

PERSPECTIVES ON "GAIA": A VOYAGE INTO AMERICAN

GREEN READING

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by

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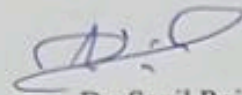
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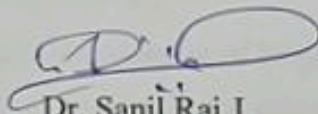
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DECLARATION

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I, hereby, would like to acknowledge that the documentation in the thesis is prepared in accordance with the style format suggested by MLA Handbook (9th Edition).

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INTRODUCTION

Scientists and men of letters have varied opinions regarding the earth system and its functioning. Both of them earnestly address the grave realities and life-threatening transformations that occur in the entire universe. The traumatized and distressed world offers an experimental platform for them to interact and critically scrutinize the role of each organism in maintaining the conditions of the universe for the survival and flourishing of their lives. The imbalanced ecosystem and the rise of different life threatening diseases impend the life on earth. The organisms on earth, inclusive of the animate and inanimate, are on the verge of extinction and the situation demands an incessant attempt by human beings to defend the planet and its organisms.

Nature occupies a significant role in different literary works fashioned across the world. Ecocritical analysis of these literary works exposes the representation of nature and various natural occurrences in the field of literature. Various natural phenomena and disasters that are surging the entire planet are the subject of a lot of experiments and investigations in the scientific field. The present study attempts to integrate literature and science by incorporating the views of literary writers and scientists on the functioning of the earth and the reasons for its 'disequilibrium'. The study employs the scientific theory of Gaia and the literary theory of ecocriticism for examining the role of literature in educating the public on the inevitability of protecting the environment and its inhabitants to ensure the healthy existence of all organisms in the universe.

The term 'Gaia' originated from Greek mythology, denotes the earth goddess. Callicott et al. in *Encyclopedia of Environmental Ethics and Philosophy* cite the Greek myth of creation (or procreation) and state, all the natural forms, features, and different

natural forces such as mountains, seas, wind, etc are created from the union of Gaia, the earth goddess with a male sky god, Ouranos. Different psychological states such as love, hatred, etc. have derived from this union (xvi). Nature occupies a significant role in Greek culture and the Greeks consider nature divine. They forewarn any ruthless activities against nature from the parts of human beings. The Greeks consider nature as a territory of divine interaction, and they caution any irreverence toward nature as a punishable offence. They infer that negative interaction by human beings will arouse the wrath of God or goddesses and it will eventually lead to the doom of humanity.

The myth demands an ethical and moral concern from the world population towards the universe in formulating plans for their prospects. The myth expects higher responsibility from the part of human beings as they inhabit on earth, which is alive and divine. The actions and plans that human beings devise affect the existence of all organisms on earth and finally contribute to the mass extinction of all species. It demands acceptable behaviour by human beings toward the divine nature.

Gaia theory assumes the earth as a single organism where everything functions in constant relation to the other. James Lovelock formulated the theory, and it is the famous English novelist, William Golding, who suggested the name Gaia to it (Lovelock 2). Lovelock considers the earth as a superorganism and defines Gaia as “The entire range of living matter on Earth, from whales to viruses, and from oaks to algae, could be regarded as constituting a single living entity, capable of manipulating the Earth’s atmosphere to suit its overall needs and endowed with faculties and powers far beyond those of its constituent parts” (9). The theory emphasizes the role of each organism in maintaining the earth’s environment suitable for the survival of the entire species on earth. Everyone

collaborates to form a complex whole that possesses a strength that is far beyond its parts and determines the destiny of its settlers.

In the 1960s, Lovelock gets a chance to be a part of a space mission by NASA for detecting life on Mars. Lovelock distinguishes earth from the other planets and identifies the flux that exists in the quantities of chemical substances in its atmosphere. He perceives the dominance of carbon dioxide in other planets, contributing to an atmosphere that provides the slightest possibilities for prospering life on them. Earth's atmosphere is regulated by fluctuations in different gaseous substances, including oxygen and nitrogen (Callicott 449). The disequilibrium that he observed prompted him to think of the idea and finally, Lovelock, along with a microbiologist, Lynn Margulis, concluded that different life systems that exist on earth play a significant role in maintaining the gaseous and chemical combinations on its surface.

In Gaia, they considered the earth a "super organism" which can regulate and coordinate the lives of its inhabitants to keep the condition on earth suitable for its existence. As the earth plays a substantial role in maintaining a regulatory system for all the organisms to survive, each of them must ensure the prosperity of the earth in all their ventures. Steven Yearley is of the same outlook and he claims "if the Earth can be described in this way, it might change our expectations of the globe's response to human meddling and alter our attitude to the planet; we might now see ourselves as having a moral obligation not just to humans and animals but to Gaia" (141). All the factors on the planet join with earth for regulating its climate, which is appropriate for life's sustenance. So everybody is indebted to one another. This very view of Gaia attempts to change the human perception of the non-human organisms and planet earth.

Gaia theory assigns higher responsibilities to its inhabitants to guarantee an amicable climate on earth that gives justice to the necessities of its dependents. James Lovelock uses the term “biota” collectively for all the organisms on earth (Tyrrel 3). The interference of “biota” determines the destiny of the earth and its residents. It confers the relevance of “biota” in generating a vigorous environment for the harmonious subsistence of all organisms on earth. The theory is concerned with a planetary regulation by all organisms to create an agreeable condition for promoting the prosperity of everyone on earth. Tyrrel expresses a similar conception of thought in *On Gaia: A Critical Investigation of the Relationship between Life and Earth* and states: “life has had a hand on the tiller of environmental control. And the intervention of life in the regulation of the planet has been such as to promote stability and keep conditions favourable for life” (3-4). Thus, the interactions of the biotic and abiotic elements control the planetary circumstances by interfering in all its occurrences.

Gaia underlines the role of each entity in retaining the balance of the unified ecosystem. It addresses different transformations and ecological processes rendered by distinct organisms in the course of their endurance. The theory asserts the inevitability of appraising various contributions started by the living organisms for planet maintenance and the exponents of the theory consider it as an inevitable process for them to comprehend the earth’s ecology. They accredit the importance of living on the planet and acknowledge the intervention of various living organisms’ involvement in several planet processes except for the physical process (Yearly 141). Entities in the oceans, including the sea algae, are essential in nurturing the temperature levels of the planet by neutralizing the carbon dioxide composition on the earth’s surface. Tiny organisms on the

soil play a decisive role in conserving the fertility of the soil and improving its productivity level. Therefore, the entities on earth, including the living and the non-living, contribute a substantial part in modifying the biological and chemical content of the planet.

Gaia theory renders higher emphasis on the relevance of each organism in preserving the balance of the entire ecosystem. Every organism in the universe carries an intrinsic value, irrespective of its instrumental or materialistic value. Anne Primavesi is of a similar opinion and in *Sacred Gaia*, she introduces each organism for its intrinsic worth as it plays a substantial role in completing the complex whole. Everything possesses certain qualities that distinguish it from others and therefore it is essential to ensure the survival of each of these creatures in the universe (126). There is a unique role for each organism to ensure the equilibrium of the planet. The essentiality of an organism gets better acceptance in the ecosystem only when it becomes extinct.

Human beings are not the lone inhabitants of this earth and Gaia prescribes certain rules for the smooth operation of the planet earth, where the interests of the human beings are least consulted. J. Baird Callicott and Robert Frodeman illustrate the same fact in *Encyclopedia of Environmental Ethics and Philosophy*. They elaborate on the view of Gaia on recommending certain rules for the functioning of various systems on the earth. Gaia asserts earth is a living organism that has the power to regulate itself and its functions based on certain principles that consider the welfare of each organism in the ecosystem to maintain its equilibrium (351). The prime focus of the Gaia system is on the flora and fauna of the universe, and there is not any special emphasis on the interests of human beings.

Gaia attributes higher significance to each natural phenomenon that happens in the ecosystem. Diverse activities on the planet earth control and restructure the earth's composition through its uninterrupted interaction. Lovelock in his *The Vanishing Face of Gaia* offers a sequence of illustrations to demonstrate the position of each creature in sustaining the basic temperature of the environment. The rocks are involved in weathering to retain a balance in the biosphere's temperature. The plants absorb carbon dioxide that is expelled by other organisms and the rocks absorb the excess carbon dioxide to ensure equilibrium in the temperature, certifying the vigorous settling of each organism. The sea algae also plays a striking role in the transformation of carbon dioxide in the atmosphere. Different organisms in the ocean convert the carbon dioxide received from the plants and humans to calcium bicarbonate and into calcium carbonate and form sediments on the ocean floor (166). Thus, the geosphere and the biosphere join hand in hand to safeguard the macrocosm.

Science expects recognition of various scientific facts even if it is not appealing to human senses. It demands the observer to consent to the scientific truth behind diverse universal occurrences, even though it is nonrepresentational to the human eyes. Thus, the exponents of the theory enhance Gaia's presence in everything irrespective of its visibility to the observers' eyes. In *The Vanishing Face of Gaia*, Lovelock compares Gaia in the universe to the scientific observation of substances that comprise atoms. This observation demands to accept of the abstract idea of atoms as they are not visible to the naked human eyes. There is Gaia's presence in everything on the planet and the quality of the experience of its presence entirely depends on the perception of the individual

(Lovelock 187). Hence, the personal consciousness of the observers governs the discovery of Gaia.

Illusion and reality are discrete entities that occupy a distinctive position in the Gaia theory. Hereditary and personal experiences that one derives from his social circle oversee these concepts. James Lovelock differentiates between reality and illusion and asserts that fact is purely based on our perception. In Gaia, instinct and intuition are two things that influence our perception. It stresses the importance of the prenatal period to generate a mind's model of earth based on the instructions got from the genes and the experiences derived from the senses. So, it defines instinct as the operating system of our mind that is transferred to us genetically (Lovelock 189). Instinctual fear experienced by most human beings while standing at the top of a steep area and also by the instinctual ability of birds to build nests with no training illustrates the fact. Gaia acclaims the ability of the human mind to form a perception of the information he draws from the surroundings. Lovelock defines perception as "a mind-made software that acts as a surrogate for instinct and allows rapid and unconscious action" (Lovelock 189). Intuition is personal and cannot be gained through genes. Intuition plays an inevitable role in empowering the mental models of an individual.

Gaia affirms that by analyzing the resemblances and dissimilarities between the predictions made by the mind's model and from the visual experience of the eye, one gains a chance of instantly recognize life. Gaia considers movement as one factor that proves the existence of life. Along with movement, shape also plays an imperative role in detecting the manifestation of life. The inanimate objects in nature, such as the stones, soil, and vegetation, remain stagnant despite their movement with the power of the wind.

They cannot move on their own. In nature, insects, birds, and other animals express their sense of life with their movement. The shape of these animate objects gets instantly matched with our mind's model and the life assigned to them. Plants differ from rocks and soil in that they have regular repeating patterns of leaves and stalks. The flowing river shows life with its movement (Tyrrell 190-91). Gaia considers movement as one feature of a complex whole that possesses the throb of life within.

The proponents of Gaia theory infer earth is a living organism, and it possesses its existence like any other organisms that inhabit it. Michael Ruse, in his preface to the book *The Gaia Hypothesis: Science on a Pagan Planet*, argues earth is a "pagan planet". He states that as the earth possesses life, it has value and reserves the right to get fulfilled its own needs (x). He mentions the opposition by the Protestant Christians towards this idea. Christianity and all other pagan religions consider God as the supreme figure and everything else as derived from God. But Gaia theory is distinct, and it extends an inherent worth to planet earth and it finds earth as a superorganism.

Gaia theory incorporates all the aspects of earth to its area of concern. It examines the significance of each of its parts in perpetuating the life of this super organism. Timothy M. Lenton in the chapter entitled "Clarifying Gaia: With or Without Natural Selection" in *Scientists Debate Gaia: The Next Century* distinguishes Gaia from the "Earth system" and the "biosphere". The "earth system" is concerned with the states of earth before the origin of life and the biosphere is only concerned with the part of the earth where living organisms exist. Whereas, Gaia stands for a wider range as the living organisms influence even the region beyond its interaction Tyler Volk defines Gaia "as the system that includes all Earth's surface life, the soils, oceans (all surface water), and

atmosphere” (Schneider et al. 27). So, Gaia is a concept that has greater concern for both the living and non-living aspects of planet earth.

The same concern for nature and its organisms’ wellbeing is there in the theory of ecocriticism. The observation of nature has occupied a significant role in the life of human beings from time immemorial. But the dimensions and the motive behind it have undergone a drastic change with the changing perceptions and the mental outlook of various generations. Initially, the intention of the writers was more or less based on the aesthetic or romantic aspects of the environment where human beings inhabit, and gradually the emphasis got deviated from beauty to reality. But the trend left unexplored till the late 1960s and 1970s with environmentalism, which examined the link between a literary text and its physical environments such as the relationship between a particular culture and its natural scenario and the influence of various natural calamities on their writings. It was in 1978 that William Rueckert coined the term ecocriticism in his essay “Literature and Ecology: An Experiment in Ecocriticism”. Here, Rueckert takes an initiative for evaluating literary texts based on certain ecological principles. Ecology as a scientific discipline stands as the basis of human existence. Ecocriticism employs various scientific and ecological principles in the study of literature. But the term received more public acceptance in the 1990s through two important publications named *The Ecocriticism Reader* edited by Cheryll Glotfelty and Harold Fromm and *The Environmental Imagination* by Lawrence Buell. Ecocriticism as a concept has its beginning in America and, at present, it has a global outlook.

Ecocriticism investigates how different writers explore nature in their works and how the physical environment where they belong affects their literary creations.

Cheryll Glotfelty defines ecocriticism as “the study of the relationship between literature and the physical environment” (xviii). In ecocriticism, the interactions among human beings, between humans and the non-human and non-humans, and the physical environment are evaluated critically. The theory tries to stress various realms of relationships, such as interdependence between different creatures, how the threat inflicted on one affects the other, and how conserving a reasonable balance in each entity helps in bringing a proper equilibrium into the entire ecosystem. The ecocritics uphold a scholarly approach to literary works and they scrutinize even literary works which seem to give little importance to nature and the non-human world and try to explore the hidden domain where these factors find their shelter. They try to stress the importance of maintaining a balance in the ecosystem for the healthy functioning of everything in the universe.

The progress of humanity in the field of science and technology is tremendous. Most of the time, human beings are under the pretext that they have the universe under their control. Despite this incredible progress in the field of science and technology, they have to depend upon nature to sustain life. They desperately need fresh air to take a breath, pure water for drinking, and other natural resources to satisfy their needs. Thus, humanity is indebted to nature and its resources for their primary existence.

Ecocriticism aims to maintain an equilibrium in nature by safeguarding the needs and survival of all organisms. Both the living and the non-living components are interdependent and mutually benefitted, and it is pretty absurd for any creature to claim superiority over the other. The centre of the world keeps on changing depending upon each organism's needs and necessities. Kerry H. Whiteside in *Divided Natures: French*

Contribution to Political Ecology discusses the concept of a centred ecological theory. In a centred ecological theory, the centre stands as a fixed point and everything gets connected to it depending on the role of the centre bearer. Both human beings and nature interchange their role as the centre bearer. When humanity functions as the centre, nature performs its actions accommodating human welfare and when nature stands as the centre, human beings hold the obligation to support nature in the development of natural abilities (46). Human beings and nature inter-change the central position depending upon the context but ensuring the interests of both. So, ecocriticism considers the equality of both nature and human beings in maintaining the balance of the planet.

Ecocriticism places a higher significance on the inevitability of nurturing the biodiversity in the ecosystem as the organisms are so much interdependent and they join to sustain the balance of the ecosystem. It advocates the fact that the reduction in the number of one species may adversely affect the existence of all the other organisms in the ecosystem. Levin in *Fragile Dominion: Complexity and the Commons* argues ecocriticism offers a complementary approach to the appreciation of the diversity of nature by interpreting the interdependence between various organisms and their connection with the physical world. The interpretation reveals that biodiversity is an essential factor for keeping the equilibrium of nature, making it inhabitable for human beings and other organisms (4). The decline in the number of one organism may adversely affect the existence of the other and, finally, the aftermath gets echoed in the entire ecosystem. In ecocriticism, the boundary or border that demarcates the area where the blending of the landscapes, flora, and fauna of two ecosystems takes place is the “ecotone” (Allister 4). The ecotones contain a diversity of plants and animals and it

provides a better ground for the flourishing of lives. Hence, the ecocritics have greater concern for the enhancement of the “ecotones”.

The ecocritics opine the universe forms a complex organic whole where each part is indispensable. Fritjof Capra in his *The Web of Life* speaks of a certain tension that arose because of a shift in the world’s thinking population from “mechanistic” to the “ecological paradigm” in various scientific realms: “The basic tension is one between the parts and the whole. The emphasis on the parts has been called mechanistic, reductionist, or atomistic; the emphasis on the whole holistic, organismic, or ecological” (17). Capra uses the term “systemic” to denote the holistic ecological approach. The advocates of “systems thinking” consider “the living organisms as integrated wholes” (17). Capra states that the terms “substance” and “form” are interdependent and the full recognition of one depends on the examination of the other. The history of biology has prior significance in this context, where a kind of tension prevails between mechanism and holism. According to him, the ancient clash between “substance (matter, structure, quantity) and form (pattern, order, quality)” creates the tension. He argues that biological form is above the fixed structure of all constituents or shapes of an object. A living organism undergoes a continuous transformation of its substance, along with its altering form. It undergoes the process of evolution and development regularly. Thus, it is mandatory to analyze the metabolic and developmental processes in every organism to have a comprehensive understanding of the biological form (Capra 18). Such a proposition centres on the interdependence of parts to the whole and the development of each part leads to the corresponding changes in the whole.

The ecocritical dimension of part and whole is like the Aristotelian concepts of “matter” and “form”. Aristotle distinguishes “matter” from “form” and endeavours to associate both through a process of development. Aristotle states that matter and form are inseparable and that one cannot exist without the other. “Matter, according to Aristotle, contains the essential nature of all things, but only as potentiality. Through form this essence becomes real or actual” (Capra 18). Aristotle uses the term “entelechy” or “self completion” to denote a process that leads to “self realization”. He deliberates matter and form as the two sides of the same coin that supplements value to the process of full self-realization (Capra 18). In ecocriticism, the part empowers the whole to achieve its completeness, like the matter concentrates on accomplishing self-realization through the form.

The ecocritical theory proposes an inseparable connection between a land and its inhabitants. The geographical features of an area play an extensive role in formulating the attitude or nurturing the character of its occupants. The very idea can be associated with Gassett and Sanders’ quote “Tell me the landscape in which you live, and I will tell you who you are,” (Allister 3). Ecocriticism stresses the interdependence that exists between the “geography of land” and the “geography of spirit”. Mark Allister states that the spirit and land are so much interdependent and one cannot be separated from the other (3). The geographical region or nature where one belongs is an inexorable constituent while writing about oneself. The same dimension of thought is apparent in Donelle Dreese’s *Ecocriticism: Creating Self and Place in Environmental and American Indian Literatures*. Dreese deliberates the relationship between place and self and clarifies how the place helps to realize the self. He states, “we are all composite beings, not only

physically but intellectually, whose sole individual identifying feature is a particular form or structure changing constantly in time... Thus, knowing who we are and knowing where we are intimately linked. There are no limits to the possibilities of the study of who and where” (1). The identity of a person and the region where he lives are interconnected. The realization of the self depends on the appreciation of the specialities of this region. Thus, the environment plays an indispensable role in determining the physical, intellectual, emotional, and spiritual identity of a person. All organisms cultivate a unique sense of place that makes them understand their affinity towards a specific place and eccentricity towards the other. Hence, the organisms aspire to a particular place that has some acquaintances with their inner self.

The environment where one flourishes has the power to generate negative or positive experiences in their mind. The childhood environment of a person preoccupies the realm of his influence. Usually, a person who is born and brought up in an urban setting advances an affinity towards a place that occupies the features of urban life and they may feel at odd getting adjusted to the one that possesses rural physiognomies. Those who have spent their early days of childhood in an urban area may find the deafening and contaminated atmosphere in cities excruciating and unendurable. The childhood environment has the power to control the emotional variations of an individual. Dreese expresses the same opinion and articulates that if individual experiences disagreeable and unappealing circumstances in his childhood environment, the exposure to the same environment can create a negative response to him (2). So, the environment plays an imperative role in moulding the personality of an individual, empowering him to respond uniquely to diverse transformations in the environment.

The terms culture, nature, and human beings are synergetic with each other. The cultural practices of human beings are so much governed by the environment where he subsists and it affects the environment. Ecocriticism analyses the interconnections that exist between various elements of culture and nature, especially language and literature. Glotfelty states, “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” (xix). Thus, ecocriticism analyses the interactions between the human and the non-human by considering the cultural and natural elements.

Ecocriticism endeavours to explore the human views represented in a literary or artistic work predominantly considering the natural factors and eventually analyzing the cultural parts of it: “the joys of abundance, sorrows of deprivation, hopes for harmonious existence, and fears of loss and disaster” (Cohen 10). It helps in delineating the position of entities in a culturally constructed world where the existence of one depends on the other. It makes the observer apprehend the shared system where everyone has enclosed for a common cause.

The ecocritics categorize the arrangement of various organisms in the universe, conferring a certain hierarchical division. The entire ecosystem contributes to a whole and all organisms are indispensable parts. There are parts in each organism that subsidize a larger whole and that whole is deliberated as the part of the entire universe. The organisms integrate their parts and generate a common network which Capra designates as “the web of life”. The functioning of each organism is based on certain rules. Capra illustrates the process: “cells combine to form tissues, tissues to form organs, and organs to form organisms. These, in turn, exist within social systems and ecosystems.

Throughout the living world, we find living systems nesting within other living systems” (28). So, each hierarchy in the system postulates a part as its base. The hierarchical arrangement of the organism demands the requirement of certain laws to operate at each level for the healthy existence of its constituent parts. The law depends on the requirements of various organisms at each level, as the complexity that exists at one level is entirely different from the other.

The proponents of “systems thinking” state that the analysis of its parts can not fully recognize a system. The specifications of a specific part can be fully interpreted by placing it in the whole’s context it contributes. Thus, the association between the individual part and the complex whole forms a reversible connection that is completely demarcated by the context. The part can be studied only by considering or relating to its whole. “Systems thinking concentrates not on basic building blocks, but basic principles of organization. Systems thinking is “contextual,”... means putting it into the context of a larger whole” (Capra 30). As a result, context plays an important role in deducing the role of the parts and the whole.

The terms conservation and preservation have considerable significance in ecocriticism. It demands an effective utilization of scarce resources. John Parham defines conservation as the “management of natural resources for human benefit based upon scientific understanding” (13). The fruitful management of the natural resources includes their distribution to the largest population, by considering its greatest good and longest duration. The deployment of natural resources is based on its reimbursement to the largest number of populations. It stresses the depletion of natural resources with the increasing population growth. I can relate it to the “Spaceship Earth” concept, which

emerged during the 1960s, where it examines the shortage of natural resources in the light of the substantial rise in the proportion of earth's inhabitants. The overexploitation of resources and pollution have left the earth in a perilous situation that demands a reduction in using natural resources and proceedings of contamination. Parham defines preservation "as a predominantly cultural ideal concerned, specifically, with preserving the existing environment" (13). Preservationists consider the adoration and protection of natural and wilderness environments. Hence, the terms preservation and conservation are mutually dependent and deserve greater concern in the jurisdiction of ecocriticism.

Ecology or environmentalism is more apprehensive about the threats inflicted by the human species to the entire universe. It censures the anthropocentric stance of the ecosystem and points to anthropocentrism as the sole reason for the wretched conditions on earth. It underlines distinct approaches to inspect the disparaging transformations devised by the human population. There is a discrete branch of ecology known as "scientific environmentalism", which evaluates the alterations conceded by human beings in the "physical, chemical and biological surroundings in which organisms live" (Parham 15). Thus, ecocriticism endorses a "biocentric" dimension of nature disapproving of the malicious human interaction.

Gaia and Ecocriticism share a lot of resemblances in their approach to the functioning of the ecosystem and the role of different organisms in it. The study endeavours to show diverse dimensions of Gaia theory by connecting it with different dominions of ecocriticism. It relates the original concepts of Gaia with major tenets of ecocriticism, such as deep ecology, ecospirituality, ecofeminism, climate change, and

other ecological disasters. It attempts to trace a common realm for both ecocriticism and the Gaia to operate. The study also uses the term “Gaia” in the sense of “mother earth”.

The study proposes to posit the prominent writers - Barbara Kingsolver, Margaret Atwood, and Carl Hiaasen in the field of ecocriticism by analyzing the select novels- *Flight Behaviour* (2012) by Barbara Kingsolver, *The Year of the Flood* (2009) by Margaret Atwood, and *Skinny Dip* (2004) by Carl Hiaasen from an ecocritical perspective. The major concern of the research is to assess the ecological apprehensions in the select novels. It investigates the approach of the select writers towards various environmental disasters and the role they attribute to nature in the transactions of day-to-day affairs. The central aim of the study is to evaluate different perspectives on “Gaia”, the mother earth by investigating various realms of ecospirituality, ecofeminism, climate change, and animal extinction in the ecocritical theory.

The relevance of the study lies in the present environmental scenario, where the anthropocentric attitude of selfish human beings has transmuted the earth from a highly industrious and peaceful existence to a disastrous and degenerated one. The investigation of the novels in the ecocritical domain strives to expose the critical coma situation that mother earth is passing through. The study proposes a platform for the intermingling of various interdisciplinary areas. The interpretation of the novels discloses a common ground for nature, religion, science, technology, spirituality, and gender to interact. Hence, the study offers a prospect of exploration of various interdisciplinary areas that determine the destiny of nature and play a central role in the conservation and destruction of the same.

The study is based on the hypothesis that the select novels depict elements of ecocriticism and its dimensions. The novels are ecocritical and it introduces various facets of environmentalism by bringing into consideration the current ecological crisis, gender difference and spiritual dimensions of nature. Nature occupies a principal position in different realms of human interactions that appear devoid of nature on the surface.

There are some resources available on *Flight Behaviour* by Barbara Kingsolver and *The Year of the Flood* by Margaret Atwood. No critical investigations are accessible on *Skinny Dip* by Carl Hiaasen despite some have attempted book reviews on it. No works incorporating the Gaia hypothesis and ecocriticism have met the eye so far.

Adam Trexler's *Anthropocene Fictions: The Novel in a Time of Climate Change*, puts forward an overview of Anthropocene fiction and deliberates various disputes such as "flooding, food shortages or violent weather" (9). He illustrates various instances from Margaret Atwood's *The Year of the Flood*, Winterson's *The Stone Gods*, Barbara Kingsolver's *Flight Behaviour*, Marcel Theroux's *Far North*, and James Howard Kunstler's *The World Made by Hand*.

Timothy Clark's *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* discourses the issues of climate change and global warming. He traces various ecological catastrophes as the repercussions of climate change. He exemplifies the issue by discussing the elements of Anthropocene from Barbara Kingsolver's *Flight Behaviour*, George Marshall's *The Earth Party: Love and Revolution at a Time of Climate Change*, Ian McKewan's *Solar*, and Liz Jensen's *The Rapture*.

Bron Taylor's *Dark Green Religion: Nature, Spirituality and Planetary Future* survey the green aspect of religion and spirituality. It explores various spiritual

performances concerning nature's sacredness and intrinsic worth. It addresses the role of religions in conveying concern for environmental protection and restoration. The work is a spiritual expedition through nature, its organisms, and their relations.

Bron Taylor's *Encyclopedia of Religion and Nature* discovers the interconnectedness between nature and philosophy. The work is an attempt to trace a spiritual dimension for natural interdependence and interaction. It warns the readers of various ecological cataclysms that can arise from the scarceness of spirituality.

Antonia Mehnert's *Climate Change Fictions: Representations of Global Warming in American Literature* evaluates the role of literature in educating the public on the grave realities of climate change. The work affords an overview of the impact of climate change by elucidating many instances from prominent American novelists.

The chapter entitled "Mediating Climate Change: Ecocriticism, Science Studies, and *The Hungry Tide*" by Adam Trexler in Greg Garrard's *The Oxford Handbook of Ecocriticism* confers the effects of climate change and science on literature. It alludes to the climate change disputes conferred in Margaret Atwood's *Oryx and Crake* and *The Year of the Flood*, Cormac McCarthy's *The Road*, McEwan's *Solar*, and Doris Lessing's *Mara and Dann*.

Eline D. Tabak in her paper- "Science in Fiction: A Brief Look at Communicating Climate Change through the Novel" analyses the role of novels in educating the public on climate change. The paper debates the influence of human-induced climate change by analyzing Susan M. Gaines's *Carbon Dreams*, Barbara Kingsolver's *Flight Behaviour*, and Michael Crichton's *State of Fear*. It explicates the role of accountable novelists in

debating the human intrusion on earth's climate and proposes substitute approaches to defend our planet.

The select novels render an ambience of linking nature with various other fields such as gender, religion, spirituality, science, technology, and economic progress. There are connections between the biographical background of the writers and their apprehensions over nature. Margaret Atwood is an environmental activist who has greater concern for protecting the environment. Being a journalist, Carl Hiaasen is so much aware of the risks and various forms of pollution and calamities experienced by the earth regularly. Barbara Kingsolver is a biologist who possesses an improved appreciation of various organisms and their surroundings and the factors that stand as a threat to their vigorous existence.

The novels selected for analysis are *Flight Behaviour* by Barbara Kingsolver, *Skinny Dip* by Carl Hiaasen, and *The Year of the Flood* by Margaret Atwood. A better comprehension of the novels is indispensable to experience a fruitful appreciation of the analysis. The following description offers a gist of the novels, biographical background, and literary background of the writers.

Barbara Kingsolver is raised in Kentucky, a place famous for rural pastures and woodlands. The landscape influenced her to a great extent to become a keen participant in nature and the impression of that observation is visible in her fictional works. From her childhood, Kingsolver preserved an intimate relationship with nature. She gained her graduation and post-graduation in Ecology and Evolutionary Biology. The learning of ecology and biology has an immense effect on her literary career and her connection with both human and non-human organisms on earth. Her first novel, *The Bean Trees*, was

published in 1988. Her short story collections *Homeland* (1989) and *Animal Dreams* (1990) followed their publication. Other notable works of Barbara Kingsolver include *Pigs in Heaven* (1993), *High Tide in Tucson* (1995), *The Poisonwood Bible* (1998), *Prodigal Summer* (2000), *Flight Behaviour* (2012), *Unsheltered* (2018), and *How to Fly* (2020).

Barbara Kingsolver's *Flight Behaviour*, published in 2012, depicts the life of the protagonist, Dellarobia Turnbow, whose impoverishment forces her to get married at an early age and be a victim of patriarchy. The novel pictures the events that take place in Dellarobia's life once she notices the monarch butterflies in the Appalachian Mountains. Dellarobia is a great observer of nature and is highly conscious of slight alterations in the environment. Other characters in the novel include Ovid Byron, a scientist, Cub, Dellarobia's husband, Hester, Dellarobia's mother-in-law, Bear Turnbow, Dellarobia's father-in-law, and Bobby Oggle, a priest. Animal extinction, global warming, and climate change are some of the key issues that the novel deals with.

Margaret Eleanor Atwood was born on 18th November 1939 in Ontario, Canada. She is famous as an environmentalist, feminist, poet, essayist, short story writer, and novelist. Her father was an entomologist, and she possessed an admiration for nature and other organisms from her childhood. Atwood's literary works deal with various themes, such as environmentalism, gender differences, ecofeminism, identity problems, animal rights, and various environmental disasters, such as climate change. She is the recipient of many literary awards, including the Booker Prize for her novel *The Testaments* in 2019. Notable works written by Margaret Atwood include *Surfacing* (1972),

The Handmaid's Tale (1985), *Cat's Eye* (1988), *Alias Grace* (1996), *The Blind Assassin* (2000) *Oryx and Crake* (2003), *The Year of the Flood* (2009) and *The Testaments* (2019).

Margaret Atwood's *The Year of the Flood* (2009) illustrates a post-apocalyptic world, where human beings are in a chaotic state regarding their existence. The entire population is stuck in a waterless flood and a mysterious disease has spread across the region. A corrupted authority named the CorpseCorps is ruling the world. The government follows the directions of profit loving corporates and corrupt scientists. The corporates are so busy destroying the natural landscapes in the name of development. They derive huge profits through the sale of endangered species by adding new names to the list of extinct species. Another corporate named the HelthWyzer plays a noteworthy role in spreading new diseases through the sale of vitamin supplements. The only intention of the corporates is to derive maximum profit disregarding the inner worth of nature and other fellow organisms by organizing various activities and following a life that is undeniably against nature. The female characters in the novel also suffer many oppressions in society, especially by the dominant members of patriarchy.

Carl Hiaasen is an American novelist and reporter and his works condemn the corrupted political scenario and the attempt of various corporates to rule the planet. His newspaper articles administer to bring justice to planet earth and its organisms. Hiaasen is renowned as a novelist and published his first and Newbery honour winning novel *Hoot* in 2002 and it was later developed into a feature film. Most of his novels are crime thrillers comprising the theme of ecological devastation and a ruined political system. His fictional works for children include *Flush, Scat; Chomp* and *Skink- No Surrender*. Hiaasen's most famous novels for adults include *Sick Puppy* (2000), *Paradise Screwed*

(2001), *Skinny Dip* (2004), *Dance of the Reptiles* (2014), *Assume the Worst* (2018), and *Squeeze Me* (2020).

Carl Hiaasen's *Skinny Dip* (2004) is set in Florida. The novel portrays the vengeance of the Protagonist, Joey Perrone, against her husband, Chaz Perrone, in his attempt to murder her. The progress of the plot discloses the large-scale annihilation done to the Florida Everglades by the avaricious corporates. Chaz is a covetous chemist working for a corporate named Mr. Hammernut. Chaz assists the corporate to accumulate huge profits from his farm by using pesticides with poisonous substances. The plan causes the disposal of high amounts of phosphorous in the Florida freshwater storage and which leads to the devastation of many organisms in the ambience. Joey Perrone, with Mick Stranahan, devises many plans to take revenge against Chaz for her justice and the justice of the environment. Finally, Joey restores the Florida Everglades.

The thesis attempts to place the select novels in the field of ecocriticism and transmit it to the scientific theory of Gaia. The ecocritical examination of the novels discloses the current ecological crisis and the role of human beings in it. Similarly, it stresses the importance of artistic creations and scientific thought in propagating the equilibrium of the ecosystem.

The thesis follows an inter-disciplinary approach by linking various realms of knowledge, such as literature, science, politics, gender, and economics, with nature and its varied inhabitants. The study sustains an ecocritical perspective throughout its course by questioning different ecological issues and the literary stance taken by the novelists in the select novels.

The study comprises five chapters. The first chapter, “Ecocriticism and Gaia: An Interaction,” deliberates the diverse elements of ecocriticism and attempts to connect it with the same constituent of thought in Gaia theory. The chapter embodies an outline of distinct dimensions of thought in ecocriticism, such as ecospirituality, ecofeminism, climate change, ecoterrorism, ecoeconomics, wilderness, and animal extinction. It engages to associate ecocriticism with Gaia theory in its treatment of these elements. The argument on different aspects of Gaia and ecocriticism gets involved in the interconnectedness that prevails between earth and its organisms. It depicts the position of both Gaia and ecocriticism in its engagement with matters of gender, spirituality, ecological crisis, economics, and the inanimate and animate objects in nature.

The second chapter, “Conspiring Nature as a Feminist Space,” addresses the ecofeminist aspect of select novels. It strives to investigate the subjugations and ascendancies experienced by both nature and female characters in the novel. It endeavours to sketch the different stages of development in the female characters and nature in the novels chosen for investigation. The chapter also scrutinizes the gender-based treatment of nature.

The third chapter, “Tracing Spirituality in Nature” endeavours to consider the select novels from an ecospiritual perception. The chapter deliberates a transcendent existence for nature and attempts to relate it with the Gaian concept of “earth as a super organism”. The chapter primarily explores the select novels in the background of spirituality and theology. The chapter contemplates the scientific background to replicate the intrinsic worth of nature. The Gaian concept of “living earth” is demonstrated here. It

renders to epitomize the spiritual existence of nature by portraying instances from the select novels.

The fourth chapter, “Unearthing the Anthropocene in the Select Fiction,” discourses the anthropocentric exploitations of nature from ecocritical and Gaian perspectives. It inspects the Gaian concept of “earth as a self-regulatory system.” Different human-induced destructions of nature and various ecological disasters such as climate change, animal extinction, and the destruction of the earth’s equilibrium are addressed here. Several examples from the novels displaying the repercussions of global warming, flood, disease, pollution, and climate change are drawn to highlight the human made annihilations of the ecosystem.

The final chapter concludes the major arguments made in the thesis by proposing the need for approaching nature from a multidisciplinary perspective to keep its equilibrium and maintain a suitable condition for the healthy existence of all organisms on earth.

CHAPTER I

ECOCRITICISM AND GAIA: AN INTERACTION

Nature and science are intermittently unified in various realms. Nature has always provided a base for investigating various scientific transformations and disasters that are transpiring on the planet earth. Science has also undertaken many experiments to decipher the development and transformation of various earth systems and their organisms. Of these experiments, James Lovelock's theory of Gaia conveyed an innovative perspective on earth and its operation. The scientific enterprises of James Lovelock to comprehend the earth and the procedures of its systems stand distinct from other concepts of thought that outline the origin and operation of the earth and its structures. The pursuit has established unfathomable ecological sentience in the entire community of scientists. It has encouraged to propose of discrete conservational policies for the prosperity of the entire planet. Gaia acknowledges earth as a single organism by providing a comprehensive understanding of the many life systems that contribute to its wholeness. Gaia theory cogitates Earth as the only "living planet" in the solar system (Turney 2). It argues that "all the living things on Earth somehow act together to influence the whole environment, and that influence helps maintain conditions which suit them. To put it more emphatically, the Earth is alive" (Turney 3). The proponents of the theory claim that the organisms on earth are in constant interaction with each other for retaining the circumstances of earth appropriate for the existence of all. Everything is a fragment of a complex whole and the part cannot be construed without comprehending the whole. Earth stands as a complex whole that assists the conception of each part probable. The theory reflects the earth as a single organism evaluating its functioning by

considering its physical, chemical, biological, and human components (Schneider et al. 1). Thus, the theory highlights the importance of all components in keeping the earth alive.

Everything on the planet is unified and interrelated and this global view of the earth has promoted a distinct mode of approaching the planet. Anne Primavesi in *Gaia and Climate Change: A Theology of Gift Events* affirms that the comprehension of the local climate system entirely depends on the understanding of the global one. This innovative outlook on earth demands a multidisciplinary expansion of Gaia theory in which earth is approached from the perspective of geological time irrespective of tracing the development of earth after the origin of the human species (1). The approach affords a profound perception of the various scientific phenomena on earth by providing a comprehensive view regarding the position of human beings in the transformation of the earth system. This novel perception of approaching earth and its various occurrences from an interdisciplinary perspective connects ecocriticism to Gaia theory.

