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**CLIMATE FICTION, ENVIRONMENTAL CRISES
AND SUSTAINABILITY: A STUDY OF JAMES
GRAHAM BALLARD'S *THE DROWNED WORLD***

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DEDICATION

To the loving memory of my supervisor,
Professor John Nkemngong Nkengasong

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ABSTRACT

The study, entitled “Climate Fiction, Environmental Crises and Sustainability: A Study of James Graham Ballard’s *The Drowned World*” examines an environment in danger due to natural and man-made factors such as global warming, desertification, deforestation, natural disasters and the extinction of some species on earth, and man’s attempt to rescue it from its crisis of despair. The work explores the causes, manifestations, repercussions and ways that this situation can be redressed. An appraisal of the text under study is done within the frameworks of Ecocriticism and Psychoanalysis. The psychoanalytical theory helped in the understanding of the human mind and its functioning, complemented by Ecocriticism which sought to establish the link between human thoughts and the environment. The work was based on the assumption that both natural and human choices are responsible for these crises, and that man could adopt strategies to look for solutions to the environmental problems. Although fossil fuel and other tools are mere objects that man uses to aggravate the environmental problem, the actual problem rests on the ways humans think. This work then came to the conclusion that in order to ensure environmental sustainability, humans need to first understand and acknowledge the existence of the environmental crises, and later become guided by appropriate moral choices in their relationship with the environment.

RESUME

L'étude, intitulé «Climate Fiction, Environmental Crises and Sustainability: A Study of James Graham Ballard's *The Drowned World*» enquête sur un environnement en proie à des phénomènes naturels tels que le réchauffement climatique, la désertification, les catastrophes naturelles et l'extinction de certaines espèces sur la terre et surtout la tentative de l'homme pour empêcher cette crise désespérée. Le travail examine les causes, les manifestations, les répercussions et surtout les méthodes pour palier à cette situation. L'appréciation de cette étude s'est faite à l'aide des outils d'analyse tirés de l'éco critique et la psychanalyse. La théorie psycho-analyste a été utile pour la compréhension de la pensée humaine et a été complété par l'éco-critique dont le but a été d'établir le lien entre les humains et l'environnement. L'étude s'appuie sur l'hypothèse selon laquelle les choix à la fois humain et naturels sont responsables de cette crise et que l'homme pourrait trouver une solution à ces problèmes environnementaux. Bien que les énergies fossiles et d'autres éléments soient de simples objets que l'homme utilise pour aggraver le problème environnemental, le véritable problème réside dans la manière dont l'être humain pense. Ce travail a donc aboutit à la conclusion selon laquelle, pour résoudre la question environnementale, les êtres humains doivent se comprendre et s'assurer de mener une existence guidée par des choix en adéquation avec la morale.

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LIST OF ABBREVIATIONS

| | |
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| ASLE | : Association for the Study of Literature and the Environment |
| Cli-fi | : Climate Fiction |
| ISLE | : Interdisciplinary Studies of Literature and the Environment |
| J.G. | : James Graham |
| MDG's | : Millennium Development Goals |
| NGO's | : Non-Governmental Organizations |
| TDW | : <i>The Drowned World</i> |
| UNESCO | : United Nations Education Cultural and Scientific Organization |
| UNO | : United Nations Organization |
| UNEP | : United Nations Environment Program |
| WCED | : World Commission for Environment and Development |
| WHO | : World Health Organization |

GENERAL INTRODUCTION

The world is facing a lot of challenges as a result of climate change. Over the years, environmentalists and climatologists have been making a clarion call for actions that would halt environmental crises. These calls have met with mutable responses from individuals, non-governmental organizations and even governmental institutions. Nonetheless, the degradation continues more rapidly than ever. As such, there is the need for cultural responses, given that accumulating human impacts could threaten the collapse of global ecology. Almost on a daily basis, ecologists observe accelerating declines in biodiversity and (sometimes related) losses of ecosystem equilibriums. The immediate cause of biodiversity losses that later result to the crises faced by the environment is land-use change (Greenhouse gas and forestry activities) such as climate disruption; overharvesting; invasive species; and global contamination with thousands of chemicals produced by different companies. Such activities have a devastating impact on man, fauna and flora.

A revolution in human behaviour is urgently needed if civilization is to attain ecological sustainability. Science has continuously revealed the basic changes required to accomplish ecological sustainability. Nevertheless, it is extremely difficult to redirect cultural evolution to achieve an environmental-friendly society. However, that seems to be a question fraught with ethical and spiritual issues, especially in view of the decay of human cultural diversity, (Pimm 48). The ongoing crises may not be solved without a more ecologically-oriented, reorganized and cooperative world. In his attempt to develop the environment in which he finds himself, man always thinks of ways to build structures and resilience into the interwoven human and natural economies. Ecological evolution fills the minds of most contemporaries who seek to resolve the burning problems faced by the contemporary man as a result of his poor relation with the environment. Man's life seems to be a mystery that grips his interest as he struggles through his existence to understand himself vis-à-vis his environment. In the course of doing so, he discovers that there are a lot of innovations in the course of his history due to civilizations. Climate change has become a major environmental crisis that had been, and continues to plague man's wellbeing in the environment in which they find themselves.

An awareness and understanding of this environmental phenomenon has increased since the 1980s when it first entered public consciousness (Capstick et al. 15). From the outset, there were two theories that explained the origin of man: Creationism and Evolutionism. According to the Star Publication of the *King James Bible*, the book of Genesis accords six days of the creation of the world by God and one resting day (Genesis 1: 3-31). The other chapters go ahead to elaborate on man's activities in the world. This religious philosophy presents God as the bedrock and centre as he created everything. After the creation of everything including man, man was handed the task to cater for the environment (Capstick et al, ibid 1).

On the other hand, though Charles Darwin, a biologist and philosopher diverted from most of the claims of creationism; especially about God creating everything, he comes to an agreement with the creationist at the level of man evolving (developing) in, or from the environment. Darwin's claim places man in a hostile environment due to the prevailing natural disasters and calamities. As can be inferred from the words of Joseph Carroll in *Literary Darwinism*, man, from the Darwinian perspective is situated within the environment. He expresses this when he explains that "the Darwinian Evolutionary theory has established itself as a matrix for all the life sciences. This theory situates human beings firmly within the natural, biological order ..." (15). From this, we can say that the threat faced by the natural environment is a menace to human existence.

As a higher animal, man plays the role of a judge of the environment as he can either save or destroy it. In other words, whatever predicament that faces the environment seems to be as a result of the action of man, a decision that can be influenced in the choices made by humans. The causes of environmental crises are often blamed on noxious substances utilized by the human agency. Jonathan Bate identifies one of such poisonous substances when he explains that:

Carbon dioxide produced by the burning of fossil fuel is trapping in the heat of the sun, causing the planet to become warmer. Glacier and permafrost are melting... forest shrinking, fresh water becoming scarcer. The diversity of species upon the planet is diminishing (Blossom Fondo, quoted in Ayuk and Kouega, 96)

In this excerpt, some of the causes and repercussions of environmental crises are explained. The burning of fossil fuel is identified as one of the causes of environmental catastrophe through its carbon dioxide as end-product. Environmentalists set in, therefore, to promote the protection of

the environment, which is the source of livelihood to mankind. They propose that man redresses his malpractices towards the environment. As a judge, man's decision counts greatly in redeeming or destroying the environment. Maintaining an environmental-friendly attitude therefore will go a long way to reduce the crises that man, plants and animals face in the environment in which they find themselves.

Global warming, which poses a serious threat to man's existence is mostly caused by the existing environmental crises. The prevalence of the greenhouse gases play a terrible significant role as it disrupts the balance that exists at the level of the atmosphere. In explaining the ghastliness of the environmental tragedy, Paul Wingnall and Richard Twitchelle explicate that "Global warming can cause anoxia by reducing ocean circulation and so reducing the amount of dissolved oxygen in the ocean. Lack of oxygen worldwide would surely have killed much of life on the oceans..." (Quoted in Benton 117).

It can be inferred from this quotation that global warming can cause the death and extinction of many organisms that take refuge in the biosphere. Considering the fact that man is one of those organisms that use oxygen within the biosphere, global warming, with its countless effects can affect man directly or indirectly. The menace which looms around the ecosystem as man tries to develop the environment is a call for concern. Like many environmentalists who share diverse views about the ecology, J.G. Ballard, through his novel, *The Drowned World* addresses environmental crises from his own dimension. As the novel's title suggests, the world is actually drowning as a result of man's activities. Flooding, deforestation and other natural and artificial hazards have had a great toll as well as cause great damage to man and the environment. As explained by Benton, this would not be the first crisis the earth had faced through her existence over billions of years.

The biosphere has also had major problems that led to the extermination of many species of plants, birds, insects, animals and even marine life. Many years ago, since the world became nourished with green life, there had been an environmental crisis of great significance. According to Richard Fortey in *The Hidden Landscape: A Journey into Geological Past*, sixty-five million years ago, there was the Meteor Collision, also referred to as the Cretaceous Tertiary. During this period, the earth was covered with thick layers of dust that shaded the sun rays, thereby obstructing photosynthesis in plants. Though humans did not exist at the time, life that was

available on earth like Dinosaurs and other plants and animals suffered huge losses which led to the extinction of dinosaurs and many other plants and animals (238-260).

Statement of the Research Problem

Nature appears to have gone wild, resulting to a series of natural disasters and calamities. These occurrences such as floods, landslides, earthquakes, tornadoes, cyclones, draughts, acid rains, pandemic diseases and harsh climatic conditions manifest in diverse ways while destroying the lives of man, fauna and flora within the earth's ecosystem. The causes of all these have often been traced to a greater proportion to environmental crises especially global warming caused by man's action such as deforestation, disposal of waste, pesticides, poor disposal of plastics, bush burning, burning of fossil fuel, air and water pollution, just to mention but these. This research therefore is based on the debate that the biosphere continues to be violated through natural and man's activities nurtured by advanced technological development.

Research Questions

In order for the issue raised in the above research problem to be addressed, a number of questions need to be answered:

1. In what ways may J.G. Ballard's *The Drowned World* be considered characteristically as climate fiction?
2. What are the manifestations and consequences of environmental crises in Ballard's *The Drowned World*?
3. In what ways is *The Drowned World* environmentally sustainable?

Hypothesis

This work is based on the hypothetical contention that J.G. Ballard's novel under study has visible features that can qualify it as a climate fiction as it raises fundamental ideas relating to environmental crises; a crisis that seem to be caused by both man-made and natural factors. An analysis of the novel portrays an environment manifesting signs of crisis with great repercussions on not just man, but equally on fauna and flora. An appreciation, evaluation and understanding of the novel can lay the foundation to ameliorate this problem. In other words, this crisis can be resolved when some environmentally-sustainable measures are put in place.

Significance of the Study

Environmental crisis had been given significant attention in several disciplines such as geography and biology. From a literary perspective, little seems to have been done as far as presenting the causes, manifestations and repercussions of this crisis is concerned. This research is therefore significant in that through literature, it serves as an eye-opener for people to know about the sources, indicators and propose remedies to the environmental predicaments. A reading and analysis of Ballard's *The drowned World* increases the solutions that scholarship has registered in the area of environmental crises. The place of scholarship remains vital in the fight against environmental destruction by the different causes mainly instigated by mankind. This is because the treatment of the environment emanates from the cultural awareness of individuals in the society. The cultural perception and reaction towards the environment in particular and all of life in general is mostly engraved in individuals who can read books and make appropriate decisions on the do's and don'ts on environmental issues in order to stay safe.

Motivation

The researcher's interest in this topic was triggered by the fact that in our contemporary society, natural disasters and calamities such as global warming, flooding, landslides, earthquakes, deforestation, tornadoes, excessive heat, just to mention but a few, are very common. These phenomena are dangerous as they destroy both fauna and flora. Over time, people do not interpret climate change and its impacts as a threat and do not feel worried about it. Raising human awareness around this will surely increase the possibility of addressing these existing environmental problems.

Man desires to live a comfortable life. Such welfare of man largely revolves around his ecosystem or environment. Regrettably, the present environmental crises have affected and keep affecting a lot of regions in the world with Cameroon not left out. This awareness is the cause of the conception of this work as it will attempt to identify the origin of this predicament as well as to seek long-lasting solutions to it.

Aims or Purpose of the Study

This work has as aim; to examine characteristics of climate fiction, verify whether *The Drowned World* has those features that can qualify it as climate fiction; explore Ballard's

presentation of the roots, manifestations as well as the consequences of the problems faced by man in the environment in which he finds himself. Finally, it indicates possibilities of resolving the current environmental problem based on an appraisal of J.G. Ballard's view in *The Drowned World*.

Scope of the Study

This research, entitled "Climate Fiction, Environmental Crises and Sustainability: A Study of J.G. Ballard's *The Drowned World*" limits its arguments to James Graham Ballard's novel under study. However, reference is made to some related works on the environment, environmental crisis, environmental sustainability and the functioning of the human mind.

Definition of Key Terms

For the sake of clarity, and in a bid to avoid any form of ambiguity, it is important for some major terms to be defined. These definitions will help to facilitate the reading and understanding of the work from the standpoint and, or focus of the study. To this effect, the following key terms: Climate Fiction, Environment, Environmental crisis and sustainability will be defined.

To begin, the term 'Climate Fiction' has to do with works of arts that focus on the climatic conditions. It is literature that deals with climate change and is generally speculative in nature and it's inspired by climate science. The word 'environment' in isolation is ambiguous. This evidence can be seen in the number of entries it registers in dictionaries. *The Free Merriam Webster Online Dictionary* identifies different types of environments such as the physical, biological, biosocial, the internal and the total environment (232). For the purpose of precision in this work, definition 2a is used. According to this definition, the environment refers to "the complex of physical, chemical and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival" (232). Though this definition seems complex, it encompasses the various elements that comprise what could be termed 'the natural environment'; a type of environment which harbours different organisms.

On his part, John Passmore contrasts the natural environment with the built environment which has been subjected to the effects of human actions. He captures this when he explains that:

We can, for example contrast the 'natural environment from the 'built environment'. The term 'environment' in this narrow sense implies an environment for some creature or collection of creatures, whether plant or animal. Here, an 'environment' is an 'environment' for something. But we also frequently use the term more broadly to refer to the whole of the natural world- from ecosystem to biosphere, within which human beings and all other parts of the plant and animal world have their being (Quoted in Connelly, 8).

From this, we can infer that what Passmore sees as the environment is what serves as a habitat for either plants, animals or other species. As such, the existence of the environmental crises endangers all these organisms. Also, Johnson D, et al. in the Journal of Environmental Quality in the article "Meaning of Environmental Terms" see the natural environment as one which "...encompasses living and non-living things occurring naturally on earth..." (32). This definition situates the scope of the environmental setting (the earth) which is a major interest in this study. The adjective, "environmental" derived from the noun 'environment' collocates with "crises" which is defined below.

The *Glosbe Research Dictionary* defines the term 'environment' as the sum total of all the living and non-living elements and their effects that influence human life. Living or biotic elements here include animals, plants, fisheries and birds; and non-living or abiotic elements include water, land, sunlight, rocks and air. According to biologyonline.com, the environment refers to the external conditions, resources, stimuli, etc. with which an organism interacts. It may also refer to the external surroundings including all the biotic and abiotic factors that affect the survival and development of an organism or population. Also, it may be defined as the totality of the surrounding conditions and elements in an individual. A simple ecological definition of the environment is that it is the place over a particular time where organisms live or that which is occupied by a living thing. It includes all the physicochemical and biological components of the ecosystem.

Another term that is crucial to this work is "crises." According to *The Merriam Webster Dictionary*, the expression 'crises' refer to a condition of instability, or danger, as in social, economic and international affairs, leading to a decisive change. It also looks at the term as an unstable or crucial time or state of affairs of which decisive change is impending, especially one

with the distinct possibility of a highly undesirable outcome. A ‘crisis’, according to this same dictionary entry is an unpleasant situation that is difficult to get out of. *The American Research Dictionary* defines this same word as an unpleasant or confusing situation that is difficult to get out of, or solve. *The Oxford Advanced Learner’s Dictionary* sees ‘crises’ as ‘a time of great danger, difficulty or confusion when problems must be solved or important decisions made’ (348). A similar thing in these definitions is that it presents the ideas of ‘difficulty’, ‘undesirability’ and ‘decisiveness’. Simply put, ‘Crises’ in this study will be seen as difficulties that are undesirable and require good decisions for resolutions.

Based on the definition of “Environment’ and ‘Crises’ given above, Environmental Crises could be taken to mean a situation in which the earth and the organisms it harbours are in difficulty. In other words, environmental crises will refer to the difficulties, challenges, unpleasant and embarrassing situations that man faces in his day-to-day life. It is the dilemma or problems that man goes through as he struggles to give meaning to his existence on earth. This will be adopted throughout our discussion in this work.

Similarly, the proceedings of “The International Conference of Glocal Crises and Environmental Governance in North Eastern Region of India” that held between November 11th – 13th 2013 came out with a definition of ecological crises. Ecological crises could be said to be semantically to environmental crises. It sees the situation to be “... when the environment of a species or a population changes in a way that it destabilizes its continual survival” (1). It goes further to mention some of the causes of this destabilization, one of which is climate change. However, environmental crisis in this work is deeply concerned with different changes the environment undergoes. The focus of this study is more on the genesis of these changes rather than the changes themselves.

The next term to define in this study is “sustainability.” *The Free Merriam Webster Online Dictionary* defines sustainability as ‘the avoidance of the depletion of natural resources in order to maintain an ecological balance.’ The Bruntland World Commission report (1987) defines sustainability as the development that meets the needs of current generations without compromising the ability of the future generation to meet their own needs.” *The Cambridge Dictionary* defines Sustainability as the ability to conserve the present environment without compromising the needs of future generations, while ensuring a balance between environmental

growth, environmental care and social well-being. Shrivastava defines sustainability as ‘offering the potential to reduce the long term risk associated with the resource depletion, fluctuations in energy cost, product liabilities pollution and waste management’ (955). Environmental sustainability can thus be defined as the conservation and preservation of natural resources in the environment from depletion. It aims at protecting natural resources as well as man’s well-being in the environment. We shall adopt the first definition throughout this research endeavor as we ascertain the influence that certain cultural values have on man’s actions on the environment.

Biography of James Graham Ballard

James Graham Ballard was born on November 15th 1930 in Shanghai, China. He is an English novelist, short story writer, satirist, and essayist known for provocative works of fiction which explored the relations between human psychology, technology and mass media. He first became associated with the ‘New Wave’ of science fiction for post-apocalyptic novels such as *The Drowned World* (1962). The literary distinctiveness of Ballard's fiction has given rise to the adjective "Ballardian", defined by *The Collins English Dictionary* as "resembling or suggestive of the conditions described in J. G. Ballard's novels and stories, especially dystopian modernity, bleak man-made landscapes and the psychological effects of technological, social or environmental developments". *The Oxford Dictionary of National Biography Entry* describes Ballard's work as being occupied with "Eros, Thanatos, mass media and emergent technologies".

A large part of Ballard’s childhood was spent in going through war and its consequences. The apocalyptic and somewhat ferocious nature of his fiction books is said to be the result of his early exposure to the mayhem of war. After the end of The Second World War, J. G. Ballard moved to England to live in Plymouth where he attended ‘The Leys School’, Cambridge. He later enrolled into a medical program in King’s College at Cambridge to become a Psychiatrist. During this time he wrote extensively inspired by psychoanalysts and painters. While doing this, Ballard was equally interested in writing. In 1951, which was his second year at King’s College he wrote his first short story titled ‘The Violent Noon’. It got published in the newspaper magazine ‘Varsity’ and also won a competition.

When Ballard saw the appreciation that his story had received, he made up his mind to quit his medical studies and devoted his entire efforts to pursue a writing career. Following his

ambition he entered the Queens Mary University of London to study English literature though he could not complete the program. J. G. Ballard took up a job as a copywriter in an advertising agency and sold encyclopedias during his spare time. None of his work was getting accepted and all his efforts to get recognized went in vain. It was after he joined the Royal Air Force when he came across American fiction magazine. Ballard wrote many stories in this genre some of which are 'Escapement' and 'Prime Belladonna' and 'Passport to Eternity'.

J. G. Ballard realised that his job was not allowing him to write the way he wanted to so he decided to take some time off and take up writing as a full time career. His first novel, *The Wind from Nowhere* came out in 1962 and thus this became the means for his financial support onwards. His other novels include *The Burning World*, *The Crystal World*, *Crash*, *The Day of Creation*, *Empire of the Sun*, *High-Rise*, *Kingdom Come*, *The Wind from Nowhere*, *Running Wild*, and many Others. Ballard equally wrote many short stories such as 'The Atrocity Exhibition' (1969, 1972), 'Myths of the Near Future' (1982) and 'Memories of the Space Age' (1988). He was honored with many awards for his brilliant work including the 'Guardian Fiction Prize' and the 'Commonwealth Writers' Prize'.

In 1964, Ballard's wife, Mary died of Pneumonia leaving behind their three children. This was a very challenging time for Ballard as he had to deal with the crisis as the reality of raising the children alone doomed upon him. The death of his wife shook him deeply and this was reflected recurrently in his writings. Ballard never remarried, but a few years later his friend and fellow author, Michael Moorcock introduced him to Claire Walsh, who became his partner for the rest of his life (he died at her London residence in 2009).

In early 1954 Ballard joined the Royal Air Force and was sent to the Royal Canadian Air Force flight-training base in Moose Jaw, Saskatchewan, Canada. There he discovered science fiction in American magazines. While in the RAF, he also wrote his first science fiction story, "Passport to Eternity", as a pastiche and summary of the American science fiction he had read. The story was not published until 1962.

Structure of Work

This work comprises a General Introduction, four chapters, and a General Conclusion. The General introduction presents basic elements like the statement of the research problem,

research questions, the hypothesis, motivation, aims, scope, significance of the study definition of the key terms, biography of the author and the lay-out of the work.

Chapter One, captioned “Theoretical Framework and Literature Review” focuses on the theoretical approaches adopted for the work. The theories used in this study are Ecocriticism and Psychoanalysis. The chapter gives us the various definitions, tenets, the evolution and propounders of the theories. It also examines related literature to J.G. Ballard’s novel under study.

Chapter Two, entitled “*The Drowned World* as a Climate Fiction” begins by examining the concept of climate fiction in general, its general characteristics and then attempts to situate Ballard’s novel under study under cli-fi. The chapter equally examines various approaches that give a better understanding of climate fiction. Finally, the chapter attempts to examine the novel under study as an eco-feminist tale.

Chapter Three, entitled “Environmental Crises: Causes, Manifestations and Consequences” presents the origin of the environmental crises, the manner in which it is displayed in the novel, as well as its physical and psychological repercussions to man fauna and flora. The causes are presented from two folds: man-made and natural. The manifestations, as well are examined from the physical and psychological dimensions. All of these have unfriendly impacts which are examined to crown the chapter.

Chapter Four, entitled “Towards Environmental Sustainability” seeks to create a link as well as propose some solutions that would rescue the environment from its cries of despair. It ascertains the role of the novel under study in this campaign. The chapter begins from a general note as it presents the role of the United Nations Organizations in enhancing environmental sustainability. It later presents the environmental justice framework which serves as a saviour in conserving and preserving the environment. Finally, the chapter presents the concept of time and its great role in enhancing environmental sustainability.

The General Conclusion summarises the work, states the findings and validates the hypothesis. It equally makes recommendations for further research by opening further research avenues that future researchers would explore as far as cli-fi and James Graham Ballard’s texts are concerned. The General Conclusion briefly captures all the aspects discussed in the entire work to facilitate comprehension.

CHAPTER ONE

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter focuses on the critical tools that will help in analyzing J.G. Ballard's *The Drowned World*. It equally reviews prominent works related to J.G. Ballard's text under study. Given that this study handles issues pertaining to the relationship between man and the environment, Ecocriticism and Psychoanalysis are thought as appropriate frameworks to apply in its analysis. We chose these theories because of the effects that poor human relationship with the environment can have on man, in most cases, and how it can affect the individual's state of mind. Ecocriticism focuses on the way humans perceive the environment. This perception begins from the way man thinks. Psychoanalysis, on its part, will help us in unveiling the way the human mind operates as a result of the relationship that exists between man and his environment.

Theoretical Framework

The first theory that will be used in critically analyzing J.G. Ballard's *The Drown World* is ecocriticism. Ecocriticism is the critical and pedagogical broadening of literary studies to include texts that deal with the nonhuman world and our relationship to it. It is fundamentally an ethical criticism and pedagogy, one that investigates and helps to make possible the connections among self, society, nature and text, thereby elucidating relationships between human and non-human nature. Ecocriticism is a study of culture and cultural products (art works, writings, scientific theories, etc.) that is, in some way connected with the human relationship to the natural world. Ecocriticism is also a response to needs, problems, or crises, depending on one's perception of urgency. First, ecocriticism is a response to the need for humanistic understanding of our relationships with the natural world in an age of environmental destruction. In a larger part, environmental crises are a result of humanity's disconnection from the natural world, brought about not only by increasing technology but also by particularization; that is, a mentality of specialization that fails to recognize the interconnectedness of all things. In terms of the academy, ecocriticism is a response to scholarly specialization that has gone out of control; it seeks to reattach scholars to each other and scholarship to the real concerns of the world. Inherently, then, eco-criticism is interdisciplinary. In order to understand the connectedness of all things, including the life of the mind and the life of the earth, one must reconnect the disciplines that have become divided through over-specialization. All ecocritical efforts are pieces of a

comprehensive continuum. Ecocritical approaches, thus, can be theoretical, historical, pedagogical, analytical, psychological, rhetorical, and on and on, including combinations of the above.

Ecocriticism is the study of literature and environment from an interdisciplinary point of view where literature scholars analyze the environment and brainstorm possible solutions for the correction of the contemporary environmental situation and examine the various ways literature treats the subject of nature.

The major critics of ecocriticism include; Cheryll Glotfelty, Lawrence Buell, Greg Garrard, Scott Slovic and Serpil Oppermann. In 1996, Glotfelty and Harold Fromm co-edited a text, entitled *The Ecocriticism Reader: Landmarks in Literary Ecology*, a critical anthology that helped to green the field of literary studies. One of the recognised pioneers of ecocriticism, Cheryll Glotfelty, states that “Simply defined, ecocriticism is the study of the relationship between literature and the physical environment” (Glotfelty, 20). Simply put, Glotfelty looks at ecocriticism as the relationship between literature and the physical environment. Just as feminist criticism examines language and literature from a gender conscious perspective, and Marxist criticism brings an awareness of modes of production and economic class to its reading of texts, ecocriticism takes an earth-centred approach to literary approach to literary studies (Glotfelty, xix). She is co-founder and former president of the Association for the Study of Literature and Environment (ASLE). Richard Kerridge’s definition in *Writing the Environment: Ecocriticism and Literature* suggests, like Glotfelty’s, a broad cultural ecocriticism as follows:

The ecocritic wants to track environmental ideas and representations wherever they appear, to see more clearly a debate which seems to be taking place, often part-concealed, in a great many cultural spaces. Most of all, ecocriticism seeks to evaluate texts and ideas in terms of their coherence and usefulness as responses to environmental crisis (5).

