A Study of Dystopian Literature as a Depiction of Existing Ecological Crises and as a Caution to the Future Society

Kowsalyaa M S¹, Dr J Arul²

¹Ph.D. Research Scholar, CSI Bishop Appasamy College of Arts and Science, Coimbatore.
²Associate Professor, Department of English, CSI Bishop Appasamy College of Arts and Science, Coimbatore.

ABSTRACT
This research paper focuses on the current ecological crises that are represented in the dystopian fiction and also presents a caution to the future society to preserve the natural ecosystem for the harmonious living. Many ecological resources are becoming scarce and it is vital to take it into consideration for the welfare of the world and all the living creatures that depend upon them, for their survival. Dystopian literature intends to depict some of the probing existing environmental issues in its narrative which in turn creates awareness among the people to take necessary actions or that might lead into a unimaginable apocalyptic future as portrayed in the fictions of Dystopia. The ecological issues of Climate change, global warming, pollution, over use of technology, deforestation, Loss of biodiversity, Depletion of Natural resources Food and Water Scarcity and many issues are been faced by the current world. Dystopian fiction not only warns the people about the existing ecological issues but also about the eminent danger of the over use of technologies like bioengineering, nanotechnology which could be a potential threat to the society and its harmonious living. Along with the anthropocentric attitudes, the natural resources and the environment deteriorates in a rapid phase with alarms the human community to protect the natural treasures and dystopian literature serves as a representation of these ecological crises. It also cautions the readers about the impending dangers in the society.

KEYWORDS: Dystopian literature, existing ecological crises, ecological crises in dystopian literature, etc.

INTRODUCTION
At the rise of new era, the world has been facing many ecological issues and the world had been growing in a rapid phase equipping itself with many new changes. In the industrial era there is an emergent need to protect the ecological system and to preserve the natural resources for the sustainable living. The role of humans in the protection of environment and ecology is crucial for the well being and harmony. Human’s action has a twofold effect on the environment it could create or destroy nature. Dystopian literature also depicts the ecological issues and themes in its narrative and also highlights the importance of the necessary action of human beings over the pressing ecological issues from preventing it from becoming apocalyptic in its state. Earth is the planet which is the combination of all humans being and
living creatures, it is generous for its resources but the man exploits and pollutes the natural resources extremely for his own prosperity. The sever exploitation of nature needs to be studied thoroughly in order to save the future and one need to raise awareness for the future generation. Many disciplines had been raised in order to bring out the ecological degradation Green literature is one of the created tools to raise consciousness about that issues. Dystopian Literature underlines the existing ecological crises in its narrative and also serves as a caution for the future generation to be in a sustainable and harmonious relationship with nature.

DYSTOPIAN LITERATURE
Dystopian literature is a genre of fiction set in potential or near-future societies where social structures and life are in catastrophic decline. Dystopian literature discovers the darkest facets of human nature and the human mind. Dystopian literature imagines the worst possible scenarios and is set in dehumanising and oppressive environments. Dystopian fiction is usually set in the near rather than far future to generate urgency about real current events. This type of fiction speculates what might happen to society if human beings don’t deal with the existential threats such as climate change, nuclear war, overpopulation, or authoritarianism. Dystopian fiction is also an allegory that serves as a warning about how things could go erroneous if people don’t amend their actions towards ecology, society, and the environment. Environmental damage, economic challenges, loss of freedom or individual identity, government influence, survival, and technology are some of the elements present in dystopian literature. Dystopian literature also exposes the flaws of the modern lifestyle, people, and governance. It also instills hope for a better future if humans come together, working for the overall betterment of ecology, society and the environment.

EXISTING ECOLOGICAL CRISSES
Environmental difficulties pertaining to living things, their relationships with one another, and their surroundings are known as ecological issues. An ecological problem is a change in the natural environment that results in anthropogenic impacts or natural disasters that disrupt the structure and functioning of nature. Some of the existing ecological problems include things like climate change, scarcity of food and water, global warming, pollution, overcrowding, extinction of species, deforestation and the depletion of natural resources. The excessive exploitation of biological resources, habitat pollution, and the impact of introduced exotic species also leads to ecological crises. Dystopian literature brings out the need to address the emerging and existing ecological crises to the expectant society of the future generations.