Different observations in Gaia theory can be associated with various realms of ecocriticism, such as ecofeminism, ecospirituality, deep ecology, climate change, ecoeconomics, species extinction, and technological disturbances. Anne Primavesi in *Gaia and Climate Change: A Theology of Gift Events* claims the prerequisite to inspect Gaia from the prospect of theology. The transfiguration from the global perspective implores a corresponding modification in the consciousness of theologians. It stipulates an initiative from the domain of theologians to appraise the human relationships with God by acknowledging the developmental history of earth and man's role in this process. The incredible changes in the weather and global climate change demand different

sectors, such as politics, economics, and social justice movements, to incorporate such an outlook in their area of concern. Levin states that the same method of assessment is inevitable in the perspective of theology too (1). As Gaia theory combines various disciplines in its field of inquiry, theology also is required to execute such an investigation from its sphere. The interest of theology in other realms of discipline stipulates the concept of ecospirituality.

Ecospirituality intends to provide a cultural, philosophical, religious, and scientific interconnection between nature, humans, and the non-human world. It contemplates nature as an object which has the right to get an ethical concern from the parts of both human and non-human creatures. It presumes the conviction that everything is created by God and there is the omnipresence of God everywhere in diverse forms. It trusts in the divinity of things and attributes the quality of inherent worth to all objects. It treats everything with due reverence, irrespective of its materialistic or instrumental value. It propagates the conception that God is eternal, His presence is everywhere and He is above all, irrespective of where His presence is found. There is a spiritual aspect to the cause for the existence of everything in the universe.

This stream of thought proposes to define the role of human beings in affiliation with all those organisms and the natural world where they inter-blend in the process of survival and the structuring of nature in configuring the position of each organism in nature. In *Nature, God and Humanity: Envisioning an Ethics of Nature*, Richard L. Fern asserts ecospirituality as a matter of defining the place of human beings on earth by comparing their relationship with other organisms and the environment in which they interact. It also endeavours to trace the origin of the planet and its development in

association with various organisms. It predisposes the place of each organism in the ecosystem and lists out the features that differentiate human beings from other organisms and compares the similarities that unite each organism in the ecosystem. It preaches the human beings about the things to be taken care of in the ecosystem and the reason behind their dedication to the planet. While elaborating on the facts, ecospirituality views nature as a complex whole (Fern 1). It demands a way of thought that assimilates all the objects in nature under its concern. Its efforts to recapitulate the position of human beings on the planet concerning other organisms and phenomena in the universe. It evaluates the basic correspondence and distinctness among various objects in nature by considering the facts and assigning equal concernment to values.

The same proportion of thought can be found in Gaia theory. It claims that the interactions of multifarious organisms are conspicuous to perpetuate an amicable condition on earth for their endurance. The organisms have to collaborate in a consummate manner to actualize an appropriate condition on the planet earth. The imperfections in interaction can make up an antagonistic atmosphere on earth. The fact can be illustrated with the creation events depicted in *Scientists Debate Gaia: The Next Century*. Schneider et al. explain that the first organisms on earth develop their cells utilizing various objects on earth, such as air, water, and other substances. The organisms, in response, reimburse their wastes and even offer themselves at their death. As these substances upsurge in their quantity, it affects the natural composition of the earth's air, water, and even gaseous levels. The fact discloses that the organisms at their birth do not get harmonized with geological features, instead; they generate their environment to get adapted to it. The organisms play a vigorous role in crafting an environment for the

development of their descendants (Schneider et al. 3). Subsequently, the deeds of the diverse organisms on earth play a decisive part in determining the survival of their offspring. Those who have deteriorated the ecological conditions have subsidized the extinction of their progeny and those who have sustained a comfortable environment assure the existence of their generation in advance. It also asserts the importance of favourable interaction between various organisms to make the earth a habitable place, crafting a healthy atmosphere for all creatures. Similarly, it insinuates that it is the collaboration of the organisms that maintain the homeostat of the earth.

Ecospirituality ascribes a spiritual dimension to all inanimate objects and proclaims that the existence of one organism is entirely contingent on the other. The triumph of one's life is subject to the success of the environment and the failure of the failure of the environment. Morris Berman in *The Reenchantment of the World* claims that, in ecospirituality, rocks, trees, rivers, and even clouds are observed as marvellous creatures with life and nature offers a feel at home experience for human beings. The universe is deliberated as a home for its occupants. Each organism in the universe is considered a member of this home and they directly take part in all its enterprises. The destiny of each organism is directly associated with the fate of the universe (16). The interaction of each of these participants makes the universe a meaningful entity.

The concept demands the need for a moral concern towards nature and its inhabitants by human beings. Richard L. Fern, in his *Nature, God, and Humanity: Envisioning an Ethics of Nature*, converses the right of non-human beings to get justice and the right to presume ethically upright conduct by human beings. According to Fern, even if the “non-intelligence and liberty,” possess a “sensibility” similar to our own and,

accordingly, “partake of natural right” as a result of which humans are “subjected to a kind of obligation even toward the brutes” (18-19). Conforming to this course of thought, all creatures, including the animate and the inanimate like forests and stones, claim a moral concern by the human beings (39). All these inanimate objects, both directly and indirectly, take part in maintaining the earth’s atmosphere felicitous for their existence. Earth deserves the right to get respected and expects righteous treatment by human beings (39). Despite the non-human organisms such as plants and animals lack the intellectual or social capabilities of human beings, they deserve reverence from the part of human beings.

In ancient Greek philosophy, nature was reflected “as the theatre of Gods” (Callicott 355). Callicott, in his *Encyclopedia of Environmental Ethics and Philosophy*, discusses ancient Greek philosophy and states that the Greeks considered nature as the working field of God, where the divine power dominates over the others. According to them, “Since nature manifested activities of the gods, a human action that affected the environment might provoke the reaction of some god or goddess, and presented an occasion for caution. Thus it might be expected that they would treat the environment with awe and care” (355). They infer that as nature keeps some divine potential, the irreverence triggered by nature and the natural substances will be interrogated by nature in time.

The Greeks bequeathed the title ‘Gaia’, which is the name of the ancient Earth Goddess to designate the divine power of nature (Callicott 355). The Greeks consecrated various landscapes and furnished the highest prominence for their protection: “Greek religion had a strong sense of locality. Great gods and lesser spirits haunted wild

locations such as springs, caves, and groves. Some patches of landscape, especially groves of trees, were designated as sacred and protected from mundane activities such as cutting timber, hunting, fishing, cultivation, and building” (Callicott 355). Thus, nature bears a celestial existence from time immemorial.

Ecospirituality or ecotheology is a movement that tries to evaluate the relationship between religion and nature. It attempts to institute a common ground for analyzing matters by linking both these realms. With the increase in environmental destructions and imbalances, people instigated to enquire into the position of religion in environmental matters. They assessed the stand of religion regarding various advancements and destructions occurring in the environment. “Much of this concern has involved a hope for a “greening” of religion; in other words, it envisioned religion promoting environmentally responsible behaviour” (Taylor vii). Taylor discusses the purpose of ecotheology in *Encyclopedia of Religion and Nature* and states that the supporters of the concept try to answer the questions “What are the perceptions and beliefs of the world’s religions toward the Earth’s living systems in general and toward individual organisms in particular? In what ways have these traditions promoted ecologically beneficent or destructive lifeways? Are some religions intrinsically greener than others?” (vii). Thus, it aspires to promote the green aspect of each religion in the universe by analyzing the traditional beliefs and present situation of its followers.

Wilderness is one of the important provinces of concern for the ecocritics. Wilderness shows “nature in a state uncontaminated by civilization” (Garrard 59). The ecocritics attribute some spiritual dimension to the wilderness. They stress the “redemptive” power of wild places. Wilderness helps to create a mental transformation

for those people who are exhausted from the contaminations and disturbances of urban life. Wilderness possesses a “sacramental value” (Garrard 59). It promotes a mental renovation for people to experience a certain solace for their mental barrenness from nature: “It is a construction mobilized to protect particular habitats and species, and is seen as a place for the reinvigoration of those tired of the moral and material pollution of the city” (Garrard 59). Wilderness provides a kind of mental relaxation for individuals who are fed up with the pollution and artificialities of the manmade domains.

Wilderness accounts are differentiated from pastoral accounts. Greg Garrard in his *Ecocriticism* differentiates pastoral narratives from wilderness narratives and states that “pastoral is the distinctive Old World construction of nature, suited to long-settled and domesticated landscapes, wilderness fits the settler experience in the New Worlds- particularly the United States, Canada, and Australia- with their untamed landscapes and the sharp distinction between the forces of culture and nature” (59-60). The pastoral landscapes are entirely different from the wilderness as the pastoral landscapes stand for a space frequently occupied by human beings and it occupies the traces of their culture and lifestyles. Whereas, the wilderness always remains as a sacred space uninhabited and undisturbed by human beings. The concept of wilderness can be seen in different religious incidents as well. Wilderness always stands as a space of revelation and divinity in religious texts.

The inspiration of nature in religion can be traced from the religious practices of nature religions. Catherine Albanese in her *Nature Religion in America: From the Algonkian Indians to the New Age* discusses the religious rituals of native North Americans and the Indians. The native North Americans believe in the presence of some

spiritual creatures in the natural realms and they trust the supernatural powers of nature. According to the Indian way of thought, the Indian people create certain religious geographies and they assert certain sacred creatures or spirits inhabit that space (21). So, the attribution of the spiritual existence in nature and natural objects is a fact that transcends geographies, language, and culture.

The attribution of a spiritual dimension to nature demands higher ecological concern by human beings. Richard L. Fern discusses the same concept in his *Nature, God, and Humanity: Envisioning an Ethics of Nature*. He argues that “for tribal peoples, there is an inherent continuity between the natural and the divine, earth and heaven. Nature is personal all the way through. Correspondingly, adoption of a religious perspective on nature always involves more than the recognition of extraordinary entities” (106). The tribal people spiritually link nature with the divine and heaven and attribute some paranormal and surprising powers to nature.

The following paragraphs attempt to list out the environmental concern of world religions such as Christianity, Islam, Hinduism, Buddhism, and Jainism. Christianity and Islam are Abrahamic or Semitic religions and Hinduism, Buddhism, and Jainism as religions based on dharma. All these convictions have a concern with the environment in implementing their doctrines of life. There are certain correspondences between the Abrahamic religions, Christianity and Islam in their interpretations of nature and the religions based on dharma also expose certain similarities in their approach toward nature.

High deliberations on nature can be found while exploring the origin of Christianity and its developmental history. The story of the fall of Adam and Eve in the

Bible illustrates both the positive and negative aspects of nature. The very incident of the fall of man points to human beings as accountable for the degeneration of nature and their disgrace. Bron Taylor, in his *Encyclopedia of Religion and Nature*, exemplifies the Christian approach to nature by comparing the earthly atmosphere in heaven and nature before and after Adam and Eve's irreverence to God:

Many find the garden itself a positive image of earthly existence: God plants Eden with an abundance of beautiful trees, good food, and rivers; humans are created out of the Earth to tend to the Garden. After Adam and Eve eat the forbidden fruit, however, nature becomes corrupt and humans sinful, as they are introduced to hardened labour, shame of their nakedness, and knowledge of their eventual death. The original harmony between nature, humans, and God is broken, leaving a transcendent God, a sinful humanity, and a degraded Earth in a state of mutual alienation. (312)

According to Bron Taylor, the change in human attitude and the irreverence shown to God has changed the gorgeous and serene heavenly atmosphere that was enriched with diverse blessings into a destructed, fraudulent and arduous one for human beings. Losing equilibrium among humans, nature, and God was compensated with a destructed and ruined environment for all organisms on earth.

Gaia recounts the disturbance in the earth's composition to the endeavours of human beings. It asserts that human beings are exclusively accountable for altering the stability of the environment, making it incompatible for existence: "We do all sorts of things to upset the balance- for instance, clearing forest land and scrubby burning. In addition, our activities release all manner of pollutants into the air that affects its

composition. And other seemingly innocuous activities- actual or proposed- are even worse” (Ruse 23). Thus, human enterprises play an incredible role in instituting an amicable atmosphere in the ecosystem.

The influence of nature can be seen in many of the expositions in the Bible. The verse on the Sermon on the Mount echoes the ecotheological cult in Christianity. Jesus Christ articulates his wonder over the exquisiteness of a Lilly flower to exhibit the divinity in it: “Consider the lilies of the field, how they grow. They toil not; neither do they spin. Yet I tell you, even Solomon in all his glory was not arrayed like one of these” (Matt. 6:28–29). Hence, Christianity posits nature for elucidating the divine intercession in the entire universal manifestations.

Christianity expects love and veneration for all creatures on earth, as God is the creator of everything in the universe. Bron Taylor quotes Rev. Steve Huber of St. Columba’s Episcopal Church to prove this point: “God calls us into a relationship of loving, caring, and faithfulness. The way we fulfil our part is in our relationships to others and the rest of creation” (308). Christianity considers the creations of God as sublime and expresses wonder for God’s creations. Various occurrences in nature remind the creations of their creator, God. It ascribes an immense divine power behind each accomplishment in the universe:

You make springs gush forth in the valleys; They flow between the hills, giving drink to every wild animal... By them the birds of the air have their habitation... The high mountains are for the wild goats; the rocks are a refuge for the badgers... O Lord, how manifold are your works! In wisdom, have you made them all; the

earth is full of your creatures. Yonder is the sea, great and wide, which teems with things innumerable, living things both small and great. (Ps. 104:10, 18, 24, 25)

Christianity gives importance to biodiversity and the role of each organism in preserving the natural balance. The Genesis depicts the diversity of nature and its intrinsic and instrumental value. It stresses the aesthetic and the transcendent dimensions of each organism: the Lord has made all kinds of trees grow out of the ground, trees that were pleasing to the eye and good for food (Gen. 2:9). “Let the waters bring forth swarms of living creatures, and let the birds fly above the earth across the firmament of the heavens” (Gen. 1:20). Genesis conveys the notion that God has certain tactics in constructing certain objects in the universe. All the natural phenomena and objects in nature have some hidden intentions that are predestined by God. The operation of one system indirectly supports the functioning and well-being of the other.

The New Testament attributes God’s hand to everything. Every phenomenon in nature aspires based on the will of God. Every creature is equal in the eyes of God: “Are not five sparrows sold for two pennies? And no one of them is forgotten before God?” (Luke 12:6) “And not one of them will fall to the ground without your Father’s will” (Matt. 10:29). The verses reflect the divine intention and acknowledgement of every activity that occurs in the universe. It also conveys the message that everyone occupies an equal position in the eyes of God, irrespective of their echelon in the universe.

Christianity assumes the power of nature in enlightening humanity. The Book of Job preaches the instructional power of various organisms in the universe. Each creation of God is sublime and is loaded with divinity and wisdom:

But ask the animals, and they will teach you, the birds of the air, and they will tell you, Ask the plants of the earth, and they will teach you, and the fish of the sea will declare to you. Who among these does not know that the hand of the Lord has done this? In his hand is the life of every living thing and the breath of every human being. (Job 12:7–10)

The verse asserts the knowledge that nature and other natural objects possess. All the natural objects are aware of the divine intention of creating each organism and they praise God in return for His blessings.

Bron Taylor considers Noah's Arc as the "First endangered Species Act" (309). "Behold, I establish my covenant with you and your descendants after you, and with every living creature that is with you, the birds, the cattle, and every beast of the Earth with you, as many as came out of the ark" (Gen. 9:8-10). Here, God confers justice to all living creatures and commands Noah to ensure the existence of all organisms in the universe.

The influence of nature can be found in paintings done in churches. Most of the paintings depict the objects of nature to express the concealed power of spirituality. Bron Taylor in his *Encyclopedia of Religion and Nature* enlists various examples of Christian paintings expressing the divine power in nature: "Christ as the Good Shepherd. Carvings of grapevines adorn early Christian sarcophagi as symbols of eternal life. The leaf-covered human faces (Green Men) associated with spiritual rebirth in the cult of the Greek god Dionysus, later appear on Christian church portals as symbols of resurrection" (302). Bron Taylor further illustrates other dominant paintings in Christianity:

God's creation of the cosmos, the golden age in Eden, Noah's ark and the rescue of the animals, the coming era of peace in God's kingdom, the spiritual value of solitude in wilderness, the transience of the material world, the passage of time and the seasons, birth and the initiation of life, resurrection and renewal of humans and the universe, God's rule over the cosmos, and God's continuing presence in nature. (302)

The connection between Gaia and religion can be uncovered in the matter of evolution. Some similarities can be found in the creation Day story mentioned in Genesis and the origin of life traced by the scientists. It stresses the importance of geological time. The creation day event mentioned in the Bible states:

Where were you when I laid the foundation of the earth? ...

Who determined its measurements- surely you know!

Or who stretched the line upon it?

On what were its bases sunk, or who laid its cornerstone? (Job 38: 4-6)

When God created the world, there were no human beings in it. The verse expresses the divine intention of creating the universe and determining its boundaries and limits.

The same course of thought can be detected in the scientific realm too. The scientific way of looking at the creation of the earth also stresses the absence of human beings at its conception. Stephen H. Schneider pictures the events associated with the creation of earth in *Scientists Debate Gaia: The Next Century*:

At that time and before life appeared, the Earth was evolving as terrestrial planets do, toward a state that ultimately would be like that of Mars and Venus- an arid planet with an atmosphere mainly of carbon dioxide. Early in its history the Earth

was well watered, and somewhere on it there was an equable climate, so that life, once begun, could flourish. (3)

The planet earth evolved like other planets in the solar system. The atmosphere on earth was almost like the other planets, and some regions on earth possessed certain features conducive to the flourishing of life. Life began in those regions and various life systems altered the earth's environment with their interaction.

According to the Islamic view of nature, it is the obligation of human beings to conserve the environment and God's creation in it (33:72). Islam attributes the duty of betterment and improvement of the earth to human beings. Human beings are considered as "khalifa" (Quran 35:39; 6:165) or protectors of the planet earth. Bron Taylor in *Encyclopedia of Religion and Nature* states: "according to Islam, man is not the conqueror or master of nature, he is its guardian and hence protector who ensures continuity and availability of all its bounties" (876). It infers the idea that nature is not fashioned for human beings alone and they are accountable to protect nature from any devastations and retain it impenetrable for their progeny.

The Quran asserts the importance of knowledge. It insists on the significance of reason in understanding the divine laws of nature. Human beings must ensure the unbiased practice of divine laws on nature. Those who defy the divine laws will be penalized accordingly. The punishments are often given through natural objects. Quran declares: "Corruption has appeared in the land and the season account of what the hands of men have wrought, that He may make them taste a part of that which they have done, so that they may return" (30:41). Quran pronounces that the various destructions caused to nature are anthropogenic and human beings deserve the punishment for the same.

The Quran states that all the natural resources are meant for all “whatever is on Earth He has created it for all” (2:29). According to Islamic law, the wealth, produce, or any other resources that anyone gets earns or inherits do not belong to him alone. It must be shared with all the needy, starting from one’s close relatives to neighbours, travellers, displaced, and dispossessed to anyone in need (Taylor 878). Islam demands the justifiable distribution of all the natural resources and it does not consider anyone as the owner of the resources. It also stresses the idea that man is not the only benefiter of natural resources.

Quran considers “*israf*” (6:41) or wastage of resources as an unjustifiable act. Quran declares the wasters are the creators of resource scarcity in nature and they play a vital role in creating disequilibrium in nature. Excessive use of resources is the denial of the rights of other organisms on earth. All organisms hold equal rights in accessing the resources and those who are misusing the resources are spoiling earth’s order. The wastage of natural resources is a crime in Islam and the wasters deserve punishment for the same.

Islam proclaims the importance of protecting natural resources and other non-human organisms in the universe. Islam maintains separate laws for the protection of the human and the non-human world. Quran defines the accepted behaviour of an individual in a particular community, at the same time, it prescribes certain rules to be followed while dealing with animals and other non-human organisms in the universe.

Quran demonstrates the working of a certain natural order in the universe. All universal objects keep their order of movement to maintain the equilibrium of nature. Human

beings are also required to keep this track and they do not possess any right to do any activities that affect the natural balance. Quran states:

The sun and the moon both run with precision.

The stars and the trees all bow down in prostration.

He created heaven and established the balance,

So that you would not transgress the balance.

Give just weight - do not skimp in the balance.

He laid out the Earth for all living creatures.

In it are fruit and date palm with covered spathes,

and grains on leafy stems and fragrant herbs.

So, which of your Lord's blessings do you both deny? (55:1-11)

The verse contemplates the importance of protecting the balance of the environment. It is God Almighty who has prescribed a certain law for the universe to maintain the balance of the environment to make it habitable for all organisms. All trees, shrubs, and celestial bodies follow the same law without failure. All the natural objects are considered divine and the believers can trace the existence of a divine spirit in them.

Gaia theory also mentions the importance of all organisms in maintaining the equilibrium of the earth. Michael Ruse in *The Gaia Hypothesis: Science on a Pagan Planet* discusses Lovelock's and Margulis' concept of homeostasis: "And just as the stability is essential for the well-being of organisms, so they postulated that these organisms themselves play a positive role in maintaining the stability... the earth's atmosphere is actively maintained and regulated by life on the surface, that is, by the biosphere" (11-13). It demands the need for all organisms to follow a particular pattern of

development to keep the balance of the ecosystem. The failure of which can lead to the destruction of the entire system.

Buddhism is a religion that attributes higher significance to nature in all its realms of worship. Its founder, Lord Buddha, was highly persuaded by nature. Buddha followed a lifestyle which is strictly adhered to the laws of nature. Buddha ensured a worldview that offered equal importance to all organisms in nature. He sought to fight for all those activities which affected the balance of the environment. Buddha was against any form of activities that perturb the purity of nature. Nature has a high significance in the life of King Siddhartha Gautama in his transformation as Lord Buddha. Bron Taylor accounts the revelation of Buddha: "A tremendous tumult arose while Siddhartha meditated under the Bodhi tree, a tree of enlightenment... Siddhartha attained a state of omniscience, fully comprehending the origin of his woes and escaping forever the clutches of ignorance" (228). The account exposes the power of nature in eliminating the ignorance of humanity and bringing a revelation on understanding the worth of their existence.

Buddhism believes that by sacrificing our desires, we can attain a peaceful mind. Buddhism affirms the importance of nature in self-realization and attaining moksha. It proclaims the power of nature in educating human beings and also the power of wilderness to convey truth to them. The Buddhahood is attained through the revelations from grass and trees. The lonely places and wilderness areas provide less opportunity for the desire to flourish. So these areas play a crucial role in enlightening people to comprehend the truth.

Buddhism stresses the idea of non-violence. It prohibits the killing of anything with life. It venerates the life of all animate objects including the human, animals, and

tiny organisms and criticizes all people who hamper the life of any organisms: “mostly persons who make a living by killing large animals that are criticized- butchers, hunters, fowlers or fishermen -or persons who perform bloody animal sacrifices” (Taylor 233). It not only prohibits violence against human beings, but also against nature and other inhabitants of nature.

The Buddhist concept of the “law of interdependence” perceives nature as an interrelated whole. They believe that the phenomenon that is taking place in nature is based on the activities of all organisms. Bron Taylor, in *Encyclopedia of Religion and Nature*, defines the Buddhist concept of the law of interdependence. It is a way of approaching nature as a relational, dynamic, and constantly changing entity. The law states that all the phenomena in nature is depended upon many natural causes and conditions. Along with physical and biological factors in nature, historical and cultural factors such as human thoughts and values play a vibrant role in influencing various natural occurrences (242). Thus, the natural factors and human interaction together contribute to various phenomena in nature.

The same perspective can be seen in the Gaia theory. It asserts the significance of all organisms in sustaining the balance of the environment. It insists on the contributions of each organism in making the earth a habitable place. Each organism in the universe is provided with a definite task. As an illustration, Michael Ruse cites the role of microorganisms in maintaining the level of temperature, alkalinity, and gaseous level in the atmosphere (14). So, the miscellaneous earthly phenomenon is conserved by different organisms on earth and the human disturbances and intervention in the life of one organism or nature change the course of such a natural phenomenon. If the human

intervention causes any damage to a particular organism in the universe, the task that is assigned to that organism will be adversely affected and it will lead to the disequilibrium of the planet.

Hinduism and nature are unified in many realms. The ancient Hindu texts, the Vedas supply significant details on the origin of religion and its environmental practices. The four Vedas- Rig Veda, Sam Veda, Yajur Veda, and the Atharva Veda depict various instances in Hinduism that are closer to nature. The Vedas contain diverse hymns addressed to different gods in Hinduism. Bron Taylor, in *Encyclopedia of Religion and Nature*, discusses the features of these hymns. Taylor points out certain similarities between these gods and numerous natural objects and phenomena. Agni, the fire god, is considered the messenger between human beings and God (764). Taylor further enumerates different deities addressed in the hymns: “Soma also addressed in the hymns are identified as the moon and, frequently, are depicted as the presiding deity of a creeper-plant... Usha, the goddess of dawn, Varuna, who presides over the waters, the oceans and even aquatic animals, and Indra, who is associated with the thunderbolt and rain, are all worshipped” (764). Hence, Hinduism asserts certain divine qualities for various natural objects and phenomena.

The Hindus assume God in every substance of the earth. For instance, Vishnu, the most important deity in Hinduism, “is portrayed as the creator, protector, and destroyer of the universe” (Taylor 765). Vishnu is said to exist in various forms in the universe. Hinduism believes in the many incarnations of Vishnu. Vishnu adopts various forms, including the human and the non-human, to visit earth to fight against various injustices

that exist in the world and to restore virtue. Hence, according to Hinduism, every natural object is holy, as there is the possibility of the manifestation of God.

Animals are deliberately sacred in Hinduism. Many of the deities are connected with animals, birds, or trees in Hinduism. Bron Taylor notes the connection between various organisms is deities in Hinduism. Elephants are connected with the goddess Lakshmi and the Lord Ganesha, Lions and Tigers are associated with the goddess Durga, and the Garuda bird is considered holy and kept in temples. Cows are deliberately holy and prohibited from killing (768). Hinduism proclaims that as some gods and goddesses have a connection with various animals and birds, the irreverence shown to these animals will cause disasters in the life of the doer.

Trees and plants are regarded as holy in Hinduism because of their medicinal properties. The trees are also considered sacred because the trees are the shelter of semi-divine entities. Bron Taylor discusses the same idea in *Encyclopedia of Religion and Nature*. Many groves and trees are considered the habitat of semi-divine beings such as 'yakshas' and 'yakshis'. When these entities get disturbed from their natural habitats, they will cause problems for human beings (770). Because of these reasons, some groves and forests are left undisturbed and are prohibited from cutting trees. The thought can be related to the wilderness concept of ecocriticism, where the disturbance caused to the wilderness affects our existence.

Hinduism connects human destiny with the position of certain stars and planets. The Hindus believe in the concept of Jyotisha and they analyse different planets and star positions while deciding or performing some important matters in their life. They also

believe that the stars or planets can decide a person's character. The Hindu way of life can be considered as the one working strictly in tune with nature.

Jainism can be considered a religion that is deeply rooted in nature. Jainism follows a way of life that strictly adheres to the principle of non-violence. Bron Taylor, in *Encyclopedia of Religion and Nature*, discusses the position of nature in Jainism. He states: "Jainism posits a living universe, uncreated and eternal" (892). This position of the universe in Jainism can be related to the Gaia hypothesis. According to the supporters of Gaia, the earth is a living organism, which can regulate itself from all imbalances. The Gaia hypothesis argues about the negative and positive feedback one organism receives from nature, depending upon its actions. The same course of thought can be found in the Jain view of karma. Jainism follows a "voluntarist stance, emphasizing that one's individual, self-generated karma determines one's present and future reality" (Taylor, 893). Hence, if a person desires to get a peaceful life, he is expected to keep his activities in communion with nature and other organisms.

Jainism attributes the existence of life in the universe. The existence of life in the universe can be illustrated with the lines in *Acarangalichens*, "seeds, and sprouts, he comprehended that they are, if narrowly inspected imbued with life" (1:8.1.11-12).

The ecotheological philosophy of nature and Gaia theory follow the same concept of the universe. Ecotheology regards nature possesses a spirit and therefore it deserves respect from others. The supporters of Gaia argue that nature is something that possesses life, so it has some sacramental value.

Elements of deep ecology can be traced in the Jain way of belief. In *Encyclopedia of Religion and Nature*, Bron Taylor notes the Jain aspect of deep ecology by quoting the

lines of Mahavira, which is recorded in the *Jain Declaration on Nature* by L. M. Singhvi: “One who neglects or disregards the existence of Earth, air, water, and vegetation disregards his existence which is entwined with them” (894). The lines expose the interconnectedness and inter-dependence between various organisms.

Jainism stresses the inherent worth of all natural objects. It stresses the necessity of maintaining admiration for all the objects in nature, including the inanimate ones. L.M. Singhvi in *Jain Declaration on Nature* argues “Even metals and stones... should not be dealt with recklessly” (Taylor 894). Jainism adopts some practices in their lifestyle to promote the well-being of nature. Taylor in *Encyclopedia of Religion and Nature* notes, “in terms of the lifestyle of the Jaina lay-person, certain practices such as vegetarianism, periodic fasting, and eschewal of militarism might also be seen as eco-friendly” (895). On the whole, Jainism can be considered a religion that keeps a strict affinity with nature.

Bron Taylor in his book *Dark Green Religion: Nature, Spirituality and the Planetary Future* describes the emergence of a particular religion named “Dark Green Religion”, where he strives to trace the emergence and enlist the characteristics of a religion that is ultimately based on nature:

Dark green religion is like a phantom. It is unnamed and has no institutions officially devoted to its promotion; no single sacred text that its devotees can plant in hotel rooms in hopes of reaping a future harvest of souls; no identified religious hierarchy or charismatic figure responsible for spreading the faith, ministering to the faithful, or practicing its rituals... religion that considers nature to be sacred, imbued with intrinsic value, and worthy of reverent care- has been spreading rapidly around the world. (ix)

The “Dark Green Religion” stands independently from other religious groups and the primary aim of this religion is to protect the sanctity of nature and undertake any measures to achieve the same. Religion is said to possess no religious texts or leaders. It is a course of thought that governs the mental domain of people who keep an affinity with nature.

For many years, the world of literary criticism was dominated by studies that were solely based on the anthropocentric view of life. All these theories neglected a nature-centered view of literature. They believed that nature is simply a thing that exists for human beings to exploit fully for the smooth functioning of their day-to-day activities. Peter Scott, in his *A Political Theology of Nature*, speaks of two different tendencies in nature regarding the consideration of nature- “one seeks to reduce humanity to nature, the second reduces nature to a function of humanity” (64). He says that the first one is moving in a direction of ecocentrism, whereas the second is purely anthropocentric. Peter Scott discusses Richard Sylvan’s view on ecocentric tendencies, where he defines the ecocentric tendency as to trace value and worth in nature, which stands as the area of interaction for the human beings. He considers nature has some intrinsic worth as it plays a significant role in the emergence of life. For that reason, individuals must respect nature or otherwise accept its consequences. Anthropocentric tendencies reject the intrinsic worth of nature. Here the primary attention is on the individual wisdom and the human interactions with one another, which affect the existence of humanity and other organisms on earth (64-65). Thus, both ecocentric tendencies and anthropocentric tendencies control the realms of human interaction with nature.

He differentiates deep ecology from other movements of political ecology and states. Deep ecology is not just a movement of ecosocial activism. The influence of this theoretical concern can be seen in various countries, such as the USA, Canada, and Australia. The principal influence of this theoretical framework is reflected in an environmental movement, Earth First, which is formed in the USA in the 1980s. In America, the movement flourished under the leadership of Dave Foreman. They articulate the idea that complete protection of the environment is not possible only through political and legal means. They designed an action plan titled 'monkey-wrenching, which was adopted from Edward Abbey's novel, *The Monkey Wrench Gang*, published in 1975 (Scott 66). Their actions include the destruction of the corporate properties that stand as a threat to the existence of natural landscapes and other organisms. They undertake many measures to protect nature and animal lives.

The term "deep ecology" was coined in 1973 by Norwegian environmentalist Arne Naess. Naess differentiates two types of ecology- "shallow ecology" and "deep ecology". He defines shallow ecology as "Fight against pollution and resource depletion" (Naess 28). Shallow ecology stresses the importance of protecting various types of natural resources, preventing different pollution, and making the universe a better place for human beings to survive. They follow an anthropocentric view of life and believe that nature is solely for human beings to exploit and everything in nature is kept under their will. Shallow ecology gives utmost importance to the interests of human beings, where the needs of the animals and other things in the ecosystem are neglected (Naess 28).

Deep ecologists give equal importance to everything on earth. They argue human beings are part of a complex web and everything on this web is so interconnected that the

disturbance in one disturbs the other too. In this relationship, they have to maintain a mutual understanding and respect the position of others. If human beings intend to damage the ecosystem and other creatures while pursuing their selfish needs, it will wipe out the whole creatures from the universe and eventually will lead to their destruction. Timothy Morton in his *Ecology without Nature: Rethinking Environmental Aesthetics* states the inevitability of changing our view of nature from anthropocentrism to ecocentrism (2). The new way of approaching nature demands an understanding of human's position in nature.

To maintain an equal position with the environment, human beings should shed their ego and let go of what was believed in the olden days. Traditional beliefs and customs give significance to the needs of human beings and they justify the exploitations by human beings to nature as a way of survival. To protect the whole species on earth, human beings have to change their self-centeredness and learn to respect the motive of the existence of other species on earth. They must know the intrinsic value of every creature and should place it above its instrumental value. Instrumental value depends on the need of human beings, whereas intrinsic value has an important role in maintaining the equilibrium of the universe. By giving importance to the intrinsic value, human beings are giving equal importance to the rights of other creatures and accepting the genetic diversity of various species. "Rivers and lakes should contain clean water not just because humans need uncontaminated water for swimming and drinking, but also because fish do" (Bortman 355). Deep ecology proposes a new world view where everyone understands the inner worth of all creatures and treats them with due respect. It is totally against the traditional view of the world, where the only criterion for respect

was the instrumental or materialistic value of things. Deep ecologists like to walk with the environment and get lost in its spirit. In their endeavour to save the environment, they come to a deeper understanding of it and become an inseparable part of it, and finally get immersed in its spirit.

Deep ecology implies getting involved in the daily affairs of the environment and becoming deeply immersed in the spirit of the environment. It makes one feel the pulse of the environment, experience a deeper understanding of its preaching and cultivate a 'be at home' feel in the entire universe that they come in contact with. A communication gap between nature and human beings has caused a great deal of moral, ethical, social, and economic crises in the entire universe. Everyone has to maintain a keen observation of nature and everything in nature offers a wide scope for learning. Deep ecology stresses the instructional value of the entire universe. The only thing that human beings have to maintain to be good learners is to find some time to listen with a heart.

Deep ecologists give little priority to human interests and their progress. They do not position human beings at the pinnacle of existence and would like to attribute the humans to the same position that the other species on earth enjoy. They pay reverence for all living beings and appreciate the other things that contribute to the healthy existence of all creatures. Everyone has the same outcome for their activities as they are equal in their moral stance. "Deep ecologists would assign equal value to the life of a disease-bearing mosquito and the child it is about to bite" (Bortman 355). In deep ecology, an animal who suffers and the human who suffers occupy the same importance. They preach the idea that no one has the right to cause damage to the lives of others by fearing their existence. They can take precautionary measures against any impending disaster that will cause a

threat to their existence. Deep ecologists are in support of healthy competition among different organisms. They argue that competition among various species is unavoidable, and it is essential to maintain a balance in the web of life. The food chain is the best example of showing this relationship, where the existence of one depends on the other. Pray predator competition is inevitable for maintaining the equilibrium of the food chain, ensuring the reasonable existence of all species. But they are totally against the domination or destruction of one species over another. They consider it unhealthy and fatal for the survival of all the species. Usually, human beings possess an unending desire to take superiority over other organisms and play masters for all the other creatures. With the advancement of technology and other scientific innovations, this intention has multiplied and helped them to take domination most easily.

The existence of human beings on earth is entirely based on the existence of other organisms. To maintain harmony in the universe, human beings have to comprehend the interdependence and the interconnectedness that they have with other species. The comprehension of this relationship will make the human beings humbler and they will learn to respect the cause for the existence of other organisms on earth. This will make them aware of the fact that their position is not paramount to their existence, but inside a web along with other creatures.

Deep ecology stresses the importance of the interconnectedness of everything on earth. Everything is related to each other and the existence of one depends on the other. A well-balanced universe envisions a world where everyone is living in harmony with one another and everything is maintained accurately. In his book *A Manual for Buddhism and Deep Ecology*, Daniel H Henning points out an example to describe the interdependence

between everything on earth. He cites an incident of Charles Darwin's visit to the English countryside with one of his friends. Darwin finds a great deal of clover in the countryside, and he raises a doubt about the existence of many widows in the countryside. The friend clarifies his doubt regarding the connection between the widows and the clover. Darwin explains to him that "An abundance of clover needs many healthy swarms of bees to pollinate it. Thriving bee hives mean there are few rats to raid and ravage them. A scarcity of rats spells an abundance of cats. Who keeps and feeds packs of cats? Widows, of course" (10). These lines echo the significance of the interdependence between all organisms and how the disturbance in one affects the others.

Bill Devall in his *Ethics and the Environment* states that The Federal Endangered Species Act which was passed in 1970 has a significant role in creating environmental awareness in the American natives: Many supporters of deep ecology in the U. S. consider the federal Endangered Species Act to be the most ecocentric environmental legislation because the underlying premise of the act is that humans have no right to willfully cause the extinction of other species, regardless of their value, or lack of value, for humans (Devall 19). The Act is based upon the idea that all organisms have inner worth regardless of their instrumental value for human beings.

The passing of the Federal Endangered Species Act enabled the ecocritics to plan new principles which make an amicable existence of both the human and the non-human species. It made them set up all social institutions in a way that is convenient and justifiable for both the creatures. Devall argues:

A more proactive task for green political theorists might be to explore how social institutions might be arranged to expand conventional boundaries of care in day to

day practices, while also redressing the problems of willful neglect and ignorance of ecosystems. Indeed, in the light of the history of discrimination against nonhuman species, it might even be said that there is now a case for 'affirmative action' for nonhuman nature. (Devall 20)

The Act provides a legal framework for the justice of nature and other non-human organisms in it. It asserts the rights and liberties of non-human beings and guarantees the justiciable implementation of favourable measures for their survival.