As one of the founders of ecocriticism, Buell has a lot of publications about nature and literature. In his latest study, *The Environmental Imagination* (1995), Buell analyses the perception of nature from Henry David Thoreau to contemporary writers. According to Lawrence Buell, (7-8), an environmentally-oriented work should display the following characteristics:

The nonhuman environment is present not merely as a framing device but as a presence that begins to suggest that human history is implicated in natural history; the human interest is not understood to be the only legitimate interest; human accountability to the environment is part of the text's ethical framework; some sense of the environment as a process rather than as a constant or a given is at least implicit in the text (7-8).

From the above excerpt, we can infer that the environment that is supposed to be protected by man is destroyed by the same man. Both nature and man contribute in the destruction of the environment, but man, as a higher animal has the duty to make things right for his own wellbeing. "Ecocriticism is the study of explicitly environmental texts from any scholarly approach, or, conversely, the scrutiny of ecological implications and human-nature relationships in any text, even texts that seem, at first glance, oblivious of the nonhuman world" (98).

This description stipulates the fact that environmental texts can be handled from diverse scholarly perspectives with focus on how issues of human relationships with nature are treated within a text. Slovic's perspective rekindles our understanding of Ballard's *The Drowned World*, as it presents aspects of human relationship to nature within the text. It is worth noting that ecocriticism deals with the relationship between culture and nature and it sometimes rejects the notion that everything is socially or linguistically constructed.

William Howarth argues that the term 'ecocriticism' is derived from Greek with oikos and kritic which translate "household judge". He presents the ecocritic as: a person who judges the merits and faults of writings that depict the effects of culture upon nature, with a view towards celebrating nature berating its despoilers, and reversing their harm through political action (Howarth, 69). Howarth's description of an ecocritic with the effects of culture on nature indicates how relevant this theoretical framework is to the understanding of this study. It is worth noting that an ecocritic does not only study the effects of culture on nature but also the effects of nature on culture and nature's effects on nature itself as well.

As one of the pioneers of ecocriticism, Lawrence Buell has put forward two waves of ecocriticism in his book entitled, *The Future of Environmental Criticism*. Buell asserts that ecocriticism has gone through a certain development by moving on from the first wave to the second. Nevertheless, this progress neither caused a series of the initial movement, nor a

nullification of the preceding (Buell, 17). The first wave of ecocriticism is often defined to be of a descriptive nature and generally dealt with the relationship of literary texts and the natural environment. Simply labeled as ‘nature writing’, the first wave is said to begin with American nature writing and with Henry David Thoreau’s *Walden* in particular. In *Walden*, Thoreau fled from his native urban city to live a rustic life in a hut located in the coast of the Walden Pond. His refusal of the urban and industrialized life and retreat into the wild for a period of two years was a genuine manifestation of freedom (Clark, 27). Laurence Coupe described the content of the first-wave of ecocriticism and noted that:

For first-wave ecocriticism, “environment” effectively meant “natural environment.” In practice if not in principle, the realms of the “natural” and the “human” looked more disjoint than they have come to seem for more recent environmental critics – one of the reasons for preferring “environmental criticism” to “ecocriticism” as more indicative of present practice. Ecocriticism was initially understood to be synchronous with the aims of earth care. Its goal was to contribute to “the struggle to preserve the ‘biotic community’” (Coupe, 4)

Hence, the first wave of ecocriticism was more limited in both its scope and practice. The movement concentrated on several genres of writing, namely, “nature writing, nature poetry and wilderness fiction.” The first wave generally advocated “a philosophy of organism that would break down the hierarchical separations between human beings and other elements of the natural world” (Buell, 21). William Howarth comments on the scope of the first wave and argues that: the paradigmatic first-wave ecocritic appraised “the effects of culture upon nature, with a view towards celebrating nature, berating its despoilers, and reversing their harm through political action” (Howarth, 69). Howarth marks four different principles of ecocriticism: ecology, ethics, language and criticism. While ecology and ethics are strongly connected, the same could be stated for language and criticism. In every ecocritical discourse, the relationship between nature and culture, its effects on one another and on itself is given high consideration. Despite the fact that nature and culture are treated as antagonists, it is observed that they constantly interact with each other (Howarth, 69).

In order to have a better understanding of the first wave of ecocriticism, it is imperative to grasp the philosophy called ‘deep ecology’ which the first wave mainly relied on. Deep

ecologists felt the need for a reformulation of humanity's belonging on this earth (Rivkin & Ryan, 1511). According to deep ecology, ecosystem precedes all living beings including humans (1512). Deep ecologists seek ways to create a form of consciousness which prioritizes the ecosystem rather than all animate beings including humans. Deep ecology maintains this by rising up against anthropocentric thought and opposes all arguments that regard the nature as some form of human possession. The movement proposes that humans ought to consider themselves as equals with all other living entities which will then overcome all obstacles related to the social structure (1512). *The Encyclopedia of Environmental Ethics and Philosophy* states that: Deep ecology represents the psychologisation of environmental philosophy. Deep ecology, in this sense refers to an egalitarian and holistic environmental philosophy founded on phenomenological methodology. By way of direct experience of nonhuman nature, one recognizes the equal intrinsic worth of all biota as well as one's own ecological interconnectedness with the life world in all its plenitude. (Callicott & Frodeman, 2006). Thus, deep ecology promotes and values each living being as a whole regardless of their use in the world.

Literary theorists have disdained ecocritics and thought of them as unworthy, claiming them to be "insufficiently problematic" (Howarth, 77). However, literary texts give us certain ideas concerning humanity's attitude towards the relationship that exists between culture and nature and how they both influence one another. William Howarth adds that:

Ecocriticism seeks to redirect humanistic ideology, not spurning the natural sciences but using their ideas to sustain viable readings. [...] Today science is evolving beyond Cartesian dualism toward quantum mechanics and chaos theory, where volatile, ceaseless exchange is the norm. While some forms of postmodern criticism are following this lead, many humanists still cling to a rationalist bias that ignores recent science. (78)

He openly supports the connection between the sciences and humanities. In contrary to popular belief, literature and science are not totally unrelated as it is claimed by many critics. Several connections between the two disciplines can be observed in the genre of science-fiction as well as in works of Henry David Thoreau and Mark Twain (Howarth, 78). On the other hand, literary circles have also distrusted and pushed aside natural sciences in favour of the humanities. This is specifically the case in poststructuralism where social constructs take the place of scientific facts.

Hence, ecocriticism employs science as its deixis which means that meaning is created in relation to physical spaces. As a result, ecocriticism's aim is to conciliate disparities between science and literature and thereby to provide a better comprehension of nature and the physical landscape.

Ursula Heise, in an article entitled "Science and Ecocriticism", discusses ecocriticism as the relationship between literature and the science of ecology through the application of ecological concepts to literature. The aim is to synthesize literary criticism and the environmental matters by focusing on the literary analyses of the representations of nature in literary texts, and the literary constructions of the environmental crisis in literary works. Ecocriticism is also interested in analysing the role that the natural environment plays in the imagination of a cultural community at a specific historical moment. It examines how the concept of nature is defined, what values are assigned to it or denied it and why, as well as the manner in which the relationship between humans and nature is envisioned. More especially, ecocriticism investigates how nature is used literally or metaphorically in certain literary or aesthetic genres and what assumptions about nature underlie these genres. In addition, some ecocritics understand their intellectual work as a direct intervention in current social, political, and economic debates surrounding environmental pollution and preservations (Heise, 4).

Ecocriticism seeks to find a similar ground between the human and non-human to their coexistence in various ways, as a result that the environmental issues have become an integral part of our existence. The difficulty in finding this similar ground has been one major problem which ecocriticism addresses in attempt to find a more environmentally conscious position in literary studies. William Rueckert's intent was to focus on the application of ecological concepts to the studies of literature. Ecocritics investigate such things as the underlying ecological values what precisely is meant by the words nature and whether the examination of "places" should be a distinctive category, much like class, gender or race.

Serpil Oppermann, in *Ecocriticism: Natural Word in the Literary Viewfinder* considers the ecocritical approach as an attempt to transcend the duality of art and life, human and the natural, and to work along the principle of interconnection between them. Establishing an ethical and aesthetic ground towards a renewed understanding of both literature and ecology is the purpose behind (Oppermann, 38). In this line, ecocriticism offers a unique fusion of literary, scientific, ecological and philosophical perspective. Encouraged by the insights of ecocriticism,

young and old critics started writing and analyzing works based on some of the characteristics of ecocriticism with a specifically informed foregrounding of green issues in literature, ecocriticism is likely not only to contribute significantly to the interdisciplinary dialogue between literature and science, broad rethinking of the relations between humans and nature that is currently taken ground in western societies and even in our African society today. For more clarification and a better understanding, a synopsis of the works of some of the pioneers of ecocriticism will be examined.

Robert Kern, in his essay ‘Ecocriticism: What is it good for?’ found in *The ISLE Reader: Ecocriticism, 1993 – 2003* aptly observe thus:

What ecocriticism calls for, then, is a fundamental shift from one context of reading to another more specifically, a movement from human to the environment, or at least from exclusively human to the bio centric or ecocentric, which is to say a humanism (since we cannot evade our human status or identity) informed by an awareness of the more- than-human. (Branch and Slovic, 267)

He brightens our understanding of ecocriticism, which he believes varies from one context of writing to another. This means that the relationship that exists between man and the environment has different effects per the context of application.

Glen Love, in his *Practical Ecocriticism: Literature, Biology and the Environment* answers the question of “Why the Ecocriticism is important in today’s world?” He says:

As the circumstances of the natural world intrude ever more pressingly into outreaching and writing, the need to consider the interconnections, the implicit dialogue between the text and the environmental surrounding, becomes more and more insistent. Ecocriticism is developing as an explicit critical response to his unheard dialogue an attempt to raise it to higher level of human consciousness. (Love, 18)

According to Glen Love, Ecocriticism focuses on the “interconnection between material world and human culture, specifically the culture, artifacts, language and literature” (Love, 196). Most ecocritics regard nature as an independent, active entity of its own and so can be used as an important tool in interpreting literary texts that represent the relationships of human beings to their natural environment. As man moves from the traditional lifestyle to modern technology,

nature becomes the “Other”. Buell, in *Literature and Environment* explains that “one way an eco-critic may begin reading a text is to carefully note the mentioning of animals, plant and the natural world”. Some eco-critics also see science and technology as root causes of ecological crises, both in reducing nature to a mere object to be studied and manipulated by a detached observer, and in amplifying people’s ability to inflict damage on nature (Buell, 422). This is further supported by Alan M. Edison who avers that ‘Modern Technology owes ecology an apology’”

Cheryll Glotfelty in “As Environmental Problems Compound” writes that literary works seem to be of the opinion that we are not part of the solutions. Rather, we are part of the problem” (Glotfelty xxi). Therefore, her question, “how then can we contribute to the environmental restoration from within our capacity as professors of literature?” He proposes that this contribution of ours should be well-focused on the literary as well as on the ecological concepts, not privileging one over the other. The task of ecocriticism, then, is to formulate a conceptual foundation for the study of interconnections between literature and the environment. Literature can be perceived as aesthetically and culturally constructed parts of the environment. Since it directly addresses the questions of human constructions, such as meaning, value, language, and imagination, which can then be linked to the problem of ecological consciousness that humans need to attain. Eco-critics are mainly concerned with how literature transmits certain values contributing to ecological stinking. They state that the environmental crisis is a question that cannot be overlooked in literary studies.

Cheryll Glotfelty in *The Ecocriticism Reader* asks questions such as: How is nature represented in this sonnet? What role does the physical setting play in the plot of this movie? Are the values expressed in this play consistent with ecological wisdom? How do our metaphors of the land influence the way we treat it? How can we characterize nature written as a genre? In addition to race, class, and gender, should place become a new critical category? Do men write about nature differently than women do? In what way has literacy itself affected mankind’s relationship to the natural world? How has the concept of wilderness change over time? In what way and to what effect is the environmental crisis seeping into contemporary literature and popular culture? What view of nature informs US government reports, and what rhetoric enforces this view? What bearing might the science of ecology have on literary studies? How is science

itself open to literary analysis? What cross-fertilization is possible between literary studies and environmental discourse in related disciplines such as history, philosophy, psychology, art history and ethics? (Glotfelty, 110). She concludes that, despite the broad scope of inquiry and disparate levels of sophistication, all ecological criticisms share the fundamental premise that human culture is connected to the physical world, affecting it and affected by it. Ecocriticism is taken as it subjects the interconnections between nature and culture, especially the cultural artifacts language and literature. As a critical stance, it has one foot in literature and the other on land, as a theoretical discourse; it negotiates between the human and the nonhuman (Glotfelty, 110).

Furthermore, Christopher Manes, in his essay, "Nature and Silence", throws more light on ecocriticism. He looks at the relationship between nature, culture and language. He says:

Nature is silent in our culture (and in literate societies in general) in the sense that the status of a speaking subject is jealously guarded as an exclusively human prerogative.... The language we speak today, the idiom of Renaissance and Enlightenment humanism, veils the processes of nature with its own cultural obsessions, directionalities, and motifs that have no analogies in the natural world. As Max Oelschlaeger puts it, "we are people who presumably must think of the world in terms of the learned categorical scheme of Modernism. It is as if we have compressed the entire buzzing howling, gurgling biosphere into the narrow vocabulary of epistemology". (Manes, 15)

Manes goes as far as examining the languages we speak, referring to nature as a result of the diversified languages we speak.

Lawrence Buell's *The Future of Environmental Criticism* is a significant and clearer text which emphasizes on literature and theory, and whether it is helpful in the search for a solid stand and controversies within ecocritical studies. It highlights the early beginning of ecocriticism, the relationship between the text and the ecocritic, paying attention to space, place and imagination, the text also articulates the question of ethics and politics in relation to environmental criticism. Buell shapes ecospheres that relate to one another. He also emphasised some of the difficulties faced by upcoming eco-critics beyond academic level. He considers the green aspect of nature as the greatest aspect that one can enable someone to gain solitude.

According to Michael P. Cohen in *Blues in The Green: Ecocriticism Under Critique*, the length of the ecocritical reach depends on individual cases, on the certainty of critical approach

but even more on certainty of sources of authority. Therefore, the importance of the word “eco” is by positing connection and relationship, permitting interdisciplinary work to gain authority and analytic power from disciplines outside one’s own. Ecocriticism needs to import scientific authority in order to combat two positions; that culture can be refuge from nature and that nature is merely a cultural construction.

Cohen added that, power and authority account for part of what ecocritics mean when they invoke “interdisciplinary”. There is also a real hope that a concerted multidisciplinary effort can avert environmental disaster. Ecocriticism is interested in ecology and other environmental sciences. It must cross disciplinary boundaries and use the methods and findings of other disciplines when it asks, “What is environment” or “why think in ecological or evolutionary ways about it”. Like History, ecocriticism asks, “How shall scholars deal with continuities and discontinuation found in environmental history, social history and cultural history? Cohen considers the environmental historians who regularly influence eco-critical discourse as a “naturist” like Donald Worster and Carolyn Merchant.

The accusation charged against ecocriticism, mostly the “issue-driven” rather than “methodology-driven” flaw raise the longstanding question in literary practice: What is more important, the thematic finesse of a piece of literary work or literary aesthetics? However, we have to understand that the two have to be equally combined if the work is not to be sacrificed. There is no doubt that the environment has become a bone of contention and if at all, ecocriticism focus is on the environment and its various aspects it will be meaningful and understood. In sum, ecocriticism thus regards nature as an independent, active entity of its own and so can be used as an important tool in interpreting literary texts that represents the relationship of human being to their natural environment. After looking at the various tenets of ecocriticism, this study will be analyzed based on some of the tenets of Landscape, Landscape by definition includes the non-human elements of place that is plant, trees, rocks, rivers, animals, air, weather as well as human perceptions and modifications. Some tenets of Ecocriticism such as Romantic ecology, Eco-Marxism, Ecofeminism and Literary Ecology will be used in the analysis of this work.

The next critical tool used in this study is the Psychoanalytical Theory. This approach has been chosen because, as advanced by Sigmund Freud, literature deals with the conscious and

unconscious aspects of human life and this cannot be separated from its environment. As such, literature links the characters and their experiences to Nature.

Psychoanalysis is a set of psychological and psychotherapeutic theory and associated techniques created by an Austrian physician called Sigmund Freud. Influenced by Josef Breuer's treatment of neurosis by hypnosis, Freudian psychoanalysis refers to a specific kind of treatment in which the patient is allowed to freely and verbally express his/her thoughts. This infers that the unconscious conflicts behind the patient's symptoms and problematic character, and to interpret them for the patient to create insight for resolution of the problem. Psychoanalysis actually developed out of the realm of literature, but serves as a means for the interpretation and analysis of literary works. All psychoanalytic approaches to literature have one thing in common as the critic begins with a full psychological theory of how and why people behave in the way they do. It therefore focuses on the fact that human attitude, mannerism, experience and thoughts are largely enhanced by irrational drives that are rooted in the unconscious. This came about as a result of Sigmund Freud's interest in mental health and in dreams. According to Freud, dreams have symbolic significance, and generally were specific to the dreamer.

Freud's interest in dreams led to the formulation of the "topographical representation" of human mind." Psychoanalysis was first named and described by Freud in the *Interpretation of Dreams* (1899). According to Freud, the mental apparatus or the mental process can be divided into three systems namely: conscious, sub-conscious and unconscious. To Freud, the unconscious has, or is a "primary process" consisting of symbolic and condensed thoughts, and a "secondary process" of logical, conscious thoughts. This theory becomes one of the meta-psychological points of view on how the mind functions and as well understands the behaviors of characters in a work of arts (Freud, 89). In 1923, Freud formulated his second theory known as the "Structural theory". This theory focused on or comprised of three concepts of psychoanalysis known as the Id, Ego and Super-Ego. These ideas were summarized in a book entitled, *The Ego and the Id* (1923).

According to Freud's *The Ego and the Id*, the Id is the unorganized part of personality that is present from birth and which Freud called "Triebe." It is the reservoir of the libido or the region of passion which deals with our bodily needs, wants, desires, and impulses, particularly

our sexual and aggressive drives. The Id acts according to the “Pleasure Principle”, the psychic force that motivates the tendency to seek immediate gratification of any impulse. The Id is unorganized, irrational and unconscious and knows no morality, no good and evil and lacks the sense of judgments. According to Freud, “It is the dark, inaccessible part of our personality....” The mind of a new born baby is regarded as completely “Id-ridden,” in the sense that it is a mass of instinctive drives and impulses, and needs immediate satisfaction (Freud, 23). Furthermore, in Freud’s *The Ego and the Id*, the Ego develops slowly and gradually, being concerned with mediating between the urging Id and the realities of the external world. The Ego seeks to please the Id’s drive in realistic ways that will benefit in the long term, rather than being sorrowful. It thus operates on the “Reality Principle” for example; the ego will resist the Id’s desire to grab other’s belongings because it needs them by suggesting purchase. The Ego is depicted by the Structural and Topographical Model of the mind as half conscious, a quarter of preconscious and a quarter unconscious (Freud, 41).

The ego works in line with reason and the super-ego, as the name implies, is the most refined structure as it operates on moral principles. To support this, Freud posits:

The ego wants above all to be loved ..., but it only becomes the Id’s love object, by diverting, or sublimating, part of the drive and repressing the remainder. Ultimately, the id will not reward the ego for managing the inevitably frustrating then the super ego emerges as an incorporation of the father whose strength is to bolster the ego against the id. (Freud, 33)

Sigmund Freud’s concern for the ego is a compassion for the human race, labouring under the most intolerable demands placed upon it by a civilization, built upon the repression of desire and the deferment of gratification. In his later works, Freud views the human race as languishing in a group of terrifying death drive. The final goal of life is death, a return to that blissful inanimate state where the ego cannot be injured.

Finally, Freud’s Super-Ego is held to be the part of the Ego in which self-observation, self-criticism and other reflective and judgmental facilities develop. The Super-ego acts as a conscience that prohibits human drives, fantasies, feelings and actions by punishing misbehaviour with the feelings of guilt. As a result, it helps us maintain our sense of morality and proscription from taboos, thereby helping individuals to fit into the society. The Super-ego is also symbolic of

the father figure and thus helps to regulate the Oedipus complex as it creates the sense of fear of castration in the mind of the child. Since the Super-ego strives to act in a socially appropriate manner, it acts on the “Ideal principle.” It is also highly conscious (Freud 51). Freud’s focus on the unconscious led to his theory of the Oedipus complex which is drawn from the Greek 5th century B.C mythology character, Oedipus. According to the myth as well as the play Oedipus the King by Sophocles-Oedipus unknowingly murders his father and marries his mother. (Sophocles 101) The tragic story becomes so central in psychoanalysis that Freud made Oedipus’ name into an adjective, “Oedipal.” The theory of the Oedipus complex describes the idea and emotions which exist within the unconscious mind of male children concerning their desire to possess their mothers sexually and hate their fathers.

According to Freud, the male suffers from the Oedipus complex meanwhile the female suffers from the Electra complex. This, however, occurs at a stage during which a child develops a distinct sexual identity as a “boy” or a “girl” and begins to recognize the physical and social differences between men and women. Sigmund Freud clutches that, a writer has the opportunity to portray the external aspects of his unconscious mind which would otherwise be repressed, that is, what a writer could not achieve in real life can be achieved in writing. Though much is associated with Freud as far as psychoanalysis is concerned. Murfin Ross and Supryia Ray in *The Bedford Glossary of Critical and Literary Terms* observe that:

The psychoanalytical approach to literature not only rests on the theories of Freud; it may even be said to have begun with Freud, who wrote literary criticism as well as psychoanalytical theory probably because of Freud’s characterization of the artist’s mind as “one urged on by instincts that are too clamorous,” psychoanalytical criticism written before 1950 tended to psycho analyse the individual author. Literary works were read sometimes unconvincingly as fantasies that allowed authors to indulge repressed wishes, to protect themselves, from deep-seated anxieties or both (25).

The above explanation is proof that the theory is directly and indirectly concerned with the nature of the unconscious mind but, after 1950, post Freudian psychoanalytical critics shifted this focus and stressed more on the ways in which authors create works that appeal to the reader’s repressed wishes and fantasies. This entailed a movement of focus away from the author’s psyche towards the psychology of the reader and the text. Norman H. Holland’s theories deal more with the

reader than with the text and they help to establish the reader's response criticism. Critics influenced by D.W. Winnicott, have questioned the tendency to see the reader's text as construct, instead of relationship taking place in what Winnicott calls a "transitional" or "potential space," space in which opposition, like real /illusory and objective / subjective have little or no meaning (Fombalang, 24).

Jacques Lacan is a primary figure among such post-Freudian critics whose ideas are important to this study. Lacan focuses on the language and language-related issues. Lacan handles the unconscious as a language. For example, dreams are not a form and symptom of repression as Freud saw it but a form of discourse. It is thus possible to study dreams psychoanalytically in order to learn about literature, just as we may study literature in order to learn more about the unconscious (Bedford, 27). There is also the possibility of approaching the author's inner self, especially as Ted Hughes' life experiences influenced his writings.

The French psychoanalyst, Jacques Lacan also develops a semiotic view point of Freud's ideas on the mental workings of dream formation into textual terms on the play of the signifiers; converting Freud's distorting defence mechanism into linguistic expression and interpretation. In his work entitled *Seminar, Book II: The Ethics of Psychoanalysis*, Lacan posits that the unconscious is structured like language. For him, the biological concept of need is largely displaced by the concept of desire. A need can be gratified but desire is irrepressible. Thus, once one's desire is uncontrollable, he or she tends to act irrationally.

Another psychoanalyst who was influenced by Freud is Carl Gustav Jung. Jung was influenced by Freud's approach to the interpretation of dreams whereby Freud interpreted dreams in relation to the dreamer's real life situations. Jung, thus, holds that dreams reveal a symbolic way of individual psychological life or his/her psychological formation. Jung contrasts with Freud's views because he regards great literature as a disguised form of "libidal" fulfilment that, to a large extent, parallels the fantasies of a neurotic personality. The Jungian psychology seeks to establish and foster the relationship between unconscious and conscious processes which involve dreams. The dialogue between the conscious and unconscious aspects of the psyche helps to enrich a person's understanding. Jung believes that it is through dialogue that this can be made possible, if not the personality will be jeopardized (Jung, 1948).

Jung disagreed with Freud regarding the role of sexuality. He believed the libido was not just sexual energy, but instead generalized psychic energy (Jung, 1948). For Jung, the purpose of psychic energy was to motivate the individual in a number of important ways, including spiritually, and creatively. He believes that it was also an individual's motivational source for seeking pleasure and reducing conflict. Like Freud and Erikson, Jung regarded the psyche as a made up of a number of separate but interacting system. The three main ones were "the ego, the personal unconsciousness, and the collective unconsciousness" (Jung, 1948).

Ballard's novel under study shows a deep interest in primitive beliefs and superstitions. In his text, he draws upon man's relationship to the human unconscious vis-s-vis his environment. He equally employs myths as he takes recourse to animals-especially the violence of the savage animals. In *New Introductory Lectures on Psychoanalysis*, Freud reveals his interest in the interpretation of myths through the insight that dreams provide: "In the manifest content of dreams we very often find pictures and situations recalling familiar themes in fairy tales, legends and myths. The interpretation of such dreams thus throws light on the original interests which created these themes". (4) Ballard's use of the myths, legends and fables depict the violence in the animal world which is just the "manifest" elements (according to Freud), which have an undercurrent of the "suppressed" elements preserved within them.

From the above discussion, Freud's psychoanalytic lens can be used to analyze and understand Ballard's novel under study. The tenets, conscious and the unconscious, the Id and the Ego, as expressed by the proponents of this theory, will be used as important tools in the interpretation of man's relationship with his environment.

Environmental psychology has been recognized as a field of psychology since the late 1960s and is therefore a relatively 'new' field in psychology (Altman 1975; Proshansky et al. 1976; Stokols 1977, 1978). Hellpach was one of the first scholars who introduced the term 'environmental psychology' in the first half of the twentieth century (Pol 2006). Hellpach (1911) studied the impact of different environmental stimuli, such as colour and form, the sun and the moon, and extreme environments, on human activities. In his later work, he also studied urban phenomena, such as crowding and overstimulation, and distinguished different types of environments in his work, including natural, social, and historical-cultural environments (Pol 2006). Although the topics of Hellpach are typical of the field of environmental psychology as it

has been practiced from the 1960s onwards, it was still too early to speak of an independent field of systematic research into human–environment interactions. Brunswik (1903–1955) and Lewin (1890–1947) are generally regarded as the ‘founding fathers’ of environmental psychology (Gifford 2007). Neither of these scholars had significant empirical work that we would classify today as environmental psychology. However, their ideas, such as the interaction between physical environment and psychological processes and studying human behaviours in real-life settings instead of artificial environments, were influential for many later studies on human–environment interactions (see Box 1.1).

