kerans' help in evacuating the last residents of submerged European cities. Kerans, a medical doctor, finds Riggs intelligent and friendly but hasn't shared a particular joke. As they prepare for an evacuation, Kerans invites Riggs for a drink and humorously implies he should check the Hilton for room availability. Kerans prefers solitude, akin to animals undergoing transformation, which makes him wonder about his own changes.

When Riggs asks if Kerans listens to the radio, Kerans rejects the idea, saying they know the future for the next three million years. Riggs surprises him with news of their imminent departure to Camp Byrd due to extreme heat, alongside American and Russian units. This perplexes Kerans, who finds solace in the Ritz's comfort.

The purpose of Riggs' visit is revealed: persuading Beatrice to leave. Kerans acknowledges her complexity and unusual behavior. They depart on a cutter, and Riggs comments on the bewildering nature of their work and the impending chaos in Europe. Riggs asks about Kerans' sleep, leading to a puzzled response.

As Kerans observes from the catamaran, numerous iguanas perch on the windows of submerged office buildings and department stores. He reflects on his lack of interest in identifying the drowned cities they visit, despite finding them enchanting. In contrast, biologist Alan Bodkin, much older than Kerans, has lived in many of these cities and seeks out familiar places from his memories. The absence of personal connections to these sinking civilizations makes Kerans indifferent to their fate, except for a few older individuals who recall their past life in these cities.

The story traces back to "geophysical upheavals" that began six to seven decades earlier, triggered by solar storms depleting Earth's protective barrier against solar radiation. This led to a gradual rise in temperatures, rendering tropical regions uninhabitable, and causing human populations to migrate towards the poles. Life adapted to the changing climate, giving rise to new plant species, while the polar ice caps started melting into the oceans. Mammal fertility decreased, while amphibians and reptiles thrived and adapted to aquatic life.

Kerans and Riggs arrive at the testing station, where they find Beatrice Dahl. She appears unhappy, likely due to Riggs forcing her to accept their departure. Kerans tries to persuade Beatrice to listen and comply with the plan, but she remains dismissive. After Riggs explains the situation to her, Kerans inquires about her motives. Beatrice and Kerans are left alone, and she suggests they stay together, referencing her apartment that has sentimental value. Kerans reminds

her that if Riggs departs without them, it means they will stay, not leave. Beatrice also mentions her recent nightmares.

Kerans returns to the base's landing stage, glimpsing Beatrice on the balcony. He resolves to maintain the illusion that he and Beatrice will leave with the others. Inside the armory, he notices the stockpile of ammunition and weapons, pocketing a compass before leaving.

In the sick bay, Kerans finds Lieutenant Hardman, who exhibits signs of malaise and insomnia similar to Kerans. He leaves Hardman under Bodkin's care, and Hardman reveals that listening to a record is a waste of time. Bodkin and Kerans discuss an experiment they were conducting, and Kerans unintentionally mentions the imminent departure in three days. He later regrets revealing this information and questions Bodkin about their experiment. Bodkin introduces the concept of "Neuronics," a new psychology explaining the impact of evolving flora and fauna on humans. Kerans contemplates the validity of this theory. Kerans takes out the compass he stole from the armory and ponders his motives and the inevitable consequences of his action.

Kerans, Beatrice, and Bodkin remain in London as Strangeman damns the lagoon and drains the water. Strangeman's crew captures Kerans and tortures him. Eventually, Kerans escapes and reunites with Beatrice. Riggs and the army arrive, and Kerans tries to flood the lagoon but is shot by Macready. The water rushes in, upturning Strangeman's boat. Beatrice urges Kerans to leave, and he escapes on a raft.

Kerans travels south, his gunshot wound worsening. He encounters the blind and emaciated Lieutenant Hardman, whom he cares for briefly before Hardman disappears. Kerans

continues his journey, marking his well-being on an apartment wall. He heads south, searching for forgotten paradises.

## **THE DROWNED WORLD AS POST APOCALYPTIC AND CLIMATIC FICTION**

Post-apocalyptic literature is a genre that explores human responses to a global catastrophe leading to widespread death and societal collapse. While the nature of this catastrophic event can vary, it is typically characterized by the demise of many individuals and the disintegration of established society. Post-apocalyptic fiction can be set in the aftermath of scenarios like nuclear warfare, deadly pandemics, zombie outbreaks, environmental disasters, or extraterrestrial invasions. In this genre, the specific trigger of the disaster often takes a back seat to the examination of how survivors navigate their existence in a transformed world.

J.G. Ballard, a pioneer in the post-apocalyptic dystopian genre, explored the impact of climate change in his 1962 novel "The Drowned World," long before climate fiction, or climatic-fiction, became widely recognized. Ballard's work influenced many contemporary authors in the genre. Climatic-fiction, characterized by its imaginative exploration of climate change's effects, often evokes an anxious, dystopian mood.

Climate fiction overlaps with post-apocalyptic fiction, where civilization has collapsed, although the latter has ancient mythological roots in apocalyptic floods and catastrophes. Ballard's "The Drowned World" highlights the impact of natural events on Earth's climate, causing inhospitable conditions for humans.

### **HUMAN VERSUS NATURE IN *THE DROWNED WORLD*:**

In "The Drowned World," nature is depicted as a powerful force with its own consciousness. This portrayal emphasizes humanity's helplessness in the face of uncontrollable environmental changes caused by solar radiation. The characters, including Dr. Bodkin and



Kerans, acknowledge their role as observers rather than controllers of these changes. When Strangeman arrives, he challenges this perspective by actively shaping the environment, draining a lagoon and returning London to its former state. However, this control over nature is short-lived, as Dr. Bodkin and Kerans resist it, believing that humans must accept nature's dominance. The novel conveys the idea that humans cannot truly control nature, and the concept of "man versus nature" is fundamentally flawed, as nature ultimately prevails.