CLIMATE CHANGE AND GLOBAL WARMING
Climate change and global warming are the main crises that the world is facing today. Climate change may bring numerous ecological consequences along with it, where human beings and ecosystems may be damaged because of the irreparable harm done by human activities. Some of the consequences arising due to climate change are intense droughts, water scarcity, the melting of polar ice caps, flooding, severe fires, and the loss of biodiversity. The World Health Organisation report states that climate change is directly causative of humanitarian emergencies, and they are increasing more and more in frequency, scale, and intensity. Research says that 3.6 billion people currently reside in regions that are extremely vulnerable to climate change.
Dystopian literature foresees this eminent ecological issue of climate change, and the writers have been keenly concentrating on providing awareness and caution to human society about the need to improve the ecosystem in order to live in a joyful environment by presenting them in an apocalyptic setting. The prominent authors of dystopian literature who concentrate on climatic change and portray its harmful effects are J. G. Ballard and Octavia E. Butler, although Margaret Atwood's dystopian fiction is often considered to have been an initial catalyst for this development. Kim Stanley Robinson, Richard Powers, Paolo Bacigalupi, and Barbara Kingsolver have been among the most prominent authors of contemporary literature since 2010.

Margaret Atwood is an admired dystopian writer, and her novels often have hints of environmental themes. She explored the subject of ecological crises in her dystopian trilogy, *MaddAddam* (2013), *Oryx and Crake* (2003), and *The Year of the Flood* (2009). In her novel *Handmaid’s Tale*, there is a hint of ecological disasters that contributed to the climatic change in society. The references to toxic wasteland and also the mentions of the contamination of radioactive waste and pollution that contributed to the infertility crisis can be seen as some of the factors contributing to climate change in the novel. The society of Gilead also has an environmental policy and claims to have reduced its carbon emissions by 78% over the past three years. This can be seen as evidence of the impact that pollution has created on society, which ultimately leads to many ecological and biological crises.

Atwood’s other novel, The *MaddAddam* Trilogy, is set in a future where climate change has firmly set in. It is a depiction of a world of high radiation, droughts, raised sea levels, deserts, dead zones in the oceans, a lifeless Great Barrier Reef, and lost lands. These crises are not made up; they already exist and are realities that are depicted to alert the readers to how destructive the effect of climate change could be. Climate alteration is unmistakably seen in these lines in her dystopian fiction which presage the people to be aware of the consequences of the exploit and to look for the positive and viable ways to protect the ecology and environment.

“The sea is hot metal, the sky a bleached blue, except for the hole burnt in it by the sun. Everything is so empty. Water, sand, sky, trees, fragments of past time.” (Atwood 16)

The climatic change and global warming are markedly seen in these lines in her dystopian fiction which presage the people to be aware of the consequences of the exploit and to look for the positive and viable ways to protect the ecology and environment.

*The Drowned World* of JG Ballard is a prescient warning about the potential for global warming to make unpredictable changes to earth’s ecosystems which responds to real-world anxieties about the incontrovertible evidence supporting the existence of climate change. The novel depicts a post-apocalyptic future in which global warming, caused by increased solar radiation, has rendered uninhabitable much of the surface of Earth. In the mid-22nd century, violent and prolonged solar storms enlarge the Van Allen radiation belt, which deteriorated the ionosphere of the Earth. The solar radiation bombarding the planet increased surface temperatures, raised the levels of the seas, and so established a tropical climate throughout most of the planet; with most of Earth no longer habitable by humans.
“Soon it would be too hot.” (Ballard, Drowned World 7)

This line says about the need to address the rise in temperature and need to address to adapt to the more eco friendly ways in order to save the resources and sustainability for the future generation.

Paolo Bacigalupi is one of the most prolific writers of dystopian fiction that addresses climate change and ecological issues. He also places emphasis on the human impact on the environment and the devastating consequences of human activity in turn of anthropocentric attitudes. The novel Windup Girl, covers many contemporary crises, such as climate change, global warming, and the effects of bioengineering. The novel is set in future Thailand, where global warming is at its peak and has raised the levels of the world’s oceans. There are also other ecological crises such as the depletion of carbon fuels and frequent catastrophes such as deadly and widespread plagues and illnesses caused by genetically modified crops and mutant pests that ravage entire populations. The natural genetic seed stock of the world's plants has been almost completely supplanted by those that are genetically engineered to be sterile, forcing farmers to buy new seeds from calorie companies every season. In the novel, global warming enhanced mega storms, this destroyed major cities such as New Orleans and Katrina. As the earth's sea level and temperature are already rising, this dystopian fiction serves as speculation and is close to predicting the future for future generations in order to save natural resources.