Around the late 1940s and 1950s, systematic research in everyday physical settings and psychological processes slowly increased with some pioneering studies on, for example, human factors in work performance (Mayo 1933), the lighting of homes (Chapman and Thomas 1944), and child behaviours in natural settings (Barker and Wright 1955). So, it was not until the late 1950s and early 1960s that human–environment interaction slowly received recognition as a full discipline. As most of the studies focused on how different environments influence people’s perceptions and behaviours, they were labelled as studies in ‘Architectural Psychology’ to show the distinction from the more traditional forms of psychology (Canter 1970; Pol 2007; Winkel et al. 2009). In this early period of the field of environmental psychology, much attention was given to the built physical environment (i.e. architecture, technology, and engineering) and how it affected human behaviour and well-being (Bonnes and Bonaiuto 2002). This focus on the built environment was largely guided by the political and social context of the time. Modern architecture tried to respond to post-war challenges (Pol 2006), such as decent housing. Questions like how homes, offices, or hospitals could best be built for their potential users and how environmental stressors (e.g. extreme temperatures, humidity, crowding) would affect human performance and well-being were the focus of many environmental psychological studies (Wohlwill 1970). Environmental psychology as a study to design buildings that would facilitate behavioural functions was officially born.

The second period of rapid growth in environmental psychology started during the late 1960s when people increasingly became aware of environmental problems. This resulted in studies on sustainability issues, that is, studies on explaining and changing environmental behaviour to create a healthy and sustainable environment. The first studies in this area focused

on air pollution (De Groot 1967; Lindvall 1970), urban noise (Griffiths and Langdon 1968), and the appraisal of environmental quality (Appleyard and Craik 1974; Craik and Mckechnie 1974). From the 1970s onwards the topics further widened to include issues of energy supply and demand (Zube et al. 1975) and risk perceptions and risk assessment associated with (energy) technologies (Fischhoff et al. 1978). In the 1980s, the first studies were conducted that focused on efforts promoting conservation behaviour such as relationships between consumer attitudes and behaviour (Cone and Hayes 1980; Stern and Gardner 1981).

From the above analysis, it can be understood that ecocriticism and psychoanalysis are suitable theoretical tools for this study. These theories are similar in that both are sociological theories as they deal with man's thoughts vis-a-vis the environment in which he finds himself. Man's actions towards the environment begin from his mind or thinking. Thoughts can therefore make or mar man's relationship with the environment. A review of related literature is indispensable to get diverse viewpoints of previous critical works. This will help to bring out the unique contribution of this study.

Review of Related Literature

This section examines and makes an appraisal of related works to this study. William Wiesner in *Research Review* presents a literature review as something that shows what research has been done so as to guide the researcher to have a unique manner of appreciating the text. The review also opens new research horizons that will give credibility and authenticity to a given study by making it unique. For the works to be reviewed, a similarity, as well as a deviation will be established with the present research. This will permit this study to situate its specific contribution to existing literature on the relationship between man and nature.

Over the years, many researchers have undertaken a lot of studies relating to man's relationship with his environment and the crises looming in the biosphere due to such a relationship. Scholars have looked at these from different perspectives and presented their specific opinions. Concerning Ballard's *The Drowned World*, a lot has been written and the ones relating to the present study will constitute the analysis of the below paragraphs.

Jim Clarke, in his article entitled "Reading Climate Change in J.G. Ballard" examines *The Drowned World* as an early example of climate fiction written before Wallace Broecker coined the

term ‘global warming’ in 1975, and before the notion of the Anthropocene and Anthropocentric blame got a foothold in the popular imagination (9). With this, Clarke situates Ballard’s novel under study as a good example of global warming narrative and climate change discourse. In his paper, Clarke argues that due to lack of anthropocentric blame within the story, the novel differs from modern climate novels, stating that there is “no discussion of blame or responsibility, and no attempt at mitigation or alleviation (9). Rather, the novel presents ‘a form of climate change stripped of transient concerns” (19) in which the environment provides an ontological structure within change occurring within the environment has an effect, either transformative or destructive on the inner worlds of the inhabitants (19).

From a similar angle, Adam Trexler, in *Anthropocene Fictions: The Novel in a Time of Climate Change* sees *The Drowned World* as an early piece of climate fiction, categorizing it as a ‘deluge novel’, a genre of apocalyptic narrative existing since the writing of *The Bible* and beyond, describing tales of divine judgment, destruction and creation wherein moral lessons, ethical boundaries and limits of humanity could be formulated (Trexler, 84). Much like Clarke, Trexler situates the novel under climate fiction which lack anthropocentric blame or judgment: an element of the category which Sebastien Groes calls the ‘apocalyptic-stoic’. Both Clarke and Trexler apply the ecocritical theory to analyze *The Drown World* within the backdrop of nature and climate literature.

The present study, entitled “Climate Change, Environmental Crises and Sustainability: A Study of J.G. Ballard’s *The Drowned World*” deviates from the thrust of Clarke and Trexler which essentially accentuates the motivation of Ballard writing *The Drowned World* through climate change, the implication of his representation of time and the significance of the representation of the protagonist, Dr Kerans’ body, which is an embodiment of the short-sighted rich or strong people who destroy the planet for instant gratification. This work, on its part develops the theme of climate change and probes into the various causes, manifestations, consequences and solutions to environmental crises. It visualizes the whole situation from the view of Ballard as seen in his novel, *The Drowned World*.

Furthermore, Ayse Sensoy in his article, entitled “Solastalgia in J.G. Ballard’s *The Drowned World: Living in a Watery Earth No Longer Home*’ explores the novel from the point of view of solastalgia (coined by the environmental philosopher, Glenn Albrecht) which means

'solace' and 'nostalgia'. According to him, this is a type of homesickness that someone feels at home because of environment and climate changes. From an Ecocritical dimension, Sensoy makes a general presentation of Ballard as someone whose fictions are concerned with environmentally devastated landscapes caused by technological excesses and non-ecological attitudes of humankind. He is of the opinion that Ballard's *The Drowned World* is set in an ecological disturbed world caused by such environmental elements or disasters as wind, drought and crystallization. To him, Ballard handles the notions of (ir) reversibly negative physical transformations of non-human environment and their physical and psychological effects on humans. To him, Ballard is more interested in the effects of the apocalypse on human body, psyche and emotions as humans develop new relationships in negatively transformed environments. He concludes that solastalgia is quite evident in the novel as seen in the submerged city of London due to climate change.

In "Making *The Drowned World* Manifest: Re-reading Ballard's Novel through Art" Tracey Clement argues that Ballard uses a London gallery as a laboratory to test his ideas to come in his latter novel, *Drought*. According to him, Ballard has gathered and disseminated knowledge as he has staged an exhibition of the dangers of climate change and disasters. He believes that, like actors on a stage, different people play various roles towards this mishap and can as well mobilize measures to avert climate disaster. Tracey's ideas are quite important to this study as it sets the stage to hinting a disaster caused by actors (man). However, he doesn't present the causes, manifestations as well as preventative measures to this disaster as the present study does.

Rasmus Carlsson, in his article entitled "Teaching Climate Change: Reading the Symbiosis between Mankind and Nature in Ballard's *The Drowned World*" examines the relationship between humans and nature and how nature affects humanity, as well as whether humanity is indestructible. Perusing the novel from an eco-critical perspective, Rasmus examined the actions and choices of the novel's protagonist and how they affect his partner, friends and nature. He comes to the conclusion that a complete lack of conscious humanity is impossible as the basic human instincts linger. Considering the fact that he is looking at the novel from a didactic perspective, he proposes some approaches, techniques and methods that can be used to teach the text in senior secondary schools.

Moreover, Maria Baek Jensen, in her thesis entitled “Exploring ‘the strange junction of two extremes of nature’: A comparative analysis of uncanny within post-apocalyptic narrative of J.G Ballard’s *The Drowned World* and Cormac McCarthy’s *The Road* in the context of the modern Anthropocene examines Sigmund Freud’s notion of the Uncanny appearing within her texts under study, looking at how the strangely uncanny manifests with climate fiction. Her analysis dwells at the level of setting, discourse and environment within the story worlds and in the ways in which the apocalyptic changes affect the characters, not only in relation to themselves and the environment, but also in relation to each other. With the use of the eco-critical theory, Jensen explores the manner of the state of environment and ecology within the modern Anthropocene age in relation to global warming and climate change.

Cenk Tan Turk’s reading of J.G. Ballard’s *The Drowned World* tackles the text from an ecofeminist angle. In the article titled “An Eco-feminist Interpretation of *The Drowned World*,” Turk analyses the protagonist, Dr. Robert Kerans, and other characters’ relationship with their environment from an ecofeminist perspective. He gives special treatment to the character of Beatrice, the dominant female character in the text, who experiences very traumatic treatment from the dominant male figures around her. According to Turk, this poor treatment places Beatrice at the same position with the “helpless nature,” undergoing man’s constant brutality (Turk, 2021). Beatrice has the unique quality of being not only the only woman left in the drowned city of London, but also the only female character in the entire novel. Turk’s analysis, although from feminist perspective, will be quite helpful to the present research as it will help to support the psychological effect of environmental crisis on man. This effect touches both sexes and sometimes, more detrimental to the woman.

Turk also looks at the oppression of women and nature in Ballard’s *The Drowned World*, focusing on Beatrice, who has been oppressed all her life. He makes reflection to her childhood, with attention to the subordinated lifestyle she lived under her grandfather who set up rules for her to follow and paved the way for a life of passivity and conformity. Since then, Beatrice had lived the only life she knew, the life that had been designed for her by the male patriarchal powers. To this end, Beatrice is no longer the commodity of her grandfather but a fragile figure that secretly longs for company and protection. As a conformist, she has been subjected to the patriarchal bourgeoisie and is unconscious of her oppression, lacking the will and determination

to revolt against those who have enslaved her. In *The Drowned World*, Beatrice is an ambiguous and shallow personality whose past is not openly revealed by the author.

Still in line with ecofeminism, scholars like Batrićević and Paunović argue that: “ecofeminist movements can have a crucial role in designing ecological and security policies aimed at environmental conservation, sustainable development, environmental, social and gender justice” (134). Hence, ecofeminism is not simply a theoretical framework which aims at describing and revealing the oppression between women and nature but also provides the necessary means for the preservation and protection of the natural environment. Ecofeminism’s influence in terms of gender issues is mostly apparent in climate change policies in the form of tackling climate change through gender perception and achieving gender equity (Hemmanti and Röhr, 29). All in all, ecofeminism is a broad, multi-disciplinary theory which aims at exposing the oppression between women and nature and struggles to establish new ways to defend the environment through a woman-centered approach. Thus, the liberation of women is a primary requirement for the preservation of natural areas.

Sümeýra Buran points out that, “women were brought into socially assigned roles as perfect wives and mothers because of cultural norms, morals, and values. If these social norms were disregarded then women were isolated and treated as abnormal” (607). This is exactly the case with Beatrice as she was raised by her patriarchal grandfather to flourish into the “perfect, submissive and passive wife” which the system promotes and cherishes. In addition, Merve Yıldız Öztürk claims that: “in male-dominant societies, women and nature exist as inferior and subordinate beings.

In Roger Luckhurst’s study “*The Angle Between Two Walls: The Fiction of J.G Ballard,*” he attempts to define ‘avant-garde science fiction’. He introduces the genre’s categorization as debatable, citing Kingsley Amis, author of *New Maps of Hell* (1960), and an anonymous author in The Times Literary Supplement as offering two distinct voices on what the avant-garde science fiction means. In the 1960s, New Wave science fiction took on the traditions set forth by early twentieth century artists. In the light of this, Luckhurst describes the New Science Fiction as encompassing the set of definitions put forward by avant-garde science fiction. Another useful term for this could be ‘speculative fiction’, a genre which branched out from traditional pulp science fiction and incorporated found texts and collage. During the 1960s Ballard served as ‘the

voice' of speculative fiction, with Moorcock as his publisher in the magazine *New Worlds*. Even if the authors at the time did not realize it, speculative fiction drew upon early Modernist art movements, including Dada, Surrealism and even Cubism.

In an article entitled “Psyche in Eco-Apocalypse: A Reading of Ballard’s *The Drowned World*,” Elaheh Soofastaei and Sayyed Ali Mirenayat examine Ballard’s *The Drowned World* from a psyche eco-apocalyptic perspective. This article looks at the embodiment of apocalyptic imagination in Ballard’s work under study and thinks it has been a major theme in which many writers have pointed out especially from the midst of twentieth century onwards. Although, J. G. Ballard’s narrations do not create an ordinary apocalyptic apprehension of human abolition, he enters the core of the apocalyptic theme by intertwining our world with an altering people’s psyche who tries to develop a new relationship with nature. This paper examines Ballard’s *The Drowned World* (1962) from the view of the human psyche in an apocalyptic setting. It follows and analyzes the characters of Dr. Robert Kerans (a biologist) and his team in which they are transformed in the story – both mentally and physically.

In an article titled “Work, Leisure and Time in J. G. Ballard’s *The Drowned World* and *Vermilion Sands*,” Christopher Webb proposes that the deliberate complication of time in J. G. Ballard’s early fiction, specifically *Vermilion Sands* and *The Drowned World* responds to a certain shift in mid- twentieth century evaluations of work and leisure. It suggests that the characters who populate Ballard’s early fictions can be read as displaced and disorientated late-capitalist subjects, whose experience of time is transformed by the ‘weird’ temporality of the landscapes in which they find themselves. Written at a time when many were concerned about a post-industrial future and the resulting “sudden onrush of leisure,” Webb suggests that Ballard’s fictions go beyond a simple critique of what an all-permissive leisure society might look like. Instead, they prod and unsettle the notion of linear time and, by doing so, force us to confront the essential weirdness behind what we consider to be the ‘normal’ experience of time.

In “Waste, landscape and the environment in J.G. Ballard’s climate novels,” Rachele Dini focuses on Ballard’s treatment of waste and material devastation in *The Drowned World*, *The Drought*, and *The Crystal World*, specifically on their desistance from critiquing industrial modernity and their exploitation, instead, of the narrative potential of its deleterious effects. She’s interested in examining the relationship between the three novels, whose strikingly similar

storylines approach ecological catastrophe from multiple angles. To this end, she refrains from discussing Ballard's two other climate novels, *The Wind from Nowhere* (1962), which he himself dismissed outright as a "piece of hackwork" he wrote in the space of a day, and *Hello America* (1981), which departs from the 1960s texts in its thematic structure (Sellars and O'Hara, 88). From a broader dimension, she is interested in examining the ways in which the articulations of waste in these texts anticipate contemporary discussions in discard studies of waste's "liveliness."

Humanity's relationship with the environment goes all the way back to the early stages of creation in which the Holy Books framed human beings' relationship with the environment (Buell, 2). The beginning of the first book of Bible has often been regarded as the origin of God's dictate on man to master and subjugate all living forms on the surface of the earth. Many people regard this as the first mention of the Western man's whereabouts with nature. However, this notion proved to be quite different in non-western tribal cultures as their affiliation to nature proved to be complementary in contrast with the judgmental essence of the Judeo-Christian tradition. Thus, despite the fact that Ecocriticism is a relatively new movement, its origins go back to the antiquity (2). During the middle ages, the representations and ideas concerning nature were commonly present in the works of Geoffrey Chaucer. Chaucer's understanding of the environment was not limited to the physical locations but also deeply related to spiritual and religious notions (Alias, 2011).

The duality between nature and human is stressed but at the same time the contradiction of human resistance against nature is highlighted through these characters. It is possible to read *Sir Gawain and the Green Knight* as a piece of nature writing. As a whole, the poem tends to point out the resemblance between seasonal transitions of nature with the several stages of human life. However, nature renews herself in a constant cycle of seasons and fertility, humans vanish in mortality. (48) It must also be kept in mind that *Sir Gawain and the Green Knight* is a Medieval, Christian poem. Thus, the opinion towards nature is severely shaped by the Judeo Christian tradition which asserted man's hegemony over nature (49).

Popescu quotes from Lynn White's famous 1967 article where he openly blamed Christianity for the ecologic crisis. At the beginning of the poem we meet Gawain who is on his way to the Green Chapel, the poet comments: in the wilderness of Wirral, few thereabouts that either God or other with good heart loved. And ever he asked as he fared, of fellows he met, if

they had heard any word of a knight in green, on any ground thereabout, of the green chapel; (...) The knight took pathways strange by many a bank un-green; his cheerfulness would change, ere might that chapel be seen (701-702). The poet comments on the wilderness, a location he describes as a place that is remote from civilization. These strange lands contain lots of adventure but also plenty of danger: Sometimes with dragons, the wars, and wolves also, sometimes with wild woodsmen haunting the crags, with bulls and bears both, and boar other times, and giants that chased after him on the high fells. Had he not been doughty, enduring, and Duty served, doubtless he had been dropped and left for dead (720-23). This stanza reveals the human struggle with the non-human environment: serpents, dragons, wolves, bears, boars, giants and trolls. Not only are they inimical creatures but they also force the traveler to be separated from nature (George, 21).

The living creatures which seem to be representatives of nature are seriously belligerent and unfriendly towards all human activities. George states that: The poet obviously privileges the human over the environment, as we would expect. Yet such privileging functions to remove humanity from its natural relationship to the ecosystem. The human relationship to the environment is a reciprocal one, with humanity altering the environment. [...] The journey itself is a significant task, yet we get only a few lines of the poem that reveal Gawain in a non-civilized setting. [...] The message is clear; humankind belongs in a tightly-controlled habitation, not in the wild natural world (36).

An effort to alienate humans from their natural environment is observable here. As a result, nature appears hostile to humans as well. It is as if all living creatures including the weather take a stand against Gawain (35). Each and every element of nature is presented as an enemy to be defeated. Gawain is favoured against all that is non-human because he is at service of God. In the end, Sir Gawain prevails and defeats nature, thereby defeating the uncivilized. The underlying message is that humans obviously don't fit in the natural environment (36). Sir Gawain is the typical representative of the Medieval, Christian mentality which condemns nature and regards it as a commodity to be possessed. It is quite obvious that in Sir Gawain and the Green Knight, the Green Knight is the personification of the wild nature and Sir Gawain a common example of human (37). A human from the Arthurian court is struggling the wild nature

is the main theme of the poem. Finally, the struggle goes on towards the end of the poem when eventually nature prevails and humans lose.

During the Elizabethan era, literature and art flourished. Britain became a country of artists by raising various poets and playwrights. The foremost representative of the Elizabethan age is with no doubt William Shakespeare. Shakespeare made extensive use of nature imagery in most of his works, including his sonnets. In one of his most praised pastoral plays, *As You Like It*, Shakespeare depicts an intriguing perspective about the nature in the conversation between Oliver and Charles: CHARLES They say he is already in the Forest of Arden, and a many merry men with him; and there they live like the old Robin Hood of England. They say many young gentlemen flock to him every day, and fleet the time carelessly, as they did in the golden world. As visible in these lines, Shakespeare ascribes positive qualities to the natural sphere.

Many of Shakespeare's Sonnets and other works including tragedies and comedies reflect similar references and associations to nature. However, there were also several other writers in early British literature who succeeded Chaucer's and Shakespeare's nature writings. In the late 17th century, John Evelyn issued a warning concerning deforestation to the Royal Society in his work *Sylva or A Discourse of Forest-Trees* (Hutchings, 2007). He maintained the formation of laws that aimed at protecting the woods. Environmental matters became more common during the Romantic era when the urban population in Britain rose and industrialization emerged with a great deal of pollution.

The Romantic poet William Blake wrote about pollution: "cities turrets & towers & domes / Whose smoke destroyd the pleasant gardens & whose running Kennels / Chokd the bright rivers" (167-9)" Themes about pollution were also touched upon in the poetry of Percy Bysshe Shelley who complained about polluted water: "the putrid atmosphere of crowded cities; the exhalations of chemical; 'the muffling of our bodies in superfluous apparel' and 'the absurd treatment of infants'" (Shelley, 133). It was obvious that Shelley was trying to raise awareness about the environmental problems of his age. It was also during the same period that the problem of species extinction came to be recognized by the masses. Gilbert White's *The Natural History of Selborne* warned people against excessive hunting of species such as the red deer and partridges and some other local species to be on the brink of extinction (White, 1987).

The work which drew people's attention to the problem of extinction was Thomas Malthus's *Essay on the Principle of Population* which was published in 1798 (Hutchings, 2007: 176). Malthus warned the British about the dangers that could result from disproportionate population growth and possible widespread famine. Hutchings remarked that: Among the implications of this frightening demographic insight was the notion that *Homo sapiens* was itself subject to ecological limits, that humans – despite their perceived status as privileged lords of earthly creation – were not immune to the possibility of future extinction through widespread starvation. Malthus's controversial insights played an important role in encouraging the development of ecological awareness during the Romantic period (176).

To sum up, it can be stated that in early British literature, writing about natural themes and elements was a common sight. Although most of these were nature writings, with some of them even reflecting social and environmental concerns. Besides the previously mentioned authors, the actual forerunners of early Ecocriticism are traced back in British Romanticism. Romantic poets such as Wordsworth, Coleridge and Keats are considered to reflect significant ideas regarding humanity's bond with nature. Romanticism advocated a strong and indispensable tie with nature, and this proved to be a serious motivation for these authors. Referred to as 'Poet of Nature' by Shelley and the Victorians, William Wordsworth was the leading poet who possessed an ecological awareness (Bate, 2013). Living in an age of Britain's Industrial Revolution caused a great impact on the poet to reflect its effect on nature and people.

Words like clouds, daffodils, trees and breeze all highlight the sphere of nature. Since most of his works dealt with a pastoral context, the poet made effective use of metaphors, similes and personifications of natural elements. Jerome MacGann comments on the relationship between Wordsworth's poetry and nature and asserts that: Ecological nature is Wordsworth's fundamental sign and symbol of his transcendent Nature because the objective natural world – the fields of chemistry, physics, biology – contains for human beings, whose immediate lives are lived in social and historical fields, the images of permanence which they need. Like Coleridge, however, Wordsworth translates those ecological forms into theological realities: nature as Nature, the Active Universe and the manifest form of the One Life. (MacGann, 2001) Wordsworth thus considers nature as an indispensable element of human life.

Despite living in an era when the term environmentalism was not even coined yet, Wordsworth and his poetry set the foundation of literary environmentalism. In short, the Romantics established strong bonds with nature in their literature, and it is commonly agreed that their works were more eligible for the school of deep ecology. After the Romantic era, there emerged the Industrial Revolution in Britain and along with remarkable scientific and technological breakthroughs, the rustic environment which happened to be the dominant setting of the Romantics transformed into an urban, industrial and completely different atmosphere. Victorian industrialization was seriously present in literature and the leading author was Charles Dickens. Dickens not only reflected the hardships of life during the Victorian era, but also emphasized the effects of industrialization on the environment.

John Parham asserts in his article that: the novels represented a ‘concrete and experiential investigation’ of the impacts of Victorian industrialization on human and nonhuman nature alike; and that Dickens’s writing and active involvement, notably in the area of sanitation reform, constituted ‘the creation of an ecological imaginary’, one constructed around an interest in political change and, in particular, an enthusiasm for the possibilities of new technology. (2010: 10) The author thereby contributed to the establishment of an environmental awareness during the Victorian era, when industrial boom was bursting at full speed. Thus, Dickens not only reflected human perspectives in his works but also the impact of human creation on non-human environments. It can be said that the urban Victorian city was a source of inspiration for the author which motivated him to get involved in socially oriented writing (11).

According to Parham, Charles Dickens’ analysis of the Victorian environment has evolved in four different environmental stages: straight environmental description; a more complex description informed by the language and concepts of science; a visceral, ecological mode of analysis in which he began to recognise that environmental hazards – most notably, air pollution and sanitation – pervaded the entire (human and nonhuman) environment; and a concern about the impact on human health that mirrored and anticipated the ecosystem health thesis. (11) Dickens’ masterful skills of writing and his concerns for the environment as well as the negative impacts of pollution on human health can be noticed through these lines. Direct environmental description can easily be observed in many of Dickens’ novels. Bleak House opens with a shocking description of ecological disaster: ‘Fog everywhere’; ‘the waterside

pollutions of a great (and dirty) city’; gas ‘looming [...] in divers places in the streets’; and, of course, ‘Smoke lowering down from chimney-pots, making a soft black drizzle, with flakes of soot in it as big as full-grown snow-flakes—gone into mourning, one might imagine, for the death of the sun’. (Dickens, 1994)

This description points out that Dickens draws a realistic but bitter picture of London in the reader’s mind. Dickens never preferred to compare or contrast the urban environment with the rural landscape but rather tended to stick to city settings as a major source for his socially driven novels. In most of his novels, Dickens depicted a gloomy image parallel to that of industrial England and thereby stressed the reality that industrialization causes the deterioration of the common people as well as that of the environment. Novels such as *Bleak House*, *Little Dorrit* and *Our Mutual Friend* all share detailed descriptions concerning the pollution of the urban city and the devastating effects of the pollutants on nature. Parham argues that: This development, from descriptions of the insidious intrusion of pollutants into the air and soil and water, to those of its entering the ‘hair and eyes and skin’ of the human population, culminates with an anticipation of ecosystem health that clarifies the social-ecological dimension in Dickens (13).

This obviously coins Dickens as an environmentally aware author and this is mostly due to the industrial progress which brought a series of ecological and social problems with it. As a result, Dickens had clearly established the association between public health and environmental pollution. His involvement became obvious when Dickens joined the Metropolitan Improvement Society in 1842. The author voiced concern about health conditions in his own way and expressed the following: “I can honestly declare tonight, that all the use I have since made of my eyes – or nose – that all the information I have since been able to acquire through any of my senses, has strengthened me in the conviction that searching sanitary Reform must precede all other social remedies.” (Dickens & Fielding, 1988)

In this speech, Dickens playfully aims to raise awareness to the necessity of improving sanitary conditions in London. He also envisioned that London and its supporters played a unique role in ‘setting an example of humanity and justice’ (Dickens & Fielding, 1988). Dickens’ writing proved that works of fiction could serve a good purpose by reflecting the hardships of life in an ecologically ruined society (Parham, 2010). Furthermore, he also emphasized that literature had the capacity to raise awareness for the preservation of nature and take action against pollution

of all sorts so as to re-establish ecological justice. Hence, Dickens believed that the blending of poor sanitation and grave air pollution would eventually bring forth an “unnatural humanity” (15). As a result, Dickens’ writing closely corresponds with contemporary environmental justice ecocriticism whose goal is to: attempt to redress the disproportionate incidence of environmental contamination in communities of the poor [...] to secure for those affected the right to live unthreatened by the risks posed by environmental degradation and contamination, and to afford equal access to natural resources that sustain life and culture. (Adamson, Evans, & Stein, 2002)

The correspondence between Dickens’ fiction and environmental justice ecocriticism is obvious as both strive to reach environmental progress, especially for the disadvantaged, lower classes. This urge to fight for environmental justice also resulted in political action. All these place Charles Dickens close to the views of Murray Bookchin but nonetheless, Dickens himself denied being a radical activist of any kind. Dickens’ views towards technology were doubtful and unclear. He maintained that technology could strive for the social progress of humanity by promoting the rebuilding of an egalitarian society (Parham, 2010). Dickens strongly believed that living in a contemporary era need not weaken the secrets of the powers vested in nature. The second concern he raised had to do with technology’s destructive potential: “Is not my moral responsibility tremendously increased thereby?” (Dickens & Fielding, 1988). The notion that technological progress requires moral commitment is totally coherent with the school of social ecology (Parham, 2010).