It took around forty years for the concept of deep ecology to develop and get established in the minds of the critics. Arne Naess and George Sessions played a vital role in creating a platform for the deep ecology to operate. By setting up a platform, they intended to plan some criteria or principles for the critics of deep ecology to analyze and clarify. The following list shows the platform set up by Arne Naess in his *Ecology, Community, and Lifestyle: Outline of an Ecosophy*:

- (1) The flourishing of human and non-human life on Earth has intrinsic value. The value of non-human life forms is independent of the usefulness these may have for narrow human purposes.
- (2) Richness and diversity of life forms are values in themselves and contribute to the flourishing of human and non-human life on Earth.
- (3) Humans have no right to reduce this richness and diversity except to satisfy vital needs.
- (4) Present human interference with the non-human world is excessive, and the situation is rapidly worsening.

(5) The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.

(6) Significant change of life conditions for the better requires change in policies. These affect basic economic, technological, and ideological structures.

(7) The ideological change is mainly that of appreciating life quality (dwelling in situations of intrinsic value) rather than adhering to a high standard of living. There will be a profound awareness of the difference between big and great.

(8) Those who subscribe to the foregoing points have an obligation directly or indirectly to participate in the attempt to implement the necessary changes.

(Naess 29)

The platform established by Arne Naess highlights the intrinsic worth of all organisms, irrespective of human or non-human. The balance of the environment is being kept by the role of biodiversity. It prohibits the wastage of resources and states the aftereffects of human intervention in the ecosystem. It demands the setting up of various economic, political, and technological policies that are catered to the wellbeing of nature.

In his attempt to define deep ecology, Naess applies the term 'ecosphere' in place of 'biosphere' to denote the platform that the living things interact. The term biosphere echoes a narrow sense which accommodates only things with life in the scientific sense. He prefers the term ecosphere to broaden the interaction and includes both the living, non-living, animate, and inanimate objects under the category of the ecosphere. He attributes the quality of life to all the objects and reflects the significance of their

existence to the entire ecosystem (29). So, every ecological space is an area of concern for deep ecologists, irrespective of whether it is a domain of living organisms.

Deep ecology stresses the significance of tiny plants that are insignificant in the eyes of human beings in retaining the diversity of the universe. It respects the inner worth of those tiny creatures in keeping the equilibrium of the entire ecosystem. The tiny creatures, by the passage of time, add to the richness and diversity and grow into an inevitable entity for the whole ecosphere. 'Richness' and 'diversity' mean the perpetuation of a healthy habitat for all the organisms on earth. It also means that the population has a greater role in keeping the diversity of the universe. Whereas an excessive population of some species can hamper the habitat and lead to the destruction of the entire ecosystem.

Deep ecology tries to proclaim the point that human beings have no right to the richness and diversity of the universe. They can only affect the richness and diversities only in matters that are inevitable for their survival (vital needs). The vital needs of various human beings can be different based on various factors, like the hierarchical arrangement or social positions of various communities, geographical factors, and the difference between a need and the way to satisfy that need.

A change in the policies of the state in terms of economy, ideology, and technology is inevitable for bringing up a positive transformation into the ecosystem. Economic growth, which is based only on marketable value, should be ready to accommodate many values while making policies. Ecological value is the most important value to be considered in those matters. Ideology should be planned based on the interests

of everyone in the universe and technology should be utilized for cultural advancement and its nourishment.

Most of the world religions have their foundation in the concept of deep ecology. All of them deal with daily affairs concerning the welfare of the universe and follow a holistic approach to various environmental issues faced by the universe. The fact is well explained by Henning in his work, *A Manual for Buddhism and Deep Ecology*: The teachings of Buddha also have “Oneness,” egocentric, and spiritual orientations with loving and compassionate concern for all living beings. These teachings are very correlated and compatible with Deep Ecology and its orientations. Thus, both teachings can contribute to each other for holistic and deeper approaches to various ecological and environmental issues (8).

Arne Naess mentions the concept of ecosophy as a philosophy for balancing ecology and selfish interests. He differentiates ecosophy from ecophilosophy and states that ecophilosophy can be described as a discipline that examines the environment based on our relationship with it. He does not consider ecosophy as a discipline and it depends upon our philosophy. Exuvia functions as a guide in matters related to the environment. Ecosophy is not only concerned with various resources, natural calamities, or pollutions it also analyses the ethical or value oriented aspect of the matters related to the universe. Because of their exposure to diverse experiences and situations in life, every individual possesses a distinct form of ecosophy, which provides an emotional and intellectual trace of their personality in their analysis of deep ecology.

Deep ecology is based on the philosophy of environmental ethics. Environmental ethics denote a moral connection between the environment and human beings. Humans

have to perform certain duties for the natural world. It forms a base for the nature of responsibilities and their priorities. It also addresses the question that how can be maintained equilibrium among these responsibilities, human interests, and their necessity. Such types of questions have given way to the emergence of various principles, like utilitarianism, by Jeremy Bentham. Utilitarianism is a philosophy that justifies an action as morally correct if it produces the greater good for the largest number of people.

Utilitarianism follows an anthropocentric world view where they consider the intellect and the power of reason of human beings. They argue that only human beings can behave morally and accept the aftereffects of their activities. But they make an exception with weaker sections of humans, such as children and the mentally diseased. They consider this weaker section as moral subjects and the others as moral agents and argue that only these moral agents possess intrinsic value and the right to get respected.

The environmental philosophers are totally against the tenets of utilitarianism and argue that all the matters in the natural environment possess intrinsic value and have the right to get recognized. They consider it the responsibility of human beings to protect the lives of all other plants, animals, and other organisms in the universe. They have to transform the world into a better place for the existence of other creatures by eliminating all the hazards to their healthy living. Human beings have to function as an integral part of the ecosystem in reducing the risks of other creatures by utilizing their natural gifts of reason and intellect.

Human beings have gained a great deal of power through scientific advancement and technological progress. Deep ecologists put some restraints on human beings for crossing the boundaries of their advancement and impose them with the task of protecting

the entire universe, reasonably using their strengths. As the destiny of the natural world solely depends on the actions and decisions of human beings, they are decreed to leave any malicious intentions to nature.

The proponents of deep ecology consider human beings as the only creatures on earth who can control their number to maintain the balance of the environment. They have a significant role in keeping the diversity of the universe. This ability of human beings enables them to keep a healthy interaction with various organisms and the surroundings that sustain them. Human beings are in an absolute dilemma that whether to accept their role as a saviour of earth or drop the role to some invisible hands to take over.

Human civilization has progressed a lot in different fields and has reached the pinnacle of development. They have invented many gadgets and technologies for the betterment and smooth functioning of human life on earth. They have broadened the horizon of their knowledge and accepted the goodness of different cultures and morals. But one thing that remains static in the minds of these technologically advanced and scientifically literate human beings is the double status enjoyed by the male and female gender in a well progressed society. Everybody in the universe is in a race to survive or win their goals. In their effort to accomplish their objectives, usually, the weaker sections of the society get exploited or marginalized. The patriarchal society which is deeply rooted in the superiority of the male gender over the female disregards the intrinsic worth of all organisms on earth and considers nature and other natural objects simple as an entity that was created for them to utilize and exploit depending on their necessities and desires.

Ecofeminism emerged during the 1970s along with a radical dimension of feminism. To make a well-defined definition for ecofeminism, one needs to look at various features of feminism. The term ecofeminism will not be understood fully without paying much attention to various branches of feminism. “Historically, the variety of different feminisms (e.g., liberal, Marxist, radical/cultural, social/ socialist feminisms) gave rise to a variety of different ecological feminisms” (Callicott et al. 228). Hence, all these movements are an area of concern under ecofeminism.

Giorel Curran categorizes two types of ecofeminisms- cultural and social. Cultural ecofeminism evaluates the exceptional relationship that women share with nature. It analyses the biological and spiritual similarities that women have in common with nature. Both women and nature share the same biological and reproductive abilities. These abilities add the qualities of love, care, and foster in them (116). Curran quotes Plumwood to define social ecofeminism: “they view ‘the threads of gender as interwoven with those of class, race, and species’” (117). All these characteristics link women with nature and make them question the inequalities faced by mother earth. Social ecofeminism, on the other hand, attributes socio-economic and political reasons for the oppression of the female gender and nature. They question the views of cultural ecofeminism and reject the idea that as the object of oppression. They recognize patriarchy as challenging, but free it from the abuse of oppression (Curran 117).

Ecofeminism can be defined as the convergence of feminist and ecological ways of thinking. It ruminates the ecological exploitations suffered by nature as a feminist issue and tries to establish interconnectedness between the female gender and the environment. Evaluating the problems faced by nature would enable an individual to

redefine the socio-economic and political position of women in a patriarchal society. They look out for various problems faced by the nature such as deforestation, various types of pollution, and landslides as feminist issues as they help to understand the superiority of the male gender over the female.

Ecofeminism possesses the characteristics of both feminism and environmentalism. Environmentalism tries to evaluate the functioning of the entire ecosystem by giving due consideration to various aspects, such as its progress, allocation, interdependence, and interconnectedness between various organisms and objects, preservation and nurturing of various natural resources. It is a systematic method for analyzing the interactions and interconnectedness between various organisms, including human beings and their surroundings. Feminism tries to evaluate the relationship between men and the female gender. Like human beings establish superiority over nature and natural objects for satisfying their desires and selfish needs, the male gender suppresses the female for the satisfaction of their sexual needs, to show their superiority, and constrain them from active involvement in social, political, or economic matters.

As feminism claims equality among the male and the female gender, ecofeminism tries to analyze the relationship between various organisms in the environment and places patriarchy and capitalism as the main reasons for the sufferings of the female gender and ecology. As the female gender is being oppressed by the patriarchy and the capitalist economy by curtailing their liberty and individuality, the ecosystem experiences an oppressive and discriminative attitude from the part of the human beings who consider they are the kings of this universe. The critical issues faced by the environment such as pollution, global warming, extinction of species, and the unpredictable transformations in

the climate result from urbanization, industrialization, unlikely improvement in the population, and the valueless policies made by the government and other corporations for developmental activities. They believe that the injustice caused to women and nature is preplanned and implemented by the patriarchal capitalist society which considers only their advancement and growth. It tries to establish a common platform for the discussion of the problems faced by nature and the female gender and explores the inseparable bond that exists between women and the entire ecosystem.

The power structure created in a patriarchal setup multiplies the suppression experienced by the female gender and the environment. Ecofeminism stresses the importance of questioning this patriarchal mentality in reducing the suppression of women and nature. Radford R Ruether, in her work *New Women/ New Earth*, stresses the need for uniting the activities for liberating women and the environment and states. The liberation of women and nature is only promising with the eradication of domination that governs them. It demands the integration of the environmental movements and feminist movements to redefine the position of women and nature in a socioeconomic world by reconsidering the values promoted in the modern world that are dominated by industrialization (204). Thus, nature and women face the same suppression in this technologically advanced and profit-oriented living scenario.

Ecofeminists analyse the patriarchal dominance in various realms of interaction based on a hierarchical arrangement. Bron Taylor in his *Encyclopedia of Religion and Nature* illustrates the exercise of patriarchal dominance through “categorical or dualistic hierarchies: heaven/Earth, mind/body, male/female, human/ animal, spirit/matter, culture/nature, white/non-white” (534). It states that these dualisms play an imperative

role in vindicating various supremacies that are taking place in the environment. It enlists the vulnerabilities that these dualisms can lead to and argues for the annihilation of these dualisms, which can lead to the everlasting division of humanity against each other.

Ecofeminism can be reflected as an interdisciplinary area that incorporates various realms of knowledge. Analyzing the power structures of patriarchy it provides an enhanced scope for understanding other connected elements of patriarchy. Bron Taylor in his *Encyclopedia of Religion and Nature* states: “ecofeminism broadens the scope of the cultural critique and incorporates seemingly disparate but... radically connected elements. Combining feminist and deep ecological perspectives- in and of themselves extremely varied ways of thinking about reality- is a complex, transgressive process that is often in flux” (534). This strand of ecofeminism allows observing the function of patriarchy from different dimensions.

The patriarchal domination of women and nature can be seen in various fields, such as philosophy and religion. Bron Taylor in his *Encyclopedia of Religion and Nature* traces the manifestation of such domination by analyzing the studies put forward by various ecofeminists. He cites the view of various scholars such as Anne Primavesi, Carol Christ, Merchant, Daly, and Charlene Spretnak on the position of women in ancient civilizations such as Mesopotamia and Greece and various world religions such as Judaism and Christianity. They trace a particular type of symbol system that existed in the patriarchal structure of these areas. Taylor exemplifies the symbol system by illustrating the story of creation from Genesis, which stands as a foundational text for Abrahamic religions such as Judaism, Christianity, and Islam. In Genesis, the identity of Eve and the snake is pictured as that of a demon (534). The fact mirrors the inferior

position of women and nature reflected in the traditional systems of culture, religion, and philosophy.

Ecofeminism unambiguously possesses both the qualities of feminism and environmentalism. Cuomo in his *Feminism and Ecological Communities: An Ethic of Flourishing* opines that the main difference that can be found in the theoretical perception of them regarding the comprehension of the ideologies of feminism and the view of nature, women and the environment, and the suppression and liberation of nature and the female gender. Ecofeminism argues that the exploitation of women and nature is so interconnected that both nature and women stand in the lowest order of a particular hierarchy. Anne Primavesi speaks of a particular hierarchical arrangement in the entire ecosystem on the grounds of theology. Theology posits God is at the peak of the hierarchy. Men are positioned immediately after God, and below that comes the position of women, children, animals, plants, and other natural objects. And finally, the dirt/soil/earth is placed at the bottom of the hierarchy (128). Based on this hierarchical arrangement, the characteristics of the male gender are considered most sublime and those of women and nature as the lowest in the order. Primavesi also discourses the problem of deprivation of the biophysical environment, which only considers the consumerist value of natural objects. This problem of degradation represents the existence of a particular hierarchy. Primavesi states: “the degradation has been validated, consciously or not, by the identification of male/female with culture/nature, with overtones of mastery by the male” (128). Thus, the hierarchical arrangement places nature and women below the sequence and ensures male domination over them.

Nature is considered as a woman who shares the qualities of the female gender and bears the same oppressions and subjugations by the male members of the society. Earth is often called the 'mother earth' because of its process of production and reproduction concerning the female gender. Anne Primavesi in her *Sacred Gaia* illustrates the 'femaleness' in women and the mother earth. Primavesi cites Merchant to illustrate the fact. Men have made a hierarchical division between themselves and women/nature. The same distinction has led to the representation of nature as a passive female by relating images of motherhood, foster hood, reproduction, and virginity. They employ various metaphors of seed, womb, fertility, and barrenness to strengthen these images. Man is often considered an active partner (131). Primavesi states, "The enduring relationship between him and woman, 'husbandry', is used to describe his closest working relationship with the earth, with its connotations of 'penetrating' virgin forest or soil, sowing seed on the analogy of marital sowing, and ploughing for the procreation of children" (131). So, nature and woman possess a close similarity in all those man induced processes that are taking place on them.

The patriarchal society considers the oppression and subordination of women and nature as something natural. Disregarding the rights and individuality of these organisms, they believe both creatures are existing for the men to exploit and use for accomplishing their egoistic tasks. Karen J. Warren in *Ecofeminism: Women, Culture, Nature* stresses the importance of distributing economic power and positions for the female gender to extinguish the double standards in society. Warren argues that the domination of men over women is a universal phenomenon, and most people consider this domination as natural and unchangeable. The same type of oppression that is found with a black man by

the white man is left invisible in society. Warren demands the need for the end of racism and sexism to rescue the world from the dangers of poverty and nuclear weapons. She states that as long as, the social and economic power is vested in the hands of the white men, the exploitation of women and coloured people will be continued in the society, leaving most of the people in poverty and injustice (112). So, gender discrimination is a serious threat like racial discrimination that needs urgent attention to ensure peace in the entire world.

There are certain similarities and distinctions between deep ecology and ecofeminism. Greg Garrard argues that deep ecology stresses “the anthropocentric dualism humanity/nature” as the actual cause of the sufferings of nature. Whereas the ecofeminists attribute the “androcentric dualism man/woman.” as the cause of the inferior position experienced by nature and the female gender. Deep ecology differentiates human beings from nature, assuming that humans possess reason and an immortal soul that is absent, and deliberates the superiority of man over nature. Ecofeminism distinguishes men from women by stating that men possess larger brains compared to women and they deserve a higher position in society (23). So, both androcentric dualism and anthropocentric dualism place women and nature as something inferior to the male or human population.

As ecocriticism is concerned mostly with the study of the natural world, Physical Science stands as an indispensable part of literary analysis. The theory does not evaluate the accuracy and correctness of the scientific assessments or experiments, rather, it critically evaluates how its process has affected or added to the degradation of the natural world. It also tries to examine how the scientists artifice the ecological disasters.

Recent advancements in ecotheology contribute to analyzing how scientific knowledge can be incorporated for implementing environmental practices based on ethical values and moral concerns. Dalton and Simmons illustrate how scientific knowledge can inculcate awareness against an increased number of natural calamities. Science plays a crucial role in educating the public on the problem of climate change and the need to take various measures to resolve this problem. Science, especially biology, evaluates the process of evolution and states the role of nature in the evolution process of human beings (71). The knowledge helps human beings to maintain a positive attitude towards nature and take various valuable measures to maintain the equilibrium of the planet.

There are differences in how the ecotheologians view science for the study of ecological disasters. They differ in the emphasis of science in various realms of understanding ecological imbalance or crises. Dalton and Simmons state: On one end of the continuum are those texts that see science (in some sense) as providing a cosmology that promotes the radical change of consciousness required to meet the ecological crisis. On the other end are those texts for which science fulfils more pragmatic functions. They educate and ground ecotheology so that it is not simply dismissible by physical and human sciences. They describe human behaviour in a way that grounds a concrete and effective moral ethic. They provide scientific data that help make a case for ecological action, most often on issues of ecojustice (72).

Even though many support the significant role of science in analyzing, exploring, and sorting out ecological devastations, there is a vast population who stand against the prominence of science in solving ecological disasters. Steven Yearley in his *Cultures of*

Environmentalism stands against the idea that environmental protection should be based on science or scientifically proven. He lists out the reason for opposing this insignificant importance given to science for environmental conservation. He underlines that science and technology stand as the major cause for generating various environmental disasters. Many of the human inventions in the field of science and technology cause grave issues for the environment. The CFCs invented by human beings pose serious threats to the ozone layer. The nuclear power developed by human beings gave way to various calamities, such as the explosion at Chornobyl in Ukraine. The technology used in the industrial sector also adds to environmental disasters by expelling a lot of poisonous and waste materials, pollution in many forms, and scarcity of natural resources (114). So, many supporters of ecocriticism are against the development of technology and scientific inventions, which add to the destruction of the ecosystem.

Science adds a lot to open up the doors of success and progress in front of humans. Scientific knowledge brings many advancements in various realms of human interaction. It reduces the cost of production and unburdens human labour. Whereas as part of advancement, there arises many experiments and inventions in various scientific disciplines. They invent various life-threatening machines and expel various poisonous gases, causing the entire ecosystem to lose its balance.

The advancements in science and technology threaten the healthy existence of both human and non-human creations. Most of the scientific policies are based on reason, giving less consideration to morality, ethics, or emotional basis. Technological progress helps the scientific people to be their creators by developing their own lives or creatures. They utilise science to defy their enemies or to become the winners of the world. It

contributes a lot to the devastation of both the natural world and its organisms. The competition among the scientists to prove their might by inventing various nuclear weapons and other dangerous objects leave the multitude of the population with non-curable diseases and physically and mentally challenged generation.

There is a difference of opinion between scientists and environmentalists. The scientists propagate that scientific knowledge and scientific backup are indispensable for the healthy running of industries and other corporations. Whereas the environmentalists reject the notion and stress the partiality of scientists in making policies or listing down principles, which are most of the time catered to the convenience of profit loving corporate giving a less consideration for the environment or other species. Yearley states the reason the environmentalists reject the role of science in studying natural problems is that “on closer inspection, scientific expertise soon begins to lose its straightforward appeal” (115). The scientists take a double stand in studying various environmental problems. Some scientists highlight the issues associated with poisonous waste materials, whereas others try to hide them from the public. Some scientists stand as the constructors or destructors of the ecosystem. The industry needs the support of scientists for its functioning. It incorporates various scientific skills and opinions in its work. There are scientific critics and advocates for an industry. The scientific advocates of the industry hide the role of industry in creating various pollution or extinguishing various poisonous gases. The scientific critics of the industry try to expose the pollution events created by the industry. It causes scientific disagreements and conflicts between the advocates and the critics.

Williem B. Drees in his *Technology, Trust, and Religion* gives a brief description of three different dimensions of technology. As the first layer of technology, he tries to question the common notion of technology as a set of machines or gadgets. He claims that technology is more than these machines or equipment and explains that technology cannot function without proper infrastructure. He cites the examples of telephone lines, electricity, and gas stations which need additional infrastructure for their functioning. Refineries, ships, pipelines, and oil wells function using oil, which is a natural resource. So, most of the technology needs the support of natural resources for its functioning. By using natural resources, technology expels excess heat and waste materials that cause pollution in the atmosphere and ground (Drees 11). So, technology is not merely a machine that can function by itself. It needs the support of natural infrastructure and it pollutes nature in return.

Drees explains the second layer of technology as a “social system”. He argues that technology needs a social system for its basic functioning. “Technology depends on skills (and thus on educational systems) as much as on hardware. Highly technical medical disciplines such as surgery are certainly also about the technical skills of the humans involved. And skills are also involved for ordinary people; driving a car is a technical skill” (11-12). In short, the second layer of technology depends upon “the social, human dimension of organization and skills” (12). Here, technology functions as a social system that needs the support of human skills for its functioning.

The third level of technology is purely “psychological”. Drees attributes a technological dependence to some attitudes in our life. The technological attitude “refers to a way of life in which a problem- whether it’s a leaking roof, an illness, or a

miscommunication-is not the end of a story, to be accepted as a fact of life, but rather perceived as a problem to be addressed. An active attitude, sitting down to analyse a problem to solve it by practical means” (12). Here, the functioning of technology entirely depends upon the psychological presence of human beings.

The same notion that science and technology stand as an antagonistic force for protecting the environment is also expressed by various critics. Greg Garrard in *Ecocriticism* argues that “ecological problems are ‘features of our society, arising out of our dealings with nature, from which we should like to free ourselves, and which we do not regard as inevitable consequences of what is good in that society” (Garrard 5). Technological advancements contribute to various pollutions and bring a transformation to the level of various substances in the ecosystem and it contributes to climate change.

Climate change is a fatal factor that has the power to eliminate everything and everyone on earth. Earth is passing through many phenomena in response to climate change. Global temperature is rising every day, causing the disappearance of various species, including human beings. Richard Beach et al. discuss the serious effects of climate change in the preface to *Teaching Climate Change to Adolescents*: “Worldwide, hundreds of thousands of people are dying every year from climate-change-related causes. Many more become climate migrants... Because of human activity, the Earth is warming faster than ever before in its history, and we all must act quickly to avert even more dire consequences” (vii). It echoes the powerful consequences of climate change and urges the need for uniting human beings against the dreadful aftereffects of climate change.

The planet earth is irreversibly transforming because of the expulsion of various dangerous gases generated due to selfish human interventions. The atmospheric temperature is rising every day, causing a threat to the life of both human and non-human organisms. Richard Beach et al. note:

Recent research indicates that global temperatures may increase by 4 degrees as early as the 2070s and perhaps even sooner... A rise of 4 degrees Celsius would permanently devastate US food production in other countries. The Antarctic and Greenland ice sheets have already begun to melt and break apart. No matter what humans do now, sea levels are going to rise, and rise substantially. Much of Florida and the East Coast of the United States will first be subjected to storm surges, and then inundated, as will many of the largest cities in the world. (1-2)

The rise in global temperature is a destructive force that has the power to bring an end to all life systems on the planet. Beach et al. warn of the serious aftereffects of climate change that are going to take place in the United States shortly. It also predicts the reflection of the occurrences in other parts of the world as everything is part of a single system.

Global warming can be considered a destructive force that has the power to devastate the entire planet. McCaffrey in *Climate Smart and Energy Wise: Advancing Science, Literacy, Knowledge and Knowhow* asserts, "The interconnectedness of Earth's systems means that a significant change in any one component of the climate system can influence the equilibrium of the entire Earth system... these complex interactions may cause climate change that is more rapid and on a larger scale than projected by current

climate models” (136). As the earth system is a complex whole, a change caused in any part of the earth can influence the system completely. Richard Beach et al. argue that even if the poorest countries cause little chances of pollution, they have to suffer more as they possess a scarcity of resources to defend themselves (3). The change caused in one part of the world gets transformed into the entire world. Beach et al. argue climate change poses a lot of threats to the entire world. It will lead to scarcity of food materials, spread various diseases, increase uncertainty, destabilize governments and strengthen struggles and terrorism (Beach et al. 2-3). Hence, climate change is a factor that has the power to leave the world in utter disorder.

Climate change affects the overall development of an individual. According to The Intergovernmental Panel on Climate Change, 2016, climate change affects the social system of the entire world. It will adversely affect the healthy existence of everyone. There will be increased health problems in response to the high temperature. Much life-threatening diseases will spread to devastate the world population, resources will be scarce, and presence of the poisonous substances in water bodies. The situation demands the world population to migrate to various countries, destroying their mental wellbeing and creating physical discomforts (Beach et al. 4). Hence, climate change plays a substantial role in maintaining the physical and mental health of individuals.

There are many plausible reasons for climate change in an ecosystem. Beach et al. discuss the probable reasons for climate change in *Teaching Climate Change to Adolescents*. They argue that commonly pollution caused by transportation and energy production can be considered the sole cause of climate change. The cause demands the need to depend on non-conventional sources of energy, such as the wind, solar, etc.

According to them, the universal production of beef, chicken, and pork can be considered another factor that acts as the source of the emission of greenhouse gases. Highly influential corporates also act as a source for expelling carbon and other poisonous substance into the environment (10). The anthropocentric climate change affects the lives of different organisms in the universe, including humans and non-human. It will be reflected in the life of plants and other natural systems. It also gives way to species extinction and other natural disasters. “This story has versions about deforestation or agriculture or the oceans” (Beach et al. 10). So, human intervention stands as the major cause for unforeseen changes in the climate.

The problem of climate change can be eradicated only if a joined effort is taken by human beings. Human beings should shed their ego and should respect the worth of everyone on earth. They should possess a deep ecological concern in them to understand the worth of all organisms. Clark in *The Cambridge Introduction to Literature and Environment* discusses the role of deep ecology in maintaining a well-balanced climate for the welfare of all organisms. Deep ecology demands an initiative from the part of human beings to view themselves as part of the greater whole by shedding their ego of self-assertion. Their view of the world should be shifted from it as a commodity for consumption and they should consider the greater good of all biospheres in every realm of interference. Such a biocentric worldview will ensure the intrinsic value of all organisms and make them avoid silly human wants that suppress the necessities of other organisms (4). Therefore, following a deep ecological way of life that considers the needs and demands of all organisms and ensures their existence will help to bring a reduction in the problems of climate change.

The present climate related problems and ecological destruction leave the entire world distinct from the one that existed in the last century. The crisis is mostly influenced by the deliberate human effort to accomplish their selfish needs. In *Anthropocene Fictions: Novel in a Time of Climate Change*, Adam Trexler discusses some geologists' attempts to name the present period of Earth as the Anthropocene (1). Trexler discusses the accuracy of the term Anthropocene and announces that human beings have transformed the face of the earth entirely and it demands the declaration of a new era to indicate this changed phase of the earth. The main alteration is reflected in the gaseous level of the atmosphere. The atmosphere composition is occupied by a large concentration of greenhouse gases such as carbon dioxide and methane which are emitted from different anthropogenic sources. These gases play a crucial role in altering the atmospheric temperature and climate. The substantial increase in the human population, increase in the energy usage rate, largescale exploitation of natural resources, and the construction of various buildings questioning the natural order of the ecosystem have also contributed to the alteration of the earth's face (Trexler 1). Thus, these changed conditions on earth require a new term to indicate this new epoch. Hence, the term 'Anthropocene' is best suited to describe this transformed phase of the earth.

Many scientists predict the occurrence of various unlikely happenings shortly because of anthropocentric interventions. Adam Trexler predicts the raising of global temperatures to a higher degree by the year 2100. According to him, the hike in temperature will make the world witness a variety of outcomes in various forms. He states:

Droughts, tropical cyclones, heatwaves, crop failures, forest diebacks and fires, floods, and erosion will become more extreme. Inadequate water supplies, malnutrition, diarrheal diseases, and infectious diseases will become more common. Flooding, drought, and water shortages will lead to mass migration and regional conflicts. (2)

Trexler warns the human species about their destructive approach toward nature. He forewarns the rise in global temperature to a higher degree soon and enlists the aftereffects that this high temperature planet can generate. The human species will be the most affected population by these disasters and they will be compelled to move from their place of inhabitation because of various diseases and calamities.

James Lovelock discusses the same concept of climate change in *The Vanishing Face of Gaia: A Final Warning*. He forecasts the transformation of the earth's atmosphere in the future to a hotter and diminished state, which ensures its survival, whereas disqualifies the habitability of other organisms (3). According to Lovelock, "earth is a self-regulating system" which can ensure its survival and rebalance itself (Schneider et al. 1). The new state of the earth may not be habitable for humans or any other organisms, or some organisms may experience extinction as they may not survive in the new atmosphere. Lovelock states that human beings have compelled the earth to move to a changed state through some selfish activities and policies that have less concern for the welfare of the planet. The result will be reflected in the future, where the earth will be transformed into a hotter planet, dismissing human beings from its realm of existence.

Climate change is a global issue, which can affect the entire planet. The organisms on earth have a principal role in maintaining the climate of the earth. Schneider et al. in *Scientists Debate Gaia: The Next Century* elaborates on the role of organisms on the planet. Organisms act as a principal force in controlling the earth's climate. He illustrates the fact that the organisms in the soil perform the weathering of rocks. Usually, weathering is higher in the tropical climate and the weathering stands as an important part of regulating the global climate and keeping the chemical level (1). So, the existence of healthy organisms is necessary to maintain the condition on earth accurately for the survival of its organisms. James Lovelock stresses the importance of interaction between both inanimate and animate objects on earth to maintain its equilibrium and keep the climate suitable for the existence of everything and everyone on earth. Schneider et al. elaborate the idea in the preface written for *Scientists Debate Gaia: The Next Century*:

1. That the Earth was, and largely still is, managed by its bacterial ecosystem.
2. That the atmosphere of the Archean period was chemically dominated by methane.
3. That rock weathering is part of a self-regulating system involving the biota that serves to regulate carbon dioxide in the atmosphere and keep an equable temperature.
4. That oxygen levels need regulation within a mixing ratio of 15 to 25 percent.
5. That the natural cycles of the elements sulfur and iodine take place via the biological products dimethyl sulfide and methyl iodide.

6. That dimethyl sulfide emission from the ocean is linked with algae living on the surface, clouds, and climate regulation.
7. That regional climate on the land is coupled with the growth of trees in both the tropical and the boreal regions.
8. That biodiversity is a necessary part of planetary self-regulation.
9. That mathematical procedures for modelling these systems originated with Daisyworld.
10. That life on other planets can be detected by chemical compositional analysis of the planets' atmospheres. (Schneider et al. 3)

The organisms on earth play a significant role in preserving the earth's atmosphere. So, the organisms' negative interactions will affect the equilibrium of the planet. The chemical composition of the earth acts a substantial role in conserving a suitable climate. The animate and inanimate objects also play an extensive role in sustaining the chemical compositions on earth. Even a tiny organism like bacteria is necessary to keep this composition. So, the human interaction, which disregards the non-human beings and the inanimate objects in nature, stands as the principal factor that contributes to climate change.

Human beings have pushed the earth to its limits. James Lovelock in *Gaia: A New Look at Life on Earth* claims human beings play a substantial role in producing many poisonous gases that affect the equilibrium of the earth. Lovelock states: "the man-made gases such as the fluorocarbons, which have their sources mainly in the chemical industry and were never in the air before industrial man appeared, are very indicative of life at work... they may, of course, be aggressive and dangerous, like nerve gases" (74). Human

beings are solely responsible for the disequilibrium in the chemical composition of the earth that makes the survival of organisms safe on earth. Lovelock further adds that man's insatiable curiosity and his irresistible urge to experiment and interfere with nature have contributed to his downfall (Lovelock, 100). Various activities undertaken by human beings in the economic, social, industrial, and political fields will surely affect the existence of all organisms living on earth. The activities of human beings cause the earth to lose its equilibrium and it gives rise to various natural calamities. Natural calamities make certain species disappear from the face of the earth and the regenerative power of the earth restores its environment and gives opportunities for new lives to expand. Lovelock speaks of the same idea in *Gaia: A New Look at Life on Earth*: "whenever natural disasters occur, like the appearance of oxygen as the dominant gas, or planetesimal impacts, there is turmoil among the species. Eventually, a new ecosystem comfortable with the new environment emerges and is populated by new species of organisms" (102). The new ecosystem may cause danger to the existence of some other organisms, even if it provides room for new organisms.

According to the theory of Gaia, biodiversity is a principal factor that maintains the equilibrium of the planet. Stephan Harding in the chapter entitled "Gaia and Biodiversity" in *Gaia in Turmoil: Climate Change, Biodepletion, and Earth Ethics in an Age of Crisis* define biodiversity as "the diversity of life at various levels of the organization, ranging from genes, species, and ecosystems to biomes and landscapes" (107). Harding argues that the earth was filled with diverse organisms before the entrance of modern man. He states it is evidenced from the fossil records that there had been a mass extinction of various organisms many million years ago. All those extinctions took

place because of natural calamities and the recent extinction events that are taking place in the ecosystem are because of the developmental process created by the modern industrial world (107). Human beings are starting large-scale destruction to the natural habitats, landscapes, and different species to achieve their insatiable needs, which later lead to the extinction of various organisms that dismantle the equilibrium of the ecosystem. Crist et al. attribute the same economic reasons behind the large-scale extinction of species that are taking place nowadays. They state, “Every day we are losing about 80 species, mostly in the great tropical forests, because of our endless desires for timber, soya, palm oil, and beef. Coral reefs and the marine realm, in general, are not exempt from our destructive attentions” (107). Thus, the materialization of natural objects, non-vegetarianism, and developmental activities are contributing not only to the extinction of various organisms, but also to various landscapes and other natural objects of concern.

Human beings enact a substantial role in altering the chemical and biological combinations of the ecosystem, which contributes to climate change. Primack in *Essentials of Conservation Biology* argues that a considerable amount of Earth’s organisms will become extinct within the next 50 years. Stephan Harding also discusses how the transformations in biodiversity affect the ecosystem. It disturbs the ecosystem’s ability to fight and regenerate from different ecological instabilities. The recycling process and biomass production in the ecosystem are done by various organisms and the scarcity in the number of these organisms will distress the same. The failure in the recycling system and the scarcity of biomass disturb the other organisms in the ecosystem and it leads to further extinction of species (Crist et al. 108). It signposts the need for

biodiversity in maintaining the earth's atmosphere and promoting the lives of other organisms on earth. The organisms on earth regulate the climate suitable for the existence of multiple other organisms on earth. The scarcity of one organism may adversely affect the aspect of the planet that each organism maintains. Biodiversity is an imperative factor that keeps the climate of the planet.

Among all the annihilation strategies that transpire in the universe, human induced one occupies a foremost position. Stephan Harding summarizes the influence of the human intervention on biodiversity to the acronym 'HIPPO'. He expands the term where 'H' stands for habitat destruction and fragmentation, 'I' for invasive species, 'PP' for pollution and population, and 'O' for over-harvesting (Crist et al. 109). Human beings have exceeded the limit in exploiting the planet. An assessment of the number of organisms that are found in the universe a decade ago with those that exist in the present scenario reveals the extent of human intervention in biodiversity. The egocentric human activities contribute to this decline.

Human beings are extinguishing the regular habitat of different organisms in the appellation of innumerable developmental undertakings. They are instigating severe damage to the natural habitat of the organism by constructing roads, buildings, and other industrial setups in deforested or cleared land areas. Crist et al. discuss the aftereffects of the annihilation of natural habitat in *Gaia in Turmoil: Climate Change, Biodepletion, and Earth Ethics in an Age of Crisis*. In the process of demolition, the destructors leave a small portion of the natural habitat and the remaining organisms in the area continue to use it as their habitat. Crist et al. state that each of these habitats is surrounded by inhabitable habitats such as roads, agricultural lands, and buildings. For many organisms,

these contiguous habitats stand as a threat, as they cannot find enough food or a suitable mate in the new atmosphere. In the progress of this process, many of these organisms get extinct (110). Hence, various progressive accomplishments by human beings subsidize the extinction of many organisms in the universe.

CHAPTER II

CONSPIRING NATURE AS A FEMINIST SPACE

The female gender has invariably stood for the progress of nature in their attempt to sustain in a marginalized world. There are certain similarities between women and nature, and these resemblances style the female gender constantly in communion with nature. Both of them suffer the same problem of servitude while sacrificing themselves for others. The reproductive process in them attributes them the title “mother”. As a mother is supposed to sacrifice her health and comforts for the satisfaction of her children and family, both of them are obliged to serve and look after others irrespective of their incapacities and threats.

An inner urge for freedom and identity can be pursued in women and nature. Irrespective of the subjugations and exploitations that they are forced to accept in a marginalized world, they retain an intrinsic desire to assert themselves and announce their identity. This struggle for accomplishment penalizes them with many tortures and suppressions. In the end, victory reaches them, reasserting their identity and opening new windows of prospects in front of them.

Barbara Kingsolver’s *Flight Behaviour* outlines the female character’s mental and physical struggles for survival in a complex society. The principal female characters in the novel, such as Dellarobia and Hester, attempt to be more independent and strong personalities regardless of their disparaged situation in a patriarchal society. Kingsolver portrays how nature around them prompts and equips them in recognizing their potential and advance accordingly.

Women can be considered more environmentally sensible and anxious about any threats precipitated to the ecosystem. Ariel Salleh in *Ecofeminism as Politics* argues that women are ecologically more conscious and states that women's concern for ecology stems from the biocentric attitude that makes them understand how the healthy existence of human beings is associated with the survival of the entire ecosystem (51). The firm bond between women and nature is revealed through the character of the protagonist, Dellarobia Turnbow. She is a young mother of two children, who gets married at the early age of seventeen. She belongs to a lower-class family suffering from poverty most of the time. She has little knowledge of the metropolitan culture and receives few chances for visiting the countryside except the one where she lives. She has never achieved a good educational background nor received any chances of conversing with highly educated personalities. She is exposed only to the ways of the rural community to which she belongs. Even if she is less educated or illiterate about the external world, she is an ardent observer of nature and retains a renewed wonder and appreciation for the surrounding nature. Catriona Sandilands in *The Good-Natured Feminist* argues, "women, the keepers of family sanctity and the doers of family work, are particularly aware of ecologically destructive events. This Heightened awareness... nominates women as the vanguard speakers of environmental malaise, and perhaps also as the vanguard of the forthcoming ecological revolution to clean up the earth" (xi). The same sense of ecological concern can be traced in Dellarobia too. Being a mother, she is highly conscious of the future of her children. She firmly believes that nature has a substantial role in preserving her children's life secure in the future. Thus, she takes significant efforts to observe the surrounding where she inhabits.

