



The Impact of Climate Change on Human Lives in James Graham Ballard's *The Drowned World*

Omar Ayed Shaman AL.Qudah¹

¹ PhD student, University of Canberra, Australia
Email: omar.alqudah@canberra.edu.au

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Abstract

Climate fiction, also known as cli-fi, was coined by the American journalist Dan Bloom. It has gained popularity in the last decade due to the urgent and widespread discussion of climate change and has been explored in various literary forms. The present research aims to investigate the impact of climate change and global warming on human lives. To achieve this objective, the study employs a descriptive-analytical approach to examining the concept of climate change in *The Drowned World*. The analysis of the novel ultimately reveals that climate change has a profoundly negative impact on human life, painting a bleak picture of the world. Additionally, the book reflects a deep conflict between characters who believe in climate change and its catastrophic effects on our lives and those who deny its existence, revealing that the latter group has the upper hand. As shown in the novel, the primary cause of climate change is natural processes rather than human activities. Finally, the study concludes that nature can be more accurately characterised as a winner and humans as victims.

Keywords: Climate Change, James Graham Ballard, Climate Fiction, *The Drowned World*

Introduction

“The relationship between humankind and nature can be one of respect and love rather than domination... The outcome... can be rich, satisfying, and perpetually successful, only when both partners are modified by their association to become better adapted to each other... With our knowledge and sense of responsibility... we can create new environments that are ecologically sound, aesthetically satisfying, and economically rewarding (Dubos, as cited in Kellert and Calabrese, 2015).

Since the time of the cavemen, people have been interested in natural phenomena due to their significant effect on human life, including climate change. No matter how advanced human development becomes, climate change remains beyond our control, and its effects, especially the extreme ones, are difficult to manage. In the last few decades, environmentally conscious, eco-friendly cultures have emerged in the Western world,

particularly in Australia, where the researcher used to live. He notes that a growing number of people have become more aware of the environmental impact, and many have begun to adopt ecologically sustainable lifestyles to the best of their ability. For example, many individuals are avoiding plastic products, including plastic bags at supermarkets. Furthermore, Public interest increased in climate change due to the discovery of the ozone layer hole by Joe Forman, Brian Gardiner, and Jonathan Shanklin in 1985 over the Antarctic. This discovery became an icon of growing worries and fears about the world and the future of humanity.

Climate change fiction has become a very serious issue in twenty- first century, especially for countries adjacent to seas and oceans, such as the United States, Britain, Australia, Canada, and many others. Although this narrative, *The Drowned World*, belongs to science fiction where writers feel free to incorporate imaginative elements, many of their depictions, like floods, drought, storms, volcanic activity, and desertification, are supported by scientific evidence. The significance of this topic is manifested through the countless rallies, activities, demonstrations, exhibitions, and conferences held to pressure governments into taking action. Furthermore, this work (*The Drowned World*) belongs to fiction; it is, in fact, a serious document about the horrible fate awaiting the globe and its inhabitants.

Discussion and Analysis of *The Drowned World*

The Drowned World depicts a world where important cities such as London, the capital of the United Kingdom, have transformed into tropical lakes with growing levels of water resulting from rising temperatures. Variations of the solar disc have caused the ice sheets to melt in numerous ways, leading to climate change. The novel is divided into 15 chapters, each of which centers on a single character or a cast of characters and describes events from their points of view. It begins in 2145 in London, which will be drowned in the ocean due to climate change. After the solar flare destroys the earth's atmosphere, the earth becomes at risk of solar radiation, which could cause many diseases such as skin cancer and malaria. However, a group of experts, directed by the biologist Dr. Robert Kerans, decided to stay in the drowned city (London). At the same time, the temperature was sixty degrees hotter than before to study animals and plants in the new climate-changed environment. Additionally, Dr. Kerans physically and mentally struggles to modify heat, quickly shifting their lifestyle. Although the remaining people in the lagoon ran away to the north and south as a result of high temperatures, Dr. Kerans, Dr. Bodkin, and Beatrice chose to live together in the lagoon to live an isolated kind of life. However, a man called Strange Man appeared with his crew in the drowned city searching for treasures. He was so aggressive that he killed Dr. Bodkin in cold blood because he changed his mind to drain the submerged city in order to visit his old haunts. When he realized that the strange man wanted to restore the old world of the drowned city, the Strangman and his team could not

find any treasures in the submerged city. The man decided to drain water to discover a town underneath the entire lagoon, London. The researcher noted a conflict between characters; while some accepted the climate-altered environment, others aggressively resisted it. This divergence in attitudes is a principal drive of the narrative tension. The novel starts with “Soon it would be too hot” (p.7); by these words, the writer wants to warn people about the drastic climate change in the near future that will affect all kinds of faunae, florae, and humans:

Pockets of air would heat rapidly, then explode upwards like escaping balloons, leaving behind a sudden detonating vacuum. The steam clouds hanging over the creek dispersed briefly, and a vicious miniature tornado lashed across the 60-space plants, toppling them like matchsticks (p. 8).