In a 1858 speech to the Institutional Association of Lancashire and Cheshire, Dickens proposes a visionary scope to technology which would decrease its unperceptive pragmatic inclinations: [...] in the midst of the visible objects of nature, whose workings we can tell off in figures, surrounded by machines that can be made to the thousandth part of an inch, acquiring every day knowledge which can be proved upon a slate or demonstrated by a microscope – do not let us, in the laudable pursuit of the facts that surround us, neglect the fancy and the imagination which equally surround us as part of the great scheme. (Dickens & Fielding, 1988) Dickens openly manifests his argument that technological advancement should not result in any renunciation from nature and all her elements.

Joseph Conrad established a close relationship with nature in his oeuvre. Most of his novels reflect vivid depictions of nature. Conrad’s fourth book *Lord Jim* has meticulous natural

references. A dialogue between Marlow and the merchant Stein reveals man and nature's bond: Look! The beauty—but that is nothing—look at the accuracy, the harmony. And so fragile! And so strong! And so exact! This is Nature—the balance of colossal forces. Every star is so—and every blade of grass stands so—and the mighty Kosmos in perfect equilibrium produces—this. This wonder; this masterpiece of Nature. (Conrad & In Moser, 1996) Nature in all its harmony and nobility is appreciated to the fullest extent by the works of Conrad.

Marlow who is amazed by Stein's words asks: "Masterpiece! And what of man?" (125). "Man is amazing, but he is not a masterpiece," replies Stein. This brief dialogue in a way sets the standard in terms of man-nature relationship for most of Conrad's novels. Conrad insistently depicts nature as predominant compared to humans and claims that humans will never reach the same level as nature on the condition that they cling on to Cartesian doctrine of dualism (Luther, 2014). Cartesian thought which favours the human mind over matter results in the isolation of human which in its turn leads to the breakdown of humanity (2). Dualistic thought favoured one aspect over the other and inevitably led to the assumption that humans were better than other beings. Ecocriticism lies in perfect harmony with Conrad's views on humans and nature. While ambitiously seeking advancement, humans regress, get more and more isolated and become desperate in the quest for technological improvement (5).

Conrad's renowned novella *Heart of Darkness* also includes a great deal of ecocritical content. The abuse of nature by humans is a theme which is constantly stressed throughout the novella. Sonja Luther argues that the sea and forest have a special place in Conrad's fiction: the sea is the place where a man can reestablish his communication with nature. [...] The sea takes man away from his past and with its exceptional vigor forces man to reevaluate his whole being. The forest in Conrad's fiction plays the opposite role; it takes man right back to his past and without interference watches him get lost in his materialistic desires. When surrounded by forest, Conrad's protagonists reach anything but a state of transcendence. (Luther, 2014) Hence, it is obvious that Conrad ascribes special meaning to natural areas.

While his first two novels take place in the rainforest, his other two works including the novella *Heart of Darkness* are set in the tropical forests of Congo in Africa, and this is by far no coincidence. In Conrad's fiction forests and rivers are personified as antagonists who dominate the existence of human beings (55). Simply put, it is man against forest and man against river/sea,

and these clashes always result in man's humiliating defeat. The relationship between Marlow, the protagonist and his antagonist Kurtz reveals their perspectives on nature: [N]ever before did this land, this river, this jungle, the very arch of this blazing sky appear [...] so hopeless and so dark, so impenetrable to human thought, so pitiless to human weakness (Conrad, 2006) All natural areas like the land, river, jungle and sky are personified and ascribed feelings as if they were living human beings. Taking these characters into consideration, it is clear that Marlow's views are heavily affected by Kurtz who acts as a virus to all whom he approaches. It is Kurtz who distorts all the other characters' opinions and adapts them to his own mentality. Through the character of Kurtz, Conrad elicits human's misconception of nature and corrupt spirit which considers nature as a simply commodity belonging to man (Luther, 2014).

Kurtz, from the above view, is a representative of the anthropocentric worldview that humans have come to embrace and which serves as a form of justification for western colonialism. Thus, Conrad turns the man-nature relationship upside down by pointing out the extreme hegemony of anthropocentric thought. In another major novel, *Nostromo* (1904), Conrad takes his readers to the isolated town of Sulaco in South America. Sulaco is an artificial town which is completely disconnected from the outside world via mountains and rivers. A disconnected and isolated micro-society leads the people to become alienated which eventually cause negative results (Luther, 2014). Sulaco's natural environment is gradually being torn down because of capitalist industrial development and the only character who comes to realise is Ms. Gould: "Mrs. Gould had seen it all from the beginning: the clearing of the wilderness, the making of the road, the cutting of new paths up the cliff face of San Tomé" (Conrad, 2002).

However, the devastation of nature in *Nostromo* takes place at the background of the novel, in a rather silent manner (Luther, 2014). Conrad conveys serious anti-capitalist messages through the narrative of *Nostromo*. Ms. Gould's painting serves as a foreshadowing which enables her to enjoy the beauty of nature before it gets destroyed. Afterwards the waterfall is used for the production of hydropower to supply fuel for the mine which results in the destruction of the natural resource (125). In the end, to Ms. Gould, the painting becomes nothing more than a sad memory of the good old times. Conrad shows what men's greed is capable of doing to one another and to the environment. In conclusion, Conrad illustrates the consequences of men's alienation from nature which are degeneration, despair and inevitable downfall. On the other

hand, in the United States, there was another writer who was mainly accepted to be the founder of American nature writing.

Henry David Thoreau's *Walden* was seen as the first work that was associated with the first wave of ecocriticism. In this influential book, Thoreau wrote: "We need the tonic of wildness . . . We need to witness our own limits transgressed and some life pasturing freely where we never wander" (Thoreau, 2018). In terms of environmental literature, Thoreau's writing proved to be so radical that it became the centre-stage of American nature writing (Kováčik, 2011). In contrast to Ralph Waldo Emerson's *Nature* which was known to be an essay that changed views, *Walden* became a radical canonical work that comprised and defended Thoreau's ideas and philosophy (47). Thoreau's *Walden* gave rise to a new style of writing that not only had its origin in America but was also mainly nature-oriented (47). Compared to its refined European counterpart, American nature writing owed its development largely to Thoreau mainly due to its grandeur and immensity (48).

However, the birth of modern ecocriticism as a genre occurred in the 1980s when several distinguished academics such as Frederick O. Waage and Alicia Nitecki contributed to the existence and development of environmentalism within the scope of literary studies. These scholars published books as well as journals and showed great effort in order to raise awareness for environmental concerns (Glotfelty, 2009). Together with these efforts, Universities and academic circles supported ecological courses and founded positions related to environmental studies. In 1992 at the Western Literature Association, a most valuable effort was made as the Association for the Study of Literature and Environment (ASLE) was founded with Scott Slovic as its first president (xviii). The Association's pursuit was defined: to promote the exchange of ideas and information pertaining to literature that considers the relationship between human beings and the natural world and to encourage "new nature writing traditional and innovative scholarly approaches to environmental literature, and interdisciplinary environmental research." (xvii)

Not only was this the first effort to promote environmental research but also the primary initiative to combine environmentalism with the humanities. As an organization with a clearly defined purpose ASLE soon developed into a blossoming association. Within a couple of years ASLE acquired a great many number of members and by the early 1990s, the Association had

reached over 750 active members. By the year 1993, ecocriticism had flourished to an established literary discipline. What proved to be a loosely disorganized group of scholars had come together to create a unique and ambitious organization determined to achieve change in the field of humanities and arts (xvii).

The above review has demonstrated that Ballard's *The Drowned World* and works related to nature have attracted a lot of attention from critics. The review of existing literature has shown that the concept of climate change and environmental crises had been a topical issue in Ballard's work and his fellow contemporaries. In spite of the much research on Ballard, the contribution of the present study lies in its situation of the novel as climate fiction, establishing the causes, manifestations and consequences of the environmental crises. The study further proposes sustainable measures that could be adopted to rescue the environment from its crises of despair. The study affirms that there is a crises and proposes some preventive measures that could enable man to live happily in the environment in which he finds himself.

CHAPTER TWO

JAMES GRAHAM BALLARD AND CLIMATE FICTION

This chapter presents the concept of climate fiction in general, as well as situates J.G. Ballard's *The Drowned World* as a climate fiction. In other words, after examining the general features of climate fiction, we strive to situate Ballard's text under it. The chapter equally presents the novel within the context of an imagined state or society in which there is great suffering or injustice (dystopia). Furthermore, various approaches that Ballard uses to situate his novel within the limelight of climate fiction are examined. Finally, the chapter examines the novel under study as an eco-feminist tale.

According to *The Merriam Webster Online Dictionary*, Cli-fi, short form of climate change is a form of fiction literature that features a change or changing climate. It is rooted in science fiction but always draws on realism and the supernatural. This form of literature, although scientifically grounded, is said to be speculative in nature. Actions may take place in the world as we know or in the near future. The term Cli-fi is generally credited to the freelance news reporter and climate activist, Dan Bloom in 2007 and 2008. Writers such as Ballard, Margaret Atwood, Octavia Butler, Kim Stanley, Ian McEwan and Barbara Kingsolver are prominent authors whose works are strictly Climate fictions.

Characteristics of Climate Fiction

Climate fiction has some specific features which writers within this domain of writing situate their ideas. These characteristics are what strengthen thoughts within this narrative and clearly pinpoint possibilities of relating with other domains like culture, gender, politics, etc. According to Julia Leyda, these qualities are put forward with seven keywords: contemporary, controversial, trans-medial, transnational, didactic, generic and political (Leyda, 12). Texts pertaining to climate fiction are contemporary in the sense that the majority of these works take place in the present or the near future. Since climate change is an ongoing process which keeps reappearing on media and popular culture, its presence in cinema and works of fiction is emphasized by literary critics and film writers up to our present day. More and more films about

climate change and climatic catastrophes continue to be produced and enjoy high ratings. Moreover, since its first establishment in the early 2000s, the term has preserved its controversial nature.

A new type of fiction came into being at the beginning of the 21st century- the climate fiction (cli-fi) which mainly dealt with narratives concerning climate change. The term was coined by Dan Bloom in the early 2000s (Irr, 2017: 2). Climate fiction is dedicated to the cause of exposing the effects of catastrophic climate changes on human life. Climate fiction has an undeniable connection with ecocriticism, and critics have questioned whether the genre inevitably portrays an apocalyptic devastation of humanity or whether it simply foresees the downfall of economic, political and social organizations that have brought about climatic fluctuation (4). Caren Irr affirms that: the movement of ecocriticism, in other words, urges readers to recognize the subliminal commitment of cli-fi to utopian invention as well as its most readily perceptible commitment to apocalyptic terror. These two gestures take on different weights in various incarnations of climate change fiction, but both are recurring and essential features in the genre.

Leyda maintains that Cli-fi as a term was purportedly coined in 2007 by the Taiwan-based North American activist and blogger journalist, Dan Bloom, who continues to actively promote it. Indeed, Bloom has not only publicized it, but also vehemently (and vainly) attempted to maintain some degree of control over its meanings and usages. Like most creations, however, the expression cli-fi has entirely escaped the control of its self-proclaimed creator. The term cli-fi has not only been proliferating at recent international conferences, but also within university curricula as educators in many disciplines embrace the recent spate of fiction and film dealing with climate change in humanities courses and beyond. Leyda affirms that the originality of the term arouses curiosity and debate concerning climate fiction works in literature and cinema. In addition, the term cli-fi connotes a direct reference to the genre of sci-fi but is not classified to any type of medium (Leyda, 13). Thus, cli-fi includes a wide variety of media from literature to cultural studies and from comic books to theatre and cinema.

Climate fiction, ecocriticism and utopian/dystopian fiction are inevitably interrelated as they are comprised of apocalyptic and post-apocalyptic genres as continually reappearing themes. While cli-fi overlaps with sci-fi, it also intersects with ecocriticism as it provides excellent

sources for ecocritics to consider and analyse. Trexler and Johns-Putra posit that the labeling of a book “depends not simply on the characteristics of that text, but on the identification of its author with the genre and the willingness of readers to read that text ... Science fiction, in particular, functions as a community of authors and readers, built on and defined by a sense of shared identity.” (Trexler and Putra, 187). Works of science fiction thus appeal to a large community of authors and readers who gather around a common identity. Works of climate fiction (cli-fi) largely overlap with science-fiction (sci-fi). Owing to their linguistic resemblance, sci-fi enables cli-fi to be perceived as a radical genre in spite of the reality that climate change is now the centre of attention (Mehnert, 38).

Climate fiction is not a simple sub-genre of science-fiction as there are serious intersections between the two. Besides its trans-medial quality, cli-fi also possesses a transnational characteristic. In other words, it is national but at the same time transcends boundaries and reaches a global scale. Its transnational origin obscures all boundaries and interconnects territories (13). Next to being trans-medial and transnational, cli-fi is also acknowledged to be a didactic genre which: Students and scholars of literary history know that didactic fiction can harness the emotions and appeal to the morality of its readers, compelling them to recognize the injustices in their midst. The power of literature can make a strong impact on society by winning over large reading audiences to support movements that foster change. Films and books are effective source in creating public opinion and in raising awareness for certain vital issues. Therefore, cli-fi films and books may be extremely influential for educational purposes as: cli-fi films can be usefully adopted in the classroom as “attractive, non-textbook ways of introducing students to issues that are terribly resistant to narrativization.” Similarly, the study of cli-fi novels provides emotional connections with characters dealing with the impacts of climate change, pushing readers to “care enough to change our actions now, and to pressure our governments and corporations to do the same.”

Most cli-fi works are distributed and sold as sci-fi but remain closely bound to realism and scientific truth. Therefore, this specific hybridity forms one of the distinct features of climate fiction (41). The major representatives of climate fiction are J.G. Ballard’s apocalyptic/postapocalyptic quadrilogy of the early 1960s, Frank Herbert’s *Dune* (1965), Ursula K. Le Guin’s *The New Atlantis* (1975) and *Always Coming Home* (1985), Cormac McCarthy’s

The Road (2006), Jennifer Egan's *A Visit from the Goon Squad* (2010) and Margaret Atwood's *Oryx and Crake* (2003) and *The Year of the Flood* (2009) (38). Dr. Antonia Mehnert affirms that:

While portraying humans' intricate relationship with the planet and thereby teasing out the anthropogenic dimension of global warming, climate change fiction inevitably also deals with ethical questions about humankind's responsibility in this unprecedented crisis. Finally, in depicting climate change, writers also have to engage with a variety of representational challenges such as the phenomenon's global scale and long, slow process of unfolding. (38)

Thus, climate change fiction serves a wide range of purposes including raising humans' awareness against climate change issues and pointing out human responsibility. Despite the restricted scope of this definition, an increasing number of climate change fiction in writing and cinema has been produced since the beginning of the 2000s. Michael Crichton's *State of Fear* (2004), Ian McEwan's *Solar* (2010) and the blockbuster movie 'The Day After Tomorrow' (2004) are the major names in recent climate change fiction (38). Within the context of ecological apocalypse, J.G. Ballard's post-apocalyptic novel series of the early 1960s constitute the forerunners of climate fiction. On a specific note, his second and most acclaimed novel, *The Drowned World* (1962) recounts the adventures of a UN scientist, Dr. Robert Kerans in his struggle to map the drowned Western European cities after a period of severe climate change (Irr, 2017: 6). In terms of climate fiction, the novel is of utmost significance mainly due to its opposition against liberal policies which fall short of generating decisions in favour of humanity (6). Kerans' quest represents a scientist's struggle to maintain reason and rationality in an environment where humanity has regressed to primitive levels with the influence of extreme climatic conditions (6). Hence, the literal flooding of the cities allegorically represents the collapse of human reason and morality. Ballard draws multiple pictures of humanity's possible condition under extreme climatic disasters.

Ballard's climate fiction novels were released at a period when climate change had not been named by scientists (Clarke, 7). Therefore, Ballard's novels played a vital role in the development of climate fiction. Jim Clarke asserts that: they have been collectively presented as 'elemental' novels. They have been depicted as disaster dystopias, mediated through each of the four classical Aristotelian elements of air, water, fire and earth. (8) Ballard meticulously used the

four classical Aristotelian elements to convey his narratives related to each environmental apocalypse. It is undeniable that the majority of climate fiction came forth from the genre of science-fiction (8). Another interesting point is that in his post-apocalyptic novels, Ballard makes no detailed scientific explanation for the disasters because the actual cause and explanation lie outside the range of science (9). However, Ballard seems to evade accusing humans for directly or indirectly causing of climatic catastrophes. Instead of doing this, the author demonstrates his distrust for scientists in each of these four works (10). Science's inclination of disregarding the reality had caused Ballard a serious revulsion towards scientists (10).

In Ballard's world, environmental disasters have already taken place and are advancing while the scientific methods are stuck at the level of theory (11). He portrays the protagonist scientists as passive and impotent against the disasters. According to Ballard, science alone cannot be a solution to catastrophes: They insist that since environment and climate are fundamentally experienced sensually, science is impotent in investigating what human response climate change may demand from any particular individual. If Ballard does have any rapprochement with the perspective of science, it is in sharing the science-driven notion of later cli-fi that conventional responses are an insufficient reaction to a global challenge such as climate change. (12) The author implies that science and scientists have forsaken humanity as they have fallen short to create a solution for the environmental crisis on a global scale.

Ballard's climate fiction is not devoid of political implications. Ballard, who grew up in Shanghai, displaces the catastrophe from the outer Pacific to Europe, mainly London, so as to impose guilt on and harshly criticize the capitalist nations of the West for their previous colonial activities (14). Furthermore, climate fiction has some specific characteristics. According to Julia Leyda, these qualities are put forward with seven keywords: contemporary, controversial, trans medial, transnational, didactic, generic and political (Leyda, 12). Texts pertaining to climate fiction are contemporary in the sense that the majority of these works take place in the present or the near future. This is partly because climate change is an ongoing process which keeps reappearing on media and popular culture. As such, its presence in cinema and works of fiction is emphasized up to our present day. More and more films about climate change and climatic catastrophes continue to be produced and enjoy high ratings. Moreover, since its first establishment in the early 2000s, the term has preserved its controversial nature.

In addition, the term cli-fi connotes a direct reference to the genre of science fiction (sci-fi) but is not classified to any type of medium. Thus, cli-fi includes a wide variety of media from literature to cultural studies and from comic books to theatre and cinema. Climate fiction is not a simple sub-genre of science-fiction as there are serious intersections between the two. Besides its transmedial quality, cli-fi also possesses a transnational characteristic. In other words, it is national but at the same time transcends boundaries and reaches a global scale. Its transnational origin obscures all boundaries and interconnects territories (Leyda, 13). Next to being transmedial and transnational, cli-fi is also acknowledged to be a didactic genre which: Students and scholars of literary history know that didactic fiction can harness the emotions and appeal to the morality of its readers, compelling them to recognize the injustices in their midst. The power of literature can make a strong impact on society by winning over large reading audiences to support movements that foster change. (Leyda, 13)

Films and books are effective source in creating public opinion and in raising awareness for certain vital issues. Therefore, cli-fi films and books may be extremely influential for educational purposes as: cli-fi films can be usefully adopted in the classroom as “attractive, non-textbook ways of introducing students to issues that are terribly resistant to narrativization.” Similarly, the study of cli-fi novels provides emotional connections with characters dealing with the impacts of climate change, pushing readers to “care enough to change our actions now, and to pressure our governments and corporations to do the same.” Engrossing audiences in filmic and fictional narrative means allowing them to process emotionally the implications of what they may well already know via facts and figures. (Leyda, 14) As a result, its didactic nature is vitally significant to shape individuals and societies. Additionally, cli-fi’s categorization as a genre arouses debate because of its widespread representation in literary and cinematic circles. A wide variety of newly appearing genre names have come to be affiliated with cli-fi. From speculative fiction and sci-fi to eco-fiction, eco-cinema, eco-disaster and ecocriticism etc. All of these notions eventually overlap with cli-fi. Finally, cli-fi also provides a better understanding for its political effects on the society. It inevitably comprises political issues and helps us comprehend politics concerning race, gender, nationality, sexuality etc.

J.G. Ballard’s cli-fi novels of the early 1960s impeccably correspond with these seven characteristics. They are contemporary in the sense that they take place in the present or near

future, and their settings are valid even in our present day despite the fact that they were published half a century ago. The novels are not bound to any particular era. Ballard's post-apocalyptic novels are also highly controversial in that they present us four distinct disaster settings by **air**, **water**, **wind** and **earth**. Ballard thereby explores climatic disaster through each of the four elements. They are trans medial in that they could easily be adapted to the white screen. Even though these books have not yet been adapted to cinema, various films have used them as a source of inspiration. These include popular apocalyptic films such as *The Day After Tomorrow*, *Geostorm*, 2012, *San Andreas* and many other similar productions. Transnationality is also present in his works which mainly take place in Britain but also mention many other countries, emphasizing that climate knows no boundaries due to the wholeness of the Earth.

In Ballard's novels, the main story revolves around the UK and Western Europe. However, due to the catastrophic impact of natural disasters, many other countries including distant ones such as Asian and American nations are also affected by them in a similar disastrous ways. In addition, Ballard's novels are didactic in the sense that they all attempt to convey moral messages and covert implications. Their generic quality lies behind the fact that they are considered within the genre of climate fiction whereas at the same time they also classify in sci-fi, dystopian fiction and in the sub-genre of apocalyptic/post-apocalyptic fiction. Finally, Ballard's novels are loaded with overt and covert political implications regarding the western society but reflexive of the contemporary society. These novels deal with a variety of social and political issues ranging from women's rights to class struggle and environmental justice. Therefore, works of cli-fi not just describe problems related to climate change but also shape and change our understanding concerning social issues that are largely connected with them.

Finally, to fully comprehend and scrutinize cli-fi, it is not only required to identify its distinctive characteristics, but also imperative to analyze it within the dystopian tradition (Loock, 2016: 6). Thus, in order to explore works of cli-fi more profoundly, a deeper studying of dystopias is necessary. This makes dystopias one of the characteristics or grounds on which cli-fi is laid. Dystopias foresee a bleak and failed futuristic vision of humanity and use various techniques to convey their narratives. The first and main technique is de-familiarization (6). Also referred to as cognitive estrangement, it is explained as: Distant settings and shocking scenarios serve to de-familiarize the fictional world from the known world, thereby foregrounding and

commenting on the social, political, and cultural conditions of their time of production. (6) De-familiarization thus serves as an important tool within dystopian fiction. Therefore, dystopias also contain a didactic purpose so as to project premonitory narratives and probable future societies which rely on contemporary prepossession and came to existence as a reaction to utopian thought (6). Dystopias are strong tools for shaping societies. They arouse curiosity and force the public to question concerns of social, political and cultural content. In addition, utopias generally narrate a journey from the beginning whereas in dystopias, the narrative starts in medias res. The reader/spectator is introduced to the main character in a mysterious, unrevealed setting. This causes the alienation of the protagonist and an increasing consciousness of all sorts of wrong doings with the result of intervening and causing to change or escape from the society (6).

As an unadulterated example of natural dystopia, J.G. Ballard's quadrilogy of cli-fi novels also begin in medias res and reveal their themes and details in their upcoming chapters. The readers have no idea as to how the disasters occurred or what exactly happened before the catastrophe. As the story progresses, Ballard gradually reveals details about the catastrophes and main characters. However, it is worth noting that in two of the three analyzed in this study, mainly *The Wind from Nowhere* and *The Drowned World*, the actual cause of the climatic disasters are completely left out. Readers are pushed to speculate on the causes and are driven to question the human impact on these natural phenomena. It is only in *The Drought*, that Ballard openly reveals that the cause of the cataclysm is due to the industrial pollution of rivers and streams which disrupts the hydrologic cycle and results in a terrible drought.

Though reflecting many disparate themes, dystopias generally deal with all kinds of failed society projections including dictatorships, climatic disasters, destructive wars, epidemics, and class conflicts. Therefore, while analysing cli-fi, it is noteworthy to take into consideration the common characteristics it shares with dystopian fiction (Loock, 27). One of these common features is its didacticism. The manner in which both dystopias and cli-fi works tackle social matters are almost identical. These issues and the focus on the family speak to the heteronormative anxieties that many examples of both cli-fi and post-apocalyptic fiction articulate and to the traditional values of patriarchy, family structures, and gender roles these texts seem to promote in the face of crisis – as if to provide stability and a moral compass for the impending end of the world. These aspects need to be critically examined, especially since cli-fi,

just like dystopian fiction more generally, fulfills a didactic function. (7) Loock stresses the very didactic nature of cli-fi and post-apocalyptic fiction and maintains that heteronormative and patriarchal values need to be open for criticism.

All in all, it can be established that climate fiction, science fiction, dystopia and ecocriticism are interrelated and overlap within one another. These notions not only share common characteristics but also complete each other in a harmonious way. Thus, climate fiction being a sub-genre of sci-fi mostly classifies as dystopia and forms a case study for ecocriticism.

J.G Ballard's Fiction as a Cli-Fi

The novel's title situates it within a climatological context. This is true because geography studies happenings and natural occurrences on, or around the earth surface. In his appraisal of the novel under study, Jim Clarke, in his article entitled "Reading Climate Change in J.G. Ballard" posits that *The Drowned World* as an early example of climate fiction written before Wallace Broecker coined the term 'global warming' in 1975, and before the notion of the Anthropocene and Anthropocentric blame got a foothold in the popular imagination (9). With this, Clarke situates Ballard's novel under study as a good example of global warming narrative and climate change discourse. In his paper, Clarke argues that due to lack of anthropocentric blame within the story, the novel differs from modern climate novels, stating that there is "no discussion of blame or responsibility, and no attempt at mitigation or alleviation (9). Rather, the novel presents 'a form of climate change stripped of transient concerns'" (19) in which the environment provides an ontological structure within change occurring within the environment has an effect, either transformative or destructive on the inner worlds of the inhabitants (19). From a similar angle, Adam Trexler in Anthropocene 'Fictions: The Novel in a Time of Climate Change' sees *The Drowned World* as an early piece of climate fiction, categorizing it as a 'deluge novel', a genre of apocalyptic narrative existing since the writing of *The Bible* and beyond, describing tales of divine judgment, destruction and creation wherein moral lessons, ethical boundaries and limits of humanity could be formulated (Trexler, 84). Much like Clarke, Trexler situates the novel under climate fiction which lack anthropocentric blame or judgment: an element of the category which Sebastien Groes calls the 'apocalyptic-stoic'.