### **WORLD TOWARDS FAILURE**

In the novel global water levels have risen and all cities south of the Arctic Circle are underwater. The year is 2145 and few people remember what the world was like when humans lived in the cities of Europe and America.

The world's transformation in the novel reflects the consequences of humanity's failure to confront climate change and ecological decline, serving as a cautionary message about the possible breakdown of societies in the face of environmental crises.

In today's world, similar concerns exist regarding our inability to effectively tackle climate change, deforestation, biodiversity loss, and other environmental issues. "The Drowned World" acts as a warning that aligns with these modern apprehensions, underscoring the urgency of taking proactive steps to avert devastating environmental breakdowns.

### **THE ECOLOGICAL CHALLENGES OF 21 CENTURY AS IT IS IN THE DROWNED WORLD**

The recent reports on the accelerated melting of glaciers and the alarming climate change indicators mirror the themes explored in J.G. Ballard's novel "The Drowned World." In the novel, the world has already suffered significant environmental changes, and the characters grapple with the consequences of these changes.

The world's glaciers melted at dramatic speed last year and saving them is effectively a lost cause, the United Nations reported, as climate change indicators once again hit record highs. The UN's World Meteorological Organization said that the last eight years have been the warmest ever recorded, while concentrations of greenhouse gases such as carbon dioxide hit new peaks.

The October 2023, WHO report reveals that climate change is already affecting 3.6 billion people, potentially causing 250,000 additional annual deaths from various health issues between 2030 and 2050. Climate change also strains healthcare systems and degrades environmental and social factors that impact physical and mental health. Urgent action is needed to prevent increased health risks, protect global health gains, and uphold the right to health for all. The report underscores the broader consequences of climate-related events and stresses such as shifting temperature and precipitation patterns, droughts, floods, and rising sea levels. These factors degrade both environmental and social determinants of physical and mental health. Climate change affects all aspects of health, encompassing clean air, water, soil, food systems, and livelihoods.

According to CBS, Himalayan glaciers are melting at an unprecedented rate, with scientists warning that this will have widespread repercussions. The Himalayan-Karakoram-Hindukush (HKH) region, which stretches over 2,175 miles from Afghanistan to Myanmar, houses the world's highest mountains, including Mount Everest. The melting glaciers in the Himalayas would spell disaster for around 240 million people living in the HKH region and an additional 1.65 billion people downstream. This rapid glacial melt is expected to lead to severe weather events with far-reaching consequences.

The recent article in Live Mint highlights the alarming projections regarding rising sea levels and the potential impacts of climate change on coastal areas, particularly in cities like Mumbai, Kochi, Mangalore, Chennai, Vishakapatnam, and Thiruvananthapuram. The study by RMSI indicates that these critical properties and road networks in these cities may be at risk of drowning by 2050 due to sea-level rise. The article discusses how internal climate variability can exacerbate the rise in sea levels, potentially leading to a 20-30 percent increase in some locations. This increase in sea level rise, combined with climate change, could result in more frequent and extreme flooding events. As seen in the case of Manila, the study predicts that coastal flooding events could become 18 times more common by 2100 compared to 2006, primarily due to climate change.

These reports emphasize the urgent need for climate action and the importance of addressing the impacts of rising sea levels and extreme weather events, as highlighted in the context of J.G. Ballard's novel "The Drowned World." The real-world developments underscore the relevance of such concerns and the need to take measures to mitigate climate change and its consequences.

## **CONCLUSION**

"The Drowned World" by J.G. Ballard, penned in 1962, presents a remarkable work of science fiction that remarkably foreshadows the ecological challenges of the 21st century. The novel provides an uncannily prophetic vision of a world profoundly impacted by climate change, where rising sea levels submerge major cities, forcing humanity to grapple with the dire consequences of environmental degradation. In a time when our planet is beset by issues such as climate change, global warming, glacier melt, ozone layer depletion, water and air pollution,

solid waste management problems, deforestation, and overpopulation, Ballard's narrative emerges as a poignant allegory for the pressing environmental dilemmas we confront today.

"The Drowned World" serves as a stark warning, underscoring the imperative of taking proactive measures to tackle these ecological challenges head-on. It accentuates the potential calamities that may befall our planet and societies should we fail to confront these issues, mirroring the catastrophic world depicted in the novel.

The parallels between the novel's portrayal of a changing climate and the contemporary environmental issues are strikingly apparent. Recent reports regarding the alarming acceleration of glacier melting and the breaking of climate records closely resonate with the themes of the novel, accentuating its relevance in today's context. The alarming health warnings from organizations like the WHO concerning the health repercussions of climate change underscore the widespread impacts of environmental shifts, which Ballard's work astutely anticipated.

As we bear witness to the real-world surge in climate change and its catastrophic aftermath, "The Drowned World" calls upon us to unite in the mission to safeguard our planet and secure a sustainable future for all. It is an eloquent reminder that the consequences of inaction in the face of ecological challenges can be nothing short of disastrous. Therefore, it is incumbent upon us to heed the profound lessons imparted by this thought-provoking novel and take immediate, concerted action to address the ecological challenges of the 21st century, for the window of opportunity to do so is fast closing.

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