This quotation illustrates the unstable environment using quasi-scientific language and highlight the suffering of all characters in the novel due to climate change. Over time, the heat in the novel increasingly aggressive: “Even though the massive olive-green fronds the relentless power of the sun was plainly tangible,” and the water in the drowned city “seem to burn.” As a result of the extreme temperature, Kerans, the main character, first wipes his “sweat,” and then, to protect his eyes from sunbeams, “put on a pair of heavy sunglasses.” Additionally, a man, who normally arrives at “the biological testing station” at least three or four hours early to do some work before the temperature becomes “intolerable” finds himself “reluctant” to leave the “cool” hotel that morning (p.7). Furthermore, the high temperatures bring different kinds of “vicious insects” that cover the entire surface of the hotel; some of which cause many diseases, such as malaria. The heat is also responsible for awakening “mosquitoes” from their nests, and gives “alligators and giant bats” the opportunity to attack humans (pp.10-192). Moreover, Kerans is unable to sleep due to the extreme heat, and his head feels as if it has been struck by “the kick of a leather boot.” Both the heat and the noise drummed at “Kearns’s brain” like a “thousand clubs, clouds of dust billowing around him” (pp.73-75). This reflects the strong relationship between headaches and lack of sleep (Geng, 2021). According to the novel, tropical areas will become “uninhabitable” due to rising “temperatures,” forcing people to migrate either south, north, or to Camp Byrd, which is one of the far places on this planet that can still house mankind (pp.22-23). Brown (2008), supports this idea, stating that the major drivers of climate migration are dangerous heat, floods, storms, and drought. In the novel, the main reasons the characters abandon the drowned city are heat and flooding, as they seek better living and safety.

When Bodkin asked Robert to summarize the past three years of work in the submerged city, he responded:

Well, one could simply say that in response to the rises in temperature, humidity, and radiation levels, flora and fauna of this planet are beginning

to assume once again the forms they displayed the last time such conditions were present-, roughly speaking, the Triassic (p.45).

Kerans describes the hot climate in the drowned city as resembling that of the Triassic period, which occurred over 200 million years ago and saw the extinction of approximately 75 percent of all plant and animal species (Team, 2020). Kerans claims that even the gloomy “green-black” leaves come from the “Triassic Past” (p.10). According to Team (2020), “The message of this finding is absolutely alarming,” highlighting the perilous consequences of climate change that will threaten people across the world.

The impacts of climate change and global warming on humanity are clearly noticeable in two major ways: physical and mental health. The main character, Kerans, exemplifies someone who struggles to adapt to the changing environment and lifestyle:

Although he was only forty, Kerans' beard had been turned white by the radio-fluorine in the water, but his bleached crew-cut hair and deep amber tan made him appear at least ten years younger. A chronic lack of appetite and the new malaria had shrunk the dry, leathery skin under his cheekbones, emphasizing the ascetic cast of his face (p.11).

This passage introduces the main character, Kerans, whose appearance reflects the complex environment of the novel. Keran's beard has turned white due to “the radio-fluorine in water,” and the harsh environment has also changed his body. The physical transformation symbolizes the huge effect of environmental change on human beings. The novel portrays a great contrast between “Kerans' beard (that) had been turned white” and his youthful appearance described as “at least ten years younger.” This contradiction underscores. symbolizes the psychological and physical complexities people face in response to climate change and global warming. Furthermore, the expression “lack of appetite” serves as a metaphor for food and water shortages, while the word “new malaria” indicates that the drowning of London has led to the emergence of new diseases. Agreeing with Casadvall (2020), climate change will have significant “changes to the epidemiology of infectious diseases through changes in microbial and vector geographic range” (p. 533). Unstable weather, heat, humidity, and air pollution can lead to a new disease, characterized by a direct and indirect connection between climate change and disease.

Accordingly, Seymour (2016) argues that humanity is affected by any changes in nature, good or bad. As a result of nature transformation, Riggs warns that Beatrice will go crazy if she “stays here much longer” (p.17). This aligns with findings by Clayton, Manning, Speiser, and Hill (2021) who state that, “Longer term climate change can cause equally significant mental health impacts. Heat can fuel mood and anxiety disorders, schizophrenia, vascular dementia, use of emergency mental health services” (p.6).