Generally, J.G. Ballard's cli-fi novels of the early 1960s perfectly correspond with the characteristics discussed in the previous section of the work. Reading Ballard's fiction from the angle of the characteristics makes his works contemporary in the sense that, the stories take place in the present or near future, and their settings are valid even in our present day. The novels are not bound to any particular era. Ballard's post-apocalyptic novels are also highly controversial in that they present us four distinct disaster settings by air, water, wind and earth. Ballard thereby explores climatic disaster through each of the four elements. They are trans-medial in that they could easily be adapted to the white screen. Even though these books have not yet been adapted to cinema, various films have used them as a source of inspiration. These include popular apocalyptic films such as *The Day After Tomorrow*, *Geo-storm*, 2012, *San Andreas* and many other similar productions. Transnationality is also present in his works which mainly take place in Britain but also mention many other countries, emphasizing that climate knows no boundaries due to the wholeness of our Earth.

The novel opens with the author creating curiosity in the minds of the readers about what would happen next (suspense). 'Soon it would be too hot...'. This sentence sets novel against the backdrop of climate fiction. The sun rises behind the abandoned lagoon causing intolerable heat due to rising temperatures.

In Ballard's novels, the main story revolves around the UK and Western Europe. However, due to the catastrophic impact of natural disasters, many other countries including distant ones such as Asian and American nations are also affected by them in a similar disastrous way. In addition, Ballard's novels are didactic in the sense that they all attempt to convey moral messages and covert implications. Their generic quality lies behind the fact that they are considered within the genre of climate fiction whereas at the same time they also classify in sci-fi, dystopian fiction and in the sub-genre of apocalyptic/post-apocalyptic fiction. Finally, Ballard's novels are loaded with overt and covert political implications regarding our western society. These novels deal with a variety of social and political issues ranging from women's rights to class struggle and environmental justice. Therefore, works of cli-fi not just describe problems related to climate change but also shape and change our understanding concerning social issues that are largely connected with them. Finally, to fully comprehend and scrutinise cli-fi, it is not only required to identify its distinctive characteristics, but also imperative to analyse it

within the dystopian tradition (Loock, 2016: 6). Thus, in order to analyse works of cli-fi more profoundly, a deeper studying of dystopias is necessary.

J.G. Ballard within the Context of Dystopia

The presentation of a (non) fictional society in which there is great suffering constitutes the lives of humans, fauna and flora in Ballard's novel under study. The relationship between dystopia and climate fiction is very instrument in the understanding of the core of Ballard's environmental discourse. This is because it creates an image of the future, mostly as warnings, from the poor relationships between man and his environment. Though this term is mostly used in political discourses, it is highly applicable in environmental discourses because it reminds man about the danger of certain negative activities on the environment. Dystopias foresee a bleak and failed futuristic vision of humanity and use various techniques to convey their narratives. The first and main technique is de-familiarization (6). Also referred to as cognitive estrangement, it is explained as: Distant settings and shocking scenarios serve to de-familiarize the fictional world from the known world, thereby foregrounding and commenting on the social, political, and cultural conditions of their time of production. De-familiarization thus serves as an important tool within dystopian fiction. Therefore, dystopias also contain a didactic purpose so as to project premonitory narratives and probable future societies which rely on contemporary prepossession and came to existence as a reaction to utopian thought (6). Dystopias are strong tools for shaping societies. They arouse curiosity and force the public to question concerns of social, political and cultural content.

In addition, utopias generally narrate a journey from the beginning whereas in dystopias, the narrative starts in medias res. The reader/spectator is introduced to the main character in a mysterious, unrevealed setting. This causes the alienation of the protagonist and an increasing consciousness of all sorts of wrong doings with the result of intervening and causing to change or escape from the society (6). As a perfect example of natural dystopia, J.G. Ballard's quadrilogy of cli-fi novels also begin in medias res and reveal their themes and details in their upcoming chapters. The readers have no idea as to how the disasters occurred or what exactly happened before the catastrophe. As the story progresses, Ballard gradually reveals details about the catastrophes and main characters.

However, it is worth noting that in two of the three analyzed in this study, the actual cause of the climatic disasters are completely left out. Readers are pushed to speculate on the causes and are driven to question the human impact on these natural phenomena. It is only in *The Drought*, that Ballard openly reveals that the cause of the cataclysm is due to the industrial pollution of rivers and streams which disrupts the hydrologic cycle and results in a terrible drought. Though reflecting many disparate themes, dystopias generally deal with all kinds of failed society projections including dictatorships, climatic disasters, destructive wars, epidemics, and class conflicts. Therefore, while analysing cli-fi, it is noteworthy to take into consideration the common characteristics it shares with dystopian fiction (Loock, 7). One of these common features is its didacticism. The manner in which both dystopias and cli-fi works tackle social matters are almost identical. These issues and the focus on the family: speaks to the heteronormative anxieties that many examples of both cli-fi and post-apocalyptic fiction articulate and to the traditional values of patriarchy, family structures, and gender roles the text under study seem to promote in the face of crisis – as if to provide stability and a moral compass for the impending end of the world.

The Landscape Approach to Environmental Crisis

An explicit theme in Ballard's *The Drowned World* is the gradual convergence and eventual confusion of the external environment and the protagonists' inner psychic world. Subject to radical transformations and upheavals, both are frequently referred to as "landscapes," a signifier that conspicuously links up with a tradition in painting by which the natural environment has been framed through the tension between the world-for-us and the world-in-itself, simultaneously organized by the sensory apparatus of the perceiving subject and externalized as ontologically separate and inaccessible. Indeed, as we shall see, landscape painting provides a recurring signifier in Ballard's climate novel under study and taking a closer look at the characters between his literary imagination and the visualization of inhuman environments in the Western art canon is revealing. John Ruskin famously limits the subjects of landscape painting to "natural phenomena in their direct relation to humanity" (Ruskin, 5).

With its apotheosis in the romantic period, landscape carries within it the ambiguity of denoting both the external land and its internal aesthetic representation. Between the seventeenth and the nineteenth century, depictions of landscape transitioned from providing the background

of bucolic fantasies to foregrounding elemental vivacity, or what could be called the meteorological sublime. What specifically British and American nineteenth-century landscape painters sought to capture and even imitate was an expression of divine order, a motivation that strongly resonated in the concurrent emergence of a new set of natural philosophical disciplines that included geology, botany, zoology, and meteorology. As Barbara Novak notes, nineteenth-century painters and scientists were united by “the desire to approximate the moment of creation itself” (Novak, 41), which unfolded in the gaps “between historical and mythical time” (42). Like the fossils and minerals excavated by geologists or the pre-human genealogies traced by Darwin, especially vistas of the natural sublime in nineteenth-century landscape art seemed to offer a glimpse of a primordial past.

It seems that Ballard’s landscapes provide a vision that is not dissimilar. The return of Triassic swamps in *The Drowned World* fuels the “meta-biological fantasy” of an excavation of pre-cerebral layers of “spinal and psychic time, recollecting in our unconscious minds the landscapes of each epoch, each with a distinct geological terrain” (Ballard 44). Eighteen years prior to John McPhee’s alleged first coinage of the phrase, Ballard invokes a “descent into deep time” (Ballard, 70) and heralds the human as geological subject long before Paul J. Crutzen introduces the Anthropocene as the defining environmental concept of the new millennium (Crutzen 2002). Especially *The Wind From Nowhere* allegorizes a radical upheaval of the relationship between human and ground. Unable to withstand the global storm of ever-increasing intensity, “the entire topsoil of the globe was being systematically loosened and windborne” (Ballard 225).

Quite literally, human civilization becomes sediment, sealed and buried under strata of rubble and ruin to be exhumed by future archaeologists as evidence of a planetary cataclysm. At the same time, conditions above the surface are determined by the sublime force of “[n]ature herself in revolt, in her purest, most elemental form” (297). It is the responsibility of human beings to save the planet, but Ballard’s characters do not show even a small effort to rebuild nature. Culture may be a reason for this dereliction. Human beings and culture are intertwined one is confident to say that culture shapes the ecological behaviors of humans. Despite experiencing a tremendous ecological crisis, human beings jeopardize their lives in the view of the fact that the hierarchical structure is profoundly embedded in the culture. For this reason,

Lynn White suggests a cultural remedy which seems to be reactionary to the climate novels of J.G Ballard, mostly *The Drown World* and *The Drought*.

Ballard, in *The Drowned World* tries to picture a kind of disaster and the role man has to play within this disaster by portraying that the apocalypse could be used as reawakening where humanity changes its way. In the text, for instance, Kerans is a lovely person and signifies his need in order to find a new way to live by growing and catching his own food and refolding the lagoon, while Strangman is an unreliable and profligate guy who has a desperate feeling to the past and reveals it by means of saving jewels and artwork. But the author focuses on happiness of residents rather than feeling distress. He also uses a collective unconscious to reveal the apocalypse as a reoccurrence more than a culmination and connect the post-apocalypse setting to the protagonist while ascribing past society to the antagonist. This approach gives a more dystopic insight into Ballard environmental discourse which calls on humanity to change the way they relate with the environment.

J.G. Ballard makes us understand through *The Drowned World*, that the apocalyptic climate changes may not necessary indicate an end in civilization, but also simply push it back to a physiological state and style of living. In Kerans's view, the old society cannot last anymore. He also believes that everyone should alter his/her personality related to the situation and think about living in a primitive conditions otherwise they will die as "the genealogical tree of mankind was systematically pruning itself" (23). He does not look at death as an end of anything and when he tries to kill himself subconsciously in his final moments, he compares the planetarium to a "womb-like image" (108). Such interpretation of death is the novel's reflection in which the extinction of human race is possible and easy to accept without any possible approach to address the situation stemming from the environment.

The Ecofeminist Approach to Environmental Crisis

One important approach Ballard uses to address environmental crisis is the ecofeminist approach. Since ecofeminism emerged from within the feminist movement, it needs to be stated that there exists many variations within ecofeminism (Alonso, 69). Liberal, Cultural/Radical, Social, Spiritual and Socialist ecofeminisms constitute the five branches of ecofeminism. Despite all its variations, the notion of ecofeminism serves as an umbrella term that encompasses all these

sub-branches and all variations of this philosophy agrees that there is a deep bond between the subordination of women and nature (69). Renowned ecofeminist Karen J. Warren asserts that: “because all feminists do or must oppose the logic of domination which keeps oppressive conceptual frameworks in place, all feminists must also oppose any isms of domination that are maintained and justified by that logic of domination” (21). Warren also defends that ecofeminism is an extensive movement which includes women of all races, ethnic origins and classes mainly due to the fact that all of these categorisations have been oppressed by the patriarchal order (4).

Ecofeminism is not simply a theoretical framework which aims to describe and reveal the oppression between women and nature but also provides the necessary means for the preservation and protection of the natural environment. Ecofeminism’s influence in terms of gender issues is mostly apparent in climate change policies in the form of tackling climate change through gender perception and achieving gender equity (Hemmanti and Röhr, 156). All in all, ecofeminism is a broad, multi-disciplinary theory which aims to expose the oppression between women and nature and struggles to establish new ways to defend the environment through a woman centered approach. Thus, the liberation of women is a primary requirement for the preservation of natural areas.

In Ballard’s novel under study, the protagonist, Dr. Robert Kerans is assisted by Dr. Alan Bodkin, Colonel Riggs and his pilot Lieutenant Hardman. The novel’s main antagonist is an intriguing character named Strangeman and lastly there is also a woman who goes by the name of Beatrice Dahl. Beatrice has the unique quality of being not only the only woman left in the drowned city of London, but also the only woman character in the entire novel. In the early pages, Beatrice is mentioned as she:

Lays back on one of the deck chairs, her long oiled body gleaming in the shadows like a sleeping python. The pink-tipped fingers of one hand rested lightly on an ice-filled glass on a table beside her, while the other hand turned slowly through the pages of a magazine. (Ballard, 25).

She is depicted as a relaxed, careless person who tries to live life to the fullest despite the catastrophic setting. Beatrice insists on her joyful and individualistic lifestyle which she is determined to carry on no matter what happens. Ballard entrusts some negative characteristics on her by naming her a traitorous and unreliable woman who is after deceiving men (Clement, 61).

Ballard compares her to a “sleeping python” which enforces the negative connotation attributed by the author. Beatrice is directly blamed for being a snake-like character and portrayed in an openly sexist manner. As the Earth experiences a reversion to the Triassic stage, those who are left alive also go through a process where they ascribe new roles to one another. Ballard makes several implications to the creation myth of Adam and Eve. While Kerans assumes the role of Adam, Beatrice becomes his Eve:

The birth of a child had become a comparative rarity, and only one marriage in ten yielded any offspring. As Kerans sometimes reminded himself, the genealogical tree of mankind was systematically pruning itself, apparently moving backwards in time, and a point might ultimately be reached where a second Adam and Eve found themselves alone in a new Eden (Ballard, 23).

The notion of going back in time creates a mysterious atmosphere while at the same time establishing an allusion to the early stages of our Earth and human kind. In this apocalyptic setting, children are no longer or very rarely born which causes a drastic decline in the human population. The Biblical references to Eden and Adam and Eve, reflect Kerans’ inner dreams of becoming the last man alive on Earth to fulfil the sacred mission of providing humanity’s continuance. Robert Kerans’ ambition in claiming such a mission is not because he wants to save the human race, but rather owing to the fact that he is after becoming a hero in a time of global disaster and complete destruction (Clement, 61). Therefore, it can be stated that Kerans acts out of pure personal interest rather than the common good.

Beatrice, on the other hand is a monotonous and dull woman that everyone is eager to possess. She is generally tedious, disoriented, obedient and reckless but nevertheless seductive in physical terms. As it is the case with most of the characters in *The Drowned World*, Beatrice exhibits signs of an inconsistent mental condition. At the beginning of the story, Kerans wants to join an expedition of scientists on a journey to Greenland but gets dissuaded from leaving when: “Beatrice looked away for a moment. Oh, nothing. I’ve just had one or two peculiar nightmares recently. Robert, seriously if I decide to stay on here, would you? You could share this apartment. Kerans grinned. Trying to tempt me, Bea?” (TDW 28).

Ballard's choice of word to describe the conversation between these two characters is worth noting. Kerans assumes the role of an artificial father figure but also puts Beatrice in a weak and subordinate position, as if she is in desperate need of help and assistance. Kerans flatters Beatrice by reminding her of the fact that she is not only the only woman left but also the only beautiful woman left alive in London. Ballard's references to Adam and Eve continue in a rather ironic fashion. Kerans' attitude towards Beatrice is condescending and dishonouring at large. Beatrice's only worth and meaning is her physical appearance and female sexuality. She is being treated in an overtly sexist manner but does not exactly seem to be bothered by this. Her degradation and intimidation as a human starts right from the early pages: "Beatrice pulled off her sunglasses, then tightened the loose back-straps of her bikini under her arms. Her eyes glinted quietly. All right, you two, get on with it. I'm not a strip show" (TDW, 25).

In these lines, Beatrice is treated as a sexual commodity rather than a human being and to our surprise she neither responds emotionally, nor shows any sign of anger to this kind of treatment. She seems to take this kind of sexist behaviour for granted. Another scholar of ecofeminism affirms that "the boundary conditions specify that an ecofeminist ethic must be anti-sexist, anti-racist, anticlassist, anti-naturist, and opposed to any 'ism' that presupposes or advances a logic of domination" (Warren, 99). The same scholar also contends that "the basic starting point of ecofeminist philosophy is that the dominations of women, other human others, and nonhuman nature are interconnected, are wrong, and ought to be eliminated" (155). Warren thus strongly advocates that the dominance and subordination of women and nature are consistent with one another. Another scholar, Yan Liu maintains that in the patriarchal system: "nature is regarded as the object of conquest and utilization, as well as a tool for servicing person. And slavery and destruction of nature will inevitably lead to the imbalance of the whole ecosystem" (216). Ballard's narrative is identical to Liu's description as nature is regarded and treated as a mere object, a commodity to possess and exploit.

In J.G. Ballard's *The Drowned World*, Beatrice's state is homogenous to the condition of nature. In the year 2145, the Earth has been damaged by human industrial activities, causing a series of natural disasters which in their turn leads to a global flood. Earth is under the siege of the aggressive, patriarchal, free trade market economy. Beatrice on the other hand, is similarly and constantly under the attack of men and the main reason why she is valued is because of her

sexuality. Right from the beginning until the very end of the novel, Beatrice is treated as an object, a mere commodity that men want to add to their private property. When Riggs tries to persuade Beatrice to abandon London, she refuses and decides to stay with Kerans: “Beatrice can be difficult sometimes, he temporised, hoping that she hadn’t offended Riggs. She’s a complex person, lives on many levels. Until they all synchronise she can behave as if she’s insane” (Ballard, 16).

Besides being treated as a sex object, Beatrice is also ascribed certain negative features like being complex, insane and troublesome. Her complex nature is regarded as a problem that needs to be taken care of, in other words, an anomaly that does not conform to the standards of the patriarchal and capitalist society. To achieve a better understanding of her personality, Beatrice’s past needs to be examined closely:

She had been brought up under the supervision of the grandfather, who had been a lonely, eccentric tycoon and a great patron of the arts in his earlier days. His tastes leaned particularly towards the experimental and bizarre, and Kerans often wondered how far his personality and its strange internal perspectives had been carried forward into his granddaughter (The Drowned World, 29).

To that end, Beatrice does not come to being autonomously but is rather created through the forces besieging her. Since her childhood, Beatrice has been highly subordinated and subjected to her grandfather, an opulent father figure that has had ultimate authority over her. Growing up in a patriarchal bourgeois surrounding enabled her to enjoy all the privileges of a wealthy lifestyle. However, as a prisoner of this patriarchal machine, Beatrice has been raised obedient and passive, disabled of opening her eyes to the reality of the world. As a captive of the capitalist patriarchy, she simply takes it all for granted, unaware of the poison she was fed throughout her life. As contemplated by Pelin Kümbet, an androcentric mentality and attitude is prevalent and exerts influence over its subjects (182). In short, due to all these factors, Beatrice has never been able to rise up against the patriarchal system. Bookchin points out that the original cause of oppression is hierarchy:

The very concept of dominating nature stems from the domination of human by human, indeed, of women by men, of the young by their elders, of one ethnic group by another, of

society by the state, of the individual by bureaucracy, as well as of one economic class by another or a colonized people by a colonial power (62).

Ballard exposes the outcomes of the latter stages of post-capitalist societies and highlight humans as being virtually swept from the surface of the Earth and are forced to find new places of settlement in order to survive. People have to migrate to other locations to obtain shelter and food. The suppression of nature and Beatrice are corresponding and homogenous to one another. Both nature and Beatrice have been suppressed and subjugated by the same force: the patriarchal capitalist world order. This particular system has manipulated and taken advantage of women and Earth's natural areas. The patriarchal system has consciously left out and rejected women from actively joining into the workforce. Similar to the misuse of nature by the capitalist system, Beatrice has also been left out and isolated from the society by her wealthy and greedy grandfather. She was raised as a highly submissive and dependent person and thereby not provided the necessary means to become a free, independent individual. An instance of this is related when Beatrice's air conditioner suddenly stops working: "It's broken down again. Leave me alone, Robert, she said in a tired voice. I know I'm a loose, drunken woman but I spent last night in the Martian jungles and I don't want to be lectured" (Ballard, 50).

Another noteworthy point is that along with the flooding of the main continents, humans have lost their hegemonic position on this planet. Together with the emergence of new fauna and flora, human beings struggle to find a place within the newly emerging world order. Nature has punished humanity for their long-term damage and is responding by degrading humans to the same level as all other living beings. Humans whom were once the supreme rulers of this planet are now equals with all other living creatures. Humanity has been equalized with all life forms. The patriarchal capitalist order's oppression on women and nature has resulted in the annihilation of all types of segregation and hierarchy. Moreover, Beatrice's role in this novel seems to be vital but is nonetheless trivial in general scope. Throughout the novel, she seems to be treated as an object to be conquered. For Kerans, Beatrice represents her second Eve whereas for Strangeman, she makes up for the queen in his kingdom. Altogether, she is nothing but a simple obsession, an object the men desire to complete their mission and to satisfy their needs. In the end, Beatrice's ending is uncertain but Ballard implies that she consciously chose death over a subordinate life

with no meaning whatsoever. While choosing death over life, Beatrice claims her freedom from the patriarchal capitalist order that she had been held captive all her life.

The Drowned World by nature is somewhat enigmatic but Ballard's protagonist is a capable and knowledgeable man who gets involved in a struggle for survival in a remote and far from any technological setting. Moreover, Ballard tries to illustrate environmental themes and explore the nature of humanity through the nature of mind and memory. This novel tries to look at how the rest of people have departed by global warming. It as well has a look at the isolated individual's psyche. Actually, Ballard's psychology is not inconsistent and complicated. Its characters speak in the same tone, and they make the same kinds of observations. He makes an attempt to create a continuous and common psychology for the characters, but it defines the struggle between them. In fact, a most widespread feeling of the disability of technological man has formed by him

Thus, in all forms of oppression, there exist different variations of hierarchical structures. However, all these disparate types of domination are eventually human caused and are therefore equivalent to one another. It can be concluded that climate fiction, science fiction, dystopia, ecofeminism and ecocriticism are interrelated and overlap within one another. These seem to better describe the situation within which J.G Ballard's fiction fits and the approach he takes, particularly through *The Drown World*, to address environmental crisis which is our major concern. Putting climate fiction together with dystopian fiction and situating Ballard in the middle is an indication of the kind of projection he seems to have toward environmental crises which man has vehemently choose to destroy the ecosphere for civilization. These notions do not only share common characteristics but also complete each other in a harmonious way. Thus, climate fiction being a sub-genre of sci-fi mostly classifies as dystopia which ecofeminism falls within, forms a case study for ecocriticism.

In conclusion, the chapter has established detailed background information of climate fiction by looking at its general characteristics and how these characteristics are depicted in Ballard's *The Drowned World*. As a climate fictional writer, Ballard is situated within the context of dystopia wherein we see how he presents an environment in an apocalyptic situation. This would serve like an eye-opener to man to understand what the present crises hold for him as far

as the dangers looming in the environment are concerned so that they resort to prompt solutions. Finally, some approaches were discussed with the novel discussed as an ecofeminist tale.

CHAPTER THREE

ENVIRONMENTAL CRISES: CAUSES, MANIFESTATIONS AND CONSEQUENCES IN *THE DROWNED WORLD*

This chapter examines the source, manifestations and effects of the prevailing environmental crises as presented in Ballard's *The Drowned World*. It probes into the man-made and natural causes of the environmental predicament as well as the physical and psychological manifestations and the aftermath of this catastrophe. The biosphere is inhabited by several organisms, amongst which man is the most intelligent. Man's activities at the individual and community levels turn to have a significant impact on the environmental health. Changing environmental conditions have influenced the lives and activities of humans and other species since the appearance of life on earth. Indeed, until the Upper Paleolithic era, environmental crises arose almost entirely from natural conditions. A growing agreement among archeologists recognizes that global climatic and environmental changes over geological time created the conditions under which biological evolution took place. Dinosaurs ruled the earth for some two hundred million years, for example, but disappeared rather suddenly, perhaps because of a purely natural global environmental catastrophe caused by collision of the earth with an asteroid. About thirty million years ago, the earth entered a long-term cooling phase that devastated the extensive forest cover that had nourished the dinosaurs (Bently 18).

The society is made up of distinct but inextricably attached parts. With this, one can create a forum where a relationship can be created between distinct phenomena as environmental crises and the socio-economic realities around people. Human beings live within the precincts of the natural environment and there exists a mutual relationship between them; while the environment provides the necessities and, or wants such as food, clothing and a suitable atmosphere for habitation, human beings have the responsibility of making decisions that turn to affect the environment either positively or negatively. According to Garrard in *The New Critical Idiom*, "the integration of climate change and environmental crises as a problem within the environmental setup only asserts the fact that the lives of human beings are linked to that of their environment. Humans are thus supposed to be part of nature and vice versa (29). This nature-human amalgamation espouses the fact that human actions either directly or indirectly affect the

environment. Ballard's *The Drowned World* therefore will serve as a lens to examine the source, manifestations and effects of the environmental crises.

Causes of Ecological Disaster in *The Drowned World*

A careful reading and analysis of the novel under study presents a series of factors as being responsible for the ecological disaster. To begin, the extreme transformation of the urban landscape is a major cause of the ecological crises in Ballard's novel under study. These unwanted changes appear to have become so unfriendly to the inhabitants (man, plants and animals). The protagonist, Kerans struggles psychologically as well as physically due to this ecological crisis to establish new relationships in an ecologically imbalanced environment. The destruction of the flora has resulted to rising temperatures as the narrator notes:

Soon, it would be too hot. Looking out from the hotel balcony shortly after eight o'clock. Kerans watch the sun rise behind the dense groves of giant gymnosperms crowding over the roofs of the abandoned department stores four hundred yards away on the east side of the lagoon. Even through the massive olive-green fronds the relentless power of the sun was plainly tangible. The drum refracted rays drummed against his bare chest and shoulders, drawing out the first sweat and he put on a pair of heavy sun glasses to protect his eyes... By noon, less than four hours away, the water would seem to burn (The Drowned World, 7)

The excerpt reveals that the destruction of the natural landscape has contributed greatly to the ecological disaster. Excessive heat, due to rising temperatures seems to be the direct effect of man's inhumanity to the environment. At this juncture, therefore, we blame man for contributing directly to his demise and that of the environment. In case there were trees, this heat would not have been too much as we find it displaying to the discomfort of the characters. The destruction of the fauna can thus be held responsible as a major cause of the ecological disaster in Ballard's *The Drowned World*.

Furthermore, the quest for civilization contributes greatly to the ecological disaster as presented in Ballard's novel under study. This view is confirmed by Annshini H. in his article entitled, "Effects of the transformed Environment on Human Psyche and Emotions: An Apocalyptic Study of J.G. Ballard's *The Drowned World*." Here, Annshini opines that "James

Graham Ballard is known for his fictions of environmentally-ransacked landscapes caused by technological excess and non-ecological attitudes of humankind” (8). According to him, Ballard wrote in a period before global warming happened and had been identified by scientists, and his fictions are to be both psychological and ontological since it concerned with biological factors of the environment. Ballard portrayed the effects of the changed human psyche and emotions as individuals as apocalyptic study that highlighted the developed new relationship of human beings with the adversely transformed environment. Most of the characters in the novel are scientists; as such, they have that zeal to explore and discover new horizons. Ballard captures this as follows:

He had commandeered the Ritz the day after their arrival, eager to exchange his cramped cabin among the laboratory benches at the testing station for the huge, high-ceilinged state-rooms of the deserted hotel. Already he accepted the lavish brocaded furniture and the bronze art nouveau sanctuary in the corridor niches as a natural background to his existence, savouring the subtle atmosphere of melancholy that surrounded these last vestiges of a level of civilization now virtually vanished forever. Too many of the other buildings around the lagoon had long since slipped and slid away below the silt, revealing their gimcrack origins, and the Ritz now stood in splendid isolation on the west shore, even the rich blue moulds sprouting from the carpets in the dark corridors adding to its 19th century dignity (The Drowned World 7-8)

From the excerpt, it can be inferred that in an attempt to destroy the old and establish the new, man exposes himself to disasters and calamities such as flooding, rising temperatures and many more. Man’s adventure to explore new horizons only lands him to unimagined results. Manmade factors can therefore be held responsible for the crises that man is undergoing in the environment as presented in *The Drowned World*.