Women, children, and aged people are the chief victims of imbalances in the environment. It is the physical and mental condition of these people that get affected most by the unlikely transformations in the atmosphere. Karen J. Warren in *Ecofeminism: Women, Culture, Nature* states that there are strong gender based differences regarding the stand that human beings adopt towards toxic substances. Warren discusses the role of persistent toxic chemicals chiefly because of their “ability to cross the placenta to bioaccumulate, and to occur as mixtures, cause severe health problems disproportionately to infants, mothers, and the elderly” (10). The imbalance and treacherous transformations in nature disturb the life of Dellarobia to a great extent. The disequilibrium in her environment leads to some fertility problems in her. She miscarries her first child because of some unhealthy factors caused by the environment.

The supporters of ecofeminism interpret the ecological problem as a feminist issue. They associate the protection of the environment with the fortification of the female gender and argue that women and nature cannot attain liberation unless their lives become completely free from the clutches of domination (Reuther 204). Dellarobia feels caught in a cage-like situation while she lives in her husband’s home. She enjoys less liberty and surrenders her aspirations in life for the advancement of her family. The only thing that she encounters there is domination and marginalization of her needs and aspirations. Her life undergoes a complete transformation when she wanders through the Appalachian Mountains above her home. There she encounters the fascinating ways of nature and expresses wonder at the terrible beauty of nature. A complete reformation occurs in her life while she grows conscious of the repercussions of climate change that are ensuing in her surroundings and the suppression that she suffers.

Wilderness is always regarded as a place for the reinvigoration of those people who are exasperated by the moral and material disintegration of the metropolitan life. Wilderness has an almost mystical significance: it carries out the assurance of a restored, reliable relation of humanity and the earth (Garrard 59). Once Dellarobia climbs the Appalachian Mountain above her home, a sudden revelation comes to her that the world is not the one she observes through her farmhouse's narrow windows. She marvels at the grandeur of her surroundings and appreciates the hills for gifting her a distinctive angle for inspecting nature. While observing from the top of the hill, she experiences the realities of discrete objects. She is alone on the hilltop with a serene atmosphere. She has left her children with her mother-in-law and feels so much relieved from the hectic schedule of a stay-at-home parent. While reaching the pasture, she leans against the fence to get some oxygen. The fresh air in the area revitalizes her, offering her a refreshed feeling. She examines the sky while lying there and she discovers nothing impressive about the sky. It is all dull like the day and she frowns at the sky for being so gloomy. Whereas, she feels great admiration for the pasture pond as it reflects the light in a more glittering way than the November sky (Kingsolver 2). From the top of the hill, she identifies the positive and negative aspects of nature and it facilitates her in interpreting the dull and bright sides of her own life.

Ecofeminists investigate the marginalized condition experienced by the animals, analogous to the female gender. Both the animals and the female gender encounter the same subordination in society. Bron Taylor, in *Encyclopedia of Religion and Nature*, speaks of the inferior position enjoyed by animals in the ecosystem:

Animals are, on the whole, subject to much more suffering; in the natural world, the weaker are devoured by the stronger, and domestic animals are exploited and tortured by man. Besides, animals are mostly regarded as morally, and especially, intellectually inferior to man, to the extent of not being capable of attaining liberation unless they happen to be reborn as humans. (235)

Dellarobia looks at the sheep advancing towards the pond with great admiration and she pursues some resemblances between herself and the sheep. She and the sheep experience the same marginalization. They are enforced to endure an atmosphere that is incompatible with them. The sheep are constrained to live in an unsafe situation filled with mud and dirty water (Kingsolver 3). She is too forced to sacrifice herself and settle for the well-being of others- her husband and children. Both of them experience the curtailment of their liberties and freedom of movement. Like her, the sheep also have settled for the second best.

From the top of the hill, Dellarobia examines the surroundings of her home and the condition of her farmhouse. It is the first time in her life that she receives such a chance to observe her home from a distance. She has only got chances of beholding the exterior world through the narrow windows of her damaged house. She could never look through the windows into her house. She has been nailed in a particular frame for the last ten years after her marriage; it is now that she gets time to view things by standing out of the frame (Kingsolver 3). While walking out of the picture, she seems relieved. She experiences a sort of compassion for the sheep on her farm and she discovers traces of her in the miserable sheep standing in the mud ground. She could not go outside of her house except for the hospital visits related to childbirth. The condition of the sheep is the

same as that of hers. They are besieged by the tiny holes of their footprints and stand gloomily on the muddy ground overflowed with rainwater. It is the season of summer and the sheep have worn out their wool and the season of winter is near and they will be shorn again with their new wool. The sheep are very much unaware of the alterations of the seasons and like Dellarobia, for them, life is unpredictable most of the time.

Another similarity can be found between Dellarobia and the ewes. As a pregnant woman is treated well by society for the fear of giving birth to an unhealthy baby, the ewes are often given more nutrients for the advantage of getting a healthy lamb. Such a provision was given to them only during the time of pregnancy and at other times, no one cares whether they drink or eat anything during the day. She senses the same situation for the ewes and remarks that: “these ewes only got extra minerals and a grain ration because they were near lambing” (Kingsolver 458). Here, the ewes, who represent nature, and Dellarobia, who stand for the female gender, suffer the same treatment by society. Their worth is only appreciated if it is proposed for the nurturing of future generations.

The fallen tree in the forest shares some resemblances with Dellarobia. She considers the tree majestic and denotes the tree as ‘the corpse of the fallen monster’ (Kingsolver 7). The tree appears very strong with all its might, even on its deathbed. The tree is not cut or fallen in a wind. She makes a comparison between herself and the tree that despite much toughness experienced in their entire life; both of them have survived long battling the difficulties and finally have escaped from their fixed position in life:

She smacked her palms together to shuck off the damp grit and viewed the corpse of the fallen monster. The tree was intact, not cut or broken by the wind. What a waste. After maybe centuries of survival it had simply let go of the ground, the

wide fist of its root mass ripped up and resting naked above a clay gash in the wooded mountainside. Like herself, it just seemed to have come loose from its station in life. (Kingsolver 7)

Like Dellarobia, who has sacrificed ten plus years of her married life for accomplishing the needs of others, the tree has survived long there nurturing the ground and providing a kind of shelter and shade for others. Finally, both of them decide to stay independently, cherishing their own needs and desires.

While walking through the hill, Dellarobia ponders over different incidents in her married life. She gets married to Cub while she is very young. She expresses her sorrow over poor girls who get a little chance of choosing their own life. Most pretty girls get married during their high school stage and they rarely get any chances for going to higher studies or to pursue their dreams. She expresses grief over her helplessness in choosing her life. She is the one who failed to achieve her dreams. She is an unemployed woman who gets little exposure to public life. She is so pretty and her mother-in-law considers her an art piece when she meets her for the first time and makes her son Cub marry her (Kingsolver 13). She infers it is true, as the parts of an art object can be altered according to the will of the manufacturer. She is enforced to follow a lifestyle set up by her husband and his family.

Being an unhappy woman who gets married at a very young age, Dellarobia Turnbow sacrifices all her dreams and aspirations in life. Her husband, Cub, is a total failure in making her experience the bliss of living. Cub is ignorant about her needs and rarely makes any attempt to understand her needs. He is a gentleman who is very soft in heart and loves a peaceful life. "Cub moved in slow motion. His gentleness was merely

the stuff he was made of, like the fibre content of a garment, she knew this. Something a wife should bear without complaint. But it made him seem dumb as a cow and it made her mad” (Kingsolver 10). She makes company with a telephone mechanic named Jimmy, and she flirts with him to make a temporary escape from her disappointing life. She climbs up the mountain expecting to meet him to have a momentary solace for her.

Animals have the power to enhance the mental health and social skills of an individual. Much scientific research has progressed in this realm. “Interacting with animals influences social interaction between humans and related factors important in this respect, such as trust, empathy, aggression, and a positive mood” (Beetz). The arrival of sheep to Dellarobia’s home brings a positive outlook to her. She dearly enjoys the new companions and finds solace in the new atmosphere. She gets thrilled by the scents of the barn and appreciates its beauty: “ The presence of animals had changed this barn, a long-dead place smelling of dust and fuel oil transformed into an environment rich with the scents of sweet feed and manure” (Kingsolver 457). Her dislike for dust and the smell of fuel oil display her hatred towards the destruction of the environment and she considers those places devoid of any natural fragrance as dead zones . Her love for the scents of animal feed and manure reveals her concern and closeness to nature.

A sense of liberty and happiness embrace Dellarobia while she steps on the mountain. Her husband’s family had always discouraged her from climbing the mountain and they used to denote the mountain as a high road. The journey through the high road was forbidden as they believe that taking the road will lead someone to damnation (Kingsolver 5). She feels a tendency to look back to her home, but she avoids the instinct, as the act may call her back from her attempt. The belief reveals the regulation of

patriarchy on women from attaining greater aspirations in life. The travel gives way to a momentary flee from her inescapable and ineluctable obligations as a married woman with two children. She compares herself with Lot's wife in the Bible, whose last look at the home has brought about her destruction (Kingsolver 5). The act emphasizes her attempt to forget her past and restore her life in a better way.

Dellarobia's mind undergoes a complete transformation when she encounters the sight of burning trees. The sight frightens and assists her to gain sense. She grows doubtful about the truthfulness of her current task and experiences a kind of dilemma that whether to carry on her task of visiting the telephone man or go back to her duties as a housewife with two children. The sight aids her in redefining her position in society and instructs her on the inescapable obligations of a married woman. While viewing the orange glow among the trees, both fascination and fear take hold of her mind. She experiences a kind of fear and thinks about the aftereffects of her actions. The people would look upon her children with shame, whose mother left for a telephone man only for the cause of her lust. She comes to the revelation that Jimmy, the telephone man, is a person and not a destination to run after. He would find this act as a game and leave her once he gets over the thrill of those unusual visits. While she thinks about the soft touch of her cute children and their milky breath, the guilty mother in her takes the role and drives her away from that sinful act. She goes back to her position in the universe and accepts her fate as a poor woman living in a lower-class family. The revelation that she received from the forest can be equated with the Buddhist concept of nature. Bron Taylor in his *Encyclopedia of Religion and Nature* argues "in the forests and other natural places where the impact of human desire is weak, we can begin to listen to the truths that the

leaves whisper and the rocks shout” (230). The deserted forest plays a vital role in bringing a revelation to Dellarobia’s life.

Dellarobia is an environmental lover who efforts to find out the reason for the visit of those Monarch butterflies to the mountain, dodging their usual habitat. She believes that the bright orange colour has something serious to convey to the world. She acknowledges the sight as an omen that attempts to reverberate the current ecological distractions occurring in her surroundings. She associates the unstoppable rain and cold in the Appalachian region and the recent flood and landslide that took place in Mexico with the migration of the butterflies from their usual habitat. The climate impairs the survival of these tiny creatures and it is as rehabilitation that they find shelter in the mountain, avoiding their usual migratory path. Her findings reflect Dellarobia as a keen observer of nature who takes significant efforts to figure out the ecological problems in her surroundings. She gets affected by the sight and her life turns distraught at the thought of those orange flames. She used to wake up through the entire night to answer Jimmy’s calls. But Jimmy is not a question now, and he has gone entirely out of her mind. The thought of those burning flames disturbs her sleep, and she often wakes up from her dreams by seeing fearful dreams. She struggles her best to avoid any thoughts about the orange flames and gets involved in her works as deeply as she can. She dedicates her full attention during the shearing day. Whereas the sight of the sheep makes her think about the flame and she gets sympathized with the helplessness of the poor sheep as they are going to face the aftermath of the fire even if the human beings are liable for the same.

The traces of a cultural ecofeminist are explicit in Dellarobia when she identifies her own life with the sheep on her farm. Cultural ecofeminists maintain that women and nature share a common emotional temperament as they are associated with the process of production and reproduction and they blame patriarchy as the sole cause of various disasters in the environment (Merchant 11). Dellarobia sympathizes with the sheep as they are enduring the same fate as her. The sheep will be sold to some butchers after the shearing is over and their babies will surely miss their mom. She finds similarities between herself and the sheep in that she is having two children with a little age difference, like the sheep whose two lambs are very close in their age and they are demanding milk from the sheep at the same time. The only distinction that she finds in them is that they will not see each other once they get sold to the butcher.

While observing the sheep after the shearing, Dellarobia comprehends the confusion experienced by the sheep after the disappearance of their wool. The sheep are in a complete dilemma in their attempt to detect their identity. They cannot recognize each other as they appear completely transformed after the act. Those who played and lived together till the moment turn aggressive and rebellious. There occur many fights between the grumpy ewes and lambs for milk as they are unable to trace the actual mother. She grows very much sympathized with them and feels sorry for the cruel act by the human beings for material gain. The identity crisis experienced by the sheep can be equated with Dellarobia's life too. After marriage, she faces the same identity crisis as the sheep and many struggles originate in her mind to reassure her identity.

The responses of certain characters in the novel toward the ecosystem are purely based on gender, and the anthropocentric attitude monopolizes their perception. The male

characters in the novel are only concerned about the materialistic aspect of nature and they are ready to resort to any kind of violence against nature, regardless of protecting its inner worth. Timothy Clark gives a brief description of anthropocentrism:

Anthropocentrism names any stance, perception, or conception that takes the human as the centre or norm. An ‘anthropocentric’ view of the natural world thus sees it entirely in relation to the human, for instance as a resource for economic use, or as the expression of certain social or cultural values - so even an aesthetics of landscape appreciation can be anthropocentric. Anthropocentrism is often contrasted with a possible biocentric stance, one attempting to identify with all life or a whole ecosystem, without giving such privilege to just one species. (3)

Anthropocentrism accepts man as the centre of existence and considers everything is created for men to exploit and utilize to achieve their egoistic needs. It views nature simply as a source of natural resources and other material things that keep men’s life economically and socially secure. Dellarobia’s father-in-law Bear Turnbow is a pure example of the patriarchic mental outlook. He adopts various money-oriented activities against nature, such as logging. His greed leads to the degradation of topsoil on a large scale. He possesses little reverence for the female gender, animals, and nature. He views nature and women as mere materialistic things.

Dellarobia can be deliberated as a person who keeps love and admiration for all organisms, irrespective of their instrumental value. She realizes the interconnections between the female gender, nature, and the animals, and she associates the reason for their diseased conditions with the undesirable land practices of the covetous male members of their society. She realizes that the absence of wool has caused the sheep to

lose the aroma that has helped them each other in finding their dear ones. She derives solace from the thought that they will recognize each other once their wool grows back.

The environmental lover in Dellarobia gets wounded when she perceives the news that her father-in-law has signed an agreement with some loggers to clear cut the mountain behind their house for obtaining money for paying off his debts. The news was told to her by Cub impassively and she gets irritated by his attitude and asks him to behave more humanely. Cub thinks that his father's equipment loan is more significant than cutting some trees. The anthropocentric attitude of Cub is revealed at this point. But she is very much disturbed by the thought and she asks him: "So what happens to us, if this farm gets folded in half overnight?" (Kingsolver 25). She is highly concerned about the aftereffects of logging and she openly criticizes the idea of cutting trees for a small profit. She tries to dissuade Cub from the idea of cutting the trees. She points out the aftereffects of logging by illustrating the example of earlier destruction done to the Buchman place- "They'll make it look like a war zone, like the Buchman place. Have you looked at that mountain since they finished logging it out? It's a trash pile. Nothing but mud and splinters" (Kingsolver 26). Callicott and Frodeman talk of the same attitude in Arne Naess: During the course of one of the climbing expedition to Nepal, Naess observed the reverence that Sherpa people paid to sacred mountains. The observation inspired him to formulate a new philosophy that consider the sacredness of all mountains in nature. He formulated the idea that defines the interconnectedness among diverse organisms in nature and argued that each organism in the universe join together to form a complex whole. Instead of viewing an individual as an independent entity in the ecosystem, he defined the position of a person in relation to a larger complex system

(37). Dellarobia can be considered as a person who maintains a holistic view of nature. She is fully aware of the interdependence between various organisms and the disequilibrium it creates, if any kind of irreverence is provoked to anyone of them. Whereas Cub pays little attention to topics related to natural destruction. His materialistic thinking persuades him to view the destruction by his dad as a necessity. When she describes the recent landslides that are taking place in the mountains, he sits passively and finds interest in silly things like pulling wool threads from the knees of his jeans. She is very much apprehensive about the large-scale destruction taking place in her neighbourhood. The mountain looks exactly like one blown up by a bomb because of the landslide. She relates the landslide and heavy rainfall that occur in their surroundings as the reverberations of the latest logging by the materialistic loggers.

The affinity for nature is usually a question of gender. Variations in interpreting nature and concern for it are matters that have some associations with gender. While considering the attitude of Mako and Dellarobia regarding nature, the seriousness and dedication that they show towards nature is antagonistic. While performing the counting of dead butterflies, both of them behave differently. Even though Mako is a person with a scientific attitude who has more knowledge about the alterations in the ecosystem, he contemplates the act of counting the dead butterflies as a sheer waste of time. Whereas, irrespective of being an illiterate girl, who lacks scientific wisdom and is not aware of the progress of the ecosystem, she adopts a more serious and dedicated approach.

The same gender difference is apparent in the occasion of Dellarobia and Cub's argument on logging. Cub attempts to persuade her by elaborating on the monetary benefits of logging. Whereas, she strongly defies the matter and displays more concern

for nature. She is conscious of the repercussions that the logging industry generates, such as landslides and animal extinction. She states, “we cut down the trees and get ourselves buried in the mud like a bunch of hillbillies” (Kingsolver 239). Regardless of her illiteracy, she is more thoughtful about the menaces an imbalanced environment can contribute. It reflects the inner urge that exists in women to save nature.

Dellarobia can associate even minor fluctuations in the regular pattern of nature with variations in the environment. Everything in nature has significant connections with her life. She observes her shadow while she walks and wonders at the length of the shadow and pronounces that the shadow appears so long because it is winter dusk. She is an excellent observer and the banging of the doors of Bear’s machines shop by the winter wind brings her mind the memories of her father and she expresses sorrow over his loss. She associates the banging of the doors by the winter wind with the one that she experienced during her childhood days at the furniture shop of her father. Natural occurrences are used to link her with her memories.

Dellarobia is very much affected by the deviations in climate and she endeavours to question all the uncertain and irregular things that transpire in her surroundings. She expresses awe over the dry and hot air that appears in cool weather. The air seems so hard and sparks as it can dry a wet cloth in a sudden movement. She feels dreadful about the occurrence and she correlates the incident with the burning trees she found on the mountain. She keeps the matter to herself, as she cannot proclaim it to anyone as it happened during her secret visit. Even if she is not aware of severe environmental disasters such as global warming, there is an inner urge in her that makes her comprehend and interpret the climate change that befalls on her region.

Dellarobia compels Cub to have a look at the trees in the mountain before its devastation. She wants Cub to experience the diversity of that forest and appreciate its beauty. She persuades him by telling him, “There could be more treasure than you think in your backyard” (Kingsolver 28). She makes Cub agree to visit the mountain and they visit the area, along with Bear, Hester, and Peanut Norwood. As others’ intention is purely based on material gains and are thoughtful of the profits that they would derive from the forest, she silently observes the alterations that occur in the climate. She remembers she had never witnessed a bleak November in her entire life. She links the shedding of the leaves by the trees at an early stage as the consequence of unrelenting rain. She searches for the orange flames that she perceived the previous day. She finds the orange flames hanging on tree trunks like a ribbon and others avoid the occurrence, as they are busy measuring the monetary benefits of their contract. Her logical observation makes her apprehend that nothing has changed in the forest except greater barrenness has got hold of the entire trees. She attributes the same effect to herself as she is experiencing consciousness in each moment and the occurrence of a strange flame in her dreams.

The decisions and experiences borne by the male and female gender are viewed in diametric oppositions. “The distinction made between reason and emotion ... has affected men and women alike, although in different ways, with men taught to consider themselves and their actions as the embodiment of reason; women and their actions as the embodiment of emotion” (Primavesi 130). This same notion can be outlined in the male and female characters in the novel. Both Dellarobia and Hester get thrilled at the sight of the butterflies. Dellarobia feels very much relieved as she discovers that the orange flame is nothing but a fleet of butterflies. Hester appreciates the sight and denotes that it is one

of the greatest sights in the morning. Whereas the male members in the group get very much annoyed at the sight and they opine that whatever the things might be it is not for good and it will obstruct their plan of logging and they may have to face prohibition from the part of the government if those creatures belong to some endangered species. They openly curse the creatures and devise plans to culminate their existence. Whereas Dellarobia feels elated as she gets some moments to spend with the butterflies. She takes one butterfly in her hands and keeps it closer to her eyes, and admires the beauty of those divine creatures. This incident reverberates the emotional and material concern of the female and male gender toward nature.

Throughout all her life Hester was a mother-in-law who preserved disgust for her son's wife Dellarobia and she used to invent mistakes in everything she does. But the sight of butterflies brings a transformation in Hester's attitude and she instigates to admire and appreciate Dellarobia's discovery of the butterflies. The ecofeminist attitude of Hester is revealed here, and she grows thrilled by the sight of the radiance of those monarch butterflies. She feels veneration for Dellarobia and she announces that "Lord Almighty, the girl is receiving grace" (Kingsolver 78). It is nature that executes a major role in altering Hester's attitude towards Dellarobia.

The actions of some of the other characters in the novel affirm the veneration that the female gender retains for nature. The "ragamuffin girls" join Dellarobia in the protest against the extinguishing species and fight the life-threatening force of logging and global warming. A campaign named "Knit the Earth" or "Women Knit the Earth" is organized by the ragamuffin girls from England. They knit monarch butterflies from recycled yarn gathered from old Crayola- orange sweaters to retrieve the elegant and aesthetic marvel.

By this act, they struggle to knit a world that extends respect for both the organic and inorganic whole (Kingsolver 414). In *Encyclopedia of Environmental Ethics and Philosophy* Callicott and Frodeman state:

Ecological feminism is not a fixed position or event; it is a way of thinking and set of practices in transition, a social movement in the process. Ecological feminism is about the gendered journey to continually seek out and expose (objectionable) male bias wherever and whenever it occurs in feminism, environmentalism, environmental ethics, and environmental philosophy. (229)

The ecofriendly and nature restoration activities initiated by the ragamuffin girls can be recognized as a feminist attempt to save the environment. By knitting the butterflies in orange colour, they try to question the life-threatening exercises of patriarchy against the monarch butterflies, who are moving to an irreversible extinction.

The book that Preston reads titled *Magnified Face of the Common Housefly* discloses the ecofeminist tone of the author. The author attempts to make a comparison between the female gender and the ants. He designates the flight of ants through the term “The Marriage Flight”- “At certain times of the year, the nest has winged individuals, both males, and perfect females” (Kingsolver 425). Many resemblances can be ascertained between the lives of ants and Dellarobia. She was a perfect girl who possessed many aspirations and ambitions before her marriage. But married life becomes a trap for her. She feels her wings clipped by some invisible forces like the ants who lose their wings after mating. She is held back by the duties and responsibilities of her family life and her actions become a mechanical plan by someone who owns the power. Kingsolver alludes to the same dilemma experienced by the ants: “After mating, the

female tears off her wings and crawls in a hole to start her colony. After rearing a small nucleus of workers, she becomes an egg-laying machine” (425). After getting married and giving birth to children, Dellarobia too shrinks herself to the shallow domains of her home and sacrifices all her ambitions and aspirations for the maintenance of her family.

Dellarobia surrenders everything for the smooth functioning of her family matters. When she visits the church, she tries to note down her losses. She bitterly accepts that she lacks all the potential that is desirable to be accepted as a part of public life. She notices the mannerisms of the people while they behave in public. She finds that “Whether friend or foe hardly mattered; they ate with their mouths closed and wore shoes without Velcro. She hadn’t been much of a player in public after the diner closed six years ago” (Kingsolver 81). She is ignorant of how to get acquainted with new people and places or to communicate with them. She does not know table manners or the public way of behaving. She realizes the reason behind her inabilities is that she is a dedicated mother of two who has sacrificed her choices and happiness for the wellbeing of her husband and children. After the household duties and works on the farm, she seldom develops a chance to go outside and be familiarized with the public mannerisms. She rarely cares about her physical or mental needs. The image of the ewes in the pasture that are forcefully stopped by the lambs to release milk from their breasts can be associated with her. They are restrained from any movement and they sacrifice their life to nurture the lambs. She calls that life “a gut-twisting life of love, consecrated by the roof and walls that contained her and the air she was given to breathe” (Kingsolver 82). Like them, she too experiences a restraint in her freedom of movement.

The caged condition of Dellarobia is revealed while she converses with Dovey over the phone. While both of them discuss the entomologist, Ovid Byron, on the Appalachian Mountain, Dellarobia thinks of inviting him for a dinner. She shares her decision with Dovey and Dovey makes a comparison between Dellarobia and an incident in a movie where a white girl invites Sidney Poitier to her home. Dellarobia could hardly remember the occasion and she feels grief over not remembering even familiar names and movie titles. As a child, she used to visit the library in their neighbourhood and got access to plenty of books and movies there. She enjoyed the feeling very well and got exposure to various people and lifestyles. The library is a door that connects her with the entire universe. After her marriage, she rarely gains a chance to watch a movie or read a book. Dovey comprehends her situation and she comments, “sounds like the world is beating a path to your door” (Kingsolver 151). The lines echo a woman’s fate to follow a path in her life that is designed by others.

The environmental consciousness in Dellarobia assists her to be a strong woman by acquiring self-confidence. Her appreciation of the environment attracts Dr Byron, an entomologist who arrives on the mountain to investigate the migration of the Monarch butterflies. She is entrusted with a new job as an apprentice to Dr Byron in his research. In the course of the exploration, she learns many things about nature and the entire universe and it encourages her to achieve self-confidence and makes her more self-conscious. She plays a vital role in preserving the Monarch butterflies by transmitting them to a more convenient ambience for their survival. Her participation in the research expands her vision of the environment and makes her more accountable for defending the entire universe. The interaction with nature and natural beings benefits her in exploring

the new realms of knowledge and strengthens her character as an environmentally conscious woman who possesses greater aspirations in her life.

Being an ecological activist, Dellarobia makes a thorough examination of her lifestyle. She intends to make required modifications in her way of living by giving prominence to the environment. She gratefully praises poverty as it enabled her to sacrifice many things which would be a cause of carbon emission. She feels very proud once being a woman who lacks all the household machinery, which causes pollution on a large scale and needs the consumption of a huge amount of electricity or other forms of energy.

The interaction with nature transforms Dellarobia into an independent woman who has greater aspirations and dreams in her life. By taking part in the research, she realizes that there are many things to be explored outside her caged life as a housewife who gets little time for getting familiarized with the ways of the world. She escapes from the life-threatening pit of her husband's house and starts a new life in the urban area with her two children. She recognizes the glory of education and the privileges enjoyed by educated people. The realization that gaining wealth or knowledge can thrust a person to higher social status alters her life completely. She secures admission to a college for higher studies. She admires the advantages of being an earning woman who can spend herself on her needs. She gets a new job in a laboratory with the help of Dr Byron and meets the expenses of her higher studies. It is the environmental consciousness that makes her realize her potential and explore new realms of knowledge. Karen J Warren states how power alters the social position of a woman in society: "Motivated to act on our own, not only as mothers and nurturers but also as leaders in a changing world, we

must stand up as women and become elected to political and economic offices throughout the world, so we can change the policies and structures from those of death to those of life” (113). The empowerment of Dellarobia through education and a decent profession supports her in altering her position in society. She becomes an economically independent and individually self-confident person.

There are close similarities between the life of Dellarobia and the Monarch butterflies. A new beginning for both Dellarobia and the butterflies can be traced towards the end of the novel. The second last paragraph of the novel reflects a new turning point in their life: “Not just a few, but throngs, an airborne zootic force flying out in formation, as if to war. In the middling distance and higher up, they all flowed in the same direction, down-mountain, like the flood itself occurring on other levels. The highest ones were faint trails of specks, ellipses. Their numbers astonished her. Maybe a million” (597). Both of them defeat their deceased conditions and start a new life by ensuring their freedom and enjoying their new surroundings. Dellarobia escapes from her inescapable duties as a housewife working on the farm. She is very much distracted by her life in that muddy pit and craves a transformation from her usual surroundings. Her willpower and consciousness assist her in getting transplanted into a new environment. Like her, the butterflies are very much distressed by the hazardous effects of climate change that they are facing. Both of them adore the new life and start a flight to the new world of freedom, comfort, and happiness: “The insects seem to have come almost entirely to symbolize a positive turning point in one character’s life, a kind of visual background music for Dellarobia’s story” (Clark 177). Thus, the vision of butterflies leads to a new beginning for Dellarobia’s life, illustrating the possibilities of survival in a destructed universe.

The three phase existence of nature and the female gender elaborated by Marko Pogacnik in *Daughter of Gaia: Rebirth of the Divine Feminine*, can be detected from Dellarobia, the Appalachian Mountains and the butterflies. Their lives pass through the “the white”, “the red” and “the black” phases (6). The white phase represents the “wholeness of the earth”, where the earth is a fully developed entity. The red phase denotes the different interactions that are taking place on the earth. Different organisms both positively and negatively affect the earth’s atmosphere and tremor its balance. In the Black phase, the earth behaves as a self-regulatory system by rebalancing itself to a favourable condition for lives to survive (Pogacnik 6). Dellarobia enjoys a peaceful childhood with her parents. She is offered educational facilities and retains great aspirations in her life. Childhood embodies the first phase of her life, where she is a self-confident and ambitious woman. The premature marriage fetches her transformation from the first phase to the second “the red phase”. During this phase, she is observed merely as an object of reproduction. She is deliberated a mother and wife figure in this phase. She sacrifices her dreams and aspirations for her family. She feels restricted in a challenging family atmosphere. Even if she is not highly educated or experienced, she keeps a great affinity and appreciation for her surroundings. She notes down even a slight transformation in the atmosphere. She explores to the Appalachian Mountains as a way of escape. The expedition to the mountains brings the transformation of her life to the third phase. The sudden revelation that she receives from nature stands as a defining force in understanding her position in society. She transforms to a stronger and socially accountable individual after the incident. She endows herself with education and endeavors for the justice of nature. It is the association with nature that makes her get

acquainted with the scientist, Ovid Byron, and extends her horizons of knowledge and transforms her into a liberated and self-reliant woman through a decent career.

The same three-phase journey can be perceived in nature that the novel deals with. At the beginning of the novel, the Appalachian Mountains stand as a representation of the sacredness of nature and its diversity. The wilderness in the mountains mesmerizes the Monarch butterflies who are compelled to migrate from Mexico because of extraordinary climate change and global warming. The second phase of the mountain's life experiences a disequilibrium. Landslide and heavy rain occur in the region because of logging and other developmental activities of greedy human beings. In this phase, the entire region appears as a heap of waste with plastics and other man-made things. In the third phase, nature rebalances itself and makes an appropriate condition for the survival of other organisms especially, monarch butterflies. The monarch butterflies also stand as an element of nature that experiences this three-phase journey of its life. The Mexican climate impends the life of the monarchs, where they experience a threat to their life and a huge decline in their species' population. As a matter of survival, they migrate to the Appalachian Mountains. Their existence in the region is also questioned by the intolerable climate. Later, Dr Ovid Byron and Dellarobia transfer them to an atmosphere conducive to their survival. The new region offers a new beginning for their lives. The flight of the butterflies and Dellarobia's flight in career proposes a sense of freedom and their attempt to recapture their lost position.

Margaret Atwood's *The Year of the Flood* depicts the current issues faced by the planet and how these issues affect us in the future and at present. She attempts to throw a light upon the deteriorated life experienced by the planet and also the female gender. At

the very beginning of the novel, Atwood states that the waterless flood has devastated everything and only two protagonists Ren, a sex club worker, and Toby, a God's Gardener have survived. Both characters depict the ecofeminist aspects of the novel. Atwood endeavours to make us realize how the earth and the female gender are so interconnected that the special power of production and reproduction is attributed to both creatures and why the earth is called mother earth. Atwood efforts to draw an ugly picture of this devastated world and stresses how the covetous minds of the self-centred people have instigated their doom and the doom of nature. "Atwood's stories combine realism and whimsy, fairy tale, myth, and fantasy as they represent the lives of contemporary women and men struggling to cope with an often puzzling world. Many of the stories contain striking symbols that stand in dramatic counterpoint to the routine or dulled lives of the characters" (Stein 125). Thus, the novel depicts the plight of women in a destructed environment.

Atwood portrays a post-apocalyptic world where society is administered by individuals who have a less concern for values and morals. The world has witnessed an end of a civilization that offered much importance to social norms and ethical values. In the new world, women are just objects to satisfy men's sexual desires and nature is regarded as an entity to promote everything for the survival of human beings on earth. In the novel, lots of women are working as prostitutes for their livelihood. The men are only concerned about their physical desires and they have less respect for the female gender. The character of Toby exposes the ecofeminist aspect of the novel. Toby spends her childhood in a semi-country, in a calm atmosphere with her parents. Their house is surrounded by ten acres of land full of trees. The land is filled with biodiversity and the

atmosphere was thrilled with the dance of many rabbits and deer. There is a vegetable garden in her mother's courtyard. Her life is filled with enjoyment and happiness. Her father is working as an air conditioner mechanic and her mother is running a 'HelthWyzer' franchise. The tragedy in their life starts suddenly when a group of corporate occupies the entire area. They demand her father sell them their land. Being a nature lover, her father refuses to surrender to the will of materialistic and profit loving corporate. Suddenly, her mother develops a particular illness by eating certain vitamin supplements distributed by the 'HelthWyzer'. They spread various illnesses through their vitamin capsules to create more customers. They also make the medicines for curing that illness and gain huge profits out of it. Toby's father devotes a substantial amount of money to the treatment of her mother and he loses his job as he cannot go to work regularly. They develop debts and are compelled to sell their beautiful house to the corporate. Her mother dies of the intensity of the disease and her father kills himself out of grief and the fear of debts. The innocent Toby is left alone, and she leaves the place not knowing what to do. The distance from her native land- a natural surrounding filled with biodiversity pushes Toby into a helpless woman.

Toby did not have a pleasant life, even with her parents or after their death. Debts and insecurity are the only things that are left for her. Poverty induces her to drop out of her college. She does not have any relations or siblings in this world. She suffers an utter financial crisis- no property or savings are left for her by her parents. Society expects such a woman to sell her body for livelihood. But Toby does not want to go for such a disgraceful job. She attempts her best to get decent employment. She destroys her identity card as she fears that the debtors or the legal authorities named 'CorpSeCorps'

would find her. She cannot earn a better job as she does not have a perfect identity. She feels relieved when she gets a new job at the ‘SecretBurgers’. She believes that the new job will help her to get rid of starvation and will provide earnings to pay off her rent. But later she realizes that the new job is just a deception, and all she has to face there is torment. Her master, Blanco, uses her to satisfy his sexual needs. Toby suffers a lot of physical, sexual, and mental torture from him. The poor and helpless women are viewed as mere objects of sex in a consumerist society. All the sexual harassment that Toby suffers from Blanco designates the commodification of women. The voices of these destitute and helpless women are silenced by the economic and physical power of these elite groups in a patriarchal society. Toby does not receive any legal protection from the part of authorities. The authorities are actually to support the elite classes.

The practitioners of ecofeminism envision a land where women lead a peaceful life, ensuring a serene existence for nature as well. Val Plumwood elaborates the features of such a land in *Feminism and the Mastery of Nature*: The land is characterized by a lack of hierarchies among humans and between the non-humans and the humans. It is a part of the part of earth where individuals maintain a healthy interaction between each other, and the nature retains its mystery, supremacy and wholeness. The part of the earth is not controlled by the materialistic and technological consciousness of the human mind (7). Such a land has a constructive aspect to bring a positive transformation into a woman’s life. The ‘EdenCliff Rooftop Garden’ maintained by the gardeners can be considered a part of such a land. Toby’s life undertakes a complete transformation when she joins the God’s Gardeners. She can take rest and rejuvenation in the garden. The sight of the blossomed plants, fruit-bearing trees, and fresh vegetables enhance the colour of

her colourless life. The songs of birds, bees, and other insects in the garden support adding rhythm to her life. She can get over the grief that she has been feeling before she reaches there. She renovates to a stronger and more ambitious woman and her social status also grows heightened.

The speech of Adam One during the occasion of the feast of Adam One and all primates illustrates the transformed character of Toby. “We also celebrate the promotion of Toby to full teaching status. Through her hard work and dedication, Toby has shown us that a person can overcome so many painful experiences and inner obstacles once they have seen the light of Truth” (Atwood 41). The statement expresses how the communion with nature has facilitated Toby to get transformed herself. Sandilands discusses the role of nature in helping a woman to recognize herself:

In ecofeminism, the fact of being a woman is understood to lie at the base of one’s experience of ecological degradation; of one’s interests in ecological protection, preservation, and reconstruction; and of one’s “special” ecological consciousness. Whether the important elements of that “being” are seen to reside in biological, social, ascribed, or imposed factors is immaterial to my argument; the crucial thing is that identity, similarity, and belonging to a specific group are the primary foci of political speech and the basis of political legitimacy, and that the achievement of the freedom to express that identity without oppression is a key political goal (as opposed to, say, a focus on individuality and a desire to put specific identity aside to achieve a common good, an equally problematic but nonetheless different political logic). (5)

Toby witnesses many instances of the maltreatment of animals by materialistic human beings for their egoistic needs. An instance occurs while she lives in a small rented room. The ground floor of the building has been witnessing one of the most merciless and brutal acts- the killing of endangered animals. The flesh that was used for making burgers at the SecretBurgers was usually by killing endangered animals. There was a rumour that even human beings were killed for making burgers there. All these harsh experiences help to shape the nature lover in Toby and the God's Gardeners aid her to become more ecologically awakened. The presence of these nature-loving people enables Toby to work as a group for a common cause.

Before joining the 'SecretBurgers', Toby attempts to make a living by donating her hair and even selling her eggs. Egg donation is developed as a part of materialistic culture. The egg donation equips Toby to earn a huge amount for her survival. She donates her egg twice. But only later does she realize she has become sterile and cannot produce any children in the future. The process occurs with the tactful intervention of the corporate. They cheat the destitute women by proposing huge amounts of money and spoiling their life forever. Their primary intention is to get plenty of money through the exploitation of those innocent beings. The intervention of the corporate in Toby's life threatens her identity as a woman and damages her reproductive right, which a woman ascribes by birth. Like the corporate that occupied her family property and destructed its natural habitats by constructing various buildings and making them barren with different chemical pollutants, another corporate plays a role in making Toby infertile and depressed.