These lines also describe the suffering of the characters due to the extreme change

in landscape:

However, I am really thinking of something else. Is it only the external landscape that is altering? How often recently have most of us had the feeling of déjà vu, of having seen all this before and remembering these swamps and lagoons all too well? However selective the conscious mind may be, most biological memories are unpleasant ones, echoes of danger and terror. Nothing endures for so long as fear. Everywhere in nature, one sees evidence of innate releasing mechanisms literally millions of years old, which have lain dormant through thousands of generations but retained their power undiminished (p.46).

The combination of high radiation and fear of climate change causes a significant risk to mental health. In the drowned city, the inhabitants have suffered severe losses due to intense climate infernos. As a result of stress, panic, tiredness, heat, exhaustion, and depression, people frequently experience a phenomenon known as "déjà vu" (the feeling of having already seen something). According to Richardson and Winokur (as cited from Linszen and Sno, 1991), the "déjà vu" experience usually happens among "psychiatric patients" (p. 1590). The passage encourages readers to study the relationship between internal psychological responses and external environmental changes. Additionally, there is a strong, mysterious relationship between shifting landscapes and human memories in which both complete one another. For example, landscapes hold, depict, and elicit memories, while memories recollect, alter, and form landscapes (Bridges & Osterhoudt, 2021).

In the section entitled "Descent into Deep Time," the first dream comes to Kerans while he was sleeping in his bed at the "testing station,"

He had left his cabin and walked out onto the deck, looking down over the rail at the black luminous disc of the lagoon. Dense palls of opaque gas swirled across the sky only a few hundred feet overhead, through which he could just discern the faint glimmering outline of a gigantic sun. Booming distantly, it sent dull glows pulsing across the lagoon, momentarily lighting the long limestone cliffs that had taken the place of the ring of white-faced buildings (p.77).

Robert Kerans wakes up from his dream so exhausted that he barely opens "his eyes", his head splitting as a "burst marrow" (p.77); his heart is thrashing in time with the sun beating, and awful fear grips him. Yet, he is certain that his team members, Beatrice Dahl and Bodkin, have experienced the same dream: "It is basically the same recurrent dream in all cases" (p.79). These dreams reflect not only their current lifestyles and suffering in the submerged city but also echo the past concept of "preconscious filters" that

serve as a metaphor of horror and misery. Such things Agree with Kaan Jan Boztepe (2020): “When in communication with the conscious mind, the preconscious mind filters the repressed feelings and urges and provides people with their meaning and persona such as their imagination, beliefs and behaviors” (para. 3). Additionally, these dreams inspire characters to share their worst worries and fears: “So you are one of the dreamers now, Robert,” with this process of sharing beginning with Beatrice Dahl, who “had seen the same dream” (pp.78-79). According to Sigmund Freud’s theory of dreams, dreams generally refer to people’s feelings, wishes, needs, ambitions, and unconscious desires. He also describes stress dreams as nightmarish, terrifying, and gloomy (Cherry, 2021). Additionally, the recurrent dream often happens and increases during times of depression, stress, and anxiety (Claudia et al., 2021). However, the novel conveys a message to readers that climate change is growing bigger and bigger to the extent that people cannot conceptualize it, allowing it to seep into their lives and dreams and become part of their future.

Dr. Alan Bodkin interpretes the dreams of Kerans, Hardman, and Beatrice in light of a new theory called 'Neuronics'. This idea emerged from his research on recording and observing the impact of climate change and global warming on animal and human life:

Bodkin went on: "If you like, you could call this the Psychology of Total Equivalentents's say 'Neuronics' for short- and dismiss it as met biological fantasy. However, I am convinced that as we move back through geophysical time so, we re-enter the amnionic corridor and move back through spinal and archaeopsychic time, recollecting in our unconscious minds the landscapes of each epoch, each with a distinct geological terrain, its unique flora, and fauna, as recognizable to anyone else as they would be to a traveler in a Wellsian time machine. Except that this is no scenic railway but a total reorientation of the personality. If we let these buried phantoms master us as they re-appear, we'll be swept back helplessly in the flood-tide like pieces of flotsam (p. 48).

This extract illustrates how Dr. Alan Bodkin develops the theory of 'Neuronics' which searches to interpret and describe the strange recurring experiences by humans. He proposes that man automatically or unconsciously recollects the whole evolution of the planet. The theory explains how “biological memories” still control the human minds of city dwellers even in their dreams while their city is drowning (p.46). These unconsciously recall include the “landscapes,” plants, and animals of every period, sweeping back to the “geophysical” era, where the dominance of “buried phantoms” symbolizes grief, fear, death, and a horrible future.