Inasmuch as we hold man responsible for being at the root of environmental crises, we should not underestimate natural factors as well. Most of Ballard’s works are set in an ecologically ruined world by environmental disasters such as storms, drought and crystallization. As presented in the novel, a great part of the city has disappeared, leaving just a few buildings. This has made the environment unrecognizable following several decades of rising temperatures and mass flooding. The cause of this heat is not human, rather, it is natural; a sudden instability in

the sun” has resulted to these rising temperatures (11). It is like the old world had drowned and a new one evolved. In this new world,

The somber-green black fronds of the gymnosperms, intruders from the Triassic past, and the half-submerged white-faced buildings of the century still reflected together in the dark mirror of the water, the two interlocking worlds apparently suspended at some junction in time, the illusion momentarily broken when a giant water-spider cleft the oily surface a hundred yards away (The Drowned World, 11).

From the extract, it is clear that the characters dream of the past beautiful world as compared to the ugly present. The destruction of the landscape has equally led to the destruction of the human psyche. The characters dream of an ideal future, a world in which the environment will be friendly to man, plants and animals. Natural factors can thus be held responsible for the ecological disaster.

Biblical statistics hold that when God created the world and everything in it, he later created Adam (man) to be in charge of whatever he had created (Genesis 1:27-31). As a higher animal, man plays the role of a judge in the environment as he can either save or condemn it. In other words, whatever predicament that faces the environment is as a result of the judgment passed by humanity. This decision can be passed in the choices made by humans. The causes of environmental crises are often blamed on noxious substances utilized by the human agency. Jonathan Bate identifies one of such poisonous substances when he explains that:

Carbon dioxide produced by the burning of fossil fuel is trapping in the heat of the sun, causing the planet to become warmer. Glacier and permafrost are melting... forest shrinking, fresh water becoming scarcer. The diversity of species upon the planet is diminishing (Blossom Fondo, quoted in Ayuk and Kouega, 96)

In this excerpt, some of the causes and repercussions of environmental crises are explained. Fossil fuel is identified as one of the causes of environmental catastrophe through its carbon dioxide end product. Environmentalists set in therefore to ascertain the protection of the environment which is the source of livelihood to mankind. They propose that man redresses his malpractices towards the environment. As a judge, man’s decision counts greatly in redeeming or reproaching the environment.

Since the emergence of large-scale hunting, and especially after the invention of agriculture, environmental crises have increasingly reflected the influence of human behaviour and human policies. During the course of the Holocene epoch (the period from about twelve thousand years ago to the present), anthropogenic effects on the natural environment have influenced ever-larger parts of the earth and have posed threats to social stability in regional contexts. Since widespread use of fossil fuels in the industrial era, anthropogenic effects have extended their reach to literally global proportions. Indeed, some earth scientists suggest that since about the eighteenth century, the earth has entered a new geological epoch – the Anthropocene – in which human activities play major roles in environmental change and hence in the creation of environmental crises as well (Crutze, 20). Human activity had environmental influence before the invention of agriculture. After they developed effective hunting techniques, human beings placed pressure on some animal species. It has been quite clear for some time now that human arrivals in Australia and the Americas coincided with the rapid decline of mega fauna in those regions. It is less clear what role humans played in mega faunal extinctions.

Paul S. Martin and Tim Flannery have argued that overhunting by humans was the principal reason for the extinctions. Purely natural processes have by no means disappeared. Indeed, it is likely that purely natural processes created a set of conditions favoring the expansion of human prominence in the biosphere by warming the earth to the point that agriculture was a viable option in many world regions. Once they became established as a dominant species throughout the world, though, human beings soon began to register their own influence back on the natural environment (Martin, 15). For the moment, the scholarly consensus clusters around the less dramatic view that climatic change probably accounted for most of the difficulties megafauna faced. Human overhunting may well have aggravated a difficult situation further, but it was not likely the only or even the main cause of extinctions. Even this attenuated interpretation recognizes, however, that human beings were fully capable of aggravating natural processes in remote times. Meanwhile, there is general agreement that human predation was responsible in later centuries for large-scale extinctions of avifauna in Pacific islands (Redman et al, 24).

Yet, the environmental effects of hunting were minimal compared to the influence of agriculture, including herding as well as cultivation, and especially industrialization. Indeed, the

environmental effects of agriculture and industry have been so numerous that it is difficult even to catalogue them, and much more so to understand the many ways various effects have overlapped and reinforced one another. There are obviously many differences between agriculture and industry as forms of economic organization, and the two forms have had different effects on the natural environment. From an environmental viewpoint, though, mechanical industry reinforced and amplified long-standing effects of cultivation, even as it also introduced new effects of its own. In keeping with the purposes of this presentation, emphasis here will fall on effects that contributed to environmental crises rather than distinctions between agricultural and industrial production. Continuing the focus on land animals for the moment, agriculture and herding brought several very different prospects for the animal kingdom.

For some animals, the eras of agriculture and mechanical industry brought domestication and much larger populations, although the animals paid for this advantage by undergoing genetic changes and serving human interests. In other cases, agriculture and industry facilitated the dispersal of animal species beyond the range of their original homelands. For the past five hundred years – during the late centuries of agrarian empires and the era of industrialization – human methods and technologies of hunting have been so powerful as to drive some animal species to the point of extinction when concentrated demand has created markets for their products: examples are elephants, tigers, and even Atlantic cod fish. Finally, agriculture and industry have also brought habitat destruction and chemical pollution that have pushed numerous animal species toward extinction even when there has been little or no commercial demand for their products.

All of these fates clearly reflected anthropogenic environmental effects rather than purely natural processes. Have domestication, dispersal, and extinction caused environmental crises? Extinctions certainly have the potential to bring dramatic ecological changes, although they have historically presented humans with few environmental crises. What John F. Richards has called “the world-hunt” brought extinction or severe population decline to deer, beavers, and other fur-bearing animals. The world hunt dramatically changed local environments, but its effects on humans involved changes in fashion more than threats to social stability and survival (Richard, 2003). Domestication and dispersal have provided humans with exploitable animal resources and hence served as a foundation for human communities. As a result, it may seem that domestication

and dispersal would have few if any implications for environmental crisis. Yet while increasing supplies of food, labor, and other resources available to humans, concentrations of domesticated animals have also made it possible for crowd diseases to flourish among animal populations. Some of these diseases have posed threats to herds that were essential to subsistence, while others have been able to make the leap from animal to human hosts. The most important disease of this latter group is smallpox, which has taken an enormous toll in human lives. Although it usually became endemic in large societies, and thereafter carried away a steady stream of victims without threatening the stability of whole societies, smallpox has always been a ferocious killer when it struck populations with no prior exposure to the disease. It almost certainly devastated small groups of foraging peoples when it reached them from early complex societies like those of Mesopotamia in ancient times.

In most cases, humans have been able to adapt to extinctions by turning their attention to different animals: after the disappearance of megafauna, for example, early human inhabitants of Australia and the Americas simply hunted smaller animals. Extinctions may have caused subsistence problems for some island populations, but even in most of those cases, aquatic resources were available for exploitation (McNeill, 76). It sparked the largest single demographic catastrophe in world history when it raged through the native populations of the Americas and later Australia and the Pacific islands as well. Influenza, measles, and other maladies that originally arose from animal populations accompanied smallpox and amplified its effects. Indirectly, then, through their maintenance of flocks and herds of domesticated animals, humans unwittingly created the conditions for environmental crises of local, regional, and continental proportions.

Apart from the influences they worked by way of herd diseases, the effects of agriculture and industry contributed to numerous local and regional environmental crises, but the crises never reached continental or global proportions before recent times. Agriculture sustained human societies by cushioning against environmental fluctuations, while mechanical industry developed and harnessed technologies that made human life more agreeable in countless ways. Yet agriculture and industry also harbored profound implications for the natural environment. Both agriculture and industry sparked numerous environmental crises on local and regional scales, and by the twentieth century, it had become clear that both were capable of generating environmental

crises on a transregional and global basis. From its earliest days, agriculture had profound environmental consequences. It increased human control over plants and animals, and it brought about both morphological and genetic changes in domesticated species. It favoured the spread of plant and animal species that humans found useful. Agriculture also brought about environmental degradation. It increased the populations of humans and their favored species while placing pressure on predatory animals and others for which humans found little or no practical use. Cultivation of crops necessarily involved deforestation and the removal of ground cover, which in turn facilitated erosion of soils, leading in extreme cases to desertification. In some cases, artificial irrigation of crops compounded this problem by bringing underground salts to the surface and retarding or preventing the growth of salt-sensitive crops. In various forms, anthropogenic environmental degradation brought about political and social crises in multiple regions. From ancient Mesopotamia to Mediterranean Europe to the American southwest, archaeologists have documented oscillating patterns of development followed by decline (Redman, 91).

Over time, cultivators in most world regions found and employed reasonably sustainable practices that supported sizable populations without exposing them to the threat of periodic crashes. The occasional appearance of new food crops – particularly the large-scale transfers following the Islamic green revolution and the Columbian exchange – made it possible to produce more calories and support larger populations. In one case after another, agriculture flourished and supported large populations – and sometimes formal states as well – until degraded lands returned diminishing agricultural yields. With declining food resources, populations abandoned cities, and states dwindled or even disappeared. Remaining populations clustered in small villages practicing subsistence agriculture for at least a few generations until the land was able to recover some of its productive potential (Watson, 83).

The industrialization of agriculture enabled environmental crises to pose threats to social stability and survival on a much larger basis than before while also introducing new sets of problems. The industrialization of agriculture brought immediate benefits in the form of dramatically increased yields. Heavy machinery, fertilizers, hybrid crops, and new methods of irrigation all contributed to increased agricultural production and productivity. During the twentieth century, however, and especially after World War II, industrialized agriculture brought

many problems along with it, including chemical pollution from heavy reliance on fertilizers and pesticides, erosion from cultivation of marginal lands, depletion of water resources, and exposure of crops to pests and diseases because of monoculture, quite apart from more general environmental destruction due to deforestation, dam construction, draining of wetlands, and expansion of cultivation to marginal lands. Droughts, famines, and pests all had potential to compromise harvests, but as sharp as they were for afflicted lands and peoples, the resulting crises mostly struck in limited areas. It goes without saying that quite apart from agriculture, the industrialization of production more generally has also brought its own share of environmental problems. An extensive list of problems flows from industrialization: concentration of people in densely populated urban centers, depletion of resources, increasing demand for scarce fuels, creation of extremely dangerous toxins (including nuclear toxins), and the chemical pollution of soil, water, and air, to name only the most obvious (McNeill, 20).

The Psychological and Physical Manifestations of Environmental Crisis in *The Drowned World*

James Graham Ballard's *The Drowned World* presents a world in which humans are fighting to survive in a wild and dangerous landscape. The novel presents a fast-changing environment that is manifesting rapid changes so much so that it may not be able to support human life any longer due to increasing temperatures and rapid evolution of wild lizards that prey on man whenever they have the opportunity. Characters in the novel battle both internal and external conflicts: with themselves, animals and other characters. A careful analysis of the novel reveals that the environment is presented and treated like a character with its own consciousness and agency. For example the silt deposits are presented as having 'humped backs covered with fur' of giant bamboo. The environment manifests strange and wild characteristics that create horror.

In the Ritz Hotel where Dr Kerans lodges, molds and fungi seem to have become living parts of the elaborate and rich furnishings, while the ever-present Iguanas watch the platoon from the windows of abandoned buildings. In this way, one can say that the environment is conspiring to defeat human characters and man-made world. The changes manifest themselves in the form of solar storms that seem to have destroyed the earth's barrier against solar radiation, something that

appears to be beyond human control. Humans have therefore become helpless victims of a changing climate as they attempt to adapt to the new landscape.

The novel's characters are mostly scientist on a research endeavour. From the manner in which they discuss about their scientific intentions, one can infer that key characters like Kerans and Bodkins appear helpless in the face of the environment occurrences. When Kerans receive information that the officials at Camp Bryd have issued an order for the platoon to leave London and go northward, we come to the conclusion that mankind has surrendered the city to nature's actions and reactions. Humans seem to have little control over their environment as presented in the novel. They are at the mercy of nature and can only hope to survive its changes. However, the characters' sense that they lack control over nature is challenged when Strangeman arrives in London as he looks unaffected by the physical and psychological changes that other characters like Beatrice, Kerans and Bodkins had undergone.

Strangeman therefore represents the only character that actually confronts nature and believes he has the power to alter it. He does this by draining the lagoon over London, a proof that he can shape the natural world to be the way he wants it to be. However this is a short-lived venture. Strangeman is thus recognized not for what he did but what he attempted. Bodkins and Kerans believe that draining the cities is a threat for the future. As such they accept nature the way it is. The scenario seems to be like a battle, 'man versus nature', a type of battle in which some characters feel defeated while others think they can fight.

As presented in Ballard's novel under study, nature appears to be so unfriendly. The novel that is based on man's relationship with the environment consists of the surroundings where the characters continue to live their lives and the period of time when the story occurs. The details of the location, climate, weather, social, and cultural surroundings can be found in the time and place in which actions take place. In ecology novel, time is an essential element because all the destructive deeds of human occurred in a long time period since it is not taken seriously but humans unconsciously involved in continuous polluting of the environment. Time is not considered to be the centre of the incidents but it is specified by the author on the basic idea to illustrate the long term results of man- centred actions on nature. In eco-fiction novels, authors use places such as forests, mountains, rivers, and nature. The target is to create humans' oneness with nature.

Ballard paints a mental picture with the use of words (vivid description) for the readers to feel as though they were a part of the activities experienced by the characters in the novel. The environmental landscape has transformed abruptly over time such that characters like Bodkin can barely recognize anything. The one time beautiful lagoon has become a shadow of itself as its beauty has depreciated drastically. The narrator captures the manifestation of this in the following words:

The succession of gigantic geophysical upheavals which had transformed the earth's climate had made their first impact some sixty or seventy years earlier. A series of violent and prolonged storms lasting several years 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 (The Drowned World 22)

The excerpt presents nature at war with itself resulting to a change in the climate. These rising temperatures have resulted to several impacts that work man, fauna and flora. The earth has witnessed significant changes over time. These changes affect man both physically and psychologically.

Climate change is one of the most urgent critical issues of the twenty-first century. The dystopian world created in the novels of J. G. Ballard is the result of the rift between Nature and Culture. The imaginative power of the author builds the degrading bleak picture of the world by revealing the contemporary problems to an extent that lead the entire humanity towards a peculiar end.

The transaction between individuals and their physical environment reflects the internal crisis going on within them. This is to say that the human psyche contributes enormously to the relationship that exists between man and his environment. Man's poor state of mind redefines his sense of awareness either positively or negatively; in most cases negatively. Environmental influence, therefore, has fundamentally been a by-product of materialistic desire for deriving personal security, power and status and above all savoring the physical comfort throughout the course of human civilization. This is a reflection of the internal manifestation which pushes man to act unconsciously conscious without questioning certain structural realities which are supposed

to follow a specific pattern. This turns to affect the physical environment and by effect, the relationship between human and the environment turn to significantly distresses the environment. The understanding of the theory of “Environmentalism” in the context of psychological science swims within behavioral tone which reflects man’s actions, which are either negative or positive, and attached to pro-environmental intent. However, the bizarre mentality of human being on destroying and conserving for their security, power and ego warrants understanding the fundamental link between human psyche and the physical environment. Basically, psyche which is in the form of actionable behavior entails breaking old habits and becomes established by creating new ones for self and societal betterment (Dahlstrand and Biel, 97).

Consequences of Environmental Crises in *The Drowned World*

The ecological disaster discussed in Ballard’s *The Drowned World* has numerous effects on man, plants and animals. Set in London, the novel presents a city that used to be so beautiful but has now become a shadow of its former self due to a drastic change in its ecology. Ballard himself has pointed out that “nature itself consumed the city’s half-submerged steel supported tower blocks; giant iguanas that made their homes in the boardrooms of former offices; outsized bats that created their eyries in the ruined buildings; and, in between the last vestiges of the city, a network of lagoons filled with rotting vegetation and the carcasses of dead animals. (19). Ballard presents this in the novel as follows:

As the sun rose over the lagoon, driving clouds of steam into the great golden pall, Kerans felt the terrible stench of the water line, the sweet compacted swells of dead vegetation and rotting animal carcasses. Huge flies spun by, bouncing off the wire cage of the cutter, and giant bats raised 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 (The Drowned World, 13).

The above excerpt presents the impacts that rising temperature has on man, fauna and flora. The immediate consequence of the rising temperature is excessive heat which has led to the death of fauna and flora. The death of plants and animals attracts flies that are a nuisance to man. The environment that used to be beautiful now seems to be a shadow of its own. Man is thus held responsible for draining the lagoon for his egocentric reasons.

In relation to this, the high temperatures have caused untold suffering to man such as the destruction of crops resulting to famine. The wild heat, flooding and drought have ravished plants leaving man in a state of extreme hunger and starvation. While in the Ritz hotel, Kerans and Bodkins complain of the malnutrition that the drowned cities in London and other places had witnessed. This hunger keeps man thinking as to what can be done to rescue him from impending death. Hunger and starvation are thus the direct consequence of the ecological disaster as presented in Ballard's *The Drowned World*.

The prevalence of diseases that affect is another immediate impact of the environmental crises as evident in Ballard's text under study. In like manner, fauna and flora are seriously affected. Beatrice's crabby mood shows that the heat in this new environment is the most consistently dangerous element. It does not just cause cancer through direct sun exposure, but it equally causes people to withdraw and feel irritable (38). The novel's protagonist suffers from skin cancer, sun burn and other heat-related diseases. It then becomes ironical that man who is supposed to control nature is instead controlled by nature. As explained by Benton, this would not be the first crisis the earth has faced through her existence over billions of years.

According to Annshini, Ballard's forthcoming drowned city has a post-urban environment in which the traditional social relations are totally disengaged. Ballard purported that individual psyches have the possibility for transformation, but it resulted with almost total isolation and seclusion (ibid, 4). In the words of Trexler, this has proved to be a problematic precedent for fictions that address anthropogenic climate change because it "acts as a terrific form of compression, homogenizing a whole world of ecological and climatic variation into a single, distorted disaster". (ibid 28).

The protagonist of the novel, Dr. Robert Kerans, a forty-year-old biologist finds himself at a testing station where he works to examine the changes in his flooded region and remap the submerged landscape regularly. In the submerged area, Colonel Riggs helps Kerans at the biological testing station and wanders on his patrol boat to pick up the people who still strive to survive in those swamps and tropical jungle. Dr. Alan Bodkin, an assistant, helps Kerans in the testing station. Bodkin expresses the new psychological setting that overwhelms Kerans and other characters in the novel. Beatrice Dahl, Kerans' neighbour, chooses to stay in London and he never wanted go to the Camp Byrd which is in Northern Greenland in order to save his life.

He is one among a group of scientists who are gathering information about the drowned cities, before moving to the last place which is left out, considered to be fit for human survival. It is the arctic, where the residue as remnants of humanity has been gathered. The temperatures and humidity in relation to the level of water rises as each day passes. A careful analysis of Kerans action reveals that he had undergone a psychic equivalence of unrest, and later on embraces the new atmosphere and the surrounding which is before him.

Another immediate psychological impact of the crises is the strange dreams that that characters are faced with. Kerans is a biologist and as a part of an expedition, the troop is sent to explore the area once used to be the London years ago. The earlier British Capital has been submerged partly up to a long period of time and thus changed into a tropical lagoon due to a climatic disaster. The expedition undertakers start dreaming strange dreams in connection with environmental changes. Entering deep into the arctic regions, the only creatures left are the humans, who can live in favourable conditions which are suitable for them. It is the only way which is possible for them to live in- between the new seas and the new tropical forests. It is full of large reptiles and dangerous insects. Among the troop members, some of the troop members decide to go towards the south. Kerans is among the very few who decided to stay in London, but their peacefulness is disturbed by a group of men who came looking for the old treasures from the city.

According to Annshini, the novel portrays a false illusive vision as hallucinatory image of future London that has been sunk below the vast flood waters formed due to the melting of the polar ice sheets, caused due to a rapid global warming occurred from a sudden raise in solar radiation. The text highlights a post-apocalyptic world that exemplifies the effects of the extreme environmental changes. The novel focuses on how environmental disaster destroys the socio-cultural systems that help mankind to reduce his struggle within the hostile universe. These resonances have a long history of imagined drowned cities that lend a way towards the effects of climate change in this part of the world. Ballard's *The Drowned World* portrays a hallucinatory apparition based on a future London that has been ruined below the vast flood waters formed by a sudden melting of the polar ice sheets and the latter is caused by a rapid global warming that rose from a sudden increase in cosmological outcome. Such hazardous impacts of the environmental disaster affect not just the environment but also its occupants.

Ballard's *The Drowned World* portrays the extreme climate change and unsolicited deviations of landscapes. It also discloses out how these changes disturb people who are living in near-future London. The novel mirrored the struggles linked with both human and nonhuman form and thus becomes a warning for future generations. This is done in a bid for the future generation to help in saving nature. By various literary writings, humans' relationship can be restored with climate, land, and nature. The novel's title signifies a post-apocalyptic world in which the temperature rises and thus it led to a flooded tropical Earth. The actions and discussions of the characters in the novel reveal the effects of radical environmental changes on both human physique and mind. Furthermore, The novel portrays a transformed environment to highlight the loss of ecological stability and delineated a deterioration in flora, fauna, landscape, and human psychology towards the Triassic period. There are references from the text, such as: "60-foot-high plants" and "a giant reptile indistinguishable from the Pelycosaur" (8), "a giant Anopheles mosquito, the size of a dragon-fly", and "a giant water spider" (10).

Furthermore, the text reflects an image on environmental collapse that happens due to the solar storms that dismantled the Van Allen Belts and emitted an extreme solar radiation, thus resulted in raising the Earth's temperature for about a period seventy years. It gave an outcome of a higher level of radioactivity by emitting ionizing the radiation and caused changes in the environment. Due to the excess heat, the icecaps melted and there occurred a rise in global water levels. Hence it created a land of lagoons all over the world. It also resulted in a way that humans have been in a situation to move towards the Camp Byrd in Northern Greenland where life is suitable and sustainable. The novel hints on the outcome of the catastrophe on physical, psychological, and emotional health of humans, through the voice of the characters in the novel, with an outcome of environmentally imbalanced milieu.

Judging from a psychological perspective, the negative effects of the climatic changes also affected the human mind in several ways. The external environment in connection with nature and the struggled human psyche are deeply interconnected. The old buildings' upper floors of the tropical London where submerged into the water and it affected the characters' thoughts generating a new atmosphere often humans were like moving in a dream world with a changed life. The novel has its conclusion that with this 'second Adam' who heads towards south

to meet his certain death. Ballard's vision and the power of his prose find a the way in which the changed urban environment plays the role as a mirror, images of the processes going on in Kerans's psyche, and when he becomes the abandoned clock towers which he sees, their faces without hands (63), or a chalk-white colonnade visited by Kerans that reminds him of an Egyptian necropolis (68).

In response to the climatic change, the novel labels an enduring and agonising emotional struggle of humans who are referred as psychopaths, who suffer due to malnutrition and radiation sickness and manic-depressive personality due to the flood disaster (12,126). Such existential desolation creates a psychological shift that changes the life of the inhabitants, a change in landscape and loss of social communications. The novel explores the theme of place and identity in relation to the mental health risks of individuals as well as the communities caused by the lagoons.

The drowned cities in the novel with a sense of place, identity, and well-being of the remaining survivors resulted in loss based on the lively human relationships with the environment. This loss is exposed through the feelings such as grief, depression, anxiety, alienation, trauma, and homesickness. The individuals never left their acquainted home space. In the novel, Kerans and other survivors struggle due to the prolonged grief since they have lost nature, treasured places, and their spiritual bionetwork by living within the parameters of lagoons with the existing practices of life.

The effect of Kerans's hallucinations gets enlarged as he dives into the deep "aqua incognita for the sunken London planetarium" (86). The deeper Kerans dives in, the deeper he gets into depressed within his inert unconscious self. The submerged planetarium delineates him into the warm water. The lagoon that Kerans, lives develop into the pool of Thanatos, and it is highlighted as the title for ninth chapter of the novel (105). The pool of Thanatos signifies both as a death drive and life drive in the lives of Kerans.

Kerans even once thinks of committing suicide in the pool of Thanatos as a way to escape from necessity and pain of living in a much loved but desolated home. He seeks to recover his mental and emotional sphere by finding a way back to the place where once he identified it as his home. Though Kerans knows in the beginning that "the lagoon was nothing more than a garbage-

filled swamp” (13), he develops a new kind of attachment with that place which is surrounded by lagoon. He strives hard to keep his connection with the lagoon as he states that “in an insane Eden” (58). When water is pumped out of the city, his personal bond with his much-loved flooded place gets disconnected. Since he got a solace from that lagoon he tries to get back the same solace but he fails in it. His physical environment itself gets transformed into an unwanted location transformation with flooded home environment and then resulted with the draining of the lagoon. After seeing the drained lagoon Kerans drowned deep into a state of dulled inertia, from which he tried himself to get out of being inactive.

It appears that Kerans never wished for the lagoon to disappear since he has adapted to live in this submerged home territory as his own survival place. The flood disaster and its terrible outcome such as overheat depleting vegetation all have overpowered his identity. Doctor Kerans experiences a negative transformation which had resulted due to desolation of the physical environment. Kerans’s sense of being in his locale and tracing identity, his physical and mental health, and his general goodness and welfare all challenged by the undesirable environmental changes. He however, tries to cope with the negative changes that occurred in the environment. However, during certain days after the changes occurred, both nature and humans met with desolation and isolation conditions.

Kerans, the protagonist of the novel, is a part of a group of scientists who are involved in collecting information about the world’s drowned cities and the remnants of humankind. The novel ends with providing a way that Kerans will die in his quest of burning dreams that flame within him tends him towards the south. As days pass, the temperatures and humidity rises, Kerans experiences his own psychic identifications as reversion and deterioration in the form of accepting the new jungle which is before him. At the end of the story there is a resolution, the level of water decreases and a ray of hope appears. The novel has its conclusion by pointing out a ‘second Adam’, who moves south towards his ultimate death. Ballard transmuted the urban environment, as a mirror image of the processes that undergoes in Kerans’s psyche, through his perpetual hostility with the submerged city.