Toby possesses great admiration for nature, and she spends her time nurturing the beauty of the same. She is well educated about the uses of various medicinal plants. She possesses knowledge of natural ways of curing diseases. Toby observes her surroundings after the flood and she feels that the entire area has experienced a complete transformation. She finds her surroundings quiet. The streets, which were filled with motor cars once now, seem an empty corridor with no visitors at all. She listens to the coherent sounds of the birds that flutter around the windowpanes. She suspects whether these birds have noticed the silence or the absence of vehicles around them or they find happiness in their new circumstance. She does not know about the current mood of those birds. If she was familiar with their mode of communication, she might have conversed with them.

Toby has a heart that possesses greater adoration for her fellow beings. The grief-stricken and marginalized people visit her frequently. All these people derive solace from her. She has the magical power of comforting the sad minds of those visitors. Her garden also affords a kind of refreshment for the visitors. She often greets her visitors with open arms and an affectionate heart. Even during the days after the pandemic, Toby listens to the voices of those visitors and she is ready to offer them help whenever it is needed:

“Go to sleep,” she says out loud. But she never sleeps well, not since she’s been alone in this building. Sometimes she hears voices — human voices, calling to her in pain. Or the voices of women, the women who used to work here, the anxious women who used to come, for rest and rejuvenation. Splashing in the pool, strolling on the lawns. All the pink voices, soothed and soothing. (Atwood 10)

Toby scans her entire garden with the help of a binocular and she gets very much affected by the devastating state of her garden. The garden, which was once filled with soothing musical chants of the birds and fresh-looking flowers and evergreen plants, has now become a hell with an ugly face. The flower buds are bound with sow thistle and burdock. Aqua kudzu moths have occupied the space of butterflies and the fountains which splashed with dancing waters once are now stagnant with rainwater. The tree, which stood with a welcoming hand near the window, has broken in its arms by a minivan that crashed into it. The new appearance of the garden disappoints her. She discovers irregular mounds on the ground with pieces of clothes and cracked bones. She identifies those rags as the leftovers of those people who shouted for help during the time of disaster, and she expresses her helplessness over her inability to help her. Toby turns too much distressed about the new nature, which is preoccupied with different annihilation. Toby yearns for a tranquil nature which is filled with the musical chants of various birds and colourful flowers.

The ecocritics consider decomposition as an inevitable process in the ecosystem. It is decomposition that maintains the balance of the environment. Marci Bortman considers decomposition as “a major process in nutrient recycling” (355). He describes the process of energy transfer from dead and decayed organisms- “dead plants and animal materials are consumed by a myriad of organisms, from mice and moles to moles and beetles, to fungi and bacteria. Enzymes produced by these organisms attack the decaying material, releasing water, carbon dioxide, nutrients, humus, and heat. New microbial cells are created in the process” (Bortman 355). Toby finds the constructive aspects of all the creatures on earth. She believes God has created everyone with specific objectives and

each of us is indebted to fulfilling God's wishes. She believes in the principle of interdependence between various organisms. All the creatures in this world are interrelated and the lack of balance in one part may lead to the imbalance of the entire system. Toby contemplates that death is inevitable, and it is a way of balancing the ecosystem. Usually, vultures are deliberated as ugly creatures who feed on dead bodies. Toby here stresses the importance of vultures in conserving the balance of the ecosystem and she attributes a divine quality to the vultures:

The vultures roosting on hydro poles fan out their wings to dry them, opening themselves like black umbrellas. One and then another lifts off on the thermals and spirals upwards. If they plummet suddenly, it means they've spotted carrion. Vultures are our friends, the Gardeners used to teach. They purify the earth. They are God's necessary dark Angels of bodily dissolution. Imagine how terrible it would be if there were no death!. (Atwood 9)

Toby is curious to know the existence of other creatures on earth. After the waterless flood caused the destruction of the entire universe, she was not aware of who else was there. She is not sure about the fact that the persons who exist are her friends or enemies. She perceives the various transformations that transpire in her surroundings and she listens for any unusual sounds. Any deviation from the usual pattern can show danger. She is a staunch believer because small creatures can know in advance the impending disasters that are going to take place in the universe. She believes that if the tiny birds stop their musical treatment and make a fearful voice; it is a sign that the world is going to witness a disaster. Thus, Toby can be considered a person who strongly believes in natural omens and occurrences.

Toby appears very much apprehensive when she goes outside. She assumes that all the creatures in her garden can comprehend her current situation. She feels much disturbed to do anything inaccurate for the garden as she believes that the innocent trees, talking beetles, stagnant stones, and even the eyes in the leaves are so vigilantly observing her and they can sense any slight variation in her normal attitude. She recognizes that her food storage is getting reduced and there is no other way than to depend on her garden for survival. She turns extremely joyful when she finds her plantains are prepared to bear fruits. There are plenty of spinach leaves for her to depend and most of the plants are ready to offer her a meal for a day. She becomes poignant when she finds many green beetles feeding on her spinach leaves and she attempts to put them down. The green beetles lose their lives when she accidentally steps on them. She feels extremely sad about killing those innocent creatures. She makes a customary tomb for them and buries them inside it. She prays for the blessings of their souls and seeks God's pardon for her sin. She is a firm believer in the intrinsic worth of all creatures, irrespective of their instrumental value. She appreciates the role of each organism in maintaining the basic equilibrium of the universe. Each creature has a unique position and is right in the universe and reverence should be shown to each of them. Her attitude strongly reflects the basic tenets of deep ecology:

Human beings, like all lower creatures, exist within complex webs of interaction and interdependency. If people insist on conquering, dominating, or merely managing nature for their benefit or amusement, if people fail to recognize and appreciate the complex webs that hold and sustain them, they will degrade and

eventually destroy the natural environment that sustains all life.

(Bortman et al. 355)

The biocentric attitude of Toby is revealed well when three pigs visit her garden. She comprehends their decision to destroy her garden. At first, she thinks of shooting the pigs, then the environment lover inside her arouses and she hesitates to do it. She thinks they are God's dear creatures and they should not be killed without a justifiable reason. She thinks about the long years of hard work that she put in for her garden to prosper. A painful thought arises in her heart that all this hard work is going to be in vain if the pigs make her garden flat in no time. She is compelled to use her rifle on them as a way of self-defense. She feels very much remorseful after the dreadful act. She feels guilty and asks God's pardon for the dreadful act. The lack of food compels her to saw off a ham. But the environmental lover awakens in her and she remembers her vegetable vow and sacrifices her desire to have a portion of non-vegetarian food.

When Toby reaches the garden, she grows spiritually elevated and discovers the sacredness of her inner soul. "The beauty of holiness complements the holiness of natural beauty... only after discovering the inward sense of grace could a soul begin to understand its part within the larger harmony of Creation" (Gatta, 62). As Toby keeps constant interactions with nature, her physical characteristics also change to the one that has many similarities with nature's dear creatures- plants: "Her own hands are getting thicker -stiff and brown, like roots. She's been digging in the earth too much" (Atwood 18). Spending a substantial amount of time nurturing and caring for the beauty of her garden, she becomes one among them, and her physique also accommodates their characteristics.

Even though Toby is alone and helpless in the old spa centre, she does not intend to leave the place as she entrusts her with the responsibility of fostering the garden. She spends much of her life maintaining, tending, and beautifying the garden. She establishes a kind of spiritual connection with the garden. The garden also offers a kind of solace for her during a time of isolation. Even if she does not find any human beings who have survived the flood, she does not feel like going in search of them. Instead, she considers the plants, animals, and other insects as her fellow beings and spends her life in the company of those innocent creatures.

Toby can be considered a real ecofeminist as she keeps recording everything that happens to nature regularly. She preserves a pink book for the purpose and makes a print of her eyelashes and lipstick kiss on the top of each page. She mentions the names of the Gardener Feast Day or a Saints' Day related to that day. She also records the happenings on Saint's Day such as which tree is planted on the day, which seed is harvested, which all creatures come as a guest in the garden, etc. She is an expert observer of nature and notes the diverse phases of the moon in her daily notes. Even though she is working in the spa and finds little time, she does everything with great delight and enthusiasm.

Ren has been working as a trapeze artist in a sex club named Scales. It is her helplessness and poverty that compels her to choose such a disrespectful occupation. Ren can be considered the finest example of a woman from a wealthy family devoid of any fortune who is compelled to adopt sex as a means of livelihood. The consumerist society in a patriarchal system compels women to sell their bodies to find a way of living. Ren can be observed as a victim of this consumerist attitude. Nature takes a hand in Ren's life. Nature brings justice to her life through the flood. She feels very lucky to be working

there and gets locked in the Sticky Zone when the great disaster occurs. She has been shut off from the outside world, and she gets secured from the aftermaths of the flood. Even though she lacks any form of communication with the outside world, she feels very much comfortable in her present situation as she is getting enough air, water, and food and is secure from the lust of men.

Ren experiences a state of infinite freedom after the great flood has engulfed everything. She considers the flood as a way of blessing that justified her position in society. The flood assists her in overcoming all the obstructions that curtail her liberty as a social being. She finds a great space for writing. Earlier, any form of writing was denied and everyone was afraid to write. Writings in any form would be explored by the enemies, and the writers would be slaughtered and condemned by them. They even destroyed all forms of writing, whether it was as books, digital objects, or any other written materials. They fail in their attempt to deteriorate the spirit that existed inside those writers. Through their oral preaching, they carry it to others. Ren assumes that most of the opponents might have dead now and it is safe for her to express her spirit through her writing. She experiences the absence of writing materials and she uses her eyebrow pencil and wall in place of paper. The first thing that she writes is her name in a poetic form and she announces her identity. The waterless flood sweeps all the discriminations that prevailed in the society and opens a welcoming door of possibilities in front of her. She attempts to reassure her identity in the present world.

Ren's love for fellow beings is revealed during the occasion when Amanda shows her a bracelet made from two jellyfish. The bracelet is designed by tying two jellyfish together. An aerator is fixed at the place where the bracelet is fastened. The fish gets

oxygen through it. Food for the fish needs to be added twice a week. If no food is added to the fish, one jellyfish will eat the other out of hunger. The remaining jellyfish, too, will die of starvation after a few days. Ren feels so horrible while listening to the functioning of the bracelet. She dearly loves the bracelet, but she refuses to accept it out of fear. She fears she is not in a suitable position to buy the food for the fish and it will die out of starvation. The incident reveals Ren's love and admiration for the life of fellow beings. Nuala is another character who preserves a greater affinity toward nature. She is one among the God's Gardeners, who believe in the intrinsic worth of all creatures. She is working as a teacher in the school run by the God's Gardeners. The subjects that she teaches itself echo the ecocritical tone. She teaches Buds and Blooms Choir and Fabric Recycling. Hemenway argues that "Seeing the world as an ongoing process of ecological design transforms how one approaches the basic problem of supporting humanity. Ecological knowledge is now being used to develop new living technologies that can repair damaged environments and recycle wastes into beneficial new products" (xii). By teaching fabric recycling, she believes in the principle that nothing is ended up being a waste, every object has alternate uses and it can be reused by making slight modifications.

When the elder boys in the school sing songs about butcher and sausage to spend their leisure time, Nuala gets furious and scolds them. It is because of the feeling that the song is about meat and meat eating is prohibited among God's Gardeners. They only encourage the consumption of vegetables and fruits among their disciples. To save water and soap, they discourage the washing and drying of clothes every day. Nuala recommends the natural ways of drying clothes. When the children depend on dryers for

drying clothes, she discourages them and preaches that the sun is made for a cause and we have to depend on the sun for such matters. By preaching this, she tries to proclaim the principle that every object is created with a purpose and it has to be revered considering the reason behind its existence.

Ren's mother Lucerne keeps an ecological cult. She enjoys a very luxurious life with Ren's Father. He has been a HelthWyzer corporate and Lucerne always keeps a kind of hatred for him. Ren gets exposure to enjoyments in all forms while living with her father. But her mother does not enjoy that life. Lucerne is a person who follows a life that is totally in harmony with nature. She gets up early in the morning and enjoys watching the sunrise. She likes the colour of the sunrise and even paints one room in her home with a sunrise colour. She pays much attention to keeping the ambience of her home very near to nature. Being married to a HelthWyzer corporate, she lacks all kinds of sensual pleasure and gets lesser chances to mingle with nature. Even though it offers many luxuries and enjoyments, Lucerne is not much satisfied with the life there. She considers it a blessing to meet Zeb, and she runs away with Zeb to join the Gardeners. She invents a reason to justify her action. She believes that the Gardener's life is the best life for human beings and also for other living things in the universe. She desires to preserve the happiness and healthy existence of all living creatures. She does not want to offer the earth a disgraceful end.

The Pythagoreans are against the act of killing any living organism for eating. They held the view that the "universe is spherical, animate, ensouled, and intelligent" (Callicott 356). According to them. "Foods that could be consumed without killing, so far as they knew, such as milk, cheese, honey, wine, oil, the flesh of fruits and leafy

vegetables, they regarded as permissible. The reason they adduced for not killing was that all living things have the same souls, and after death, these souls pass into other bodies” (Callicott 356). The same Pythagoras cult is found in the gardeners. The gardeners are forbidden to eat anything with a face as it possesses the soul in it. The same attitude in Ren is revealed well when she doubts eating the ChickieNobs at dinner during the night before the Great Flood. She eats half of it on the advice of Mordis that the ChickieNobs are vegetables that grow on stems.

Patriarchy uses certain linguistic terms associated with the animals to convey the subordinate position of women. Callicott and Frodeman elaborate on the same idea in *Encyclopedia of Environmental Ethics and Philosophy* state that “Animalizing women in a patriarchal and naturist culture in which animals are seen as inferior to humans reinforces and authorizes women’s inferior status” (229). Many of the linguistic elements showing the female characters with animal or natural objects can be traced from the novel. While Toby and Rebecca discuss Blanco’s preference in choosing girls, Rebecca remarks that “he just like the kittens, not the old cats” (42). Patriarchy stresses the gentle aspects of women and employs gentle animal names for attractive women and indicates the unattractive women with harsh or grown up animals. Patriarchy uses some nature-related terms to express the exploitation of women. “the exploitation of nature and animals is justified by feminizing (not masculinizing) them; the exploitation of women is justified by naturalizing or animalizing (not humanizing) them” (Callicott et al. 230). Blanco uses many nature and animal-related terms to exercise domination over Toby. To convey the news of her promotion, he uses the statement “Skinny bitch, I’m promoting you” (Kingsolver 44). When Toby describes her disagreement to be submissive to

Blanco, he expresses his rage towards her by saying, “I’ll snap you like a twig” (45).

Here, the inferior position of women is articulated through various words and phrases that are connected with animals or nature.

Women are supposed to possess better knowledge of various trees and their uses. Women have that aptitude to distinguish various kinds of plants and also to recognize the multiple uses of plants. Callicott and Frodeman discuss the ability of women to identify the multiple aspects of a tree in *Encyclopedia of Environmental Ethics and Philosophy* and argue that women have developed such a talent by being closer to nature devoid of any aid from science. They state: “Their knowledge is not the ‘justified true belief’ of an impartial independent, detached, objective observer, idealized in mainstream epistemology and philosophy of science. What they know is gained through their daily, concrete, felt, lived, partial, attached, involved, relational experience as primary users of the forest” (230). Such an ability can be traced to the character of Pilar. Pilar possesses expert knowledge about various medicinal properties of mushrooms, poppies, and other herbs. She employs these medicinal properties in treating various health problems among the gardener folk. Thus, most of the female characters in the novel are said to keep some concern for nature and nature plays an imperative role in determining the destiny of these characters.

Carl Hiaasen’s *Skinny Dip* portrays the exploitation endured by nature and the female gender in a male dominated society. The novel can be considered the best illustration of how self-centered human beings abuse nature and women in their endeavour to secure some material or selfish resolutions. The female protagonist Joey Perrone’s attempt to bring justice to herself and nature can be pursued from the novel.

Both Joey and the Florida Everglades, which represents the environment in nature can be deliberated as the sufferers of the patriarchal and egocentric perspective of human beings for monetary benefits.

Environmental lovers give equal importance to the existence of all organisms in the universe. They underline the relevance of sustaining the biodiversity in the environment. Marci Bortman in his *Environmental Encyclopedia* discourses the importance of conserving the lives of all organisms and proposes that “the genetic diversity found in insects and plants in tropical rain forests is to be protected not (only) or merely because it might one day yield a drug for curing cancer, but also and more importantly because such biodiversity is valuable in its own right” (Bortman 355). Joey Perrone is an ardent supporter of non-human beings and nature. The aspect is exposed at the opening of the novel itself. When an interruption is caused in the departure of the ship that they travel on because of a raccoon, Joey does not feel any rage nor asserts any intolerance in the matter. She feels for the raccoon. Her biocentric attitude is revealed when she expresses her joy that the Animal Control team could not take hold of the raccoon. “Despite the inconvenience caused by the raccoon, she’d found herself rooting for the addled little varmint” (Hiaasen 16). Joey’s outlook can be considered more closer Kerry H. Whiteside’s view on ‘Nonanthropocentrists’:

Nonanthropocentrists’ assertion that nonhumans have morally considerable interests does not change their understanding of what nature is. Nature is centred in the sense that it consists of things- individual life forms, species, ecosystems- with determinate, self-perpetuating identities. Paying proper respect to natural things requires accepting them as they are, independent of our desires and

anthropomorphizing sentiments. Whatever exists naturally has a claim to continue existing as it is, on terms consistent with the existence of all other natural things- including humans. (45)

Nonanthropocentrists display admiration for the life of all organisms in the universe. They legitimize the right of all organisms to flourish and progress accordingly. Chaz can be considered to possess an anthropocentric view of life. The stance that Chaz holds during the raccoon episode manifests his anthropocentric prospect towards nature. Chaz acknowledges his disgust towards the creature and condemns it for “rabies” (Hiaasen 16). By accentuating the hostile aspect of an organism, Chaz is trying to stand against the innate worth of nature.

There is an immense difference between the perception level of Joey and Chaz. Joey prefers to devote her free time in reading books whereas Chaz is more absorbed in skiing. Chaz decides to have a cruise to celebrate their second wedding anniversary. Joey no longer appreciates the decision, and she aspires to spend alone time with her husband in some tranquil areas. It is out of compulsion that she reconciles to take the cruise with him. They barely consume an hour together, even if they are on the ship a whole day. It is the regular pattern in their married life to spend frequently in arguments about silly matters. Chaz often behaves as suppressive toward Joey, and he even makes her take part in sex forcefully. The married life is distressing to Joey, and she often loses her voice in taking decisions concerning her personal matters.

The contrast in personality between Joey and Chaz can be detected in the attitude that they hold in their relationship. Being on the ship, Joey feels a passion to flirt with one of the cabin attendants named Tico. But later she suspends the act as she values their

marital relationship as something cherished. “She resolved to immerse herself avidly in all aspects of her husband’s world and to become what the self-help books called ‘true life partner’” (Hiaasen 34). During the cruise, she recalls how often he deceived her. She does not even feel any resentment toward Chaz, even if she was cheated by him several times, and she knows the fact well.

The weather during the journey often turns positive for Joey. Chaz had planned to toss her in the sea at the outset of the cruise itself. He had proposed the act to happen somewhere between the Nassau and San Juan with the intention that her body would be carried over to somewhere outside the US jurisdiction. But the weather appears translucent, and it makes the outside deck filled with a lot of observers for its beauty. The incident forces Chaz to drop his plan and extend it to some lonely moment where there is no observer for the obnoxious act that is going to happen. The vicious act occurs around three hours later when the ship leaves the Key West. There occurs a heavy rain, and it makes the other viewers get inside. The rain turns out to be a boon for Joey as Chaz tosses her there and it makes her rescue to somewhere in the US jurisdiction and reaches near Mick Stranahan, who helps her to plan her coming tasks in a better way (Hiaasen 19).

The patriarchal society expects women to be more subservient and ignorant. Those who try to cross the boundaries would be punished violently and mercilessly. It is Joey’s observation that persuades Chaz to kill her by drowning. He has an opinion that “his wife had class, no doubt about it. If only she hadn’t been so damn... observant” (Hiaasen 21). Joey is a skillful and educated girl who has greater knowledge in various

fields. Chaz hates her observation skill as she discovers his deceitful plan for the destruction of the Florida Everglades.

Ecofeminists argue that nature and its organisms extend protection to those who keep an affinity towards nature in their inner hearts. The same idea is revealed when Joey is tossed into the sea, which is an abode of various dangerous sea organisms. She attempts to swim over the sea with the thought that “very soon she would drown and be devoured by sharks. Out here you had the big boys: blacktips, lemons, hammerheads, tigers, makos and the bulls” (Hiaasen 23). Even if she encounters sharks during her journey, the beings spare her as they sense her inner self that her disaster is caused by her strong stand for protecting fellow beings.

Joey encounters a strenuous life from her childhood itself. She is orphaned in her early childhood. Her parents die in an attempt to save a bear that was affected by bicuspid. They were running a casino resort that was famous for a Russian dancing bear act. When a bear gets affected by the disease, they transfer the being in a Gulfstream jet to an expert veterinarian. On the way return, the plane crashes and it causes the death of both of her parents. Later, she loses her husband Benjamin Middenbock in a parachute failure during skydiving. The deaths leave her with more wealth, whereas her life remains unpleasant afterwards. She desires to establish a regular life with ordinary people. Even if she is rich, she spends a modest life which provides more priority to work.

Joey is an environmental lover who carries greater affections towards nature. It is her admiration towards nature that connects her with Chaz. She grows attracted to Chaz when he informs her he is a biologist working with a group of scientists who try to restore the Florida Everglades from destruction. She feels fascinated for his participation

in such a lofty mission as saving the destructed wilderness in the Florida Everglades from profit-loving polluters. The marriage with Chaz also turns into a failure as it curtailed more of her freedom, and they cannot establish a rapport in the relationship. Chaz does not consider marriage a sacred thing. He treats Joey as a servant for acquiring his selfish needs. She does not turn dissatisfied with his ill treatment; otherwise e, she behaves more strongly and firmly believes that she can win her husband one day. For that, she gets immersed in all the affairs of Chaz and she wants to be a “true life partner” for that sake. But unfortunately, he avoids any conversation with her except for compelling her for forceful sexual acts. Joey lacks interest in talking to him and she feels that the more she “had listened to him really listened- the emptier she’d felt” (Hiaasen 34).

Chaz can be considered as a representation of a patriarchal mental outlook that subordinates the worth of women and nature. Irrespective of being a scientist, Chaz maintains little apprehension for nature and its conservation. He contemplates everything as money oriented, which lacks any ethical or moral consideration. He displays little admiration for nature and natural problems. He shuts his eyes against the large-scale destruction done to the Everglades by avaricious pollutants: “For a scientist, Chaz seemed dishearteningly blithe, self-centred, and materialistic. He rarely speaks of his work in the Everglades, and he seems largely unfazed by the rape of the planet. He displays no anger about the push for oil drilling in an Alaskan wildlife refuge” (Hiaasen 34). The character of Chaz stands for the anthropocentric view of nature, which only ruminates the materialistic aspect of objects.

Joey is unable to establish a connection between Chaz and herself. She pretends to like her husband’s choice and attempts to be a perfect life partner throughout their two

years of married life. Joey becomes doubtful of the meaningfulness of their matrimonial link. She often questions the advantages of their married life, but she fails in her attempt to answer the questions and accepts the self-centered life offered to her by Chaz. She repeats the same queries to herself during their cruise and she later changes her mind and accepts her fate. The weather heavily influences her and it increases her intensity of depression. She is so much closer to nature and its alterations affect her in a pessimistic or optimistic way: "The slate clouds and the drizzling rain had depressed her, and all she'd wanted to do was go back to the room and crash" (Hiaasen 35). The weather signals her the occurrence of some dangerous incidents.

There is an indirect link between non-human beings and the female gender. The animals can sense the intention of the people who are approaching them. Joey is so much closer to nature and other non-human beings. The fact can be best illustrated when she reaches the island. She becomes partially blind because of her long travel and floating through the saltwater. While she is conversing with Mick, she expresses her doubt regarding a wet dog. Mick confirms the fact and informs the presence of a Doberman there and tells her that the most interesting fact regarding the dog is that it does not bite women. The Doberman's attitude reveals the implicit connection that exist between women and other non-human organisms.

Joey has been very rich since her childhood itself. But she never wanted to lead a life that is based on all luxuries or enjoyment. She spends a portion of her wealth on charity works by helping the needy and the poor. Nature and other organisms in nature have always been a concern for her. She gets immersed in various environmental protection activities. She resolves to donate all her properties to an environment

protection trust named 'The World Wildlife Mission' after her death. The trust is mainly focused on saving the endangered species of pandas and penguins. Joey is very much interested in saving endangered species and protecting wildlife. That interest makes her intervene in Chaz's affair with Florida. But he is not willing to share anything about the Everglades with her. His unwillingness and negligence to the problems caused by the pollutants in the Florida Everglades exposes the materialistic outlook of men in a patriarchal society.

Joey's concern for the ecosystem is reflected while she attempts to escape from the island. Joey steals a boat owned by Mick Stranahan for the purpose. She also takes apples and bananas from his kitchen. The nature lover in Joey is revealed well when she eats the bananas. Even if there is no one to watch or take hold of her, she is very keen on doing justice to nature. She keeps the banana peels under the seats of the boat without throwing it directly into the sea, as some passengers do when there is no law or practitioners to catch the lawbreakers during times of violation. She does a theft to the human being by stealing his boat and foodstuffs, whereas she was afraid to do any injustice to the waters as she believes that what one gives shall be returned to him. John Gatta speaks of the same virtue:

There may be something like virtue even among thieves. Rule-based ethics likewise has a necessary function in the practical governance of societies. Yet true virtue... to embrace nothing less than the well-being of everything that is... True virtue finally has more to do with a disposition of heart than the commission of individually worthy deeds, more with a vision of symbiotic linkage among

elements composing “the great whole” of our moral universe than with reasoned choice or the satisfaction of legal duty. (Gatta 66)

As Joey leaves the island, Joey ensures that there is no one watching her disappearance. She finds the Doberman watching her eagerly and excitedly. Whereas the Doberman gives her positive applause without announcing her departure through barking. She senses its excitement through its bodily expressions, such as ears pricking and butt wiggling. She feels some kind of affinity towards the being and bids farewell to it by waving her hands. The gestures and responses of the dog reveals the hidden connection that animals possess for the female gender.

The practitioners of ecofeminism argue that the soul of a person and the place where he lives are interrelated: “there is no place more influential in the development of the human identity than the place where one grows up” (Dreese 2). The connection with the land is also defined by gender. Joey is a person who always keeps an affinity with her land. After her parents’ death, she is left alone with her brother, Corbett Wheeler, and her greedy aunt. Her brother leaves for New Zealand in search of a better future, whereas Joey stays in Florida, where she spends a part of her childhood. The difference between genders in matters of land connection is reflected here. When Corbett Wheeler leaves his homeland, he does not feel any affection towards it, whereas Joey is very much concerned about her homeland and she is unable to think of a life without Florida’s wetlands, pine trees, wild population, and meadows. She expresses her impotence to get acquainted with a new atmosphere, where she cannot make a quick rapport with its spiritual aspect. Dale Jamieson illustrates the same idea in his *A Companion to Environmental Philosophy*:

That Knowledge and land are intimately bound is a belief widely shared among indigenous peoples, as is the accompanying belief that the natural world is alive, spiritually replete. Consider Alice Benally, a Dine woman who expresses the incomprehensibility of her removal from Big Mountain by commenting that in the proposed relocation site the plants and animals would not know her- nor would she know them. She says: “if we are to make our offerings at a new place, the spiritual beings would not know us. We would not know the mountains or their significance. We would not know the land and the land would not know us” (3).

A woman has an inner urge to experience the pulse of the surrounding nature. She associates herself best with nature and other natural organisms. Even in times of terror, women feel the nature around them and derive a kind of solace from them. The fact can be figured out from the experience of Joey while she travels through the Flamingo fish camp at Everglades being anxious of Chaz’s blackmail: “Although they were speeding through absolute darkness, Joey sensed a pulse of unseen life all around them. The post-Miami hush was so soothing, the night so engulfing. She could not focus on the details of the blackmail. The deeper they drove into the Everglades, the smaller and more absurd Chaz Perrone seemed” (Hiaasen 253). Irrespective of Joey’s affinity and concern to save the Florida Everglades, her husband, a scientifically spirited person, considers the protection of the same as a fruitless task. It is Chaz, who spends more time at the Everglades. A major part of his day is spent at the Everglades to collect various samples. He curses the Everglades when he encounters difficulties in collecting the sample and the statement made by Chaz reveals his contemptuous attitude towards the Everglades: “What a steaming shithole this is! To think that the taxpayers of America are spending 8

billion bucks to save it” (Hiaasen 111). Chaz discards the importance of defending the ecosystem and measures the monetary loss behind its protection.

There is a gender-based distinction that prevails in the admiration that human beings keep for nature. Joey always yearns to visit the Everglades. She had splendid chances for the same as her husband is working at the Everglades. He refuses to take her along, “claiming it would violate the water district’s rules” (Hiaasen 337). He ignores many of the beautiful aspects of the Everglades “except to gripe about the snakes and the insects” (338). Joey enjoys the exquisiteness of the place once she reaches there. The fact shows the gender difference in matters of natural appreciation. While men concentrate more on the dangerous aspect of nature, women consider its attractiveness and beauty.

Ecofeminists believe that treating nature worse is as same as considering a person worse. Joey makes a statement regarding the attitude of Chaz toward herself and the Everglades: “He had betrayed the wetlands as nonchalantly as he had betrayed Joey. He had sold out this greedy swine she’d married- so that megatons of noxious crap could be pumped day and night into the glistening waters below. Maybe for someone as soulless as her husband it wasn’t much of reach,... from killing a place to killing a person” (Hiaasen 338). Joey believes that only a person without a soul can maliciously treat women and the environment.

Women who stand in affinity with nature play a considerable role in achieving justice in their social and political lives: “Women in the Green movement are committed to fighting the big wars- the destruction of nature, imperial politics, militarism, and the like” (Warren 114). Joey’s realization that her husband is destroying nature by working for a corporate and assisting them in causing large-scale destruction in the Everglades,

inspires her to start revenge against her husband. She even puts her life in danger for that purpose. Finally, she turns out successful in achieving the cause of her fight and plays a prominent part in ensuring justice for nature.

The accounts of their house reveal the patriarchal outlook of Chaz. Joey's likes and preferences are neglected while setting up their house. The interior of the house is designed only by considering Chaz's interests. The bookshelf of the house is dominated by golf magazines of varying types. Mick Stranahan does not find any of the books of Joey's interest there. Joey has a passion for swimming and Chaz intentionally avoids a swimming pool in their house. Their house is the only one which is devoid of any swimming pools in that area. Chaz is only concerned about his interests and he does not keep any affinity towards his family or home. Mick observes the absence of any wedding pictures or family photos in the house. Immediately after Joey's disappearance, Chaz takes a great effort in disposing of and throwing out all her items. Joey accepts the facts with great sorrow and announces to Mick that "This was my house, Mick. My life. And he's just sweeping me out the door like I was dirt" (Hiaasen 102). The affinity of Joey toward the house reveals women's inherent attachment to space.

While reaching her home back, Joey takes great effort in observing all the things in her house. While finding the fact that Chaz had better plans to push her out of her home, she develops too much hatred towards him. She comprehends that her marriage is a total failure, and she explores the harsh behaviour of Chaz. She discovers that Chaz's education and doctoral degree were a sheer waste and he does not appear much civilized or reasonable. "The guy is an animal, and I never saw it ... A primitive with a PhD And I was a fool for marrying him" (Hiaasen 102). While observing the house, Joey

comprehends that Chaz has never fed the fish in the aquarium since she left the house.

The aquarium turns into a stinking abode of those tiny creatures. Even if she has reached there in a more fearful circumstance, she feeds and care for those tiny creatures. The act reflects the sympathetic connection that women maintain towards nature.

Women and nature are considered mere products in a consumerist society. The anthropocentric men only consider their instrumental value and disposes their inherent worth. Chaz deliberates Joey as a product, and he uses her the most. He wants to possess her money and other material objects and get rid of her in the real life. The statement made by Joey expresses the fact: “This was my house, Mick. My life. And he’s just sweeping me out of the door like I was dirt” (Hiaasen 102). The statement makes a connection between nature and the female gender. Men utilize the female gender for their materialistic or instrumental purpose and attempt to dump them for insignificant reasons.

Ecofeminism emphasizes the idea that being observers of nature, the female gender possesses the wisdom to understand the ways of different organisms in nature. The character Maureen stands as a representation of this ability. Even though she is in a paralyzed state, she invents her methods to get connected to nature. Tool appreciates her affinity towards nature and he offers her a programme on white pelicans while browsing the TV channel. She derives great interest in that and shares her knowledge regarding the migratory pattern of white pelicans. Her habit of spending more time in bird watching during her healthy days is exposed from the recollections of Tool. Her ability in deciphering various extinct species is also exposed through his account: “she had spotted a red-cockaded woodpecker, which was a sort of like a red-cockaded woodpecker except hardly any of them were left on the whole entire planet” (Hiaasen 323).

Hence, the female characters in the novel possess a close resemblance to nature and they attempt to safeguard the environment from its devastated state. The novels are clear portrayals of the marginalization and subordination experienced by the female gender and nature in a patriarchal society. The female characters and the nature depicted in the novels succeed in their attempt to reassert their identity.

CHAPTER III

TRACING SPIRITUALITY IN NATURE

Technological advancements in the contemporary era transformed people to more materialistic individuals and their sole focus is on the instrumental value of things, and as a result, people started exploiting the natural environment and thus destroyed the value systems that have been upholding the society. Such a situation gradually led to the emergence of a particular group of people who are more focused on ecospirituality, and keep a reverence for nature and its inhabitants. Ecospirituality is an outcome of the divine association between human beings and the environment. It integrates an instinctive and embodied consciousness of all life and employs an interactive relation between organisms and their surroundings. The proponents of ecospirituality intend to go back to a traditional way of living, which is more sustainable and consider all living things with due reverence. They strive to establish a spiritual connection between themselves and the natural environment. This group accepted an approach to life that is purely based on ecology and spirituality, giving justice to the lives of everyone on earth. John Gatta in *Making Nature Sacred: Literature, Religion, and Environment in America from the Puritans to the Present*, elaborates the emergence of a particular outlook among the American citizens. After the setting of pastoral idealism in the United States, there appeared a particular belief that gives prominence to the revitalizing and spiritual sustenance of nature. Such a belief could outlive industrialization, commercialization of agriculture, the intellectual victory of pragmatic sciences, and a technologically advanced mentality of the human population (4). It appraises the inner worth of natural things regardless of their material or commercial worth. The advocates of this belief system

established various organizations and camps to promote the balanced existence between human beings and nature and also framed different policies for the sustenance of the planet earth.

The traces of such a movement are visible in different major religions of the world. World religions like Christianity, Hinduism, Islam, Buddhism, and Jainism play a vital role in preserving the sustainability of the environment. The examination of these religions' theological texts hints toward the emergence of deep-rooted environmental activism. All these holy texts preach humanity about upholding a life system that goes hand in hand with the harmony of the environment. High deliberations on nature can be found while discovering the origin of Christianity and its progressive history. The story of the fall of Adam and Eve in the Bible shows both the constructive and destructive aspects of nature. The very instance of the fall of man points to human beings as responsible for the deterioration of nature and their disgrace. Bron Taylor in *Encyclopedia of Religion and Nature* illustrates the Christian approach to nature by comparing the earthly atmosphere in heaven and nature before and after Adam and Eve's irreverence to God: "The original harmony between nature, humans, and God is broken, leaving a transcendent God, a sinful humanity, and a degraded Earth in a state of mutual alienation" (312). According to the Islamic outlook of nature, it is the responsibility of human beings to safeguard the environment and God's creation in it (33:72). The Buddhist concept of the "law of interdependence" distinguishes nature as an interconnected whole. They believe that the phenomenon that is occurring in nature is based on the activities of all organisms. The theological deliberations of the environment require a thorough investigation in the field of natural sciences and also the inherent

value of the ecosystem. It highlights the importance of the interaction between various inanimate and animate objects, their interdependence, mutual understanding, and sustainability. The texts also portray various theological events depicting the devastation of people who attempt to question the harmony of the existence of the world through natural calamities. Attention has also been given to the heavenly joy experienced by people who keep a harmonious rapport with nature. They also advocate the endless use of all the natural resources in the web of life and various eco-friendly methods like recycling and decentralization.

Barbara Kingsolver's *Flight Behaviour* portrays a fine mixture of nature and spirituality. Nature plays a substantial role in shaping the destiny of various characters such as Dellarobia, Hester, Ovid Byron, and Bobby Oogle in the novel. The spiritual interference of nature transforms the life of Dellarobia. The stakeholders of ecospirituality consider nature, especially wilderness, has the power to transform the perception of an individual. In *A Companion to Environmental Philosophy*, Jamieson distinguishes wilderness from other landforms and argues that wilderness is defined as a region, where the environment and its inhabitants are "untrammeled by man". The area offers a kind of solitude and refreshment for its visitors and "may also contain ecological, geological, or other features of scientific, scenic, or historical value" (350). The Appalachian Mountains near Dellarobia's home form a part of the wilderness, where less evidence of human intervention is visible. Visitors to the Mountain can find solace and a kind of recreation there. The journey to the Appalachian Mountains plays a significant role in Dellarobia's life. Dellarobia feels relaxed and refreshed in the new atmosphere. She finds the journey to the Mountain as an escape from the inescapable miseries of her

married life. Being in touch with nature, Dellarobia experiences the bliss of her life and expresses her admiration for the divine existence in everything. Hence, the wilderness plays a significant role in fetching peace to the mind of Dellarobia, which was preoccupied with miseries and sorrows most of the time.

Each object in the Mountain generates some effects in Dellarobia. The sight of the monarch butterflies terrifies her at first, and she thinks it is a forest fire that will eliminate everyone and everything in the forest. She deciphers divinity in it later: “unearthly beauty had appeared to her, a vision of glory to stop her in the road. For her alone, these orange boughs lifted, these long shadows became a brightness rising. It looked like the inside of joy if a person could see that. A valley of lights, an ethereal wind. It had to mean something” (Kingsolver 11). She considers that there is the hand of God in that orange flame and the actual intention of the flames is to halt her from the crooked intention of her visit. The thought makes her examine the worse intention of her visit and feel guilty as she has come there simply to satisfy her sexual desire and everyone in her village will mock her for leaving her children for her crooked desires. Bron Taylor in *Encyclopedia of Religion and Nature* states that “there are strategies, especially for the religiously faithful who believe in the possibilities of a continuing revelation, by which wilderness, religion, and nature can be related” (1745). The sight has a constructive impact on her. With nature’s revelation, she awakens from her imaginary world that is filled with trivial thoughts about life and develops a consciousness of her responsibilities as a mother. She deliberates the sight of those orange lights that have a divine intention of making her lead her life on the right path. Thus, nature’s revelation transforms her approach toward life, which was earlier governed by mere lust.