In summary, Bodkin's statement can be understood as a reflection on the profound psychological and existential difficulties presented by climate change. By acknowledging

the interdependence between human psychology and natural behavior, we can gain a deeper understanding of the intricate ways in which climate change affects human existence. With this knowledge, we can take informed action and responsibly care and action for the planet to reduce the adverse consequences of climate change.

Psychological and historical events are integrated into the novel, as the following lines will further reveal:

He remembered the iguanas braying and lunging across the steps of the museum. Just as the distinction between the latent and manifest contents of the dream had ceased to be valid, so had any division between the real and the super-real in the external world. Phantoms slid imperceptibly from nightmare to reality and back again; the terrestrial and psychic landscapes were now indistinguishable, as they had been at Hiroshima and Auschwitz, Golgotha and Gomorrah (p.80).

The central character of this quotation is Kerans, who compares the “iguanas braying” and its life with the true and the false of his dream. The “Braying and Lunging” of the iguanas symbolize a world of chaos and worry. Kerans believes that the relationships between reality and phantoms are vague, prompting him to ask Bodkin for “Hardman’s alarm clock” or to remind to get some “phenobarbitone” to relieve his worries and to treat or stop his skepticism of the ominous dream that dominates his thinking before he goes to sleep. However, Bodkin questions the authenticity of Keran’s dream, suggesting that the “residues of consciousness” are responsible for “holding up the dam.” He argues that the dream reflects “organic memory,” probably the most ancient form of memory in the world (p.81). Additionally, Hardman's dream was described by his colleague Bodkin as caused by something roughly similar to “The innate releasing mechanisms” noticeable in the environment. The passage finally encourages readers to reflect upon the delicate essence of reality and the intricate interaction between the conscious and subconscious mind. In the following lines, Dr. Alan Bodkin explains some of his childhood and the lives of his family in the drowned city:

Bodkin took out his cigarettes. He lit one carefully, then sat back, smoking it calmly. "Do you know where we are?" he asked after a pause. "The name of this city?" When Kerans shook his head, he said: "Part of it used to be called London, not that it matters. Curiously enough, though, I was born here yesterday. I rowed over to the old University quarter, a mass of 82 little creeks, and actually found the laboratory where my father used to teach. We left here when I was six, but I can just remember being taken to meet him one day. A few hundred yards away, there was a planetarium ... His face suddenly tired (pp .82-83).

Dr. Boodkin, who left the city at the age of “six,” expressed a sadly sentimental view of the drowned city, where smoking symbolizes heartbreak and regret. The name of the submerged city is “London,” as Dr. Bodkin says to his mate Kearns. According to Bodkin’s memory, it contained many landmarks, such as a university, a “laboratory” where his dad usually worked, a “planetarium” not so far from here, and a huge “dome” that is still underwater that reminds him of his childhood. In line with Regan (2022), childhood “memories” form people’s perception and future; they usually help us recall past knowledge and experiences. Dr. Bodkin pessimistically shouts to Kerans, “At my age, all you have are the memories of memories” (p.83), explaining that the truth of what he remembers about the drowned city (London) has disappeared. Despite all that, he still sees the submerged city as “the only home I’ve ever known,” and describes his life after leaving it as absolutely “nomadic” (p, 83).

Overall, this paragraph demonstrates Ballard's adeptness in employing vibrant imagery, symbolism, and introspective dialogue to investigate intricate issues and generate a feeling of existential disquietude. By employing the figure of Bodkin and the evocative location of the sunken metropolis, the novel challenges or invites readers to contemplate the human condition when confronted with natural disaster and the inexorable passage of time.

In the Drowned Ark chapter, Dr. Alan Bodkin and Robert Kerans try to understand the new life of the world through a drowning testing station to be displayed in a drowned cinema:

Holding the station off from the buildings they skirted, now and then crushing the soft fern trees sprouting through the windows, they soon covered two hundred yards, slowing as the current diminished around the curve, and finally lodged in a narrow inlet about a hundred feet square in size. Kerans leaned over the rail, looking down through the dark water at the small cinema theatre twenty feet below the surface, its flat roof luckily uncluttered by elevator heads or fire escapes. Waving to Bodkin on the deck above, he stepped in through the laboratory and passed the specimen tanks and sinks to the companionway leading down to the float (p. 85).