According to Anshini, (ibid, 4) Ballard’s *The Drowned World* seems to be connected with the biopsychic unity of humans and their archaeopsychic relation to their subconscious memory in relation to the ecosystem. The novel reveals the connection between ecological balance and

humans' physical, psychological and emotional unrest by examining what Kerans experiences during the global flood disaster. The novel under the eco-critical study shows how climate change instigates a transformation in the biophysical environment and thus it has an influence on humans' mental health and well-being. It can be evident as seen through the characters from the novel, through Kerans and other survivors. People in the novel are influenced and affected by the environment around them. Hence it is clear that the surrounding environment if get changed then its ecosystem will be affected and there are countless possibilities for the life supports to be changed.

Throughout the story these scientists and inhabitants of the city have experienced extreme heats, encountered mutated animals, witnessed diseases such as skin cancer, tried to survive among the giant creatures and had frightening dreams which consist of archaic memories. At first, "Kerans and later Strangeman and Bodkins come to realize, the increase in temperature is not a symptom of climate upheaval; climate upheaval is itself a symptom of devolution, which is the underlying cataclysm." (Clarke, 9).

In *The Drowned World*, time is used as the symbol of archetypal memories which underline human awareness. Jim Clarke claims that "If Ballard conflates climate with time, he also conflates it with psyche." It can be analyzed that people get accustomed to the changing conditions in time and they are trying to live even in the worst conditions. People are trying to escape and find new places to survive on and "Now they were to abandon yet another city." (19). From this, we can infer that the abandoned areas are compelled to create the feeling of isolation.

Negative transformations of ecosystems challenge the life of Kerans based on identity crisis, sense of loss in the form of both his place and peace, experiences changes both in relation with physical and mental health, leave back all his belonging and control, and finally he passed only despair, isolation, and loneliness psychic disorder. As a result, he is involved with a continual recognition of the place which he has lived in once, well known and loved ended with physically damage and transformed permanently.

The novel focuses on human activities that result in an imbalanced environment in the ecosystem. The world portrayed in the novel is not an unfamiliar one hence all can understand the struggle of Kerans due to climatic change. The novel highlights the natural, psychological

and cultural collapse. Therefore, it can be identified that Ballard has given a sensible justification to his portrayals of the destructions. *The Drowned World*, most especially, and other novels of his stress the cause and effect theory in relation with humans and their actions, thus his novels have a complex tie of plot and subplots. The novel examines a vast canvas of destroyed landscapes that comprises London and moves towards the remote corner of a Jungle in South-Africa. The cause and effect in the unity of the novel reveals a narrative focus from one transformed landscape to another.

The changed environment resulted with certain biological and psychological changes that occurred both in and around the surroundings. The novel depicts the global warming and its after effects that has retrieved world into the earliest period of the Mesozoic era. It can also be defined based on anthropological era since the novel created an image that led towards the beginning of human civilization. The novel conveys the message that the sky, land, water, plants and animals all that sustain humans' well-being will turn against humankind when humans fail to live without ecological consciousness.

In *The Drowned World*, it is found that there are humans like Kerans and Bodkin who embrace nature and there are humans like Riggs and Strangeman, who fight against nature, trying to control natural environment. This is depicted in the novel, when Strangeman evacuate the lagoon, and Kerans, drains of the lagoon to be unnatural, and decided to blow up the dam and used obstruct efforts to retrieve the city from the waters. The climatic changes in the novel lead the way about to the succession of gigantic geophysical upheavals that transformed the Earth's climate.

The novel conveys a series of violent and prolonged solar storms lasting several years resulted in to a sudden instability in the Sun and led to enlarge the Van Allen belts and diminished the Earth's gravitational hold upon the outer layers of the ionosphere. This outcome as solar radiation and the temperatures began to raise steadily, the heated atmosphere expands outwards into the ionosphere where the cycle was completed. (11-12), this depicts how climatic concerns are expressed in this novel.

The novel reflects the true elements of a climate fiction text that deals with a real yet imaginative world which portrays humans to be adaptable and struggle to survive the harsh

environment brought about by the climate change. It reflects the threat of rising flood waters, and its effects in the political, economic and social life of the inhabitants who visualize the kind of transformational change and faces a new global climatic order. The novel also highlights the disturbing features with reference to the environment crisis. The end of the novel is not concerned with any religious principles, but it is connected with a fictional world in which the characters are treated as humans devoid from identity represented a future world, thus becomes a voice to save the environment.

Ballard's post-apocalyptic novel series of the early 1960s constitute the forerunners of climate fiction. In specific, his second and most acclaimed novel, *The Drowned World* (1962) recounts the adventures of a UN scientist, Dr. Robert Kerans in his struggle to map the drowned Western European cities after a period of severe climate change (Irr, 2017: 6). In terms of climate fiction, the novel is of the utmost significance mainly due to its opposition against liberal policies which fall short to generate decisions in favour of humanity (6). Kerans' quest represents a scientist's struggle to maintain reason and rationality in an environment where humanity has regressed to primitive levels with the influence of extreme climatic conditions (6). Hence, the literal flooding of the cities allegorically represents the collapse of human reason and morality. Ballard draws multiple pictures of humanity's possible condition under extreme climatic disasters. His climate fiction novels were released at a period when climate change had not been named by scientists (Clarke, 7). Therefore, Ballard's novels played a vital role in the development of climate fiction. Jim Clarke asserts that: they have been collectively presented as 'elemental' novels. They have been depicted as disaster dystopias, mediated through each of the four classical Aristotelian elements of air, water, fire and earth. (8)

One major approach used by Ballard in conveying his message within the discourse of environmental studies is the use of the four classical Aristotelian elements to meticulously convey his narratives related to each environmental apocalypse. These elements are the earth, air, fire and water created by four qualities, dry, hot, cold and moist. It is undeniable that the majority of climate fiction rotates around these elements. Another interesting point is that in his post-apocalyptic novels, Ballard makes no detailed scientific explanation for the disasters because the actual cause and explanation lie outside the range of science (9). However, Ballard seems to evade accusing humans for directly or indirectly causing of climatic catastrophes.

Instead of doing this, the author demonstrates his distrust for scientists in each of these four works (10). Science's inclination of disregarding the reality had caused Ballard a serious revulsion towards scientists (10). In Ballard's worlds, environmental disasters have already taken place and are advancing while the scientific methods are stuck at the level of theory (11). He portrays the protagonist scientists as passive and impotent against the disasters.

According to Ballard, science alone cannot be a solution to catastrophes: They insist that since environment and climate are fundamentally experienced sensually, science is impotent in investigating what human response climate change may demand from any particular individual. If Ballard does have any rapprochement with the perspective of science, it is in sharing the science-driven notion of later cli-fi that conventional responses are an insufficient reaction to a global challenge such as climate change. The author implies that science and scientists have forsaken humanity as they have fallen short to create a solution for the environmental crisis on a global scale. Finally, Ballard's climate fiction is not devoid of political implications. Ballard, who grew up in Shanghai, displaces the catastrophe from the outer Pacific to Europe, mainly London, so as to impose guilt on and harshly criticize the capitalist nations of the West for their previous colonial activities.

The novel dwells on human activities that result in an imbalance environment in the ecosystem. The world presented in the novel is not very far from us. We all can therefore understand Keran's struggle due to climate change. A careful reading and analysis of the novel reveals that things have fallen apart from the natural, psychological and cultural perspective. With the use of vivid description, Ballard presents the drowned world or drowned cities of London and its environs. His novel probes into a cause and effect theory in relation to humans and their actions. A vast canvas of landscape has been destroyed ranging from London to the South African Jungle.

The changed environment results comes along with biological and psychological changes that take place both in and around the surrounding. The novel x-rays global warming and its aftermath that had, and keeps affecting the world till date. The message Ballard is passing across here is that the sky, land, water, plants and animals will turn against humankind when they fail to live without ecological consciousness. In the novel, Kerans and Bodkin are nature-friendly whereas Riggs and Strangeman fight against it as they try to control natural environments.

Strangeman evacuate the lagoon and Kerans drain the lagoon to be unnatural. He equally decides to blow out the dam and use scrupulous efforts to retrieve the city from the waters. The climatic change in the novel leads to a change in climate that affects the characters.

Another repercussion of this calamity is violent and prolonged solar storms. This causes solar radiation and a rise in temperature. The heated atmosphere expands outward (Ballard, 11-12). This depicts how climatic concerns manifest in the novel.

Finally, it seems as if the environmental crises have caused a breakdown in genealogy of both mammals and humans. There is a steady decline in mammalian fertility, and the growing ascendancy of amphibians and reptile forms. With the use of a biblical allusion, the narrator expresses fear that the world may soon become like the time of creation where only Adam and Eve were present. This is captured in the following words:

The birth of a child had become a rarity, and only one marriage in ten yielded any offspring. As Kerans sometimes reminded himself, the genealogical tree of mankind was systematically pruning itself, apparently moving backwards in time, and a point may ultimately be reached where a second Adam and Eve found themselves alone in a new Eden (24).

From the above excerpt, the environmental crises seems to have gone so far so much that it has affected human fertility. Man seems to be affected both physically and psychologically and this has gone a long way to affect his fertility and productivity. Low birth rate is the immediate consequence as this would result to extinction of human beings on earth. Such a long-term effect can only be likened to the effects of the atomic bombs dropped in Hiroshima and Nagasaki during the Second World War whose impacts is felt till date as some children are born as invalids (handicaps). The ecological crises therefore have dangerous repercussions that one could hardly imagine.

To conclude, the chapter has examined the origin of the environmental crises wherein it was realized that both natural and man-made forces are responsible for the ecological disaster that affects man, plants and animals. The manner in which the environmental predicament manifested itself was equally examined. Here, it was realized that this manifestation is both physical and psychological. Finally, the repercussions of the crises are examined wherein it was

discovered that man, plants and animals are seriously affected as a result of this predicament. The next chapter attempts to look at rescue and sustainable measures to rescue man from the environmental crises.

CHAPTER FOUR

CLIMATE FICTION AND SUSTAINABILITY

After examining the sources, manifestations and consequences of the environmental crises as presented in J.G. Ballard's *The Drowned World*, this chapter discusses possible avenues that can be adopted to avoid the depletion of natural resources so as to maintain an ecological balance. In realizing this, we thought it appropriate to examine the United Nations and its proposals towards the realization of environmental sustainability. The chapter proceeds by examining some paradigms related to environmental sustainability, one of which is the Environmental Justice Framework. This is a framework which attempts to uncover the underlying assumptions that may contribute to, and produce unequal protection of man and the ecosystem.

National and International organizations have been, and remain so active in saving the world from environmental crises. Crises such as climate change, earthquakes, landslides, floods, just to mention but a few are some environmental occurrences that disturb and threaten man's safety. As such, the measures of enhancing environmental sustainability as laid down by the United Nations Organization will equally be examined. According to the United Nations Organization (UNO), sustainability has to do with "meeting the needs of the present without compromising the ability of future generations to meet their own needs. Environmental sustainability is important to preserve resources like clean air, water and wildlife for future generations. According to Weinstein, sustainability has to do with "Ensuring that human society operates with ecological borders." This definition is known as the planetary boundary (PB) concept. It was introduced in 2009 to define where humans can operate safely within the environment's constraints. According to "Science," an online research organization, Environmental sustainability is so important and almost inevitable because human survival depends on it.

According to the UN, the following elements can be of help to ensure sustainability: equity, economic viability and environmental protection. There are six factors involved in the concept of environment sustainability. They include climate change, environment, innovation, technology, people and ethics. As per the United Nations (UN) World Commission on Environment and Development (WCED), environmental sustainability entails living in a way

such that future generations have better, or at least equal, natural resources available than the current generations. Even though there are various minor variations of this concept, it's generally accepted throughout the world, with respect to the various disciplines, sustainability points to conserving and preserving a healthy ecology for the present and future generations. The alternate versions usually are extended definitions that include other perspectives, such as human well-being, a clean and healthy environment, and natural beauty and wildlife protection. In 1987, the universally accepted and famous sustainability definition provided by the 'Brundtland Commission' in our 'Common Future' was released. It reads: 'Meeting the needs of the present without compromising the ability of future generations to meet their own needs.'

The environmental crises pose a great threat to both fauna and flora. As such, it is high time decision-makers started devising policies, strategies and plans to rescue the 'drowning environment' from its crises of despair. This calls for the implementation of the risk management framework. The risk management framework towards concrete decision-making about man's relationship with the environment seeks to prevent environmental threats before they occur (Bullard, 13). The environmental justice framework incorporates other social movements that seek to eliminate harmful practices (discrimination harms the victim), in housing, land use, industrial planning, healthcare and sanitation services. The impact of poor drainage, infrastructure decline, deteriorating housing, lead poisoning, industrial pollution, poverty and unemployment are not unrelated problems if one lives in an urban ghetto or barrio, rural hamlet, or reservation. The environmental justice framework attempts to uncover the underlying assumptions that may contribute to, and produce unequal protection.

The Role of the United Nations Organization in Environmental Sustainability

The United Nations Organization was formed on the 24th of October 1945 in California (USA) after the Second World War. This Organization was formed mainly because of the non-compliance and short comings of the League of Nations that was formed after the First World War (1914-1918). The idea to form such an international and global peace-keeping body came from the American president, Woodrow Wilson. As an international organization, the U. N's mission is to guarantee man's safety in a world characterized by a lot of mishaps and insecurity especially that emanating from the ecology (calamities and disasters). This organization has specialized agencies such as The International Labour Organization (ILO), The World Health

Organization (WHO), The Food and Agricultural Organization (FAO), The United Nations Education Scientific and Cultural Organization (UNESCO), The United Nation International Children Emergency Fund (UNICEF), just to name but these. The United Nations has good intentions in ensuring man's comfort in the world, explaining why it seeks to address man's basic necessities in life (especially food and shelter).

The World Health Organization works worldwide to promote health, keep the world safe, and save the vulnerable. It is focused on ensuring man's wellbeing in his ecosystem. This wellbeing relies heavily on what man eats as well as the environment in which he finds himself. The notion of sustainability therefore relies mostly on the shoulders of the UNO. This famous Organization had held, and keeps organizing a series of international crises meetings and conferences aimed at ensuring environmental sustainability.

One of such sustainability meeting that the United Nations organized concerning the Environment was held on June 5th to 6th 1972 in Stockholm, Sweden. This assembly is said to be the first major conference on the issue of environmental sustainability. The conference adopted the Stockholm Declaration and Plan of Action; a plan which sets out principles for the preservation and enhancement of the human environment, with recommendations for international Environmental Actions. The conference also created the United Nations Environment Program (UNEP), the first UN program focused solely on environmental issues. Due to the seriousness of the need for environmental sustainability, this conference lasted for two weeks and it led to what became known as "Agenda 21" (An official global consensus of development and environmental cooperation).

Agenda 21 stipulated that protecting the environment required collaboration across boundaries. In other words, nations need to work together in synergy so as to enhance environmental sustainability. It called on all states to participate in improving, protecting and better managing ecosystems, and taking common responsibility for the future. In fact, an implementation of Agenda 21 is a positive step towards ensuring environmental sustainability. This shows the great extent to which the United Nations want to protect the ecology and its inhabitants.

Twenty years later, the United Nations held another Earth Summit Conference on Environment and Development between the 5-14th of June 1992 in Rio de Janeiro, Brazil. This conference was aimed at calling on nations to look for ways to stop polluting the planet and depleting its natural resources. The Rio de Janeiro Declaration had 27 principles all aimed at ensuring environmental sustainability. States were called upon to act on a spirit of global partnership to conserve, protect and restore the integrity of the Earth's ecosystem. The fact that this conference had one hundred and eight (108) heads of states and representatives shows its paramount significance. These leaders adopted three major agreements that would guide future approaches to development: Agenda 21, the Rio Declaration, and the statement of Forest Principles (a set of principles to underpin the sustainable management of forests worldwide. In addition, two legally-binding instruments were opened to signature for the summit: The United Nations Framework Convention on Climate Change and the Convention of Biological Diversity.

Moreover, negotiations began on the Convention to combat Desertification, which was opened for signature in October 1994 and entered into force in December 1996. The Rio Conference was quite exceptional amongst other UN held conferences by its participants as well as a number of problems studied. It pricked man's consciousness of the existence of environmental crises and possible sustainable measures.

Three years later, (in 2000) the Millennium Summit established the Eight Millennium Development Goals (MDGs). In 2002, the World Summit on Sustainable Development in Johannesburg gave birth to a new action plan in enhancing environmental sustainability. This was followed by the 2012 Conference held in Rio de Janeiro (Brazil) christened "Rio + 20." This environmental Assembly met to set priorities for global environmental policies and develop international environmental law.

In 2013, a special event was held in New York whereby member states agreed to convene a high-level summit in September 2015 to adopt new set of goals which would build on the foundations laid by the Millennium Development Goals. Two years later (2015), the United Nations Summit on Sustainable Development gave birth to Agenda 2030 and its seventeen Sustainable Development Goals.

SUSTAINABLE DEVELOPMENT GOALS (SDG'S)

Sustainable Development Goals refer to the organizing principles for meeting the needs of the present without compromising the ability of the future generation to meet their own needs. The development of this concept had led to a shift of focus on economic, social and environmental protection for future generations. SDG's have however, always been intended to go beyond the Millennium Development Goal's (MDG's) and to provide comprehensive vision and framework for the evolution of all countries in the years ahead. All the SDG's are relevant and applicable in general terms to all countries including developed countries. The main objectives of the SDG's include the protection of biodiversity and rational exploitation of natural resources; the preservation of the fundamental ecological processes or biogeochemical cycles (water, carbon, food-chain and man-made resources); the diversification of uses of different energy sources which are less polluting such as combustive fossil fuel and coal and an increase in technology should enable the discovery of new energy resources. Sustainable Development Goals has seventeen Global Goals with 169 targets. Those in relation to environmental sustainability are presented below:

GOAL1: End poverty in all its forms everywhere.

GOAL2: End hunger, achieve food security, improved nutrition and promote sustainable agriculture.

GOAL3: Ensure healthy lives and promote wellbeing for all at all ages.

GOAL4: Ensure inclusive and equitable quality education and promote life-long learning opportunities for all.

GOAL5: Achieve gender equality and empower all women and girls.

GOAL6: Ensure availability and sustainable management of water and sanitation.

GOAL7: Ensure access to affordable and reliable, sustainable and modern energy for all

GOAL8: Promote sustained, inclusive and sustainable economic growth, food and productive employment and decent work

GOAL9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovations.

GOAL10: Reduce inequality within and among countries.

GOAL11: Make cities and human settlement inclusive, safe, resilient and sustainable.

GOAL12: Ensure sustainable consumption production patterns.

GOAL13: Take urgent action to combat climate change and its impact.

GOAL14: Conserve and sustainably the use the oceans, seas and marine resources for sustainable development.

GOAL15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainable manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss.

GOAL16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

GOAL17: Strengthen the means of implementation and revitalize the global partnership for sustainable development. Summarily, these goals stressed on clean water and sanitation, affordable and clean energy, sustainable cities and communities, responsible consumption and production, climate action, life on land, and many others.

Similarly, the UN Climate Change Conference (COP27) held on the 7th of November 2022. In this conference, the European Council president, Charles Michel and European commission president, Ursula von der Leyden underscored the urgency and emergency of protecting the earth from crises. In the words of President Michel, “We are, and will remain champions of climate action. We are determined to protect nature, the oceans and the forest, which make up our lungs and are guarantors of human life on earth and of biodiversity.” Here, we find the president stressing on the importance of environmental sustainability for a better and healthier life for man. Natural disasters and calamities like flooding, earthquakes, tornadoes, climate change, drought, just to mention but these have been affecting man, fauna and flora. This

has warranted the summoning of crises meetings both at the national, continental and international levels aimed at ensuring environmental sustainability.

As evident in *The Drowned World*, James Graham Ballard seems to have understood what the United Nations is all about and its functions, as he uses his artistic ingenuity in the novel to make its presence felt in a world at the verge of collapse caused by flooding and other natural disasters and calamities which are both natural and man-made. As mentioned in the novel, a United Nations military unit has been touring the globe for the past three years, surveying what is left of the world's former capitals. This delegation, led by Colonel Riggs is out to map the coastlines, study the functioning of wildlife species and evacuate any remaining inhabitant whose health, they believe will be in a very poor state (affected physically and psychologically). Robert Kerans, who is the novel's protagonist, together with his assistant, Alan Bodkin carry out biological studies to understand the causes of the changed cities and possible remedies of the transformed environment. This team stations around the partially submerged remnants of London. They believe that after working out their plan of action here, they would move to another area. Just like the central aim of the World Health Organization, Keran and Bodkins can be taken to symbolize this body as their main aim is for the world to take shape with the fauna and flora restored in good shape. Kerans work with officials of Camp Bryd and makes scientific propositions which he believes can help sustain the environment but the hierarchy seems to ignore. They believe science has little role to play in solving the ecological disaster and enhance environmental sustainability. "The biological mapping has become a pointless game, the new flora following exactly the emergent lines anticipated twenty years earlier and he was sure that no one at Camp Bryd in Northern Greenland bothered to file his reports, let alone read them" (11). This shows how Kerans' proposal on a scientific approach towards environmental sustainability had been ignored by officials at Camp Bryd.

General Characteristic of the Environmental Justice Framework

As mentioned earlier, the Environmental Justice Framework, as its name implies aims at protecting, preserving and conserving the environment and its occupants. It aims at rendering justice to the environment for a better present and future of man, plants and animals. This framework has the following features:

(1) The environmental justice framework is a global framework which incorporates the principle of the "right" of all individuals to be protected from environmental degradation. The precedents for this framework are the Civil Rights Act of 1964, Fair Housing Act of 1968 and as amended in 1988, and Voting Rights Act of 1965. (2) The environmental justice framework adopts a public health model of prevention (elimination of the threat before harm occurs) as the preferred strategy. Impacted communities will not have to wait until causation or conclusive "proof" is established before preventive action is taken. For example, the framework offers a solution to the lead problem by shifting the primary focus from treatment (after children have been poisoned) to prevention (elimination of the threat via abating lead in houses). Overwhelming scientific evidence exists on the ill-effects of lead on the human body. However, very little action has been taken to rid the nation of childhood lead poisoning in urban areas. Former Health and Human Secretary, Louis Sullivan tagged the "number one environmental health threat to children, globally." (Sullivan 19). Lead screening is an important element in this problem. However, screening is not the solution; prevention is. Surely, if termite inspections can be mandated to protect individual home investment, a lead-free home can be mandated to protect public health. Ultimately, the lead abatement debate, public health (who is affected) vs. property rights (who pays for cleanup) is a value conflict that will not be resolved by the scientific community.

(3) The Environmental Justice Framework shifts the burden of proof to polluters/dischargers who do harm, discriminate, or who do not give equal protection to racial and ethnic minorities, and other "protected" classes. Under the current system, individuals who challenge polluters must "prove" that they have been harmed, discriminated against, or disproportionately impacted. Few impacted communities have the resources to hire lawyers, expert witnesses, and doctors needed to sustain such a challenge. The environmental justice framework would require the parties that are applying for operating permits (landfills, incinerators, smelters, refineries, chemical plants, etc.) to "prove" that their operations are not harmful to human health, will not disproportionately impact racial and ethnic minorities and other protected groups, and are nondiscriminatory. (4) The environmental justice framework would allow disparate impact and statistical weight, as opposed to "intent," to infer discrimination. Proving intentional or purposeful discrimination in a court of law is next to impossible, as demonstrated in *Bean v. Southwestern Waste*. It took nearly a decade after *Bean v. Southwestern Waste* for environmental discrimination to resurface in the courts.

(5) The environmental justice framework redresses disproportionate impact through "targeted" actions and resources. This strategy would target resources where environmental and health problems are greatest (as determined by some ranking scheme but not limited to risk assessment). Reliance solely on "objective" science disguises the exploitative way the polluting industries have operated in some communities and condones a passive acceptance of the status quo. Human values are involved in determining that geographic areas are worth public investments. In the 1992, EPA report securing *Our Legacy*, the agency's describes geographic initiatives as "protecting what we love" (ibid, 23). The strategy emphasizes "pollution prevention, multimedia enforcement, research into causes and cures of environmental stress, stopping habitat loss, education, and constituency building" (13). Geographic initiatives are underway in the Chesapeake Bay, Great Lakes, Gulf of Mexico programs, and the U.S.-Mexican Border program. Environmental justice targeting would channel resources to "hot spots," communities that are overburdened with more than their "fair" share of environmental and health problems.

The dominant environmental protection paradigm reinforces instead of challenges the stratification of people (race, ethnicity, status, power, etc.), place (central cities, suburbs, rural areas, unincorporated areas, Native American reservations, etc.), and work (i.e., office workers are afforded greater protection than farm workers). The dominant paradigm exists to manage, regulate, and distribute risks. As a result, the current system has (1) institutionalized unequal enforcement, (2) traded human health for profit, (3) placed the burden of proof on the "victims" and not the polluting industry, (4) legitimated human exposure to harmful chemicals, pesticides, and hazardous substances, (5) promoted "risky" technologies such as incinerators, (6) exploited the vulnerability of economically and politically disenfranchised communities, (7) subsidized ecological destruction, (8) created an industry around risk assessment, (9) delayed cleanup actions, and (10) failed to develop pollution prevention as the overarching and dominant strategy.(Bullard, 19)

Environmental Sustainable Measures in *The Drowned World*

In addressing the notion of environmental sustainability, Ballard's *The Drowned World* provides the lens from which such sustainable measures will be examined. The efficacy of the novel lies in its representation of the different actions taken by the characters to address and handle the ecological crises. The argument on the doubts surrounding the existence of the

environmental crises as raised in *The Drowned World* points to a possible conception in the society. Ballard seems to use the officials at Camp Byrd to serve as a voice to the voiceless. Their question as per the authenticity of climate change unveils a cardinal controversy as far as environmental discourse is concerned. Ballard espouses the opinion that if people are convinced beyond reasonable doubt, it will be the first step towards enhancing environmental sustainability. The proof of such doubts on climate change in particular and environmental crises in general in the society are diverse, as humans still use fossil fuel in running modern civilization tools despite claims that it is destroying the ecosystem. In representing Strangeman who develops a lack of interest in continuing with the project at Camp Bryd, Ballard seems to be representing humans who feel reluctant in the quest for solutions to the problem that they are facing. Until apocalypse becomes the drive in the human mentality, there will hardly be a fight towards environmental sustainability. Ballard handles this view from the mind and, or conception of the society. To him, the mind is an important instrument in enhancing environmental sustainability. When the mind is aware of the existence of the environmental crises, it will be a major step towards ensuring environmental sustainability since understanding the existence of a problem is a major step towards solving it.