The power of nature to renovate the lives of human being is an area of concern for the followers of ecospirituality. Nature assists human beings in finding hope during times of despair. Bron Taylor, in *Encyclopedia of Religion and Nature*, discusses the attempt by human beings to follow nature and transform their life optimistically. He traces the effort by human beings to resurrect their life with a renewed spirit and argues:

Across time and in countless ways, people of many cultures have gone into the wilderness to mark the life transitions and seek guidance. They sought closeness with God, the Mystery, or a higher self. They found time, a time alone, exposure to the elements in an unfamiliar place, a radical shift in self and world, a trial and a gift, and a ritual death and rebirth. The core of the form was clear: leaving the ordinary world, crossing a threshold, and returning with a gift and a task. It was an initiation, a rite of passage, a new birth in the womb of the natural world.

(1748)

Dellarobia spends some time alone in the lonely forest and she feels so much blessed and enlightened. The wilderness offers a chance to scrutinize her life till then. She evaluates the bright and dull aspects of her life. After the journey to the wilderness, Dellarobia appears a transformed person. She reconsiders her position in the environment. The wilderness witnesses the death of a submissive Dellarobia and the rebirth of a woman who has self-confidence and a sense of responsibility. The act entitles Dellarobia to a new task- to discover the reason behind the orange flames. Thus, Dellarobia returns from the wilderness with a task and a gift, which later leads to protection of the environment.

Various manifestations in nature have the power to renovate a person's life entirely or in parts. For instance, it is a fallen tree that leads to her meeting with Jimmy,

the telephone man, and makes her climb the mountain with a wicked intention. The appearance of the Monarch butterflies brings a positive change to her life. She perceives the meaning of the spiritual existence of nature and praises the glory of God. She endeavours to find meaning in the occurrence and denotes the flight of the butterflies as an “ethereal wind” (Kingsolver 11). The brightness of the butterflies causes terror in her mind and the orange lights emitted by the beings reflect a divine touch on everything. It precipitates her to wake up from her world of illusions and approach life in a more serious manner.

Hester’s ecospiritual aspect gets exposed while she attempts to establish a cooperative connection between the climate and the shearing day. On this day, the climate seems clearer and brighter as it helps dry the wet wools of the sheep and aids the people to earn a better profit by selling the shiny and bright wools of the sheep. She believes that “God had taken a hand in the weather” (Kingsolver 16). If the climate is not supportive and keeps raining the whole day, the wool would become foul and cause a tremendous loss for the trade. God turns the weather into a fine one and the clouds in the sky hurry away from the scene by comprehending the situation. “For the Abrahamic religions, Judaism, Christianity, and Islam, the environmental ethic is compatible with belief in the holiness of the Earth and the perception of nature as God’s handiwork” (Wilson 157). Hester expresses the same course of thought here. She invents divine intention in every natural occurrence in the universe, including the weather.

While climbing the mountain with her in-laws and husband, Dellarobia has a strong intention of finding the truth behind the orange glow that she found on the Appalachian Mountains some days ago. Dellarobia has been carrying fear in her mind

regarding the occurrence and she is afraid to share it with anyone else. She gets a full view of those sparkling orange things which are fluttering in the air like the fallen leaves during a strong wind. She identifies it as butterflies and the fear that took hold of her mind till then flies away with the butterflies. She grows overwhelmed with emotions and wonder. The incident causes joyful tears in her and she feels like sinking in a pond with bright coloured fish. She gets surprised by the sight and it brings out the hidden aesthetic beauty that lies in her mind asleep for a long time.

The presence of the butterflies transforms the forest into an ethereal world that has the majesties and glory of a divine ambience. Butterflies fill the sky with a golden glow. Every tree develops alive with the magical flight of the butterflies and it appears more like an entity which has a sacred soul inside- “The treetops and ravines all appeared in strange relief, exposed by the trick of air as a visible quantity. Air filled with quivering butterfly light. The space between trees glittered, more real and alive than the trees themselves” (Kingsolver 72). It reverberates the power of natural objects to spread the light of divinity and bring spirituality into the world.

Hester is a person who finds little time for spending on the Turnbow property. Dellarobia’s insistence to visit the place also compels her to investigate the place before they would cut its trees down. The first time visit to the land brings a spiritual transformation in Hester, forcing her to appreciate the sudden revelation of Dellarobia. Ecospirituality associates spiritual transformation of an individual to development of his personality.. Bron Taylor, in *Dark Green Religion*, argues: “Spirituality is often thought to be about personal growth and gaining a proper understanding of one’s place in the cosmos, and to be intertwined with environmentalist concern and action” (3). Nature

plays a significant role in altering the mindset of Hester about Dellarobia and the environment. It transforms her more spiritually awakened to admire the sacredness of nature. While observing the butterflies in the sky, she derives a kind of divine illumination coming out of the wings of the creatures and experiences a certain warmth that she craved in the unstoppable rainy climate. She praises the grace of God and appreciates Dellarobia for the sudden revelation that she received.

Man is supposed to occupy the most privileged position among God's creatures, as he possesses the gift of reason. Ecospirituality stresses the imbibe responsibility of human beings to comprehend the inherent divinity of all creatures. It considers human beings responsible for understanding the divine communication that occurs in the environment. Nature is mostly considered as a divine medium above its instrumental value to human beings. John Gatta expresses the same course of thought:

Humans... are uniquely qualified to know and to respond to the beauty of God's self-communication. Nonetheless, the material world does not exist solely to satisfy the will, pleasure, or self defined happiness of human beings. Its purpose surpasses instrumental categories... Nature, then, is not simply a storehouse of commodifiable goods but the very substance of our home as human beings.... its beauty as belonging preeminently to God. (65)

The vision of the butterflies blesses Hester with reason and it assists her to appreciate the inner worth of all creations of God. She forgets the hatred she possesses for Dellarobia and deliberates her as a medium for receiving God's grace. Earlier, Hester possessed a materialistic approach to nature, and the vision plays a significant role in altering her approach to nature as something heavenly.

The proponents of ecospirituality have faith in the manifestation of spirit in nature. They adopt an ecocentric view of nature that considers the inherent worth of all organisms. Bron Taylor in his *Dark Green Religion* argues that “every being and object is a manifestation of God or God’s activity, then everything has value, which presents a fundamental challenge to the prevailing anthropocentrism” (Taylor 8). The same notion of thought is apparent in Cub. The visit to the mountain conveys an ecospiritual reformation in Cub, who was a person devoid of any sentimentality toward nature until then. Cub attempts to invent a spiritual meaning for the migration of butterflies to the mountain. He asserts God has some plan by making the butterflies occupy the region and probably it would be for preventing them from cutting down the trees in the region. He feels reverence for Dellarobia and holds her on the shoulder and announces that “Y’ all just need to see Lord’s hand in this and trust in His bidding” (Kingsolver 76). Cub experiences the divinity in the visit of the butterflies and invites everyone to their place during church prayer. He openly announces his admiration for Dellarobia for foretelling the matter and denotes her as a woman with grace. Cub’s ecospirituality gets revealed through the sentence “It’s got us to thinking where the Lord must be taking a hand in things up there” (Kingsolver 98). Pastor Bobby Oogle also accepts the fact, and he expresses that the entire Turnbow family is so blessed with those holy creatures.

All the members of the Turnbow family become very much conscious of the recent visitors. Even the non-human creatures express their curiosity about the recent occurrence. According to the theory of ecospirituality, animals are always aware of any unusual happenings that are happening or going to occur in their surroundings. They can foresee any impending dangers or unlikely things that can destroy nature or other

creatures in it. The dogs in the Turnbow family, who stand very alert with their ears pricked and watch for any unusual changes from the regular pattern, express the same attentiveness.

The followers of ecospirituality assume the changes or different signs shown by the different objects in nature as God's way of reminding everyone of the invasion of various seasons or proclamation of some natural calamities that are going to transpire in the universe. Everything in nature can bring about a transformation in its state voluntarily to get adjusted to the various changes that occur in the universe. The speech delivered by the assistant pastor during the prayer time reflects the ecospiritual cult: "Lord shaking the wilderness and making the oak leaves whirl, presumably to remind everyone it was fall" (Kingsolver 90-91). The trees shed their leaves or different organisms migrate to various places before a particular season are examples of this cult.

There is a spiritual connection between nature and the organisms that live in it. The purpose of such a connection is to accommodate the changes that occur in the surroundings and bring a corresponding alteration in the physiology or place of residence of the organisms. Non-human creatures respond in the same way human beings respond to slight variations in the weather or other climatic conditions. The fact reveals the existence of spirit in nature and other non-human organisms. The same process of accommodation is visible in the butterflies' taking up more lipids before winter. The butterflies get fattened before winter and they consume as much lipid as their body can hold since they travel less during winter. "Their physiology is responding to the cold weather" (Kingsolver 304). By sensing the alteration of the season, the butterflies behave

as the normal migratory human population. Thus, the spiritual connection with nature that exists in organisms enables them to respond to slight variations in their surroundings. The seasonal changes have certain effects on the breeding levels of the butterflies. The statement made by Dr Byron to Dellarobia exposes a difference in the inbreeding and outbreeding habits of the butterflies: “The monarchs rely on a particular alternation between inbreeding and outbreeding” (Kingsolver 438). Non-human beings have an innate ability to respond to nature’s transformation and possess a spirit to identify the changes and respond accordingly. Dr Byron elaborates the alternation as:

For most of the year, the genetic exchanges are relatively local. Summer Generations breed in smaller groups as they move north. Some might fly only a few miles from where they are born before mating and dying. But then, in winter, the whole population comes together in one place. The gene pool is thoroughly blended. (Kingsolver 439)

It reflects the inherent connection that exists between place and the spirit of various organisms. The butterflies join in a particular place after their long absence from each other with no communication in the summer.

There is a spiritual meaning in the pattern of the butterflies’ migration. Butterflies have an attachment to their migratory route. The idea gets more revealed from the statement of Dr Byron regarding the migration of the butterflies: “Of newborn butterflies, for instance, somehow flying thousands of miles to a place they’d never seen, the land where their forefathers died” (Kingsolver 306). The spirit of the butterflies forms an unknown relation with the migratory land. The instance acknowledges the ethereal connection that exists between an organism and its surroundings.

The non-human organisms are believed to have some abilities that permit them to perceive climate changes and along with that to anticipate natural calamities. They hint at some unlikely occurrences through a transformation from their usual pattern. Many scientific studies have been conducted based on the adaptive process of animals and climate change. Foo et al. in “Acclimatization and Adaptive Capacity of Marine Species in a Changing Ocean” discusses the ability of marine population to bring a variation in their genes to adapt to the changes in temperature and PH level of the ocean because of climate change. There is an incident in the novel which alludes to the fact about the movement of crows: “crows flying over the field will cause it to snow tomorrow... Maybe it’s a storm front or something that makes both things happen, but the crows move first” (Kingsolver 336). Dellarobia possesses the ecospiritual trend in her, as she strongly believes in natural hints and predictions.

Organisms in the universe can change their physical characteristics to get adapted to diverse transformations in the ecosystem. By altering their physiologies, the organisms in the universe ensure their existence and the survival of their fellow organisms in a transformed environment. Jones et al. in “Positive and Negative Effects of Organisms as Physical ecosystem Engineers ” discuss the process of physical ecosystem engineering. The organisms in the universe maintain the accessibility of resources to other organisms by bringing an alteration to their physical state. Physical ecosystem engineering by organisms is defined as “the physical modification, maintenance, or creation of habitats” (1946). Trees perform a significant role in maintaining the atmospheric conditions conducive to the survival of all organisms. The fallen leaves on the ground control the impact of raindrops, drainage, temperature levels and gas exchange in the soil habitat,

and ensure the protection of flora and fauna and other microorganisms in the soil (Jones et al. 1946). The peach trees in Cook's dead orchard stand as a symbol of physical ecosystem engineering: "The skeletal peach trees in their rows leaned into the slope with branches upstretched like begging hands" (Kingsolver 355). The trees bring an alteration in their physiology by shedding their leaves in the heavy rain to assist other organisms to get adjusted with the climatic transformation.

The repercussions of climate change are perceptible in diverse forms in the novel. Even if they are the victims of fatal environmental destruction like unreasonable climatic conditions, the organisms try to find a kind of solace in nature and keep an optimistic attitude. The trees in the area appear in a destructed state: "The trees were skinnier here and the woods more open, though still as varied as any standing congregation of human beings" (Kingsolver 478). The trees in a destroyed wood keep such an optimistic attitude: "The woods possessed but one colour, brown, to all appearances dead. Yet each trunk rose up in its way distinct. Shaggy bark and smooth, all reaching for the sky, come what may" (Kingsolver 478). Even the trees appear physically very weak and spoiled. Like some individuals, they try to find hope in this destructed world: The trees firmly believe in the power of nature to restore its equilibrium from a degenerative state. The attitude of the trees expresses the Gaian idea of the earth's self-regulation. The earth has the power to regulate itself back to life, even after great turbulences and turmoil.

The supporters of ecospirituality find a spiritual meaning in the existence of certain organisms in the universe. They believe that these organisms have something to do with their spiritual life. As there is a common saying that the shining stars in the sky represent the dear ones who are dead, Juliet in the novel expresses the same impression

regarding the monarch butterflies: “Some people believe they’re the souls of dead children” (Kingsolver 536). Juliet is obsessed with the thought of watching butterflies flight. Ovid Byron is the other person who finds some solace in watching various organisms. He can understand some emotions of the non-humans. He comments on the pleasing appearance of the turtles while he watches them: “You can’t be anything but happy when you watch them. Their little turtle mouths are always smiling” (Kingsolver 540). Byron’s comment echoes the sensing power of natural objects and non-human organisms. He makes a similar comment regarding Dellarobia’s sheep: “When I look at your sheep, I am often thinking of turtles” (Kingsolver 540). Ovid Byron discovers the same sensing capacity in the sheep as well. Thus, Ovid Byron can be regarded as a person who asserts the existence of spirit or sensuality in non-human organisms.

The followers of ecospirituality envision nature as a sacred garden and consider it the responsibility of human beings to keep the sanctity of this greenhouse. In *A Political Theology of Nature*, Peter Scott discusses Richard Sylvan’s view on ecocentric tendencies. Sylvan defines ecocentric tendency as understanding the inner worth of each organism and learning to approve its wisdom. He stresses the obligation of human beings to regard the worth of each organism and the failure of which may lead them to suffer its aftereffects (64). The menders of the garden get rewarded well by nature positively or negatively as per their act. Our existence in nature is entirely based on our deeds. The song sung by the choir members of the church reflects the aspect: “*You may live in this garden if you keep the grasses green, and I’ll return in the cool of the day*” (Kingsolver 549). The verse stresses the importance of maintaining a well-balanced environment. It reveals the Gaian view that the destructions that the human beings cause to the

environment will get repaid to them in the earth's process of self-regulating itself. The earth transforms through many processes in its attempt to regulate itself. Many dangerous effects take place in its aftermath, including natural calamities and extinction events. Usually, human beings are the sole sufferers of these calamities, as they are the promoters of global destruction.

The divine existence is present in every endeavour of nature. The advocates of ecospirituality propagate the idea that everything on earth deserves utmost reverence and sanctity. The thought of the existence of the heavenly spirit in various organisms on earth will save them from any malicious actions that will lead to the destruction of their sanctity. Peter Scott discusses the existence of a common realm for human beings, nature, and God in *A Political Theology of Nature*. He infers that the proper understanding of nature and humanity is only possible in mutual co-explication with the concept of God (Scott 31). Bobby Oggle expresses the same idea: "If God is in everything, he asked, how could we tear Him down? A love for Creator means we love His creation" (Kingsolver 550). He argues human beings should acknowledge the part that nature plays in their healthy existence. The best way to express one's devotion to God, the creator is by respecting its creation.

According to the Christian view of spirituality, the world is created for the glory of God and God blessed each organism with divine wisdom and providence during their creation. Thus, all organisms hold the divine spirit inside them and no organism is superior to the other (Scott 96). Showing veneration for nature helps to understand the holiness in everything. Bobby Oggle expresses the same idea: "May we look to these mountains that are Your home and see You are in everything. The earth is the Lord in the

fullness thereof” (Kingsolver 551). Bobby Oggle’s statement reveals the spiritual existence of God in the universe. He observes nature as the abode of God and the entire earth represents God. The Gaian concept of earth as a self-regulatory system and the ecospiritual idea of the living earth that has the power to control every existence are echoed here.

Nature has the rare capacity to penalize the perpetrators who maintain irreverence to its organisms and inanimate objects. The fatal acts performed by selfish human beings have the power to raise the rage of nature and make it defend its position in the universe. Sometimes this revenge stands as a threat to the healthy existence of all organisms on earth: “when a man is greedy and gets too big for his britches, he pays for that... If you can’t live by the laws the Lord God made for this world, they’ll go into effect regardless” (Kingsolver 555). The lines can be linked to the Islamic way of spirituality. According to the Quran, it is the responsibility of human beings to protect the environment, and the failure of which can lead to punishment (33:72). This view of spirituality can be linked with the Gaian perception that it is the duty of the human beings to protect the planet earth, not because they are the only sentient creature, but because human beings enjoy the same status as other creatures on earth (Leakey 245). When different organisms cause the earth to lose its equilibrium through various self-centred activities, the earth efforts to rebalance itself and many improbable events transpire. These implausible events usually affect the survival of different organisms on the earth. Thus, human beings are expected to protect the environment from these unlikely events.

Earth has the power to comprehend the changes that occur in each organism’s life and respond accordingly. The last paragraph of the novel portrays the spiritual dimension

of nature: “The sky was too bright and the ground so unreliable, she couldn’t look up for very long. Instead, her eyes held steady on the fire bursts of wings reflected across water, a merging of flame and flood. Above the lake of the world, flanked by white mountains, they flew out to a new earth” (Kingsolver 597). The earth wholeheartedly welcomes the new beginning for Dellarobia and the Monarchs. The event reflects the self-generating power of the earth by eradicating all the uncertainties that prevail in the ecosystem. This very idea has a connection with the Gaian ideology of the self-regulating process of the earth to maintain its atmosphere suitable for the survival of all organisms on earth.

Margaret Atwood’s *The Year of the Flood* gives a detailed portrayal of the ecospiritual aspects of various characters such as Toby, Ren, Pilar, and especially a community named God’s Gardeners. Most of Atwood’s characters keep a spiritual affinity toward nature. Atwood connects the present ecological crisis with the greed of profit loving, selfish human beings. The novel begins with a hymn from *The God’s Gardeners Oral Hymnbook*. The hymn illustrates the beauty of the garden and how it provided once a place of shelter for all the creatures and how happy were they while residing in it. It can be traced from the hymn how the greed of human beings has destroyed that joyous and divine garden, which was once solace for all the creatures in it. The new ugly face of the garden creates a kind of gloom even for the birds and it causes them to cease their regular musical treatment. The hymn ends with a positive note that the gardeners will arise and they will restore the beauty of the garden. Simon Levin argues for the importance of keeping the sustainability of the environment in every realm of human interaction. He states that “Sound and responsible environmental management demand fair and sustainable stewardship of common resources. It requires recognizing

that the biosphere is a highly complex adaptive system and learning how to harmonize human activities with the rest of that system” (198). The gardeners can be reckoned as the best followers of this ideology, who attempt to bring back the once joyful garden, which is on the verge of destruction now. Many ecologists have traced such an emerging attitude among the responsible personalities in the universe. Hemenway talks about the same movement in his *Gaia's Garden: A Guide to Home-Scale Permaculture*:

A movement is a foot toward more natural landscaping. Many gardeners are turning their backs on the lawn, in particular. People are digging up their resource-guzzling grassy swards and installing native plant gardens, wildlife-attracting thickets, or sun-dappled woodland habitats. It's an encouraging trend, this movement toward more ecologically sound, nature-friendly yards. (3)

The garden symbolizes the entire universe and the devastating state of the garden will affect the existence of other creatures on earth. There is a spiritual connection between the garden and its inhabitants. During its splendid days, the garden provides a kind of leisure and comfort for its inhabitants. The devastating state of the garden affects tiny creatures such as birds and other aquatic animals and even human beings. They accept the grief of the garden and lament over its loss. The beautiful birds put an end to their sweet song as lamentation. The state of the garden depicted at the beginning of the novel demands the need for a collective approach by human beings to save the planet from the verge of destruction. The novel depicts the formation of a collective effort to save the planet through the activities organized by the God's Gardeners, a community that stands for the wellbeing of nature.

There is an ardent effort by a group of people titled the ‘God’s Gardeners’ to restore a sacred garden in the universe. The name of the garden that they are creating on their rooftop itself suggests an ecospiritual tone. By naming the garden Edencliff Rooftop Garden, they are trying to create an Eden on earth. The act implies their endless effort to restore heaven on earth, which was lost because of the selfishness of the greedy human beings. Bron Taylor, in his *Encyclopedia of Religion and Nature*, mentions the same type of attempt by Wes Jackson, the founder of Land Institute, in 1976. He states that “His “eco-agrarianism” is founded upon the idea that agriculture should mimic the way that an undisturbed ecosystem operates in a given place” (892). Like that, the Gardeners propagate an eco-friendly method of farming that is devoid of chemical pesticides and employs eco-friendly means of cultivating the land by maintaining the habitat of various organisms in the universe. The Gardeners avoid the use of any materials that threaten the existence of other organisms in the universe. They take strenuous efforts to keep a habitable atmosphere in the garden that perpetuates the lives of fellow organisms on the earth.

The Gardeners attribute divinity to all the creatures and try to envision the positive aspect of everything. Toby Hemenway opines that “in many ways, creating an ecological garden is a restoration project. The soil in most yards is poor, important species are missing, and healthy cycles are broken. Thus, people who restore damaged landscapes for living- restoration biologists have some things to teach us” (118). The Gardeners have to take an arduous effort to convert barren land into a fertile one. They take great initiatives to bring a good harvest and attempt to teach the universe about the virtue of hard work and the importance of keeping the sanctity of nature that is divine.

Their endeavour to restore the degenerated earth can be related to their reverence for the ecosystem and concern for future generations.

Ecological crisis and hope are two antagonistic realities, because ecological crisis tries to inculcate all the negative emotions such as depression, pessimism, and melancholy in the minds of the victims. Anne Marie Dalton and Henry C. Simon states the connection between the ecological crisis and hope in the introduction to their work *Ecotheology and the Practice of Hope*. They try to stress the tension existing between these two antagonistic terms: “The ecological crisis continues to seep into our beings, producing anxiety, sadness, guilt and sometimes despair... Although the hope we seek in the light of ecological devastation almost always seems elusive, it remains the motivational horizon against which many find the energy to confront the crises” (vii). The optimistic attitude of the gardeners to restore the good old past of the universe even at the time of serious ecological crises illustrates the possibility of hope in times of the greatest disasters.

Atwood endeavours to illustrate the inherent value of all organisms through the example of vultures in purifying the earth. She describes them as “God’s necessary dark angels” (Atwood 4). There is a spiritual dimension to the existence of vultures as they play a vital role in keeping the cleanliness of the world by feeding on dead and decayed organisms. God has assigned certain obligations to all organisms and none of them is superior or inferior based on the glory of their responsibilities and everyone’s existence is valued based on their inherent worth:

Wild nature has unparalleled instrumental value: the water we drink, the air we breathe, the silicon chips we rely on. Human life cannot be sustained, let alone

achieve well-being, apart from the multifold goods of wild nature. In addition, independent of its contribution to other goods, wild nature itself has value for us—mountain lions and otters, rivers and towering mountains, the wind blowing through pine trees. Even if we left this world to live on self-sustaining star-ships, wild nature would retain this intrinsic value for those who knew and remembered the wonders of earth. (Fern 11)

Atwood appraises the intrinsic worth of all organisms through the representation of the vultures as God's dark angels. She considers vultures as the friend of humanity, who plays a significant role in purifying the earth (Atwood 4). Vultures feed on dead and decayed organisms and they retain a greater role in the elimination of dead bodies and promoting energy transfer. The gardeners deliberate death as a necessity and otherwise, it will lead to chaos in the universe. Gaia hypothesis stresses the role of death and germination in keeping the chemical balance of the atmosphere. Many tiny organisms are needed to maintain this process. So, every organism deserves reverence, not because of its instrumental values to the human beings, but its intrinsic worth in keeping the balance of the ecosystem to keep it habitable.

Most of the characters in the novel consider all the creatures as fellow beings. The speech delivered by Adam One during the creation day celebration reflects the idea. At the beginning of the speech itself, he addresses the audience as “dear friends, dear fellow creatures and dear fellow mammals” (Atwood 11). He makes an in-depth explanation of the creation of ‘Edencliff Rooftop Garden’. The place which was once a centre of all the wickedness and was adorned with a heap of wastes is converted into a glittering beauty of

freshness and serenity. He contemplates the act as redemption of God's creation from the barrenness and imperfections of the world.

... Wild nature, whatever its instrumental or intrinsic value for us, has inherent value in this sense. If it does and, thus, turns out to be a direct object of moral concern, it will have a claim to be treated with moral respect. This, in turn, will mean that we may act immorally with regard to wild nature even where we treat other humans without fault, as thieves who fairly divide ill-gotten gain. If nature has moral worth, then, as Holmes Rolston affirms ...“humans are not free to make whatever uses of nature suit their fancy, amusement, need, or profit.” (Fern 12)

Fern elaborates on the idea of doing justice to fellow organisms. The lines highlight the urgency of keeping a moral concern for nature because of its inherent worth. Adam One maintains the same view, and he preaches the gardeners about protecting the entire planet from the anthropocentric destructions of pollution and exploitation. Adam One congratulates the gardeners on their effort to transform the earth from the mischievousness of human beings.

The hymn by the gardeners “When Adam First ” reveals the spiritual aspect of the existence of all the creatures in the universe. When God creates human beings, he has an intention that the humans will live in harmony with all the other creatures and it will be convenient for them to have a better comprehension of the ways of God. When God creates Adam, He gives Adam all the prosperities of paradise and he establishes a rapport with all the birds and animals in the paradise and which provides him with a better chance of understanding the intentions of God in a better way. There, he treats all creatures with greater affinity and they enjoy a more amicable existence. Both Adam and

the other creatures spend their time together in fellowship and are engaged in singing and praising the glory of God. Even their gestures are considered a form of divine praise for their joyful existence. When humans touch the earth, everything undergoes a complete transformation, and pride, lust, and greed take the place of love, togetherness, and fellowship. The world is transformed into a more anthropocentric one and the creatures who suffer more are nature, birds, and the beasts. The gardeners express their grief over the transformation and they wish to go back to the good old past and they name the other creatures as friends and fellow beings in their inner hearts.

All the creatures on this earth are the fragments of the same ecosystem. God engineered everything, and He has given all the organisms the ability to sense the situation and comprehend the inner conflicts of their fellow beings. Bron Taylor, in *Encyclopedia of Religion and Nature*, describes the Jainist view regarding the sensual power of various organisms in the universe:

The Jainas were careful to observe and describe the many life forms that they hoped to spare. They catalogued them according to the number of senses they possess. Earth bodies, plants and microorganisms (*nigodha*) are said to possess the sense of touch. Earthworms and mollusks are said to add taste to touch.

Crawling insects add the sense of smell. Moths, bees and flies add sight. At the highest realm, Jainas place animals that can hear and those that can hear and think, including reptiles, birds and mammals. (893)

According to the Jainist worldview, nature can sense human presence and behave accordingly. Bron Taylor in his *Encyclopedia of Religion and Nature* expresses the special power of nature to infer the happenings in and around them: “the material world

itself contains feelings and that the Earth feels and responds in kind to human presence. Not only do animals possess cognitive faculties including memories and emotions but also the very world that surrounds us can feel our presence” (894). While Toby explores her surroundings using the binoculars, she is very much conscious about her movement as she fears that all the surrounding creatures can sense her intention:

The trees look as innocent as ever; yet she has the feeling that someone’s watching her- as if even the most inert stone or stump can sense her, and doesn’t wish her well. Isolation produces such effects. She’d trained for them during the God’s Gardeners Vigils and Retreats. The floating orange triangle, the talking crickets, the writhing columns of vegetation, the eyes in the leaves. Still, how to distinguish between such illusions and the real thing? (Atwood 17)

Thus, Toby is a person who strongly trusts the sensual ability of non-human organisms in the universe. She controls her actions and attitude in the presence of nature, even if there are no other human beings present.

Much scientific research undertaken by various scholars confirms the notion that organisms are capable of altering a particular environment or get assimilated to it subsequently. John Maynard Smith in his *Theory of Evolution* states that “The study of evolution is concerned with how, during the long history of life on this planet, different animals and plants have become adapted to different conditions, and to different ways of life in those conditions” (15). Such an adaptation can be traced from the novel while examining distinct characters such as Adam One, Zeb, and Toby. In the speech delivered by Adam One at the SecretBurgers, he recounts how his life gets transformed when he perceives the light of truth. His scientific knowledge is commentable, and he had

undertaken serious studies in epidemics. His studies mostly focused on the dead and decayed animals and along with that, he analysed the dead bodies of human beings as well. Being a scientist, he was totally detached from the emotional aspects of organisms. For him, these creatures were just numbers and in his outlook, they were equivalent to the inanimate objects. He paid little attention to the inherent worth of those creatures. He had been a regular customer at the SecretBurgers and had consumed many burgers stuffed with the meat of endangered animals. One day while dining at the SecretBurgers, he perceives a light and hears an influential voice that said “spare your fellow Creatures! Do not eat anything with a face! Do not kill your Soul!” (Atwood 34). That light and the prophesying voice cause a real transformation in Adam One and he becomes a renovated individual who strictly follows the cult of ecospirituality and keeps the purpose of protecting the lives of various organisms in nature. Fern discusses the importance of purpose in life:

Intentionality, purposefulness, gives a life depth, means that it is not exhausted by the things done to it. Its good encompasses that of agency, the pursuit of one’s own ends, the living of life as one chooses. As a result, agents care about their life, judge it to be going better-or-worse and, in accord with their capacity, adjust their plans and actions accordingly. Here, it must be borne in mind that agency is not an all-or-nothing proposition. (Fern 17)

Adam One tries to make his life more fruitful, not by concentrating on materialistic or worldly things, but by bringing about a change in his way of living. He accepts an optimistic attitude and firmly believes in the possibility of hope in the future. Bill McKibben in his *Hope Human and Wild: True Stories of Living Lightly on the Earth*,

stresses the importance of an alternate way of living that is devoid of materialistic or selfish desires and deeply rooted in giving due consideration to nature and its all inhabitants: “I found proof there that there are less damaging ways to lead satisfying human lives, evidence that infatuation with accumulation and expansion is not the only possibility” (5). Adam One’s attempt to find hope by sacrificing the materialistic and worldly pleasures exposes this concept. Adam One leads a life that is rooted in nature, giving due admiration to his fellow inhabitants on the earth.

The ecospiritual cult in Adam One is revealed while he is preaching at the SecretBurgers. Adam One addresses Toby as “my child” (Atwood 49). Toby refuses to accept this, as she does not want to belong to anyone. He explains the reason by saying that “We are all one another’s children” (Atwood 49). The followers of the ecospiritual cult believe in the existence of a spiritual connection between all the fellow creatures. On the outer level, the organisms show no signs of this spiritual connection. But inertly, they are all so interconnected and are part of the same universe.

In ecospirituality, nature holds the power to renovate human minds from the barrenness and pollutions of the artificial world. It believes in the conviction that various objects in nature join to bring a positive transformation in the minds of individuals, who are “tired of the moral and material pollution of the city” (Garrard 59). Atwood depicts the real transformation that takes place in Toby once she reaches the garden. Earlier, she was told by people that the garden was a real mess, with many vegetable wastes and a stinking smell. Once she reaches there, she experiences the holy in the garden. She enjoys the beauty of the garden and observes the variety of flowers and plants that enrich the garden. Different bees and butterflies dance there and even the leaves and petals shine

with joy, giving her a warm welcome. Toby feels very much relieved in the new atmosphere. She experiences some invisible hands protecting her from the chaos of the entire world. Later, she comprehends that the feeling was provided to her by the act of keeping harmony with God's creatures. The proponents of ecospirituality assert that by keeping harmony with nature and its organisms, one will be blessed with the feeling of security. Toby experiences the same situation here.

Toby is a victim of all kinds of depression and disasters. Even if she had a peaceful childhood life with her parents in the countryside, the death of her parents leads her to mere hopelessness and insecurity. She is left to face all kinds of torture, including sexual, mental, and physical, till she reaches the garden. The garden creates something holy in her and she inculcates optimism and survival in the face of that devastated world. Anne Mary Dalton et al. state: "practices of hope resist despair even in the face of clear ecological degradation. As practitioners of hope, Christian theologians are sober in their judgments about the certain results of business as usual in our relationship to the earth; still, they do not give up their intense effort to pull the world back from the brink of ecological disaster" (viii). Even if Toby experiences a lot of suffering in her personal life, she keeps hope and becomes a part of the movement that stands for protecting the environment.

The gardeners conduct a celebration to welcome Toby to the group. The things that are offered to Toby as welcoming gifts are- a pot full of honey and a jar containing purple objects like elderberries. Gardeners create a holy atmosphere for the ceremony and treat objects as the Holy Grail. They attribute a divine quality to the natural objects and assume the coming of Toby to the group as a sacred occurrence.

The characteristics of God's Gardeners illustrate the ecospiritual cult. They believe in the spiritual existence of nature and educate others about it. This cult can be linked to the Buddhist concept of ecospirituality. Bron Taylor, in *Encyclopedia of Religion and Nature*, discusses the first moral "precept" of Buddhism, which is abstention from the killing of any animate beings. "Since animate beings include not only men but also animals, the first precept is a strong basis for animal ethics in Buddhism" (Taylor 233). The gardeners strictly follow a lifestyle that is deeply rooted in customs and conventions that keep the balance of the ecosystem. They are strict vegetarians and preach the importance of guarding the life of other fellow beings. They warn the entire world against killing animals for food and other material gains.

The followers of ecospirituality observe nature to make predictions regarding the alterations in the environment. According to them, various animals and birds can foretell the occurrence of some natural calamities. The God's Gardeners are very much conscious of a slight change that transpires in the environment and they are so immersed in the spirit of the ecosystem. They are very expert in envisaging the outbreak of some natural calamities by observing a break in the regular rhythm of the environment. They predict the coming of some impending disaster by studying the chirping of the birds and they announce that the world is coming to destruction and only people who keep a spiritual affinity with nature will survive afterwards. The Gardeners assume that they will survive to restore the environment.

The gardeners believe in the inner worth and unending utility of all objects. They do not even spare a waste material. They make the optimum utilization of all resources. They practice methods like reusing and recycling. They create various objects using

waste materials and find alternate uses for those objects. During the feast of Adam and other primates, Adam One makes an elaborate discussion of the method of God in creating man. He addresses the audience as “fellow gardeners” on earth and calls the earth “God’s Garden” (Atwood 61). He attributes a spiritual dimension to the existence of human beings on earth and stresses the significance of their role in beautifying the Earth—that is God’s Garden. He makes special mention of the Tree of Creatures made by the gardener children from plastic wastes and illustrates how ugly things can be put to expert uses.

Adam One talks about the intention of God in creating human beings, and he makes a staunch criticism against the atheistic attitude of the scientists. He says that God has a plan in creating everything as what they are and how they look like. The scientists do not believe in the existence of God as they cannot do any experiments to prove His existence. Adam One perceives God as a pure spirit, who is beyond all measurements. God has instilled His spirit in everything at the time of creation and gave various forms to it. So everyone on the earth bears the light of truth inside them and it is the responsibility of every creature to venerate each other, keeping the inner spirit ever shining and sacred. God has created human beings and poured them with the same blessings as animals. But the greed, appetite and uncontrollable emotions, and the sense of questioning, make them fall from the original garden and they are sent to the earth. God commands them to restore the original garden on the earth with all its blessings and indifferences. The God’s Gardeners consider it is their responsibility to obey the words of the Almighty and they strive their best to create a new Garden of Eden on the earth.

The promoters of ecospirituality believe the animals are so humble in praising their Lord for His blessings and man is so busy satisfying his greed. According to Christianity, at the time of creation, God commanded men to live the animal life. But the thirst for knowledge makes them question everything, and they gain the knowledge of good and evil. They try to raise above all creatures and it leads to their downfall. God's gardener's opine that man behaves as if everything belongs to him and exploits the rest for his selfish and unending desires. Man belongs to everything and every creature on the earth possesses equal status. Everyone has a soul and inner worth. Nobody is superior or inferior to each other as they carry the spirit of God inside them. God's Gardeners believe that human beings have to shed their pride and pour justice and mercy on other fellow beings.

The speech delivered by Adam One on the Festival of Arks is purely ecospiritual in nature. He appreciates the children who made their representative arks for showing reverence for the creatures involved in the First Flood. He says that the act of children is praiseworthy as the entire world is dishonouring God's Creatures, the Gardener's children find a way for showing the entire world the need for valuing their fellow beings. They possess a kind of optimism as they try to keep hope in the endangered world. Their act has an instructional purpose for the other children and the ego centred humanity.

Everything that happens at the Festival of Arks carries an ecospiritual cult in it. The meal that is offered, the adornment in the surroundings, the games conducted as part of the festival, the prize which is offered for the winner, the prayers said, etc. are deep-rooted in ecotheology. Rebecca makes a special lentil soup for the occasion. The dish is served as an indicator of the First Flood. Another dish made in the shape of Noah's Ark

contains many animal formations made with vegetables. Turnip is used to designate Noah, and it is hidden somewhere among the vegetables. People are asked to find Noah from the food and those who find it will be rewarded with a special gift of a picture painted by Nuala, showing the things that should be carried at the time of the waterless flood.

On the occasion of the Festival of Arks, Adam One makes a special prayer for all the creatures who got destroyed at the time of the First Flood. He praises God for protecting the species of the animals for the future generation and he expresses his joy over the fact that most of the animals in the sea survive except a few which are destroyed because of high temperature and salinity in the sea water. Adam One considers it is their responsibility to protect all the species that are saved by God for the coming generations. He opines that God is very creative in keeping the harmony of the universe by adding musical notes and rhythmic quality to it through various creatures. He says that all artificial music is worthless and low in quality in front of the heavenly music God maintains in the universe.