The quotation above illustrates how Kerans and Bodkin submerged the testing station underwater. They “moved” at midnight silently via the “surface of the lagoon” (p.84), and then Robert carefully “freed (the station) of its attendant burden” (p.84), allowing it to descend into the “lagoons” just like an “elevator” (p.85). When the station took its place over the drowned “cinema,” which embodies nostalgia, loss, time, and the fleeting of human civilization, Kerans swam to its lowest level to open the door of the station and flood the interior. He then wades quickly and “climbs up” to where his friend Bodkin is waiting (p.85). By drowning the testing station and thereby preventing Riggs and

his group from collecting the necessary scientific data they had gathered, described as “a flotsam of hundreds of pieces of old notepaper eddying away from it (the testing station)” (p. 87), a new conflict emerges between two opposing mentalities of characters, reflecting broader existential tensions. The novel employs deep imagery, such as references to London, memories, and dreams, and pays great attention to details to engage the reader’s imagination and provoke reflection on environmental degradation. However, the novel portrays how Riggs’s struggles to restore the testing station as follows:

After a futile attempt to re-float the station, Riggs had set off at noon as planned, sending the cutter over to the apartment house where he assumed the two biologists were hiding. Finding the elevator out of order, his men had refused the alternative of a twenty-story climb up the stairway- already a few iguanas had made their homes on the lower landings Riggs had finally tried to reach them with the helicopter. Balked there, he was now crashing the Ritz (p. 87).

The lines above reveal the importance of the testing station for humanity, which Riggs fights to refloat. It serves as a multifaceted symbol that helps us understand the main ideas in the novel. Its significance is not in its practical achievement, but in its symbolic, psychological, and thematic weight. The testing station shows how environmental documentation has changed, and what science does. Riggs assumes that the future of people is in the drowned city, whereas Kerans and Bodkin think that the future of people can be through moving to the north out of the submerged city. The two biologists (Kerans and Bodkin) stop the “elevator,” which makes the mission of Riggs group members impossible. This broken elevator serves as a metaphor for the collapse of social mobility. Riggs Group’s use of “the helicopter” demonstrates human weaknesses in the face of environmental challenges. Additionally, “crashing the Ritz” hotel represents nature’s power and the ambiguity of the future.

The chapter entitled “The Man with the White Smile” begins with the appearance of a strange man and his crew that contains only African men: “The stranger driving the hydroplane was not alone” and they were “more than one group” (pp.92-93). This appearance transforms the novel from a state of reflective decline to one of social and political conflict. Strangman and his team have robbed treasures from European countries, “let me take you on a brief tour of my treasure ship” (p.102), and have headed to the drowned city to gather more. As Kerans mentions to Bodkin: “Strangman’s searching for the treasure you’ve hidden down there” (p.111). The novel develops Strangman’s personality through Kerans’s perception as follows:

His handsome saturnine face regarded them with a mixture of suspicion and amused contempt... Whatever his real identity, Strangman was no ordinary freebooter. A curious air of menace pervaded the depot ship, its crew, and

its master. Strangman, in particular, with his white smiling face, its cruel lines sharpening like arrows when he grinned, disturbed Kerans (pp. 99-100).

There are two ideas about Strangman and his team: the first is tough, harsh, aggressive, thief, and strange behavior, with an almost magical aura." This helps him keep "his authority over the crew" (pp. 99–102). The second is the strained relationship between Strangman and the other characters in the novel. Strangman's behaviors reflect instability and ambiguity in the face of global climate change. In the beginning, Strangman accuses Kerans, saying, "Your motives seem so complex, Doctor." Strangman rudely asks Kerans, "When do you finally propose to leave" the drowned city (London)? Kerans tries to change the subject to avoid Strangman's offenses, then he says, "This is our zone of transit; here we are re-assimilating our biological pasts; that is why we have chosen to remain here," and Strangman does not take Kearns's "explanations seriously, swinging abruptly from amusement at their naivety to sharp suspicion" (pp. 99–100). Furthermore, he warns Kerans and his group that the temperature in the drowned city will soon be very high, about "two hundred degrees," and the world is returning to the "Mesozoic Period," which symbolizes a scorching middle life 64 million years ago. In addition, Strangman claims that all people in the city probably do not enjoy their life or work, even though they have spent a long time in that type of life. "The trouble with you people is that you've been here for thirty million years and your perspectives are all wrong. You miss so much of the transitory beauty of life" (p. 101). Finally, Strangman claims that all people living in the submerged city are possibly mentally unstable as a result of the cruel effects of climate change and global warming; for example, he accuses Beatrice Dahl that she is suffering from "time sickness" and "melancholy," to which she curly replies, "You white devil, can't you leave us alone?" and Dr. Bodkin of "sentimental memories," in which he misses the past of London very much (pp. 100–101, 148). Moreover, Strangman murders Dr. Bodkin because he tries to re-flood the lagoon again after he drains it. Robert shudderingly describes Strangman as a "white devil out of a voodoo cult" (p. 174).