DEPLETION OF NATURAL RESOURCES

Natural resources are things that are provided by nature and used by humans. The unsustainable use of natural resources may result in damage to the natural environment, loss of biodiversity, and overexploitation of resources, which may result in exuberating more ecological crises that could make the earth an apocalyptic place for living, as portrayed in dystopian fiction. Loss of natural resources and environmental degradation may threaten the lives and livelihoods of many people who depend on natural forms for their survival. Overpopulation, pollution, overconsumption, and technological and industrial advancements are some of the factors that contribute to the depletion of natural resources.

The usage of fossil fuels and oil is increasing at a rapid rate, and at some point it may become exhausted. This ecological crisis, which had been anticipated in the dystopian novel of James Howard Kunstler in With World Made By Hand, makes an imaginative leap into the future, a few decades hence, and shows us what life may be like after these coming catastrophes—the end of oil and He also explores in his novel how the terminal decline of oil production had the capability to put industrial civilization nonexistent. In the dystopian novel, one day the supply from the planet's oil fields and pipelines fails and the world crumbles into anarchy. The highways are closed to save gasoline, and because there are no aircraft, there is no imported food, which quickly leads to riots in stores and then on the streets, and man regresses and succumbs to his worst inclinations. This resource scarcity raises many problems, like resource war, scarcity of food and water, and ecological decline. This dystopian fiction serves to showcase the dependency of humanity upon fossil fuels, and there is an evolving need and caution to convert to the use of renewable resources.

Paolo Bacigalupi’s dystopian novel The Windup girl talks about the oil depletion and warns the reader to be aware of the dangerous encounters which could be caused by the anthropogenic activities of the human beings. In dystopian fiction, the depletion of oil supplies made international travel practically
impossible and power difficult to get. The majority of trade is performed by clipper ships and dirigibles, and most household appliances are crank-powered. This depicts the effect of oil depletion requires more man power because electricity will be reduced, also there is an essential need to preserve oil because it is a non renewable resource where it takes many number of years for new deposits to form and restore. Thus it is very important to preserve the natural resources for the future generation.

WATER SCARCITY
A growing issue that many people choose to ignore is the scarcity of water. There are warning signals everywhere in the world. There have been reports for some time now of rivers drying up, continents experiencing a water crisis, and expensive bottled water. The increasing awareness of the issue foreshadows a dire future with steadily depleting water supplies. Urban residents used to have the freedom to refer to it as a far-off future, but that may no longer be the case. Dystopian literature and writers also consider these existing ecological crises as serious issues, and they incorporate the themes of water scarcity and the effects of irresponsible activity towards the preservation of water resources. Paolo Bacigalupi’s The Water Knife is set predominantly in an arid, near-future Arizona where climate change has reduced the availability of water from the Great Colorado River and generated physical and political infighting over the remaining water rights. The scarcity of water causes severe droughts in the regions, and the depiction of the chances of water wars can be a potential caution for the future generation to preserve water bodies and to make sustainable use of them.

Octavia Butler is an impressive dystopian author, whose works in the most subtle way uncover the realities of the contemporary ecological crisis and human values. Her writings forewarn the readers of the impending catastrophes that the mankind is running towards. Octavia Butler’s novel Parable of Shower takes the reader to the year 2024 where environmental degradation and economic collapse has all destroyed American society. Diseases like measles desecrate the population, people struggle and expire over water, and new drugs take over the survivors. The novel also talks about how the climate has become so depressing that individual’s battle about water. Because of the ecological calamities and the absence of downpour, water has become sacrosanct and just well off people can manage the cost of access. This stands as a premonition to human kind about the pressing need to address the water scarcity and reduce the spoilage of water bodies and to preserve it before it all dries out.

Memory of Water by Emmi Itäranta illustrate the issues of water crises and when the water becomes scares people starts to wage war against each other to attain water resources. The story is set in a dry spell desolated, war-ridden future existence where new water has turned into the honor of a couple and tea aces have been guardians of natural spring for centuries. The author says that the water doesn’t belong to us but we the humans belong to water and says that nothing could make human beings separate from earth this emphasis of need for a deep relationship with nature had been depicted in the dystopian fiction. These lines serve as a representation of the importance to preserve and protect water bodies and also to create a strong bond along with nature in order for a harmonious and prosperous living on the earth.
IMPACT OF TECHNOLOGY AND OTHER ECOLOGICAL CRISES DEPICTED IN DYSTOPIAN LITERATURE

Technology is one of the greatest inventions of human beings which has altered the way of life of the people in many ways and also has certain effects on the ecological balance of earth and human civilization. Technology has a huge impact which could be both positive and negative upon the environment. Technology is one of the major components of dystopian fiction and it leads to many complexities in the lives of people. Ecological resources are a very valuable and there is a possibility that every technology can cause havoc in human lives and in the ecological system. The overuse of technology might lead the mankind to various crises which could be unrepairable in the future. Some of the issues the world is currently facing because of the technological developments are the issues of sustainably where the foundation of sustainability is the idea that one must satisfy our current needs without endangering the capacity of future generations to satisfy their own.