Adam One tries to stress the fact that it is the responsibility of humanity to protect the entire species through the example of Noah and the First Flood. He argues Noah was forewarned about the coming of a great flood and the destruction of the entire universe. He was assigned building an ark and keeping the pairs of all the species in it. Even though there were angels and other superior creatures, Noah, who is a representative of humankind, was solely assigned to the task. He says that man has the power of both destruction and construction and man is solely responsible for what is occurring in the universe. The universe can be transformed into heaven depending on the evil intention

and goodwill of humanity. He gives examples of the Mediterranean and the Amazon River banks. Both places were once fruitful and fertilized farmland is converted into a mere barren island through the evil acts by human beings. Adam One tries to illustrate the facts through the lines:

Then God says a noteworthy thing. He says, “And the fear of you”- that is, Man- “and the dread of you shall be upon every beast of the earth, and upon every fowl of the air... into your hand are they delivered.” Genesis 9:2. This is not God telling Man that he has a right to destroy all the Animals, as some claim. Instead, it is a warning to God’s beloved Creatures: Beware of Man, and of his evil heart.

(Atwood 67)

Adam One observes God’s Gardeners as plurals of Noah. As Noah was indebted to save different species of animals during the time of the Great Flood, the God’s Gardeners get assigned to save all the creatures at the time of the Waterless Flood. They have to fill the storerooms of their Ararat with every needful thing for the time of the great disaster. They maintain an amiable relationship with all the flora and fauna and believe that it is their responsibility to ensure a secure life for those organisms. The hymn sung by the Gardeners illustrates the ecospiritual aspect. They announce they are the friends of all the creatures and they will protect various species from great disasters and lead a life that keeps harmony with various organisms.

God’s Gardeners attribute a spiritual dimension to the existence of the bees and the mushrooms. They believe the bees are good listeners and anyone can share their miseries with the bees. Pilar introduces Toby to the specialities of the bees. She says that each bee has a different name and a different purpose for its existence on earth. They

trust the bees can sense human beings through smell and understand their intentions. Pilar advises Toby not to hurt the bees even if they sting her because the bee stings only when they are fearful and they avoid stinging most of the time as it destroys their life itself. The God's Gardeners have some myths associated with the presence of bees. They believe that a bee somewhere shows an unexpected visitor. The bees need to be treated well without hurting them, as it may lead to the occurrence of some bad intention by the visitor. They believe in the healing power of honey. The presence of bees in different months has different indications as the bees can sense the change in the atmosphere in a much better way than the human beings do: "A swarm of bees in May, worth a cool day. A swarm of bees in June, worth a new moon. A swarm of bees in July, not worth a squashed fly" (Atwood 73). Ecospirituality ascribes some hidden divine intentions in the presence of some organisms at a particular time and place. The same idea can be deciphered from the bee concept of gardeners.

The Gardeners believe that all the organisms in the universe have some spiritual connection with the other world. The fact is best illustrated with the examples of the bees and the mushrooms. Pilar, the Eve Six, says that the bees and the mushrooms have connections with the eternal world. Bees are believed to be the creatures who carry messages to the dead people and mushrooms are viewed as a flower in the garden of the eternal world (Atwood 215). She says that the real mushroom plant exists under the ground and what we see in this world is a mere shadow of the real. She describes different categories of mushrooms- those used for eating, medicinal purposes, and also for vision. The most important use of the mushrooms is for creating a vision in the people. Usually, the purpose is exploited during retreats and other religious gatherings.

All human beings pass through a state of monotonous life, forgetting the purpose of their lives. The mushrooms act as a magical agent and aid in creating a vision in the fallow human beings. She also talks about poisonous and non-poisonous mushrooms. Poisonous mushrooms are created by God serving their special purpose and the poisonous mushroom is not inferior to the non-poisonous ones. There must be times that require the use of poison, and the poisonous mushrooms serve the purpose. The gardener's belief in the inner worth of the different organisms and admiration for the cause of the existence of different creatures on earth is reflected here.

The Gardeners believe in the healing power of all the natural objects. Usually, they follow natural methods for curing diseases and avoid using medicines that contain high amounts of toxic chemicals. They treat honey as a heavenly medicine, which has magical powers for curing diseases. They make an immense collection of many medicinal objects, including mushrooms, honey, roses, and poppy plants in the storerooms of their Ararat. They list out the medicinal advantage of some creatures - the antibiotic property of the maggots and moulds, the healing powers of the honey, and the ability of the spider's web in preventing the blood flow from a wound. The cult is best revealed when Zeb gets injured. They use maggot therapy to heal the wound. They believe that maggot therapy is best suited for curing the cuts and wounds faster as the maggots possess an inborn ability to destroy infectious bacteria. Irrespective of feeding on decaying flesh, the maggots hold a positive aspect of killing the infectious bacteria in cuts and wounds, helping the fast healing of the injury. Maggot's therapy was very much popular in ancient times, especially at the time of the First World War. Bortman notes:

People must recognize that animals, plants, and the ecosystems that sustain them have intrinsic value- that is, are valuable in and of themselves- quite apart from any use or instrumental value they might have for human beings. The genetic diversity found in insects and plants in tropical rain forests is to be protected not (only or merely) because it might one day yield a drug for curing cancer, but also and more importantly because such biodiversity is valuable in its own right.

(Bortman 355)

The gardener's method of treating diseases using natural objects and organism reflects the ecospiritual belief in the healing power of nature.

The customs and ceremonies associated with the marriage of the Gardeners follow an ecospiritual touch in it. They follow very simple and nature friendly customs devoid of any other luxuries. The pairs need to announce in public in front of a witness that they love each other and like to live together. Following the public proclamation, they exchange green leaves as a symbol of growth and fertility and jump over a bonfire to admire the energy of the universe. Those who complete these customs get declared married. Everything is performed vice versa with a divorce. They have to proclaim in public that they are no longer in love and like to get divorced. At the time of divorce, dried twigs are exchanged in the place of green leaves and the couples jump over a heap of cold ashes. Both these customs reflect the bright and dull sides of nature that stand for happiness and sorrow.

There is an ecospiritual aspect to the character Ren. Ren has been locked in the Sticky Zone at the time of the flood. Everything was offered to her there, and she spends her time mostly singing and dancing. She considers music as something divine and it is

instilled by God in man, and man can sing like a bird and also like an angel. She believes that singing is something that comes from our inner soul and God can sense us very well while we are singing and it is the best way of praising the virtues of God. She considers the singing of birds and angels sacred and believes that through singing; they are showing devotion to the Lord who created them.

Some activities undertaken by the God's Gardeners can be related to the 'EarthSpirit Community' in Massachusetts discussed by Bron Taylor in his *Encyclopedia of Religion and Nature*. The community was founded by Andras Corban Arthen and Deirde Pulgram Arthen in 1980. Taylor lists out various ecofriendly activities organized by the EarthSpirit Community:

At both the festivals and open circles organized by EarthSpirit, the focus is on what they believe all neopagans share a magical worldview and reverence for the Earth. Animals, streams, trees, the wind, and stones are all venerated as part of the sacred web of creation. Woven into the fabric of the rituals is a theme that humanity, which is viewed as part of the sacred web, needs to honour and protect nature. The group encourages its members to be environmentally responsible.

Some outdoor rituals include the planting of trees or the removal of trash from public lands as a symbol of the participants' reverence and care for Mother Earth.

(Taylor 530)

Ecospiritual people show veneration to all objects regardless of their utilitarian value.

While taking into consideration the different materials offered in the Tree of Life Natural Materials Exchange, it reflects the inherent worth of all materials. The exchange is held in an ancient house made of all the natural materials like clay, sand, and straw. All the

materials offered for sale comprise waste materials. God's gardeners take an ardent effort to collect various waste materials and scraps from public places and abandoned areas. They make the optimum use of these materials and turn them later into various useful objects. There are ornaments made of paper clips, handbags with unused magazine pages, and knitted animals with waste objects, and the things that are used for packing are also made from recycled plastic. They grow cabbages around the edges of their installation for adornment. Bron Taylor discusses different festivals conducted by the EarthSpirit Community, showing reverence to nature. They organize different celebrations related to various seasons to express gratitude for nature:

EarthSpirit is best known for its festival, Rites of Spring, which takes place yearly around Memorial Day weekend in western Massachusetts... The theme of the gathering changes each year but always focuses on the spiritual connection between participants and the Earth. EarthSpirit also organizes three smaller gatherings- Twilight Covening in the fall, Suntime in midsummer, and the Festival of Lights in mid-winter—as well as workshops throughout the year to train neo-pagans in aspects of magical or ritual practice or to facilitate discussions of topics such as the spiritual connection between people and the Earth as reflected in the folklore and practices of indigenous peoples. (Taylor 529)

The same effort is reflected in various activities undertaken by the God's Gardeners. They celebrate different days, showing reverence to the holy spirit of nature. They put the names of various saints to highlight the importance of the day. The preparations for the day begin even one week before it and everyone takes part actively in glorifying the

significance of the day. Every day has some significance and the natural objects associated with the day vary depending on their importance.

Saint Euell's week is associated with the gathering of many tiny creatures of germination and storing different eatable food materials at the time of emergency. Different gardeners are assigned guiding others in gathering various objects. Pilar, the Eve Six, is indebted to teaching others to gather fungi, and Burt, the Adam Thirteen, is assigned to instruct others in identifying poisonous weeds from the non- poisonous ones. He tells the children to eat from all edible weeds and avoid eating any if they are in doubt and look if another creature like a mouse has eaten it. If any other creatures have eaten it, it is secure to eat as they are much closer to nature and can identify the aspects of nature better than human beings. Zeb, the Adam Seven trains the older children on hunting small animals in case food materials are scarce. He says that eating small animals is not a sin if we show gratitude and seek pardon from them. He teaches them the lesson of sacrifice and tells them that human beings should be ready to offer their body to other creatures as nourishment after their death (149-50). Everybody is connected so closely in the food chain, and the existence of one depends on the other. St. Euell's week can be associated with the ecospiritual concept of the intrinsic worth of all organisms heedless of their instrumental value. The Gardeners celebrate the divinity in nature and the interdependence between various organisms through St. Euell's day.

Adam One tries to emphasize the instructional power of nature through the example of Saint Euell Gibbons. The story of Saint Euell carries the spirit of ecospirituality in it. Saint Euell is assigned the responsibility of looking after his family at a small age and he scarcely gets any chance of getting educated in a formal school. He

provides for his family with his natural knowledge and finds his teachers in the natural species. He gets well versed in the uses of fungi and other small creatures and understands the spiritual worth of all dangerous creatures. He is well educated on the medicinal value of various plants. He teaches the entire world not to waste any insignificant plants, as they are rich sources of vitamins and other medicinal properties. Even if they appear insignificant in the human eyes, he tries to emphasize the inner worth of all creatures. The God's Gardeners follow his words as a sacred text and seek his spiritual support during the days of the Waterless Flood. Gaia hypothesis also stresses the same idea. Schneider et al. in the Preface to *Scientists Debate Gaia: The Next Century* state: "one group of organisms makes use of the waste products of another group, inadvertent "associations" are formed with local or large-scale effects on the nonliving environment; such effects can benefit both groups of organisms without forethought or "altruism" being involved" (xv). Both these courses of thought mirror the interdependence of all organisms in the ecosystem and their inherent worth.

Tiny organisms, like bacteria and fungi, play a significant role in maintaining the equilibrium of the universe. It is the tiny organisms that keep the equilibrium and the gaseous level of the ecosystem. Tyler Volk, in his *Gaia's Body: Toward a Physiology of Earth*, discusses the role of tiny organisms in the process of denitrification:

The ammonium made by nitrogen fixers satisfies the nutrient needs of land plants and of algae in lakes and oceans during protein synthesis. Other bacteria, the nitrifiers, fairly quickly convert ammonium into nitrate, which also suffices for the protein-building cellular machinery of plants and algae. The marine cyanobacterium *Trichocoe*, *Jnzlum* fixes nitrogen and thereby directly promotes its

own capability for photosynthesis. Overall, the biological flux of fixation that transforms nitrogen from atmospheric gas into its usable forms in soil or water is the main flux from the atmosphere that counterbalances the flux of denitrification. With regard to the atmospheric pool of nitrogen gas, fixation is a sink and denitrification is a source. (41-42)

The gardeners celebrate Mole Day to emphasize the role of each organism in keeping the balance of the ecosystem by keeping a favourable climate and helping in gas exchange. In *Scientists Debate Gaia: The Next Century*, edited by Stephen H. Schneider et al., James Lovelock cites the view of various bio-geochemists A.C. Redfield, V. I. Vernadsky, and G. E. Hutchinson and states that “organisms were more than mere passengers on the planet, and geochemists were aware that organisms in the soil accelerated rock weathering and that weathering was faster in hot climates, but no one saw that these were parts of a global system able to regulate climate and chemistry” (1). On Mole Day, God’s Gardeners praise the tiny creatures that live underground in keeping up the equilibrium of the universe. The Gardeners’ children are so busy decorating the Edencliff Rooftop Garden with installations of tiny creatures fashioned from waste materials. They praise the God-given powers of creativity and make the best out of all the worst materials. Unused hair combs, plastic bags, and even the strings of unused dresses are used to make all tiny creatures like ants, different worms, and termites. By making the optimum use of all discarded things, they revitalize the inner worth of everything. They venerate the worth of everything in the habitat and applaud the virtue of all tiny creatures in keeping harmony in the environment. The bacteria are praised for defending the universe from inimical invaders and the place of flora in keeping the equilibrium of the

universe is also admired. Those tiny creatures which harm human beings are also honoured on Mole Day by praising their inner worth:

True, we are sometimes infested with nanobioforms we would prefer to be without, such as the Eyebrow Mite, the Hookworm, the Pubic Louse, the Pinworm, and the Tick, not to mention the hostile bacteria and viruses. But think of them as God's tiniest Angels, doing His unfathomable work in their own way, for these Creatures, too, reside in the Eternal Mind, and shine in the Eternal Light, and form a part of the polyphonic symphony of Creation. (Atwood 113)

Gaia hypothesis also stresses the role of microorganisms in keeping the earth's equilibrium. James Lovelock in *Gaia: A New Look at Life on Earth* argues that "the large animals, plants and seaweeds may have important specialist functions, but the greater part of Gaia's self-regulating activity could still be conducted by micro-organisms" (106). The protection of microorganisms has so much importance in Gaia as it helps to maintain the chemical composition of the planet and makes the earth exercise its regenerative power.

Ecospirituality stresses the importance of the biodiversity in the soil and honour the role of each organism on the earth. Hemenway in *Gaia's Garden: A Guide to Home-Scale Permaculture* illustrates the existence of multitudes of tiny organisms in a land:

"An acre of good pasture may support a horse or two, say about a half-ton of aboveground animals. But living in the soil of that acre may be 2 tons of worms and another 2 tons of bacteria, fungi, and soil animals such as millipedes and mites. That one horse-per-acre soil may contain eight or ten horses worth of animals below ground" (58). The gardeners also give importance to biodiversity and they call the ants, the earthworms, and the nematodes as 'God's Workers on the Earth' and venerate their valuable effort in

naturally tilling the barren soil and making it a fertile one. These tiny creatures spend their whole life in darkness in the holes in the underground. They sacrifice their lives to turn the earth into a livable place. The importance of soil organisms is highlighted in ecospirituality. Hemenway argues that various organisms in the soil work together to form the fertilizer a plant needs. They become the part of this process “as they eat, excrete, reproduce, and die”. In this process, the organisms of the soil “perform an alchemy upon organic matter and minerals in the ground” (58). This reflects the role of tiny organisms in the universe in keeping its balance and making it more fertile.

Soil is regarded with utmost sanctity ecospirituality. It praises the miraculous powers of the soil. Soil is considered a platform where the dead organisms are carried back to life. Hemenway describes the natural process of bringing dead organisms back to life:

Here, in the thin earthy boundary between inanimate rock and the planet’s green carpet, lifeless minerals are weathered from stones or decomposed from organic debris. Plants and microscopic animals eat these dead particles and turn them into living matter. In soil, matter crosses and recrosses the boundary between living and dead, and as we have seen, boundaries edges- are where the most interesting and important events occur. (57)

The soil is considered sacred in ecospirituality. James Christopher and Fitzgerald also discuss the sacredness of soil and consider soil as a living entity: “a variable entity and a living entity, and one with which, as an entity, every farmer and gardener is intimately concerned. Most people in the world are still farmers or gardeners, and they, who handle the soil, must look upon it and treat it as a living whole. For it is as a living thing, not as a

dead medium” (4-5). Thus, the power of soil in the development of life systems is stressed by ecospirituality. The gardeners also adopt the same ecospiritual approach to soil. They make a staunch criticism of ancestors’ way of cremating the dead bodies and argue that the ancestors were ignorant of the ways of nature and the interdependence of various creatures. The ancestors buried the dead bodies with countless decorations; they applied various agents to preserve the corpse and encased it in luxurious coffins. The gardeners contend that by doing this, the ancestors are ungratefully destroying the sacredness of the spirit and the soil. According to the gardeners, human beings have to repay the gifts that nature offered to them and they have to submit themselves to nurturing other creatures.

The God’s Gardeners are mostly vegetarians and they avoid eating anything with a soul. They admire the inherent virtue of all creatures. Whereas, some gardeners eat pigeon’s eggs as they believe pigeons are not an endangered species. Adam One teaches the gardeners that the eggs are not creatures who possess souls inside. They consider eggs as potential creatures who bear a potential soul inside. Some gardeners avoid eating the eggs, whereas some others eat them. They do not condemn the eating of eggs and they seek pardon from the mother pigeon while eating it.

The gardeners firmly believe in the ability of nature in predicting the impending uneasy things. They are keen observers of nature and note down every unusual occurrence in nature. Adam One forewarns the gardeners about the coming of a waterless flood that would destroy everyone and everything on earth. The gardeners are indebted to examine even a slight transformation from the usual pattern. They give little importance

to the imagination and they are warned by Adam One not to cross the boundary of their imagination and be a loser in the timeless world:

While the Flood rages, you must count the days, said Adam One. You must observe the risings of the Sun and the changings of the Moon, because to everything there is a season. On your Meditations, do not travel so far on your inner journeys that you enter the Timeless before it is time. In your Fallow states, do not descend to a level that is too deep for any resurgence, or the Night will come in which all hours are the same to you, and then there will be no Hope.

(Atwood 116)

Ecospirituality attributes reverence to fellow beings, regardless of their utilitarian values. The rat expeller the gardeners produce echoes their ecospiritual cult. They create a mixture of certain scents that are enticing for the rats; by smelling that, the rats take a diversion in their path: “The goal was to remove the rats from the former and rehouse them in the latter, without loss of life: the Gardeners didn’t want to displace a fellow Species without offering them accommodation of equal value” (Atwood 208). The supporters of ecospirituality are against causing any danger to fellow beings. Nature lovers need to ensure the existence of their fellow creatures and justify their position in the ecosystem. The gardeners take significant efforts in sheltering the rats, an animal that is unworthy in the anthropocentric sense. Thus, they are considered strictly a biocentric community that compliments the existence of all organisms in the universe.

The revelatory power of nature is emphasized in ecospirituality. Nature has a role in enlightening human minds and transcend their existence. Bron Taylor in *Dark Green Religion: Nature, Spirituality and the Planetary Future* recounts the revelation that Lord

Buddha had from nature. The Bodhi tree enlightens Lord Buddha by removing ignorance from his minds and gifting wisdom (Taylor, 228). Gardeners believe in the revelatory power of nature. The gardeners keep a vigil throughout the night to find answers to their dilemmas and difficulties in life. When Toby is confused about following the gardener cult, Adam One advises her to keep vigil at night to derive a solution for her confused state. The fact is revealed in Toby's conversation with Pilar- "he wants me to do an overnight vigil. To pray for guidance" (Atwood 203). Pilar advises Toby to have a drink that contains the extracts of some natural herbs to make finding a solution to her problem easier: "You will get an answer of some kind, on this. It never fails. Nature never does betray us" (Atwood 203). The gardeners find hope in nature and they believe in the power of nature to transcend human minds.

It is nature that announces the imminent vision to Toby during her vigil overnight. The tomato plant in the garden through its incessant movements informs Toby of her vision: "Soon the plant began to glow and twirl its vines, and the tomatoes on it started to beat like hearts. There were crickets nearby, speaking in tongues: quarkit quarkit, ibbit ibbit, arkit arkit..." (Atwood 204). The vision that Toby receives is also related to nature: "behind her eyelids, she saw an animal. It was a golden colour, with gentle green eyes and canine teeth, and curly wool instead of fur. It opened its mouth, but it did not speak. Instead it yawned" (Atwood 204). Later, Pilar interprets the vision as "that's a good sign. You'll be helped with strength when you need it" (Atwood 212). The gardener's belief in nature's power in predicting the future is also revealed here. They follow natural signs and revelations in their life.

Fire has some significance in the Hindu religious conventions. Bron Taylor in *Encyclopedia of Religion and Nature* discusses the significance of fire in Hinduism: “Agni, the god of fire, is seen as a messenger between human beings and the deities because offerings were placed in the fire to be carried to other worlds” (764). The same way of thought can be traced from the novel at the time of Pilar’s death. Toby states that “the candle flared up at the moment of Pilar’s death as if a little surge of air had passed it... Spirit, an energy that cannot be grasped or measured. Pilar’s immeasurable Spirit Gone” (Atwood 215). The travelling of Pilar’s spirit to the other world has influenced the candle fire. The belief in the Hindu concept of fire and spirit can be traced to Toby’s statement.

Carl Hiaasen’s *Skinny dip* depicts the spiritual aspect of nature. Nature plays a significant role in the evolution of its plot. The protagonist Joey and other important characters in the novel, such as Mick Stranahan, Corbett Wheeler, Rolvaag, and Maureen, believe in the spiritual dimension of nature. Many incidents depicting the existence of spirituality in nature can be traced from the novel. Weather plays an imperative role in determining the destiny of Joey Perrone. Chaz decides to put an end to Joey’s life by tossing her into the ocean. He plans all the events systematically with the reasoning of a scientist. He intends to toss her in the water somewhere at the beginning of their voyage- “somewhere between Nassau and San Juan, with the expectation that the currents would carry her body into Cuban waters, safely out of U.S. jurisdiction” (Hiaasen 19). But the unpredictable weather plays a significant role in saving her life: “Unfortunately, the weather had been splendid during that early leg of the cruise, and every night the outside decks were crowded with moony-eyed couples. Chaz’s scheme

required seclusion, and he'd nearly abandoned hope, when the rain arrived, three hours after leaving Key West" (Hiaasen 19). The pleasant atmosphere compels Chaz to postpone his plan, and the rain provides him with a chance to implement his plan. The weather stands as a supporter to Joey and the current of water leads her to a safe zone. The incident reveals the sensual power of nature in deciphering the incidents taking place around.

In ecospirituality, many plants are considered sacred because of their healing powers. Bron Taylor, in *Encyclopedia of Religion and Nature*, discusses the religious significance of plants. Taylor states that "the religious significance of plants is also related to their healing properties... The medicinal texts of Ayurveda... find that trees have medicinal qualities" (770). Mick Stranahan is a staunch believer in the healing power of nature. He applies natural herbs like aloe and freshwater to treat Joey's eyes, which got sick after travelling for a long time through the saltwater.

When Joey narrates her life story to Mick, the Doberman listens curiously with great patience. Joey feels so much grief over her husband's cheating on her and his attempt to kill her by tossing her into the ocean. She considers various facts to discover the reason Chaz has done such a cruellest act to her. She contemplates the good old days that they spent together and expresses her sorrow for what has happened right now. She feels very much affected by the grief and sits in a melancholic mood. Even though Joey is a stranger and has little affection between them, the Doberman senses the situation and tickles her feet as a way of consolation. The act makes Joey smile and forgets her agony for a moment. The Doberman's action reflects the power of animals in comprehending the problems and turmoil in their fellow beings' lives.

Corbett Wheeler possesses a love for God's creation and he tries to derive solace by mingling with the innocent creations. While moving to New Zealand, he dedicates his time to sheep husbandry even if it is not much profitable. The refreshment he finds from the activity is well expressed in the words "Nothing gave him more joy than sitting on the porch of his farmhouse, taking on a joint and gazing out upon verdant slopes speckled in pewter with rams, ewes, and lambs" (Hiaasen 86). His sister invites him several times to visit the homeland, but he rejects the request simply in the name of the lambs. Actually, "Corbet Wheeler couldn't imagine a life without lambing" (Hiaasen 87). Corbett Wheeler loses his parents at an early age. It is the connection with nature that makes him forget the sorrows and miseries of his life. It is the profession of farming and the connection with the pasture lands consoles Wheeler to escape from the barrenness of his life. Like wilderness, ecospirituality believes in the power of pasture lands and non-human organisms to transcend the human mind.

Corbett Wheeler's conversation with Joey and Stranahan exposes his ecospiritual aspect. He fills his conversation with accounts of the ewes and lambs on his farm. He lives in a secluded atmosphere, spending a major part of his life in farming. It can be inferred that he prefers the company of innocent creatures of God, the lambs, to selfish human beings. His view regarding the sheep is strictly ecospiritual in nature. He states that: "These are the most peaceable creatures on God's green earth. Strange as it seems, I vastly prefer their company to humans" (320). The statement can be related to Jesus Christ, who kept some affinity with the innocent creatures of God and chose a lifestyle that is strictly in commune with nature.

Another conversation with Rolvaag also reveals Corbett Wheeler's affection and admiration for God's creation. He persuades Rolvaag to do farming, and he assures him that the very act of farming will help him overcome the barrenness of the mind created by his hectic work in the police service. He stresses the importance of sheep farming and states that "the lamb is a universal symbol of innocence" (Hiaasen 353). It echoes his trust in the magical power of nature and other non-human organisms to elevate the minds of human beings and protect them from the barrenness of city life and human problems.

Maureen is one character who trusts in the therapeutic influence of nature. She is suffering from cancer and takes morphine regularly to escape from the unbearable pain caused by the disease. During times of excruciating pain and lacking convictions, she turns to nature to get renewed and reassured. She maintains great wonder for God's creation and admires various occurrences in nature. Her conversation with Tool exposes her belief regarding the divinity in nature: "Every time my faith is shaken, I look up into the big blue sky and see God's work practically everywhere. Just imagine a bird that flies all the way from Manitoba to Key West. Every single winter!" (Hiaasen 326). The attitude of Maureen can be related to the tenets of the Dark Green Religion. Bron Taylor, in his *Dark Green Religion*, discusses the significance of appreciating one's position in the universe. He cites James Lovelock and Gore to illustrate the fact: "the simple fact of the living world and our place on it evokes awe, wonder, a sense of mystery- a spiritual response- when one reflects on its deeper meaning." People experience God, Gore added, "in every corner of creation" (181). Nature stands as a painkiller for Maureen and it promotes her faith in the power of God. Different natural occurrences keep her closer to God and keep her hope of escaping from the incurable disease.

Karl Rolvaag maintains an inseparable connection with his homeland, Minnesota, and boundless concern for each organism on earth. He even keeps pythons in his home and feeds them well. He is only concerned with the prosperity of one of the earth's organisms, regardless of its precarious aspects. Rolvaag can be considered as a person who trusts in the inherent worth of all organisms regardless of their dangerous effect on human beings.

Some factors link all organisms in the universe, irrespective of their individual or other contextual differences. Ursula K. Heise deliberates the similar interconnectedness in *Sense of Place and Sense of Planet*: "earth's inhabitants, regardless of their national and cultural differences, are bound by a global ecosystem whose functioning transcends human made borders" (25). The same bonding can be outlined in the relationship between Mick Stranahan and Joey Perrone. Regardless of their gender or cultural differences, they develop a thick bond between them and join hand in hand in the struggle to protect the Florida Everglades. The same concern for nature evokes an attraction in Joey toward Chaz. Joey grows inclined to Chaz when she gets to know about the fact that he is working to protect the Florida Everglades. Hence, most of the characters in the novels reflect the spiritual dimensions of nature and stress the necessity of guarding the environment.

CHAPTER IV

UNEARTHING THE ANTHROPOCENE IN THE SELECT FICTION

Living organisms experience an an utterly disastrous situation through a large-scale extinction of diverse species. Human beings embarrass the earth beyond its limits, which is the sole reason various natural calamities. Along with various disasters, there emerges the dissolution of various natural habitats, like rain forests, coral reefs, and wetlands. The entire planet is haunted by pollution in myriad forms. A substantial increase in global temperature adds to the miseries of all organisms on earth. Human beings are regarded accountable for all these natural catastrophes. The global community must apprehend these fatal calamities unless they will challenge the survival of everything and everyone on earth.

There are certain 'events of extinction' on earth from ancient times itself. There is a vanishing of a sizable amount of earth's inhabitants every year. The earth witnesses the disappearance of different varieties of fish, animals, and even geographical features like wetlands, coral reefs, rain forests, etc. The superfluous use of natural resources by human beings such as excessive consumption of endangered species, annihilation of the habitats of the organisms in the name of developmental activities, and high level of pollution that human beings create for their egotistical needs can be attributed to the source of all these fatal advancements that emerge in our ecosystem. All these destructions caused to the environment trigger the dissolution of the human species along with other organisms. The drastic change in the environment precipitates many negative effects on human beings. Many people are the sufferers of cancer and diverse fatal diseases because of the presence of ultraviolet rays and other unstable elements in nature.

Many unprecedented events transpire in the environment due to drastic fluctuations in the climate. Various catastrophes such as unusual rainfall, excruciating heat, floods, drought, tsunamis, and other dangerous storms menace the planet. Human beings can be considered exclusively liable for these climate changes. In *Encyclopedia of Environmental Ethics and Philosophy*, J. Baird Callicott and Robert Frodeman examine human-induced climate change and contend that human beings are creating an effect on the global climate since the year 1896 by suspending carbon dioxide and other gases through the burning of various fossil fuels. The actions institute great dangers to the global climate and biological systems. They quote Svante Arrhenius, the Nobel Prize-winning physicist, regarding the rise in global temperature. Arrhenius forewarns the doubling of carbon dioxide, which will lead to an increase in atmospheric temperature by about 4 to 6 degrees Celsius in the future (458). Arrhenius' statement foreshadows the future generation of the consequences of uncertain increases in the global temperature.

Climate change's effect cannot be delineated at the instant it is happening. It is a progressive process and turns an irreversible one once it advance. Antonia Mehnert in *Climate Change Fictions: Representations of Global Warming in American Literature* argues: "the impact of climate change is cumulative and cannot be immediately felt. Moreover, so far it has been in the uninhabited areas of the world... where early signs of climate change have been detected" (53). Literature furnishes an opportunity to perceive the happenings in the future with a realistic representation of some fictional characters. Jennifer Rose White explains the power of literary works and asserts that they "can project our understanding and appreciation of invisible, slow, and slowly accelerating crisis into the future in a dramatic way that other forms of discourse lack. [Novels] can

also legitimately collapse or juxtapose time for maximal impact and understanding in a way that science, biology, and even history cannot” (240). Thus, climate change fictions play a decisive role in elaborating the ramifications of climate change.

Climate change can be ascertained as one of the vital issues in the novel *Flight Behaviour*. A sequence of events that emerges in the novel can be perceived as the repercussions of climate change. A warning voice that urges the readers to introduce requisite measures in serving the planet to make it more sustainable for the vigorous existence of all organisms can be distinguished from it. The novel explores the complexities of a world that is struck by climate change. The dreadful experience of various characters in the novel, including the humans and the non-humans due to infelicitous transformations in the environment, can be discerned from the novel. The degeneration of a world which was once flourished with the diversity of various animals, species, and even tiny creatures can be mapped out throughout the progress of its plot. Greg Garrard in *The Oxford Handbook of Ecocriticism* discusses the recent advancements in the field of science that lead to ecological destructions and the common folk’s dismissal of the relevancy of ecological imbalances:

Environmentalism has brought much-needed attention to the problems biodiversity losses pose to human survival on the planet. As a recent poll by the American Museum of Natural History revealed 7 in 10 biologists believe that mass extinction poses a colossal threat to human existence, a more serious environmental problem than even its contributor global warming, and that the dangers of mass extinction are woefully underestimated by most everyone outside of science (Garrard 344).

The quote exposes the inattentiveness of the public to distinct ecological transformations, such as global warming, animal extinction, and biodiversity loss. Most of the characters in the novel disdain the scarcity of biodiversity, whereas Dellarobia can be regarded an exception to this view.

During her journey to the Appalachian mountain, Dellarobia witnesses a huge orange flame devouring the entire forest. She intends to examine the occurrence and attempts to discover the plausible reasons for the same. She associates the incident with a recent occurrence in various parts of the world: “trees were getting new disease now” (Kingsolver 17). The lack of balance in the climate generates the rise of certain pests and they eventually lead to the destruction of several trees in the surroundings. The summers become wet and the winters milder. This precarious condition induces the outbreak of numerous insects, proposing a reduction in the fertility of the forest and making several species endangered: “The wetter summers and mild winters of recent years were bringing in new pests that apparently ate the forest out of house and home... the day couldn’t decide whether to warm up or not” (Kingsolver 17). James Lovelock in *The Vanishing Face of Gaia: A Final Warning* alludes to Sir John Houghton’s view on the transition in the atmospheric temperature and its repercussions. He illustrates how different aftereffects of climate change in diverse parts of the world finally add to the destruction of the entire planet. According to him, climate change will be more palpable in the Polar Regions as it precipitates the melting of ice and causes Greenland and Antarctica lose their ice caps. The changes that arise in these regions lead to the hike in global temperature and sea levels and eventually affect the entire planet (15-16). Hence, the

transformations created in one part of the world upset the conditions of the earth and all its systems.

Climate change can be contemplated as a global issue, the effect of which gets manifested differently in different parts of the world. While some parts of the world experience the melting of ice, another part boils at a high temperature. There may be excessive rainfall in one part of the world, while another experiences a high snowfall. All these changes institute various calamities in the world, such as drought, flood, rising sea levels, tsunamis, and other threats, such as the extinction of animals. The same condition can be observed in the novel. As the Appalachian Mountains receive heavy rainfall, Mexico experiences a high temperature. The effects of these unprecedented changes are different in both these places. The condition in Mexico urges the people and other organisms, especially the Monarch butterflies, to migrate to another land, whereas the people in the Appalachian region experience a flood-like situation due to heavy rainfall.

Climate is an imperative factor that determines the existence of various organisms in the universe. An affirmative change in the climate affects the organism positively and the undesirable vicissitudes will be reflected in its life adversely. Disparate elements in nature respond to climate change differently. While some embrace climate change, others force themselves out of that climate. Tony Eggleton, in *A Short Introduction to Climate Change* notes, "In climates in which life pauses for the cold of winter, plants and animals respond to the warmth of spring. Trees bud, frogs spawn, birds mate and caterpillars hatch from their dormant eggs. And if spring comes early, so does the re-awakening of life" (Eggleton 13). The consequences of climate change are obvious in disparate elements of the novel, such as the garden, landscapes, and the monarch butterflies. It can

be delineated from the garden in Hester's home, too. The garden is in a completely deteriorated state and makes the hard work of Hester to keep it in a luxurious position in vain: "Hester's flower beds had melted under the summer's endless rain and so had the garden... prized rose beds were reduced to thorny outposts clotted with fists of mildew" (Kingsolver 24). Climate change proposes a great deal of loss to Hester. Her expensive plants in the garden get withered in the persistent rain and the garden's elegance gets subsided in the new climate. Climate change's impact gets reflected in nature and nature is left in an utterly destructed state.

The irregular change in climate can be detected in the comment that Preston passes regarding Christmas: "Preston gave up hoping for a white Christmas and asked his mother if Santa knew how to drive a boat" (Kingsolver 169). They experience heavy rain as opposed to its usual pattern, and it has made their life miserable. The intensity of the rain can be traced from the following statements:

It fell on them in sheets and gushes, not normal rain anymore but water flung at the windows as if from a bucket. At times, it came through the screens, visibility zero, and gusts of air seemed to burst from the ground, swirling the deluge around in clouds of spray. Groundwater was rising everywhere. The front yard became a flat, grassy pool. (Kingsolver 169)

Climate change not only disturbs nature but also all organisms in nature grow vigorously distressed by it. The unexpected rain leaves the surroundings in a flood-like situation and it precipitates the life of the people miserable.

Climate change generates an unpleasant experience on the monarch butterflies. Their usual habitat in Mexico is transformed to a completely destructed place in the

unlikely climate and they migrate to the Appalachian Mountains for an enhanced environment. But the condition there turns extremely worse and adds to a menace to their robust existence. The dead bodies of these tiny organisms appear in large quantities in various parts of the mountains: "Piles of dark detritus lay in leafy clumps at the edges where the flow had receded, and these... were not leaves but corpses" (Kingsolver 171). Tony Eggleton, in *A Short Introduction to Climate Change*, discusses the role of climate in the life of insects. The food habits and the endurance of the insects are entirely based on the climate where it lives. Eggleton argues that:

Insect species are confined to places where the climate is right for them. In the case of butterflies, this may be because caterpillar-food plants thrive in that climate or the caterpillar itself survives best there. Whatever the butterfly's reason, one study has shown that of European butterflies, two-thirds have moved their range northward over the past century, some by as much as 200 kilometres. Such a change implies a move in order to remain within the insect's preferred climate range, which in turn implies that the climate has changed, and in this case, because it is getting warmer. (14)

The climate change in Mexico adversely distresses the butterflies. Global warming urges the Monarch butterflies to leave their regular habitat by being dispossessed and suffering starvation. Many of them die of unbearable climate and shortage of food in the transferred region. Here, climate change serves a notorious role in eradicating a particular species from the face of the earth. Thus, species extinction engendered by climate change is one issue that the novel deals with.

Climate change can be said to possess certain constructive aspects. The rain quickens its flow throughout the mountain path to reveal the exploitations and annihilations caused by the materialistic individuals to mother earth. A place uninhabited by human beings can be seen as a pile of waste deposits. The rainwater brings down most of the waste materials deposited by men in the sacred bed of the mountains:

How much man-made flotsam had washed down from above, given that no one lived up there: a flat-sided plastic bottle, bright yellow under its ancient patina of dirt. White shreds of plastic grocery bags. A large, rumpled panel of corrugated tin. Old fence posts tangled with barbed wire, from some upland boundary that was surely no longer relevant. Cigarette butts, also some traces of some personal past. (Kingsolver 186)

Climate change performs a decisive role in instructing human beings about the deterioration and damage they inflict on the planet. The heavy rain brings down many shreds of evidence for human annihilation in nature. It plays a vital role in exposing the malices wreaked by human beings secretly. People deposit many waste materials above the mountain which are not inhabited by anyone. They keep the matter of waste disposal a secret. Whereas nature itself takes a hand to divulge it to the entire world.

Human beings initiate many discrepancies in the atmosphere as part of their daily routine. Greg Garrard in his *The Oxford Handbook of Ecocriticism* points out how man's intervention adversely affects nature irrespective of the geographical location, gender, or class differences. He states: "They use the Earth's resources at vastly at different rates, generate waste in vastly different ways, and transform vastly different aspects of the planet: its atmosphere, waters, and soils, its genes, species, and ecosystems. And they do

this, again and again, every day, all over the world” (391). The regular habitat of the monarchs is in Mexico, and they migrate to the Appalachian Mountains for their survival. Their existence in the Appalachian region is also imperiled by various natural calamities, like heavy rain. The major factor that stands as a menace to their survival can be attributed to climate change and the actual reason behind it can be related to the profit-loving citizens of the region.