The novel pointed out that climate change is the outcome of the following; The succession of gigantic geophysical upheavals that had transformed the Earth's climate had made their first impact some sixty or seventy years earlier. A series of 117 violent and prolonged solar storms lasting several years caused by a sudden instability in the Sun had enlarged the Van Allen belts and diminished the Earth's gravitational hold upon the outer layers of the ionosphere. As these vanished into space, depleting the Earth's barrier against the full impact of solar radiation, temperatures began to climb steadily, the heated atmosphere expanding outwards into the ionosphere where the cycle was completed (p.22).

In the preceding quotation, Ballard reveals that the initial “geophysical upheavals” are responsible for the “earth’s climate” change, which started nearly seventy years ago. The term "geophysical upheavals" indicates massive and far-reaching changes to the globe's natural systems. Global temperatures have been rapidly increasing every year, affecting some parts of the “ionosphere” (p. 22), which is usually produced by “instability in the Sun.” These effects are increased "during magnetic" storms and "flares on the Sun" (p. 80). The sun habitually symbolizes life, energy, and light, but in this text, it becomes a symbol of human suffering. All in all, the passage presents scientific details about climate change, stressing its natural causes. Additionally, the depiction of climate change serves as an important reminder of the possible consequences of natural deterioration, as well as the urgent need for a united effort to address the issues it poses. The change in global temperatures is depicted in the novel as follows:

Worldwide, mean temperatures rose by a few degrees each year. Most tropical areas rapidly became uninhabitable, with entire populations migrating north or south from temperatures of a hundred and thirty and a hundred and forty degrees. Once-temperate areas became tropical, Europe and North America sweltered under continuous heat waves, rarely falling below a hundred degrees. Under the direction of the United Nations, the colonization began of the Antarctic plateau and the northern borders of the Canadian and Russian continents (pp. 22-23).

The quotation above illustrates how rising temperatures make the tropical area “uninhabitable,” forcing people to migrate south and north to escape extreme heat ranging from 130 to 140 degrees Fahrenheit. According to Brown (2008), “forced migration hinders development in at least four ways: through increasing pressure on urban infrastructure and services, undermining economic growth, increasing the risk of conflict and leading to worse health, educational and social indicators among migrants themselves” (p. 10). In contrast, the upheaval in climate helped to form new cities or lands in the north of Russia and Canada "under the direction of the United Nations" (pp.22-23). Such hindrances agree with Gregg Easterbrook (2007), “climate change increases the value of northern land and resources”, arguing that climate change might have some advantages and disadvantages globally; some areas of the world may benefit by, such as northern Canada. This section of the novel effectively summarizes the diverse effects of climate change on both human society and the natural world. It illustrates a planet struggling with unparalleled difficulties and disputes due to climate change and global warming. By focusing on increasing temperatures, changing geography, and risky climate events, the novel emphasizes the immediate necessity for collaborative efforts to reduce climate change and protect the welfare of current and future generations.

This section provides the following description of the sad destiny of the submerged

city:

As the sun rose over the lagoon, driving clouds of steam into the tremendous golden pall, Kerans felt the terrible stench of the water line, the sweet, compacted smells of dead vegetation and rotting animal carcasses. Huge flies spun by, bouncing off the wire cage of the cutter, and giant bats raced across the heating water towards their eyries in the ruined buildings. Beautiful and serene from his balcony a few minutes earlier, Kerans realized that the lagoon was nothing more than a garbage-filled swamp (p.13).

Even though the passage begins optimistically by drawing a beautiful picture of the submerged city, it quickly shifts to a grim realization: the city is overwhelmed by decay, marked by the stench of death and decomposition. The lagoon is absolutely no “more than a garbage-filled swamp.” This image highlights the deterioration of natural ecosystems as a result of climate change.

Kerans, in the following lines, explains the transformations and events he has seen in his nightmares, framing them as part of his journey to the South,

That he had traveled over a hundred and fifty miles southward, he could tell from the marked temperature rise. Again, the heat had become all pervading, rising to a hundred and forty degrees, and he felt reluctant to leave the lagoon, with its empty beaches and quiet ring of jungle. For some reason he knew that Hardman would soon die, and that his own life might not long survive the massive unbroken jungles to the south. Half asleep, he lay back thinking of the events of the past years that had culminated in their arrival at the central lagoons and launched him upon his neuronomic odyssey, and of Strangman and his insane alligators, and, with a deep pang of regret and affection, holding her memory clearly before his mind as long as he could, of Beatrice and her quickening smile (p. 191).