Another way of ensuring sustainability is the application of virtue in one's actions. The creation of artificial cold as a by-product of technology seems good to man to ensure environmental sustainability. Over the years, technological development has been seen as an instigator to the present environmental crises. According to I.G. Simmons, "areas hitherto unexplored came into the fold because of better technology" (195). The implication of this claim is that technology increases the platform on which the environment is destroyed. This goes in line with what O'Riordan terms "the techno-centric ideology" which he defines as the "... assumption that man is supremely able to understand and control events to suit his purposes" (quoted in Connelly 39). He however opposes this view with the ecocentric ideology when he explains that "Ecocentrism preaches the virtues of reverence, humility, responsibility and care; it argues for low impact technology (but it is also anti-technological)" (39). The ecocentric perception on technology and industrialization is evident in Ballard's *The Drowned World* as characters use artificial measures to combat the excessive heat. Through this, Ballard seems to be saying that technology could be of help in sustaining the welfare of man in the environment. The Camp Bryd project seemingly fails because it is executed with lack of virtue; the characters'

inability to acknowledge the source of the technology. As humans seek ways of attaining sustainability in their environment, they ought to be virtuous in their venture; a characteristic that emanates from within the human personality, what Freud calls the super ego.

“What cannot be avoided needs to be prevented.” This is another important measure of sustainability that Ballard’s *The Drowned World* seems to be propagating. The rising temperatures that have brought excess heat make the characters such as Dr Kerans and Hardman to think of changing their environments. Characters tend to migrate ‘pole-wards’ which they consider fortified as “the water levels and encroaching jungles in these areas were breached’ (24). The narrator notes that “only within the Arctic and Antarctic Circles was life tolerable. The oblique incidence of the sun’s rays provided a shield against the more powerful radiation. Cities located on a higher ground surface in mountainous areas nearer the equator had been abandoned despite their cooler temperatures because of the diminished atmospheric protection” (24). Life seems unbearable due to either excessive cold or excessive heat. Characters believe that migration to safer zones is the lone option for them to live better lives. The narrator presents this as follows:

Kerans nodded. The temperature in the cabin had begun to fall, and he felt himself breathing more freely. “A change of climate will probably help as well.” There was a dull clatter outside as one of the metal scows being hauled up in its davits clanged against the hull. He added: “The atmosphere in these lagoons is pretty enervating. Three days from when we leave I think we will all show a marked improvement. (41)

From the excerpt, a change of environment is seen by Dr Kerans and his cohorts as a solution to their problems. They think the excessive heat around the lagoon may not be the same elsewhere around other parts of London, explaining why they resort to migration. They hope to go to safer zones so that the mishaps that the rising temperatures are causing to them would become a thing of the past. They believe the temperatures are unbearable, intolerable and quite terrible to their health.

The solution to environmental crises rests in the hands of humans. I.G. Simmons explains that the human species is the most intelligent that has inhabited the planet earth. Though it appears to him like a paradox that the intelligent species have destroyed her ecosystem, Ballard

seems to be of the opinion that these species could as well fabricate a solution. Ballard uses Kerans and Colonel Riggs as a representation of those who could strategize and synthesize solutions to pending environmental crises. Kerans initially believed the United Nations needs to rescue them from their crises of despair meanwhile the environment continues to depreciate. Through him, Ballard seems to be satirizing human rationality. According to John Connelly, saving the environment is supposed to start at the individual level (considering the old adage that 'charity begins at home'. This view is known as "the bottom up method" of addressing problems. According to Cheryll Glofelty and Harold Fromm, "the problem now ... is to find ways of keeping the human community from destroying the natural community, and with it the human community" (107). When Kerans is more concerned with the human, other than the ecological problem, the destruction of the environment is imminent. His ideology, however, is guided by his entrusting environmental responsibility to the government. Ballard does not only unveil the human responsibility but seems to say that the individual humans work by the dictates of the state. Also, Ballard seems to support the ideology that while individuals wait for the powers that be, it remains their responsibility to do what is necessary to ensure sustainability of the environment.

As mentioned above, the use of fossil fuel has a damaging impact to the environment and her inhabitants. Here, the government can play a vital role in presenting and alternate source of fuel with less damaging impacts. This is because the government's decisions represent the collective interest of the people. As far as this is concerned, Ballard seems to be saying that the social contract, as represented in the ideas of John Locke, Jean Jacques Rousseau and Immanuel Kant is a part of the solution to environmental crisis, a contract where the authorities represent the collective interest of the people. The authorities of Camp Bryd, as well as U.N. officials could be representation of the government and individual opinions respectively. The government has a great role to play as far as shaping the minds of citizens are concerned. To address the problem of environmental crises therefore, and to enhance a sustainable environment, Ballard's politics dwells on using the government as a tool to such ends.

As mentioned earlier, enhancing environmental sustainability will require man to understand himself as well as the environment in which he finds himself in. There are some unplanned and unpredicted things and happenings that cannot be controlled or prevented. Such is

the view of Gandy in “The Rotting City: Surrealist Arts of Noticing the Urban Anthropocene” where he states:

*... no matter how much we attempt to control the landscapes we live with, wild spaces, wild animals and wild places will continue to survive and thrive in our cities. The London that has returned to the jungle described by J.G. Ballard in *The Drowned World* may be less that fictional from both social and ecological perspectives (Gandy, 6)*

From the excerpt, we understand that Gandy’s proposal towards ensuring environmental sustainability is that man needs to better understand the role of different kinds of wild spaces in rapid-changing social ecological systems to successfully plan for, and manage more complex landscapes.

The notion of politics and leadership in ensuring environmental sustainability is equally raised in Ian McEwan’s *Solar*. The congregation of Beard and other Post-Docs is a product of politics. It appears that without this initiative, the centre would not have existed. In tracing the path followed in the creation of the National Centre for Renewable Energy, McEwan states that:

...there was a new government establishment on the outskirts of Reading... the centre was supposed to resemble the National Centre for Renewable Energy Laboratory in Golden, Colorado, new Denver, sharing its aims but not in acreage or funding. Micheal Beard was the new centre’s first head, though a senior civil servant called Jack Braby did the real work... it represented they soon found out seventeen percent of the first year’s budget. A sodden twenty acre field had brought from a local farmer and work to begin drainage was in the planning stage (15)

By the end of the century, the Blair government seems pre-occupied with issues pertaining to climate change as seen from the announcement of a number of initiatives, one of which was the creation of the centre for basic research. This assertion is historically factual given that Shearman and Smith validate it when they attest that “... of all the leaders in the world, Tony Blair has grasped the implication of global warming caused by greenhouse emissions” (8). His, as an exemplary case is like an encouragement to other world leaders to grapple with the problem of environmental crisis so as to ensure sustainability.

Ian McEwan, just like Ballard is of the opinion that the involvement of the government in the fight to combat environmental crises is unquestionable. In expressing the practicality of government's actions to combat environmental crises in *Solar*, the registers 'appear to be' and 'wished to be' are used. In such context as "... the Blair's government wished to be or appeared to be practically rather than merely rhetorically engaged with climate change...: (16). Here, McEwan appears to be expressing doubt about the whole issue as it seems like government action is deceiving the citizens. McEwan seems to be applying the notion of Mary Pettenger which states that 'uncertainty of science about the climate change is exploited by politicians' (5) It is like the institutions placed by the government (s) to address the problem of environmental crises are just 'make belief' institutions. McEwan also seems to be in line with the views of Vaclav Smil when he explains that "policy-makers often select interpretations which suit best their own interest and the general public is exposed solely to findings with sensationalizing catastrophic bias" (1). The uncertainty about the role of the Centre heightens when the details of its construction are presented thus:

There was a new government research establishment on the outskirts of Reading... the Centre was supposed to resemble the National Renewable Energy Laboratory in Golden, Colorado... the administrative buildings ... were not new... it represented they soon found out seventeen per cent of the first year's budget. A sodden twenty-acre field... bought from a local farmer and ... drainage was in the planning stage (McEwan 15)

This land is procured from a 'local farmer' in the outskirts of Reading. Its funding is not up to that of the National Renewable Energy Laboratory in Golden, Colorado.....' In a humoristic and satirical tone, McEwan seems to represent the Centre as a capitalist tool aimed at amassing wealth with little plans of handling the ecological disaster. Just like Smil had explained, the Blair government may just have used the Centre's creation for their own selfish interest rather than that of the entire community. McEwan decries the usurping role politicians have on their citizens. Such citizens hear only what percentage has been used but remain blind to what has been done. McEwan seems to be of the opinion that such politics is not what is required for environmental sustainability.

Another way that could ensure environmental sustainability is persuasion on facts relating to the environment. Colonel Riggs needs to be convinced to accepting the idea of using diverse measures to ensure stillness against the hostile environment. He needs as many proofs as possible to believe that there is actually an environmental crisis. Persuasion is an ideal way of manipulating the mind. Such is the instrument used by Goneril and Reagan as well as Banquo in Shakespeare's *King Lear* and *Macbeth* respectively. Like King Lear and Macbeth fall prey to their gullibility, it is no doubt that through Riggs, initially rejects Kerans' idea, he turns to steal it. According to Ballard therefore, decisions are attained from persuasion and not necessary by facts. If facts are not persuasively presented, they may be discarded. In ensuring environmental sustainability therefore, the society should be convinced on facts relating to the environment.

Furthermore, according to James MacKusick, romantics like Mary Shelley had as cardinal concern the representation of man's destruction of the earth's to sustain human life. He further explains than "...the idyllic romantic conception of the natural world as a place of vital sustenance and peaceful existence is complemented by its nightmare vision of a world threatened by environmental catastrophe" (29). As such, MacKusick implies that human folly as a cause to environmental crisis was first raised in the romantic ideal before ecocriticism. The averting of this state of catastrophe seems to rests in humans. When Ballard represents his characters, they seem to be examples of romantic distaste. Ballard seems to espouse a romantic ideal that humans ought to master their lives first then later master the environment in which they find themselves. This view is reflected in the prologue to *Global Sustainability* when he writes that "... we will not rescue the earth from our own depredation until we understand ourselves a little more, even if we understand that we can never really change our natures (quoted in Nicholas Stern xxii). A similar idea is evident in Glotfelty and Fromm's assertion that "the problem now as most ecologists agree, is to find ways of keeping the human community from destroying the natural community, and with it, the human community" (ibid 107). Vaclav Smil on his part explains that "perhaps too the difficulty of two kinds and its cause is not so much in the things themselves as in us" (1). From this assertion, it is discovered that the agreement is on the cause of the problem emanating from the human nature, hence saving the planet needs that humans have an understanding and a control of their nature.

The Notion of Time

The concept of time appears to be of utmost importance in Ballard's *The Drowned World*. Time serves as a springboard in understanding the manner in which the novel's plot unfolds. The past, present and future plays a great role in the lives of the characters as well as the environment in which they find themselves. One can conveniently say that the past represents the cause of the environmental crises; the present stands for manifestation and the future can be taken to represent a period of seeking solutions or the quest for sustainable measures. Ballard's narratives anticipate recent discussions on 'global weirding', a term that, as Gerry Canavan and Andrew Hageman write, which briefly rose to prominence in 2010 as an alternative to 'global warming' and 'climate change.' (Canavan, Hageman 26) 'Global weirding', they explain, focused "on the unpredictable disruptions that have been caused and will continue to be caused by the coming years of anthropogenic global warming . . . which will be distributed unevenly across the planet and experienced with different intensities by different populations." (Ibid 27) While the narratives might appear to be about the bleak struggle of human life following a natural disaster, Ballard himself seemed just as concerned with what happens to the human experience of time during these crises. Ballard opines that:

In The Drowned World, The Drought and The Crystal World, I attempted to construct linear systems that made no use of the sequential elements of time; that is, the events of the narrative unfold chronologically, but what determines their movement forward (or backward in the case of The Drowned World and sideways or inwards in The Crystal World) is the mythological element, the attempt— particularly in the first two novels—to validate the linear element of time by imposing a psychological dynamic and necessity. However, a series of non-linear elements and images more and more began to force themselves through the texture of the narrative—the characters found themselves in situations that owed nothing or little to their place in the sequence of events. (Ballard, "Images of the Future,")

These "non-linear elements and images" give *The Drowned World* a peculiarly disjointed narrative: as Ballard implies above, the events might unfold chronologically but the real narrative dynamic lies in its "backward" movement as the protagonist Dr. Robert Kerans experiences an

ambiguous physical and psychological “devolutionary descent” (113) or a kind of “Lamarckism in reverse.”(42) As his colleague, Dr. Bodkin points out, ever since the flooding occurred, the natural world has steadily reverted back to a former age (the Triassic period), which makes all human survivors, most of whom are now living in Greenland, appear “anomalous” when compared to other organisms inhabiting the radically altered landscape (47). Part of Bodkin’s and Kerans’ job is to help the government regain a foothold in the world, which sees them venture to the flooded plains in the south. Bodkin and Kerans are responsible with mapping out the new geography and examining new species of plants and animals. Bodkin explains to Kerans that:

During the last three years, Robert, you and I have examined something like five thousand species in the animal kingdom, seen literally tens of thousands of new plant varieties. Everywhere the same pattern has unfolded, countless mutations completely transforming the organisms to adapt them for survival in the new environment. Everywhere there’s been the same avalanche backwards into the past—so much so that the few complex organisms which have managed to retain a foothold unchanged on the slope look distinctly anomalous—a handful of amphibians, the birds, and Man. It’s a curious thing that although we’ve carefully catalogued the backward journeys of so many plants and animals, we’ve ignored the most important creature on this planet (42)

The excerpt presents the various occurrences that had taken place over a short period of time with a lot of impacts. This affirms that time is actually a concept that Ballard uses to a good effect to show the manifestation and effect of the environmental crises on man, plants and animals. More on the concept and the importance of time in Ballard’s *The Drowned World* is presented on the first page of the novel as follows:

Soon, it would be too hot. Looking out from the hotel balcony shortly after eight o’clock. Kerans watch the sun rise behind the dense groves of giant gymnosperms crowding over the roofs of the abandoned department stores four hundred yards away on the east side of the lagoon. Even through the massive olive –green fronds the relentless power of the sun was plainly tangible. The drum refracted rays drummed against his bare chest and shoulders, drawing out the first sweat and he put on a pair of heavy sun glasses to protect his eyes... By noon, less than four hours away, the water would seem to burn (The Drowned World, 7)

As the narrative progresses, we become aware that there are two distinct types of time that compete with one another in this new landscape. One is clock-time, a relic of the drowned (and overtly late-capitalist) world, but one that Kerans and most of the other characters still use in their attempt to control and make sense of the new environment. The other is “deep time,”(119) an inner psychological time that has begun to take hold of Kerans in his “growing isolation and self-containment,” one that steers him away from human ‘civilisation’ and towards a “radically new environment, with its own internal landscape and logic, where old categories of thought would merely be an encumbrance” (14).

The French scientist, Thomas Davin, also projects Ballard’s pre-occupation with the notion of time. In his article entitled, “The Fallacy of the Reversal of Time in *The Drowned World*”, Davin posits that Ballard makes constant reference to the reversal of time by which the world is regressing into the Paleozoic age, resulting in people having intense dreams of a giant, pounding sun that calls them south into the mouth of the ecological and climatic change (1). However, to refer to the transitory period in which the characters in the novel exist as a period marked by a reversal of time indicates an anthropocentric single mindedness that blinds the novel’s characters to the reality of nature. Davin further avers that the novel’s characters, by viewing themselves as travelling back in time into a previous age and as experiencing intimate calls to embrace their new environment and travel into the depths of it, remain blind to the fact that the world in which they live is not regressing into a past era in which humans are called to participate, but rather rapidly progressing into a new era that will most likely bring about the extinction of humanity (ibid, 2). According to Davin, the “drowned world” referenced in the novel’s title does not refer to the world itself, but simply the world that is centered on humans. Buildings and towns mark of humanity’s presence in the world lie drowned, but a new world of amphibian and reptile life flourishes and rapidly spreads. The changes outlined in the novel do not indicate a regression but rather a progression. However, unable to visualize a world without humanity, most of the novel’s characters like Kerans view the changes as travelling back in time—back through time marked by humanity—unable to imagine a future that does not have room for humanity. The past becomes a refuge for the novel’s characters as they delude themselves into thinking that the new environment is connected intimately to the core of their existence. Davin states that the fallacy of this notion becomes apparent when Kerans stumbles upon Hardman after he has embarked on his journey southwards. Hardman’s body is burnt and

withering away, and his vision has degenerated to the point that he can only see the sun. The withered Hardman reveals the true place for humanity in the coming world; like his body is burning and withering away, so too will humanity presumably wither and die out (5). An understanding of the novel's characters concerning the occurrences in their environment as being a reversal of time gives a false hope that there still remains a place in the world for humanity, and, as even in a reversal of time would one eventually come to a time before humans, the practice of imagining a journey back through time merely delays the inevitable and grim fate of a species destined for extinction in a new age of the earth.

A dominant fundamental and universal idea raised in the novel is man and nature. An understanding of the novel reveals that man is eventually at the mercy of nature as he finds himself helpless due to occurrences in the environment. This is the novel's central theme and most enduring source of conflict in the lives of the characters: the struggle of man versus the forces of nature which appear to go twisted because of cosmic phenomena. Humans struggle to keep on living and adapting to a planet whose environment seems to be fully determined to wipe humanity off the record. There are conflicts experienced by the characters amongst themselves (internal conflict), but if one looks at these human conflicts, the root of these struggles would still stem from how the characters respond to an ever increasingly hostile ecosystem and how it creates fertile ground for disagreement. As time passes, the relationship between man and nature gets sour. Man is supposed to control his surrounding, but the irony here is clear as nature seems to oppose man's wish. In such a helpless situation, man is left with no option but to hope for a better future using memories of the past. It appears that all of man's superiority, such as his ability to change the course of great rivers, produce food in surplus, travel vast distances in a short period of time are all distant memories. Sea levels have risen globally, immersing most major coastal areas and majority of the planet is now a torrid, tropical swamp and there is barely anyone still living who remembers the huge cities of mankind. Day by day, humanity begins to embrace this as the new "normal" and soon man begins to have collective dreams where humanity is no longer on top of the food chain but part of the daily menu. These frightening visions, too, over time become part of the new normal, embraced as an undeniable reality to be lived. On the other end of the spectrum, however, are characters that endeavour to regain humanity's seat on the top of the food chain. The novel also suggests that humanity also shares a racial memory lodged somewhere in the human vertebrae. Here, this racial repository of memory

lays the entire history of man, which, theoretically at least, can be recovered by humans. In recalling what humanity once was, particularly the grandeur of mankind's time as the dominant sapient species of Earth, they believe that humanity would be able to march boldly into the future without devolving into savages.

Humanity finds itself at crossroads where the future may go in either direction: there are characters that fight to preserve a way of life long gone trying to hang on to the grandeur of humanity. For other characters, they see human civilization as having finally come to its twilight and embrace the slow but steady decline of humanity. These diametrically opposed viewpoints drive the novel forward and in the process of fighting for their cause of choice, they also learn that regardless of their perspective, current circumstances will definitely change humanity in ways never before which are considered either good or evil.

With his artistic ingenuity, Ballard uses symbols which equally illustrate the notion and role of time. One of such symbols is the broken compass which can be said to be a representation of the current state of the world: a world in which man is no longer on top of the food chain and the old established norms no longer holds true. Even the theft of the compass is an act that is out of order with Dr. Keran's character; an indication that he is no longer the rational scientist he once was. The compass itself is strange as it points south rather than pointing north as a standard compass ought to. This malfunction serves to mirror Dr. Keran's inexplicable desire to head south as well and serves as a visual metaphor for doing away with old established ways of doing things. Characters yearn for a new order due to the advent of civilization. They want to change with changing times; a type of change that seems to be more of a curse than a blessing to them. His is seen as they undergo both physical and psychological trauma.

Still with the notion of time, is the presentation of Strangeman, who can be taken as both a character and a symbol of ruthless human ambition and lust for power. His instinctual attitude reflects what Sigmund Freud calls the id. Even in a world where humanity has been reduced to just another menu item for the reptilian predators living in the sunken cities, Strangeman stubbornly hangs on to power by circulating a legend about himself: that he is not dead and effectively immortal and that he has power over the crocodiles that follow his plane around. Using this myth and a combination of good old-fashioned theatrics he is able to amass a cult following of superstitious African men whom obey his every urge. He is also the representation

of people that cleave to the past in the hopes that mankind would eventually return to it “rightful place” as apex organism of earth.

In conclusion, this chapter has examined various opinions as per environmental sustainability as inferred from the analysis of J.G. Ballard’s *The Drowned World* is concerned. The chapter equally presents the significance of time in determining the present crises. In other words, the opinions presented in this chapter could be classified as Ballard’s subjective ideas in the fight towards environmental sustainability. As examined above, while individuals have significant roles to play in ensuring environmental sustainability, the role of the government and international bodies are inevitable. In these views, it is discovered that society needs to accept the existence of environmental crises and work towards ameliorating it. Their actions should be supported by the government, which is expected to make plausible decisions as well as inculcate in her citizens a sense of morality and respect. As such, sustaining the environment requires that man become friendly to the environment.

GENERAL CONCLUSION

Ecological disasters have been a topical issue in academic discussion within the last few decades. Due to its global nature, it has attracted the attention of writers from varied disciplines. In the domain of literature, it has emerged with the major fields of Ecocriticism, Zoocriticism, Eco-feminism, Post-colonial Ecocriticism, Romantic Ecology, Literary Ecology and Eco-Marxism. Prior to its emergence, different researchers have undertaken different research to contribute to, or add their voices to an understanding of this phenomenon. Works have been done both within the fields of the arts and the sciences evident in titles like Ecocriticism, Practical Ecocriticism, The social construction of climate change and Romantic Ecocriticism, just to mention but a few. These works are united in diversity on the consensus that the phenomenon of environmental crisis actually exist. The differences in ideas come into play when they try to view its causes, how it manifests, and ways in which the phenomenon can be combatted. The diversity in these ideas only increases the range of solutions that human beings have. It becomes important because handling environmental problems, given its magnitude requires every possible solution present to man. With such a consideration, this work was done to exploit a possible co-ordinate from which environmental crisis could be perceived. It explores a different dimension of the problem from man's and nature's contribution.

This work was based on the assumption that the causes of environmental crises rests on human choices. With this, there is need to investigate the causes of this crisis from the choices that man makes. When such choices are examined, it will be easier to prevent ecological calamities. For this to be realized, the study applied two major theories: Ecocriticism and Psychoanalysis. Considering the fact that the study aimed at creating awareness of the environmental crisis, the ecocritical theory was thought and seen as an inevitable paradigm to be used in analyzing the work. This theory is used to elicit the various ways in which J.G Ballard perceives the environment. This could be gotten by looking at the various ways his characters handle environmental concerns. Though the relationship between the characters and the environment is not direct, the intrapersonal and interpersonal relationships among these characters have a strong impact on the environment. The analysis of the characters is done with Ballard's overall mood on them. As such, the work tried to understand the cultural awareness and dispositions that humans have towards the environment based on their activities.

The psychoanalytical theory is as well brought in to interpret the ways characters make their choices; a perspective from which their actions are understood. Within this theory, areas of importance are seen in Freud's explanations of the functioning of the conscious and the unconscious, the interplay of the id, the ego and the superego, the functioning of the Electra complexes and the quest for the lost love object. These tenets are used to understand how and why characters behave in certain ways. An understanding of these tenets will serve like a bridge to bridge the gap between the novel's characters and their behaviours based on the relationship with the environment and other characters.

Furthermore, a review of existing literature is done. These existing literatures included the different angles that critics have handled in *The Drowned World*. In doing this, the focus of this work is distinguished from that of previous works. In other words, points of convergences and divergences are established to make the present study unique. This has enabled the continuity of this study, given that previous works on the text have not handled the environmental theme in the dimensions in which this study handles it.

Chapter Two, entitled "J.G. Ballard and Climate Fiction" examined the background and characteristics of climate fiction in general and in *The Drowned World* in particular. This chapter further situated J.G. Ballard within the context of Dystopia wherein the roots of the environmental crises as examined in the novel under study. Some approaches towards the environmental crises used by Ballard are equally examined. Finally, the chapter examined the novel under study as an ecofeminist tale. From the various links established, a conclusion was drawn which encompassed the general idea of the chapter.

Chapter Three was captioned "Environmental Crisis: Causes, Manifestations and Consequences." This chapter traced the origin of the ecological disaster and then gave a glaring insight into the indicators and repercussions of environmental calamity. It examined cultural forces and eco-destructive ways of life like technology, capitalism and industrialism and their effects on man and nature. In other words, the chapter presented the physical and psychological manifestations of the ecological predicament as well as the socio-economic and political impacts on man and nature. The chapter addressed social tensions from the domain of the human conflicts that arise in human relationships due to clash of interest. Elements such as the inner desires of individuals like the quest for power, money, glory and sexual satisfaction are examined. Within

the framework of the psychoanalytical theory, these desires were studied and linked to the ways in which they affect man's actions and activities in the society. Decisions made by man rely heavily on his state of mind. Man's activities vis-à-vis his surrounding were thus examined to find out the roots, manifestations and repercussions of the ecological predicament.

Chapter Four, entitled "Towards Environmental Sustainability" dwelled on the various sustainable strategies that man can apply to save the present and future health of the environment. It presents man's thinking at the zenith of whatever problem which man faces in the environment and how people act to sustain nature. From such thoughts, man can apply actions to rescue the world from its crisis of despair. Some of the stratagems discussed as far as this is concerned were tilted towards the psychological and the physical geared towards enhancing environmental justice. This chapter examined a diversity of views as far as the environment and proposes global action to combat such a predicament from the characters' actions and thoughts. Cultural awareness is created towards the environment as the role of the government is sought to ensure a complete eradication of the environmental predicament. In the political philosophies, French Philosophers like Jean Jacques Rousseau, Immanuel Kant and John Locke equally asserted the role of the government since it represents the collective will of the people. Humans need to work together to handle the environmental problem. To realize this, man needs to avoid being egocentric in his relation with the environment.

This work was based on the hypothetical premise that J.G. Ballard's *The Drowned World* has noticeable characteristics that could qualify it as a climate fiction. The crises discussed in the novel are caused by both man-made and natural factors. A careful analysis and assessment of the novel portrays an environment manifesting signs of these crises with varied and immense repercussions on man, fauna and flora. We came to the conclusion that through sustainable indicators, mankind is sure to conceive preventive measures to such this crisis. Through an analysis of the foundations, indicators, penalties and proposed resolutions to the ecological predicament, James Graham Ballard's *The Drowned World* can be used as a stepping stone to combat and prevent future environmental crises. The novel fulfils all the functions of good literature as it entertains, conscientises and educates man on how to conveniently live in his environment. Future researchers can do a re-reading of the novel using other theories, or do a comparative study of the novel with other related novels like Ian McEwan's *Solar*.

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