The theme of biotechnology and genetic engineering is the most prevalent in the dystopian fictions. In the novel of Margaret Atwood’s *Handmaid’s Tale* there are references of the harmful ecological effects of technology which is said to be present in the pre Gilead society were the birth control devices are used by women and also environmentally harmful technologies such as power plants, sex technologies were used in the society. There are the mentions of atomic power plants and due to the high pollution and radiation the society of Gilead started to face infertility crises and which could lead to extinction of the human civilization itself.

French science fiction author René Barjavel wrote the dystopian novel Ashes, Ashes (originally titled Ravage) in 1943. The society depicted in Ashes, Ashes is far more technologically sophisticated and modern. The author depicts a world where buses and cars can fly, magnetic body suits are common, robots perform household tasks, and enormous freezer rooms are used to keep the dead fresh. The novel major concern is seen as the ecological sustainability and it had been the themes for major debated. The novel also tells how the over use of cars, air conditioning, technology, and aeroplane and some others technological advancements are contributing to climate change. So this serves as a caution to the readers of dystopian fiction to reduce the use of carbon emission objects in order to prevent the future devastating climate changes.

Genetic engineering can be useful in certain ways, but it is highly dangerous in many ways, and the fiction also signifies the point of being aware of it. We may not have the technological capacity to intentionally produce a virus, microbe, or dangerous creature right now, but we will eventually acquire that ability. There is always a threat of biological weapons and also acts of bioterrorism in the world of dystopia. This may become a reality in the near future if it is not controlled by human society. We should consider biological weapons more carefully, especially in light of our limited success in managing nuclear weapons. Our environment has been changed by even very basic biological engineering approaches. There are mentions of bioengineered crops and animals in dystopian fiction, which leads to some of the ecological crises but also, as an aftermath, plagues and diseases and makes organic agriculture difficult. Genetically engineered crops are used as supplements for natural crops because of the lack of fertile soil, overpopulation, and climate change as depicted in the apocalyptic...
future of dystopian fiction, but it also leads to damage to the ecosystem and causes various diseases and plagues affecting both the ecosystem and humankind.

Other existing ecological crises, such as deforestation, soil erosion, extinction of species, and pollution, have also been underlined in the dystopian fiction of the current dystopian writers. The Sheep Look Up by John Brunner serves as the best example of depicting the existing ecological crises as a whole in their nature. The dystopian novel takes place in the near future, and human activities have resulted in the total destruction of the environment and ecological system. Due to the severity of the pollution in the water, "don't drink" signs are frequently displayed. Family water channels are famous things. People living in urban areas can no longer go outside without wearing air masks due to air pollution. Such exhaust is abandoned via airplane that it causes nausea in planes dragging along. California is covered by a thick layer of brown haze that keeps the sun from radiating through. Corrosive downpours force individuals to cover them in plastic so their garments don't get demolished. The ocean has become so contaminated and the seashores so tossed with trash that individuals currently get away in the mountains. All these crises are in a beginning stage in the world but these dystopian society scenarios may be an eminent future and the need to develop a sustainable living along with nature.

CONCLUSION
Dystopian literature has always served as a prophetic vision for the future, and it also cautions the reader about the unknown danger, which could be the worst possible scenario for ecological and human wellbeing. The writers of dystopian fiction very much wanted to convey the edging issues that are faced by society and the aftereffects of anthropocentric human activities. Ecological crises have been affecting the world today, and the earth is suffering due to the irresponsible acts of mankind, which in turn affect both humans and nature. Dystopian literature takes on the responsibility of conveying the existing ecological crises prevailing in society through its apocalyptic setting and cautions the reader to undertake the necessary action to maintain a harmonious relationship with nature. Thus, human beings must come together to protect the environment and ecological system from devastating activities, to be selfless, and to save the ecosystem for the sustainable living of the future generation. Dystopian literature serves as a tool for depicting the existing ecological crises and as a caution to the future generation.

Works Cited