Kerans exemplifies humanity's predicament in the face of climate change, aligning with the English proverb “caught between the devil and the deep blue sea”. The doctor is reluctant to leave his city and migrate south. His close friend Beatrice says, “I've always understood that our duty was to stay on here as long as possible and make every sacrifice necessary to that end” (p.29). However, the rising temperature and the flood that submerged the whole city eventually forced him to migrate south, where the climate is much calmer, cooler, and more remarkable than the tropical area that became an uninhabitable place. During his journey south, Kerans unexpectedly encounters, in the middle of nowhere, his colleague Hardman, whom he had not “seen since the day he disappeared”; he “had been the perfect buffer between Riggs and Kerans” (p. 171, 37). Hardman is one of Rige's team who experienced dreams that “were almost driving him out

of his mind.” Hardman also suffers from the sun, which is typically associated with happiness, confidence, hopefulness, optimism, and enthusiasm, but in this context of climate change, it symbolizes illness, suffering, and death. Kerans notes that his friend (Hardman) is nearly blind, able only to perceive the sun’s set and rise: “corneal cancers almost completely occluded both eyes, and Kerans guessed that they would be able to see little more than the dying sun” (p. 188). Despite expecting Hardman’s imminent death due to the extreme heat, Kerans continues to care for and feed him. He describes Hardman’s life in the jungle as follows:

Unable to advance, Kerans watched the huge, emaciated figure on the ground before him. The man was no more than a resurrected corpse, without food or equipment, propped against the altar like someone jerked from his grave and abandoned to await the Day of Judgement (pp. 187-188).

Extreme heat has ravaged Hardman’s body, leaving him “like a dying beggar”. Kerans observes that Hardman’s voice has deteriorated into a “feeble rasp” and his eyes have become “hollowed”. Additionally, Hardman suffers from depression, stress, and memory loss, for example, “he failed to remember Kerans and addressed him simply as ‘Soldier,’” rather than naming him by his name (Kerans) (pp. 188-189). Overall, the novel effectively highlights real-world issues, depicting humanity as a victim of climate change and nature as an adversarial force. The serious message conveyed is that the future of humanity may mirror that of Hardman and Kerans if collective action is not taken to combat climate change.

Conclusion

The findings of this study show that *The Drowned World* depicts a depressed world image. The main reason for climate change, as illustrated in the novel is due to some sort of variability in the solar disc, which causes ice caps to melt. In other words, the major cause of climate change comes from natural processes rather than human intervention. As shown in the novel, the relationship between humans and nature is based on conflict, and nature has the upper hand. It also portrays humans as victims and nature as winners. By analyzing it, the study finds that climate change seriously affects human and nonhuman lives. Characters in the narrative are divided into two groups based on their behavior toward the drowned city (London); a strange man represents the first group, and his group reflects personal gain and insane, and irrational behaviors. The second group is represented by Dr. Bodkin, who fights to prioritize the public interest over the private interest. As a result, he suffers mentally and psychologically.

The novel successfully employs vivid images of memories and dreams to blur the lines between reality and imagination, which enhances the character's excellent value of experiences and connections by introducing a greater level of complexity. Temperatures,

as presented in the novel, are extremely high, which forces people to move to new uninhabitable areas in the north and south. Additionally, the writer compares the hot weather in the drowned city to the Triassic period, during which the land lost various kinds of plants and animals, including dinosaurs. Finally, the study recommends doing more research that focuses on how women and nature are portrayed or presented in climate fiction, highlighting the relationship between these two elements.

References

- Andima, E. L. (2021). Humanizing climate change through climate fiction: A literary examination of *New York 2140* (2017) by Robinson and *the Drowned world* (1962) by Ballard. Doctoral dissertation, University of Namibia, Windhoek, Namibia.
- Ballard, J.G. (1962). *The Drowned World*. Mikhail Sharonov, 2006.
- Boulard, A. Writing (on) Environmental Catastrophes: The End of the World in Éric Chevillard's *Sans l'orang-outan* and Michel Houellebecq's *La Possibilité d'une île*. *French Ecocriticism*, 215.
- Boztepe, J, K. (2020). BOZTEPE: Freud provides insight into our consciousness. <https://dailytargum.com/article/2020/04/boztepe-freud-provides-insight-into-our-consciousness>.
- Bridges, B., & Osterhoudt, S. (2021). Landscapes and memory. In *Oxford Research Encyclopedia of Anthropology*.
- Brown, O. (2008). Migration and Climate Change. *International Organization for Migration (IOM)*, 19 (16), 9-42.
- Casadevall, A. (2020). Climate change brings the specter of new infectious diseases. *The Journal of Clinical Investigation*, 130(2), 553-555.
- Cherry, K. (2021). Why Do We Dream? <https://www.verywellmind.com/why-do-we-dream-top-dream-theories-2795931>.
- Clarke, J. (2018). J.G. Ballard's "The Drowned World" (1962): Psycho-geographical cli-fi. https://www.researchgate.net/publication/263610513_Reading_Climate_Change_in_J_G_Ballard
- Easterbrook, G. (2007). Global Warming: Who Loses--And Who Wins? *Atlantic Monthly*, pp.199, 52–64.
- Finch-Race, D. A., & Posthumus, S. (2017). *French Ecocriticism: From the Early Modern Period to the Twenty-First Century*. Peter Lang International Academic Publishers.
- Geng, C. (2021). Lack of sleep and headaches: What to know. <https://wartasore.com/host-https-www.medicalnewstoday.com/articles/headache-from-lack-of-sleep>.

- Halford, M. (2009). J. G. Ballard. <https://www.newyorker.com/books/page-turner/j-g-ballard>.
- Howell, R. (2011). Lights, camera... action? Altered attitudes and behavior in response to the climate change film *The Age of Stupid*. 21 (1), 3.
- Jha, S. K. (2020). An Eco-Critical Analysis of Amitav Ghosh's *The Hungry Tide* and *Gun Island* as Climate Fictions. Dr Ram Avadh Prajapati (Eds), *Eco-Sensibility in World Literature* (pp. 87-88). Notion Press.
- Johns-Putra, A. (2015). How "cli-fi" novels humanize the science of climate change – and leading authors are getting in on the act. Retrieved from 'Cli-fi' novels humanize the science of climate change – and leading authors are getting in on the act - World leading higher education information and services
- Johns-Putra, A. (2016). Climate change in literature and literary studies: From cli-fi, climate Change Theater, and eco-poetry to ecocriticism and climate change criticism. *WIREs Climate Change*. 7(2), 266-282.
- Kellert, S., & Calabrese, E. (2015). *The practice of biophilic design*. London: Terrapin Bright LLC, 3, 21.
- Kharisova, K. (2020). *Left and Right-Wing Populism in the United States*. Bachelor thesis, Charles University, Prague, USA.
- Kreider, T. (2013). Our Greatest Political Novelist?. <https://www.newyorker.com/books/page-turner/our-greatest-political-novelist>.
- Licauco, J. T. (2005). *Dwarves and Other Nature Spirits: Their Importance to Man*. Rex Bookstore, Inc.
- Linszen, N, L., Sno, H, L. (1991). The deja vu experience: Remembrance of things past? *American Journal of Psychiatry*, 147 (12), 1587-1595 .
- Nielsen, T., Picard-Deland, C. (2021) Being Chased, Losing Your Teeth or Falling? What Science Says About Recurring Dreams. <https://neurosciencenews.com/being-chased-losing-your-teeth-or-falling-down-what-science-says-about-recurring-dreams/>
- Plantz, K. (2015). As the weather shifts, 'cli-fi' becomes a new literary genre. <https://news.trust.org/item/20150410094252-x7we9/>.
- Regan, S. (2022). 7 Reasons You're Dreaming Of Your Childhood Home, According To Experts. 7 Reasons Your Childhood Home Keeps Popping Up In Your Dream (mindbodygreen.com) .
- Seymour, V. (2016). The human–nature relationship and its impact on health: A critical review. *Frontiers in public health*, 260.
- Smith, J. (2001). *Fiction Non-Fiction Short Stories*. <https://literature.britishcouncil.org/writer/j-g-ballard>.
- Team, Y. (2020). Climate change during the late Triassic linked to mass extinctions. Climate change during the late Triassic linked to mass extinctions » Yale Climate

Connections.

- Temple, E. (2018). You can't rely on inspiration: Essential writing advice from J.G. Ballard. <https://lithub.com/you-cant-rely-on-inspiration-essential-writing-advice-from-j-g-ballard/>
- Ullrich, J.K. (2015). Climate Fiction: Can Books Save the Planet? <https://www.theatlantic.com/entertainment/archive/2015/08/climate-fiction-margaret-atwood-literature/400112/>.
- Wheeler & Braun. (2013). Climate Change Impacts on Global Food Security. *Science*, 341- 512.