Trees, especially forests, play a significant role in preserving the balance of the ecosystem. The carbon cycle in the atmosphere is basically controlled by the trees. The forest ecosystem operates as the principal agent in preserving the gaseous level in the atmosphere. Freer-Smith et al. in “Forests and Climate Change: the Knowledge-base for Action” elaborates the role of forests in upholding the equilibrium of nature. They argue that forest environment and the soil store a higher amount of carbon than it is present in the atmosphere and the primary cause of the present day climate change is considered as an anthropogenic one. The current ecology experiences a transformation in the global carbon cycle through the release of carbon dioxide and methane (Freer-Smith et al. 7). The same anthropogenic destruction can be detected in the novel. Logging is one of the dominant activities that can be seen prevailing in both Mexico and the Appalachian Mountains.. Landslides and floods are the two aftereffects that destruct the existence of the organisms in the universe. The fact can be inferred from the statement that Dellarobia makes: “They had clear-cut the mountainside above the town, and that was said to have caused the mudslide and floods when a hard rain came” (Kingsolver 189). Thus, the climate change experienced in both regions can be related to the avaricious assertiveness of egocentric human beings.

Logging is one of the grave issues that perturb the wholesome existence of the environment. It enacts a vital role in precipitating the earth to lose its equilibrium and leaving everything in utter disorder. It intensifies the extremity of climate change via various forms, such as soil erosion, landslide, and animal extinction. Most of the male characters in the novel support deforestation, and they estimate it as an effortless strategy to accumulate wealth with little toil. Bear Turnbow and Mr Norwood sign a contract with a private party to cut down the trees to obtain wealth for reimbursing their debts. They perceive natural objects as simply materialistic, which can be used for their own egoistical needs neglecting their inner worth. Most of the natural calamities such as heavy rainfall, landslide, and soil erosion that take place in the novel are the aftereffects of this mental assertiveness. The mindset of the selfish human beings to manifest nature merely as an entity to provide for them contributes to this despairing situation and adds to the miseries of humans as well.

The anthropocentric perspective of human beings will lead to the destruction of the entire ecosystem: “Humans may, of course, interfere with a plant’s or the planet’s, ability to continue performing its duty. Given the reciprocity of relations, however, when country is treated improperly and desecrated, the natural world becomes unbalanced and all within it are affected” (Jamieson 11). The repercussions of logging are well conveyed through the words of Dellarobia while she converses with Cub to stop his father from the disastrous act of logging. Dellarobia surmises the mountain has become “a trash pile. Nothing but mud and splinters” (Kingsolver 54). Each time she travels to the grocery shop, she notices the mountain in an entirely destructed state. Landslide is occurring all over the mountain and it looks like somebody has blown the bomb there. The area

experiences heavy rainfall in winter, along with humid climatic conditions. The heavy rain intensifies the amount of landside and the roads also turn into a danger zone for all those who are travelling there.

Many ecologists consider it as the obligation of human beings to protect the universe from various annihilations and destructions that occur on the planet. Callicott et al. argue about the climate change expectation of an ethical concern from the parts of the human beings. “It not only challenges people to act in a morally responsible way but it also challenges the very idea of moral responsibility” (459). Dellarobia considers the protection of the environment as her moral concern by attempting to identify the reason behind it and taking valuable measures to counter the same. In *Dark Green Religion*, Bron Taylor discusses the two streams of dark green religion that flowed from Thoreau- “the first involves a bioregional impulse, the quest to return to and commune and live in harmony with nature in a particular ecoregion. The second involves an activist impulse, whose chief moral priority is to engage in political action to prevent the desecration of nature” (58). Dellarobia can be connected to the second stream of dark green religion. She takes great effort to enlighten her family members and society on climate change. She also openly protests against the atrocious logging projects undertaken by her husband and father-in-law. She even talks against a corporate named the Money Tree industry, which takes great initiatives in deforestation and induces the earth to lose its balance.

The people who are organically united to nature, specifically the biologists take great initiatives to retrieve the planet from the clutches of climate change. In *Sense of Place and Sense of Planet*, Ursula K. Heise expresses the evolution of a group of

scientists or environmentalists who pay much attention to the aftereffects of climate change that are occurring in their surroundings:

While issues such as population growth, chemical pollution, nuclear contamination, and looming resource shortages dominated the environmental imagination of the global in the 1960s and 1970s, a new concern began to reshape it in the late 1980s. Initially called the “greenhouse effect,” the gradual warming of the earth’s atmosphere due to emissions of heat-trapping gases later came to be referred to as “global warming” or “climate change.” Scientists and environmentalists have sometimes worried that “global warming.” Perhaps the most straightforward of the three phases does not sound risky enough to who associate heat with pleasant summers on the beach, and obscures the fact that some regions might actually experience more rainfall or lower temperatures.

(205)

Most of the novels on climate change incorporate a character with a scientific cult, who maintains a greater perception of various endeavours in the universe and institutes an ardent effort to defend the planet from the crisis. “Scientists play a fundamental role, developing the meaning of climate change while helping to frame questions about both knowledge and the novel as a formal entity” (Trexler 31). The character, Ovid Byron, can be perceived as the finest example of a scientist who seeks to salvage the position of the earth and vindicates the right of all organisms to a vigorous existence. Ovid Byron is too much apprehensive about the vigorous existence of the monarch butterflies and he accepts various measures to make the survival of the butterflies a reality. He perceives the migration of the monarch butterflies as a global issue and dedicates his time in

studying the reasons behind it. He takes a long journey to inspect the Appalachian Mountains and acknowledges the issue as a global one that disturbs the existence of all organisms- both human and non-human. He states about the migration: “it’s like if we got persuaded to come out here for some reason and live among the sheep. We still couldn’t eat grass. And we wouldn’t have baby sheep, we’d have babies, and they’d be in trouble with the freezing rain and the coyotes” (Kingsolver 360). Ovid Byron’s remark acknowledges the concern of scientists on climate change. He contemplates climate change as a global one and if its effect is not seen in human beings, it does not mean that it will not disturb them. Animals are also part of the ecosystem and the impact that is displayed on them will have a reflection on the lives of human beings, as the ecosystem is constructed as an interconnected one.

Climate change’s impact gets manifested in diverse forms in distinct ecological regions. Adam Trexler in his *Anthropocene Fictions* states, “climate change’s real effects are more distributed: desertification, contamination of freshwater, fiercer tornadoes, extinctions, destroyed mangrove barriers, crop failures, and so on” (170). The traces of destruction are reverberated in the surroundings where Dellarobia lives- the yard in her home is adorned with plastic toys and straggling grass. The land lacks any qualities of fertility and any fruitful plants or trees are hardly seen in the yard and the area witnesses soil erosion. It is the plan of her father-in-law, Bear Turnbow, to bulldoze the land for constructing the house instigates such destruction.

The disappointing culture of commodification reigns over the nature of the Appalachian region. The environment suffers from the destruction of many forms. People appreciate everything conferring to its monetary value, rejecting its inborn worth or the

power to balance the entire ecosystem. Bron Taylor discusses the consequences of globalization in *Dark Green Religion* and states:

The globalization process itself was said to destroy traditional and sustainable agroecosystems. This involved, in essence, an increasing and sacrilegious commodification of life,... which in turn depended on the theft of intellectual property from indigenous people and the destruction (if not theft) of their lands.

According to this declensionist narrative, globalization- fueled by corporate greed and power and a corresponding erosion of democracy- thus destroyed both biological and cultural diversity. (Taylor 184)

An organization named Money Tree Industries is operating in the country that extends huge amounts of money to their clients by endorsing a contract with them for cutting down the trees on their property. The organization can be observed as the principal agent for generating an imbalance in the environment by shattering the trees that play a significant role in perpetuating biodiversity and preserving the equilibrium of nature. Bear Turnbow and Peanut Norwood sign a contract with the organization to clear-cut the mountain. The organization lacks any moral dimensions and they initiate various tenders for clear-cutting the mountains and forests with little consideration for them. The organization supplies wood or other materials from the mountain across the world for even silly matters, like producing toilet papers for city folks.

Callicott and Frodeman state that the consequences of climate change are so outrageous that it emerges at least expected times. They deliberate the aftereffects of carbon dioxide emission and state that “once carbon dioxide is emitted, it remains in the atmosphere for centuries, and other greenhouse gases (GHGs) can remain in the

atmosphere for millennia. Because GHGs have such long residency times in the atmosphere, their effects on climate extend far into the future” (459). Natural disasters play a substantial role in relocating and altering the face and inhabitants of a region. Kate Rigby expresses the same view in *Dancing with Disasters* and states that people’s interpretation of natural calamities varies corresponding to their cultural differences. They consider natural calamities “as a response to human wrongdoing on the part of God, or the gods, or an indwelling power inherent in the sacred order of things. In this hermeneutic horizon, morality and materiality, and social relations and natural phenomena, were understood to be interrelated” (Rigby 3). The incidents that take place in Mexico can be perceived as the aftereffects of the egotistic cravings of human beings. The degenerated condition of the country is reiterated through the words spoken by Josefina, Preston’s classmate, who visits the Turnbow family with a desire to observe the butterflies on the mountain. The girl and her family are from a recently migrated population of Mexico. The girl’s description of her home country divulges that the actual migratory route of the Monarch butterflies is in Mexico. Some natural calamities that occur in the region compel the Monarchs to search for an alternate migratory route and the search leads them to the Turnbow property. “Climate change will affect everyone, but the people who will suffer most are those who have done the least to bring it about. Poor countries will suffer more from climate change than will rich countries, just as they suffer more from climate variability and extreme events” (Callicott et al. 459). It is the innocent people and organisms in Mexico that suffer more than the destroyers who cause such a disaster. It is clear from the accounts of the girl that some unscrupulous developmental activities in the area have boosted to the demolition of the Monarch’s habitat. The phrase

“Everything is gone!” (Kingsolver 139) reveals the destructed state of the place. The unauthorized logging and bulldozing of the region instigates a terrible landslide and soil erosion in the surroundings. The incident causes an imbalance and the natural calamities sweep everything, including the mountain, the people, the building, and, of course, the Monarch butterflies.

Many of the disasters transpiring in the environment can be linked to natural and man-made causes. Human beings are responsible for such events and such disasters have now become reciprocal, unable to decipher their boundaries. Axel Goodbody in *Nature, Technology and Cultural Change in Twentieth-Century German Literature* postulates human beings as solely responsible for all the natural disasters taking place in the environment. He argues:

In recent years, the boundaries between such man-made disasters and other natural catastrophes have become increasingly blurred, with growing acceptance that we are involved in exacerbating certain meteorological phenomena. We have also come to recognize that circumstances under our control contribute significantly to the disastrous impact of natural events: the deaths and suffering resulting from earthquakes, volcanoes, tsunamis, and hurricanes are often a consequence of warnings that have been ignored and inadequate preparation. Both kinds of disasters are commonly related to risks that were at least partially known previously. The result is not only from chance and human error, but also from strategic economic decisions. (87-88)

A comparison between a sacred world that is uninterrupted by the profit-loving human beings and the one that is tormented by these greedy individuals can be deduced from the

description made by Pete: “the two different streams merged, one yellowish and silty from the road cut, the other one clear, from the forested side, the dark and light waters running parallel for several yards before they blended” (Kingsolver 190). The colours of these waters suggest the one pure and the other devastated magnificence of nature. The region, which is a victim of the logging industry, is suffering from dangerous environmental calamities like soil erosion and that brings a change in the texture of the water that flows there. Whereas, the water in the pristine region of the forest appears flawless.

The unethical use of harmful pesticides and other chemical fertilizers are instrumental in bringing much imbalance in the environment. The pesticides filled with fatal chemicals disturb the existence of various tiny organisms in the universe along with the human species. Excessive use of noxious pesticides precipitates the extinction of numerous flora and fauna. It also creates a negative effect by extinguishing a particular species of plant or animal from the face of the planet. Alexander E. Gates and Robert P. Blauvelt deliberate the aftereffects of using dangerous compounds on the soil and the pollution created by them:

These pollutants are pesticides, herbicides, and fertilizers and are probably the most damaging of all pollutants to the environment. Most are very soluble and can be readily leached into the groundwater system and are found in drinking water supplies throughout the country. Some may be adsorbed to clay or organic particles and remain mixed. These are the most persistent of the organic compounds. Some pesticides are so potent that they are even toxic to the microorganisms in the soil. (664-65)

Dellarobia's discussion with Tina reveals the improbable effects of the use of inorganic pesticides in her neighbourhood. She states: "Their little boy came down with cancer, and it got them kind of born-again about using chemicals... They lost their whole tomato crop. And they put in that peach orchard, which is dying" (281). The incidents can be connected to the aftereffects of soil pollution. Both humans and non-humans suffer from the effects of chemical pesticides and other fertilizers. The harmful pesticides also disturb the fertility of the soil and lead to the extinction of the flora there. "There have been examples in the past of soil mismanagement that threatened to restrict productivity such as the dust bowl of the American Midwest as well as numerous cases of desertification around the world" (Gates et al. 665). Thus, climate change issues discussed in the novel can be recognized highly anthropogenic, caused by the materialistic and egocentric outlook of human beings.

Margaret Atwood's *The Year of the Flood* furnishes a better illustration of the ecological crisis experienced by the entire world because of the fatal destruction done to the entire universe. It can be interpreted from the novel how the happy and serene atmosphere in the universe gets reconstructed into an uglier and more fearsome place, where everyone constantly dreads the impending natural calamities. "Atwood describes a world where hierarchical, corporate capitalism and biotechnologies allow the unprecedented exploitation of human bodies. The world population is decimated by a virus engineered in the centre of the corporate machine, and a new race of posthumans is positioned to live more sustainably" (Trexler 196). The novel expresses the complete devastation of the natural order provoked by the anthropocentric attitude of the human population.

Then novel has an uneventful beginning with a description of a garden that once symbolized heaven and at present has been transformed into a mere skeleton, devoid of any elegance and adornment. The garden has been once a place of shelter for many kinds of birds and animals and even human beings used to call on the place to find some solace. The transformed condition of the garden generates misery in all the creatures and their life undergo a complete transformation- the birds stop their joyful song and the beauty of the garden gets buried with the sand. The description of the environment after the Great Flood vividly depicts the transformed condition of the new atmosphere. The enchanting smell of the old nature gets replaced by the smell of destruction:

As the first heat hits, mist rises from among the swath of trees between her and the derelict city. The air smells faintly of burning, a smell of caramel and tar and rancid barbecues, and the ashy but greasy smell of a garbage- dump fire after it's been raining. The abandoned towers in the distance are like the coral of an ancient reef- bleached and colourless, devoid of life. (Atwood 9)

The lines portray the transformed condition of the environment after the Great Flood. The world appears devoid of any life. The city is in an entirely dilapidated state with various stanches of destruction. The ecological disaster that the novel deals with is the extinction of all organisms in the universe. Callicott et al. in *An Encyclopedia of Environmental Ethics and Philosophy* confer various reasons for the extinction of different organisms. They state two factors- “the natural and the human caused” are solely responsible for this disaster (417). “The source of these extinctions ranged from volcanic activity, asteroid collisions, sea-level changes related to glaciation, chemical alterations of the oceans and atmosphere, and other such global natural phenomena... however, human activities have

gradually superseded natural phenomena as the prime movers of extinction” (417). They further elaborate on the destruction of organisms and degradation of landscapes triggered by the human species and how it intimidates the habitat of organisms driving them to extinction. They also attribute “global climate change, the overexploitation of species for human use, the invasion of exotic species, and the increased spread of disease” as the actual causes of ecological crisis in the present time (141). All these events stand as the genuine cause of the extinction of species in the world depicted in the novel.

The beginning hymn clearly states how the avarice of self-centred individuals reconstructs the universe from heaven to hell. The hymn depicts a deteriorated garden, which was once flourished with an abundance of plants and other species. Here the garden embodies the entire world and all the organisms lived in utmost harmony with each other in the serene ambience of the garden and it assisted them to sustain the equilibrium of the entire world. The acquisitiveness of selfish human beings is responsible for the transformed condition of the garden. The fact is well expressed through the lines of the hymn:

But then came the greedy Spoilers.
And killed them all away.
And all the Trees that flourished
And gave us wholesome fruit,
By waves of sand are buried,
Both leaf and branch and root. (Atwood 1)

The lines portray human beings' greed as the sole reason for the destruction of the ecosystem. Human beings play a crucial role in altering the face of the earth and instigating it to lose its balance.

Different industrial and trade practices of human beings are responsible for the extinction of certain organisms on earth upsetting their biodiversity. Crist et al. in *Gaia in Turmoil: Climate Change, Biodepletion, and Earth Ethics in an Age of Crisis* argue: "the most recent mass extinction is happening now and is entirely due to the economic activities of modern industrial societies" (107). Endangered species trade is one of the ruthless means of profit that the greedy human beings participate in the novel. They accumulate huge profits through this illegitimate method and function as the torchbearers of animal extinction, digging their own tombs. Many instances of endangered species trade can be traced from the novel. An agency named 'Slink' is deriving huge profits through illegal trades:

There was an endangered-species luxury couture operation called Slink. They sold Halloween costumes over the counter to fool the animal-righter extremists and cured the skins in the backrooms. The fumes came up through the ventilation system: though Toby tried stuffing pillows into the vent, her cubicle stank of chemicals and rancid fat. Sometimes there was roaring and bleating as well.

(Atwood 37)

They utilize both domestic and wild animals for cosmetic purposes and generate a large scale extinction of these animals. The activity is performed secretly, hidden from public attention, but leaving so many traces of animal exploitation in its background. The

bleating, roaring, and stink of animal fat and chemicals point to the exploitation of animals to a large extent.

A web of these types of agencies is functioning at the basement level and the entire law system is in support of these malpractices. A restaurant named 'Rarity' is their regular customer and its name itself is derived from their practice of preparing foodstuffs using rare animals (Atwood 37). They accumulate a good amount of money in this way: "The profits were immense; one bottle of tiger-bone wine alone was worth a neckful of diamonds" (Atwood 137). The market value of extinct animals is so high and the profit loving human beings multiply these practices to accumulate economic progress.

Another kind of illegal trade practice that challenges the natural law is the 'SecretBurgers'. The customers are unaware of the meat those secret burgers are using: "The secret of 'SecretBurgers' was that no one knew what sort of animal protein was actually in them" (Atwood 40). There are rumors regarding the type of meat that these burgers are prepared. They even utilize human flesh for making those burgers: "you might find a swatch of cat fur in your burger or a fragment of mouse tail. Was there a human fingernail, once?" (Atwood 40). The 'SecretBurgers' also initiate many illegal activities with the support of the 'CorpSeCorpsMen'. They extend huge amounts of money as bribes to the 'CorpSeCorpsMen' and "the CorpSeCorps let the pleebmobs run the low-level kidnappings and assassinations, the skunkweed gro-ops, the crack labs and street-drug retailing, and the plank shops that were their stock-in-trade" (Atwood 40). The SecretBurgers gather their meat through various unlawful methods such as kidnapping and assassinations. They also undertake various activities such as disposal of dead bodies, gathering of organs for transplantation through illegal means, and the

grinding of skeletons through SecretBurgers grinders (Atwood 40). They illegally exploit dead bodies to prepare burgers and also to transplant various organs. The SecretBurgers represent the immoral corporates who play a principal role in generating ecological disasters through unscrupulous ways.

The 'CorpSeCorps' who rule over the land is the representation of the corrupt legal system that prevails in the contemporary society. The endangered species trade is declared illegal all over the country, but the 'CorpSeCorps' act completely blind against the practice. The traders are ready to offer higher amounts of bribes as the trade of endangered species makes them rich each day. The corruption that prevails in the contemporary society in the name of endangered species is echoed through the words "the endangered trade was illegal- there were high fines for it- but it was very lucrative. People in the neighbourhood knew about it, but they had their own worries... There were pockets within pockets, with a 'CorpSeCorps' hand in each one of them" (Atwood 137). Karen J. Warren speaks of a misguided society managed by the profit loving corporate in *Ecofeminism: Women, Culture, Nature*: "Multinational corporations use rhetoric to convince indigenous people to sell their rights to their own natural resources, without informing these people that the next generation will have no natural resources with which to develop and use their skills. The rhetoric emphasizes participation in the free market but fails to recognize the possibility" (400). The corporates take great effort in causing a scarcity in the animal and human species. A large population is aware of this, but they are afraid to raise their voice against the corporates and the legal authorities.

Another kind of trade practice that is fashioned against the law of nature is the "Mo'Hair" sheep breeders. The corporates grow diverse breeds of sheep for wool, and

then that hair is transplanted to human beings (Atwood 38). The society depicted in the novel exercises all kinds of immoral practices. Egg donation is one of the most unethical practices that derive plenty of money for the corporate. Toby is a victim of egg donation and it precipitates danger to her future. Toby donates her eggs twice, and she develops a kind of infection from the extraction needle. It is the third time that she realizes that she has turned sterile from the vulnerable ways of donating eggs (Atwood 38). It kills her hope in her future and turns her furthermore disappointed. The egg donation questions the natural law of reproduction in the ecosystem. The corporates play a vital role in making a woman sterile and altering the laws of nature.

The corporates perform a decisive role in annihilating the natural habitat of organisms and thus create imbalances in the ecosystem. They harm the wild creatures and their habitats for construction activities and leave their habitat in a fragmented state. Eileen Crist et al. in *Gaia in Turmoil: Climate Change, Biodepletion, and Earth Ethics in An Age of Crisis* discuss the destruction of the natural habitats by the corporate and how the fragmentation affects the biodiversity on the planet. Crist et al. state:

When humans attack the great wild, they generally leave a few fragments of the original habitat here and there... Each fragment is an island, often surrounded by inhospitable habitats such as agricultural land, buildings, and roads that for many creatures create insurmountable barriers to foraging, dispersal, and colonization—even a small road in a nature reserve can be a daunting obstacle to tiny insects.

(110)

Such devastation of natural habitat and an event of fragmentation is conspicuous in the novel when a corporate purchases Toby's house and other properties for the construction

of buildings. Toby's house is in an area packed with biodiversity. Many varieties of rabbits, deer, and other organisms are seen in the surroundings. Regardless of his love for nature, out of poverty and debt, Toby's father is forced to sell the property to the materialistic corporate. The corporate destroys the landscape for construction and damages different habitats, adding to the reduction of biodiversity in the ecosystem. The deforestation in the area plays a decisive role in inviting climate change in the region.

Globalization is a phenomenon which has emerged around two decades ago and it has brought about a change in the critical realm of individuals from the aesthetic or instrumental value of things to the economic or political advancements. Along with the advancements in science and technology, the economic system of the entire world transformed into a more capitalist regime, where the ultimate goal lies in deriving maximum profit irrespective of giving due consideration to the moral or ethical aspects of various organisms that exist in the universe. The trend has led to the advancement of a society that is purely consumerist and nurtures capitalism. Ken Wilber points out "the fractured world view" as the cause of present ecological disasters. He defines a fractured worldview as:

A worldview that drastically separates mind and body, subject and object, culture and nature, thoughts and things, values and facts, spirit and matter, human and nonhuman; a worldview that is dualistic, mechanistic, atomistic, anthropocentric, and pathologically hierarchical- a worldview that, in short, erroneously separates humans from, and often unnecessarily elevates humans above, the rest of the fabric of reality, a broken worldview that alienates men and women from the

intricate web of patterns and relationships that constitute the very nature of life and Earth and cosmos. (12)

Toby's mother can be considered a victim of this fractured worldview. She becomes prey to the greed of some corporates. She has been running a 'HelthWyzer' franchise and has been a regular customer of the vitamin supplements sold there. She gets affected by some mysterious diseases through the regular consumption of those toxic medicines:

Toby's mother came down with a strange illness. She couldn't understand it, because she'd always been so careful about her health: she worked out, she ate a lot of vegetables, she took a dose of HelthWyzer Hi-Potency VitalVite supplements daily. Franchise operators like her got a deal on the supplements-their own customized package, just like the ones for the higher-ups at HelthWyzer. (Atwood 31)

The strategy of the corporate by administering such a 'HelthWyzer' franchise is to create regular customers for their newly invented medicines. These corporations simply select the poor and innocent human beings for testing their newly developed medicines which later contribute to the loss of their lives. They intend to spread several diseases through these medicines and find a market for medicines to cure such diseases. "All they did was poke at your tongue and give you a few germs and viruses you didn't already have, and send you home" (Atwood 31). Those who are regular customers of these medicines help the corporate to accumulate huge profits and they solely depend on the corporate for their further treatments and recovery. Usually, the ways which are opposed to the ways of nature are employed and the regular victims belong to the category of innocent animals

and poor people. All the legal authorities, scientists, and doctors are in tie-up with the corporate and they support them to make the selling of their products very smooth.

The 'HelthWyzer' supplements represent two aspects of chemicals- medicinal and poisonous. The medicines supplied by the corporates offer remedies for all human illnesses. It stands as a threat to human existence, too. Ursula K. Heise, in her *Sense of Place and Sense of Planet*, discusses the toxic and medicinal aspects of chemicals and states:

The dual nature of chemicals as toxins and medicines and the attendant fascination with altered physical and psychological states of various kinds have been a recurrent issue in American literature and culture of the last forty years. The American counterculture of the 1960s, more than its analogues in other regions, was fascinated with hallucinogenic drugs, with their ambivalent symbolic role as an instrument of liberation and a tool of addiction and subjugation... Mainstream medicinal culture with its concern to develop pharmaceutical remedies for all kinds of physical and psychological conditions, as well as the New Age counterculture's attempt to both counter and replicate this regime through allegedly "natural." "Herbal," and "detoxifying" remedies all bear witness to an enduring obsession to heal, alter, or improve the human body and mind by chemical means, as well as with persistent fears that such intervention might itself turn to poison. (161)

Toby's mother can be recognized as a victim of the subjugation of corporate remedies. She is addicted to the HelthWyzer vitamin supplement and finally, the poisonous aspect

of the medicine takes her life. Here chemicals are used for “the ecological destruction and the extinction of human beings” (Trexler 17).

The advancement of technology has assisted in creating various genetically modified plants and herbs, which has aided in improving the productivity and effectiveness of the crops. Whereas sometimes the scientific people are unsure of the outcome of this genetic crossing:

There are currently different agricultural biotechnology innovations on offer. Farmers have been changing the character of crop plants for millennia, by selectively retaining advantageous mutations and by deliberately crossing plants with desirable characteristics. More radical steps have also been taken to promote mutations, through for example, subjecting plants to severe chemical treatments or exposing them to radiation. These interventions were unpredictable and thus the plant breeders still had to wait to see what the character of the mutations might be. The biotechnology industry presents its activities as only an enhancement of such time-honoured procedures with the added benefit that the changes are not random and can be - approximately- anticipated in advance. (Yearley 161)

A community named God’s Gardeners stands in extreme opposition to this scientifically advanced corporate and they try to cure various diseases through natural ways. They can be considered the followers of the ecospiritual cult. They are well educated in various natural remedies for illness and medicine preparation. They condemn the use of pesticides for plants and other chemicals for curing both human and non-human diseases. They consider honey and other natural herbs as treasures of nature that should be kept

sacred. They are totally against the use of pesticides and other fertilizers for better yielding. They follow organic ways of farming and promote various eco-friendly techniques, such as recycling and reusing. They are opposed to the use of plastic and other artificial fibres for manufacturing objects. They use biodegradable materials for constructing their houses and stitching their clothes. The gardeners can be considered a community that questions the current ecological disasters that transpire in the universe. They adopt various measures to eradicate these disasters.

‘Behavioural ecology’ is concerned with the change that occurred in the mental outlook of people regarding their approach to nature and its organisms. Kennett and Winterbalder in their *Behavioral Ecology* trace the development of a particular positive transformation that emerged in the attitude of some nature loving individuals: “the evolutionary transition from societies relying predominantly on hunting and gathering to those dependent on food production through plant cultivation, animal husbandry, and the use of domesticated species embedded in systems of agriculture” (1). The gardeners can be recognized as a pure example of this transformation. The gardeners are true lovers of nature who consider agriculture a sublime act and they cultivate their food, crops and vegetables. They avoid eating non-vegetarian food and encourage horticulture and apiculture, which stimulates the growth of many tiny organisms.

Science plays a vital role in helping human beings to take monumental steps toward the progress of the entire universe. Science instills the spirit of environmentalism among the entire civilization and helps to plan various policies based on the current trends in the natural world. It instructs the public on various issues like soil erosion, resource scarcity, various forms of pollution, and the threats that human beings have to

suffer if they cannot maintain an equilibrium between their selfish needs and the protection of nature. But various forces that developed as part of scientific thought, like technological advancement, industrialization, and urbanization have paved the way for the degradation of the entire environment. James Lovelock speaks of the aftereffects of technology in *Gaia: A New Look at Life on Earth*: “it may be that the white-hot rash of our technology will, in the end, prove destructive and painful for our own species, but the evidence for accepting that industrial activities either at their present level or in the immediate future may endanger the life of Gaia as a whole” (100-101). Here, Lovelock warns the world population of the dangers that an imbalanced technology can cause.

The spirit of reason is one of the significant development with the expansion of scientific knowledge. Human beings questioned the unknown facts, and it led to the opening up of new knowledge and a window of possibilities in front of them. Technology also plays an indecisive role in facilitating the rhythm of the entire universe. Even though the spirit of reason and inquiry serve human beings to acquire undiscovered knowledge and make them more innovative, it has some greater setbacks on the spiritual, moral, and social life of the individuals. It acts as a threat to the existence of all organisms, including human beings, and paves the way for the occurrence of all the undesirable things.

The Year of the Flood presents how the inability to sustain a balance between science and nature prompts the destruction of the entire ecosystem. The speech that Adam One delivers on Creation Day reflects the conflict that prevails between science and religion. Science traces the creation of the world to the Big Bang theory whereas the Gardeners trust in the role of the divine in creating the universe and the existence of divinity in all creations: “God laid the foundations of the Earth by interposing his own

Spirit between one blob of matter and another, thus giving rise to forms” (Atwood 41). Science considers atoms and molecules as the building blocks of all organisms, whereas the gardeners believe God created man from pure dust, which is much closer to nature. This expresses the conflict that prevails between science and nature.

Along with science, technology also acted as a medium in the destruction of the environment. Even though technology has facilitated a lot in the refinement and progress of all generations; technology and nature are considered as things that stand in two different realms. In the opinion of Lynn white Jr, “scientific knowledge means technological power over nature” (White 4). He opines that modern technological advancements are in a way stand as enemies to environmental protection. Technology is a human creation that has facilitated them to reach higher levels of advancements and, like any form of human creation, it can preserve or suppress the natural environment.

In *The Year of the Flood*, the advancement of technology supplies a lot to challenging the laws of nature and creating complete disorders in the entire ecosystem. The bioengineers in this novel are so busy creating a new species named ‘liobam’ consolidating the characteristics of both lion and sheep. By creating this species, they want to establish an amicable relationship between the two animals that stand in extreme opposites in their way of living and physical features. By performing such anti-natural tasks, the bioengineers become a threat to the web of life disturbing the food chain and the interdependence between various organisms. They also supply to the extinction of organisms by performing such immoral practices. Clearley talks of the same aftereffects:

In developmental work on gene transfer... technologists had wanted an easy way to check whether genetic material had been correctly incorporated. Since the

characteristics they had introduced would only be displayed once the organism had matured, they sought a means of establishing sooner whether the gene had ‘taken’. Accordingly, a segment of genetic material which gave rise to antibiotic resistance was inserted alongside the other transferred genes as a marker. The new material could be checked for antibiotic resistance early on and if that resistance existed it was safe to assume that both the marker and the desired gene were in place. In the haste to get these GM products onto the market, the antibiotic-resistant gene was not taken out. (164)

These newly developed species may come as a threat to the entire ecosystem, affecting the interdependence and interactions that take place between various organisms in the ecosystem.

Nature has a regenerative power that helps it to acquire a balance in the environment. Sometimes nature adopts some destructive ways to gain its balance. Timothy Clark in his *The Oxford Handbook of Ecocriticism* discusses the ability of nature to reestablish its position through some destructive ways: “Fully equipped with destructive devices, nature emerges as a combative agent, a vengeful creature who has it in for humanity. Hence one story is substituted for another: the story of nature -as-victim makes place for an apocalyptic narrative of nature as a dangerous threat” (509). Nature has the strength to get accommodated to even minute changes in the atmosphere. Some ecologists contend that the level of change of nature collapse at some points and eventually leads to destruction, leaving the entire world in a dilemma. Simon Levin discusses such a catastrophe in his *Fragile Dominion: Complexity and the Commons*. He argues:

Ecosystems have evolved some degree of resiliency in the face of environmental change, but what resiliency exists has emerged from selection acting on the components of the system, not from forces acting at the level of the entire ecosystem. There are no guarantees, and the potential for disaster is real, as exemplified by the desertification of previously productive areas, global pandemics of disease, and the collapse of marine fisheries. (195)

A mass exile of the entire population dwelling in the cities can be inferred from the novel. The world portrayed in the novel is haunted by the pandemic in some forms. The entire population is in fear of the outbreak of a waterless flood or some diseases among them. They constantly fear contact with other people. Some people in the novel possess a helping mentality. Whereas the fear of disease keeps them away from helping others. Toby can be considered the best illustration of this attitude. Toby has genuine sympathy for her fellow creatures, but she fails in helping them. Her helplessness can be best illustrated through the words, “some of those people had called for help as if they’d known she was there. But how could she have helped?” (Atwood 5).

The pandemic described in the novel has some similarities with the Coronavirus (COVID-19) which has shaken the entire world throughout the year 2020 and has its impact till date. The virulent disease was quite intimidating and created the feelings of insecurity among the world population in their mental, physical, economic, and social realms. Corona is an airborne disease that has the power to take the life of multitudes of people and has caused the death of multitudes of the population in the entire world. The disease can be prevented by wearing masks, maintaining social distance, and keeping personal hygiene, like washing hands regularly. The outbreak of the same type of disease

can be traced in the novel. There is a kind of horror in the entire population and they are in constant fear of getting affected by this disease. Many similarities between the pandemic situation in the novel and the coronavirus can be traced from the description given by Margaret Atwood:

This was not an ordinary pandemic: it wouldn't be contained after a few hundred thousand deaths, then obliterated with biotools and bleach. This was the Waterless Flood the Gardeners so often had warned about. It had all the signs: it travelled through the air as if on wings, it burned through cities like fire, spreading germ-ridden mobs, terror, and butchery. The lights were going out everywhere, the news was sporadic: systems were failing as their keepers died. It looked like a total breakdown,... The trip would be dangerous. She'd have to walk to her old plebe- no transport would be functioning. (Atwood 24)

The description gives a similar pandemic experience like the Coronavirus that led to the death of thousands of people. The disease gets transmitted through the air and various activities like sanitization can be traced from the description. A lockdown situation where the breakdown of the entire system, like transportation and law and order, can be drawn. The year twenty mentioned in the novel can also be related to the year 2020.

The atmosphere prevailing in the novel resembles a lockdown situation and the scarcity of sufficient food materials is prominent there. Like people gather food materials before a pandemic situation, the gardeners prepare their own 'Ararats' with basic food materials. It is those food materials that save Toby's life in the pandemic situation. Before she senses she is running out of food stock, she feels a little relieved as she finds that everything in her vegetable garden is in a good condition:

Her supplies in the storeroom are getting low. Over the years she'd stashed what she thought would be enough for an emergency like this, but she'd underestimated, and now she's running out of soybits and soydines. Luckily, everything in the garden is doing well: the chickenpeas have begun to pod, the beananas are in flower, the polyberry bushes are covered with small brown nubbins of different shapes and sizes. (Atwood 18)

The population in the city is anxious about the transmission of the disease and they believe that life in the countryside can shield them from the disease. Many symptoms of the disease can be traced to the inhabitants of the city: "People were hurrying past, singly and in groups, trying to get out of the city, hoping to make their way through the pleebland sprawl and seek out refuge in the countryside. There was coughing, a child's wail" (Atwood 25). The absence of a regular law and order can be outlined in the environment. The keepers of the law, the 'CorpSeCorpsMen' have flown from the city to salvage themselves from the fatal disease. Toby believes they carry "the lethal virus with them" (Atwood 25). Toby takes many precautionary measures to protect her from the disease. The precautionary measures taken by Toby have some similarities with the one that is taken by the population of the Covid-19 scenario: "The side streets were awash with people; she dodged to avoid them. She'd worn surgical gloves,... a black nose-cone air filter" (Atwood 26). She uses disease symptoms as a way of escape from the robbers: "Two teenagers paused as if to try a mugging, but she began coughing and croaked out, "Help me!" and they scurried away" (Atwood 27).

Nature returns all the annihilations that human beings deliberately impose upon it. It adopts various destructive methods, such as natural calamities like floods, storms,

volcanic eruptions, and earthquakes to rebalance itself. Disease and climate change are also considered as other ways for nature to regain its balance. Thus, the novel can be considered the best illustration of how anthropocentric attitudes of human beings generate the wrath of nature, and finally, it leads to their devastation and the destruction of the entire ecosystem.

Skinny Dip by Carl Hiaasen portrays various destructions by human beings to nature, both intentionally and ignorantly for material and egoistic gains. Most of the characters in the novel are after monetary reimbursements, irrespective of acknowledging the inner worth of nature around them. A lot of murders occur in the novel, of which the murder or destruction of the Florida Everglades is the one that requires much attention. A lot of exploitations take place in the plot, including the suppressions done to the wild things, water bodies, aquatic animals, and even human beings.

The character, Chaz Perrone in the novel stands as the prime destroyer of nature. It is Chaz's interest in environmental protection that attracts Joey to him. At the time of their first meeting, Chaz introduces himself as a biologist who has come to the Everglades to attend a convention of chosen scientists for protecting the Florida Everglades. The environmental lover in Chaz is merely a mask; actually, he is inattentive to the large-scale destruction that is taking place in the Everglades: "For a scientist, Chaz seemed dishearteningly blithe, self-centred and materialistic. He rarely spoke of his work in the Everglades, and he seemed unfazed by the rape of the planet. He displayed no anger about the push for oil drilling in an Alaskan wildlife refuge" (Hiaasen 34). Chaz can be considered a pseudo scientist who has a less concern for the ecosystem and he observes nature simply as an object of material benefits.

Chaz is a scientist who has been conferred a doctorate in biology. The irony is that his topic of concentration is wetlands ecology and he applies the same knowledge to damage one of the largest wetlands in the world that is the Florida Everglades. Chaz's intention is highly materialistic, and he supports the progressive destroyers in their attempt to contaminate the Everglades. He expects a huge compensation in return for the cruel act of disregarding the life of the planet. By destroying the Everglades, Chaz questions the equilibrium of nature and transforms the chemical composition of the atmosphere. James Lovelock in *Gaia: A New Look at Life on Earth* discusses the role of landscape in maintaining the gaseous level in the atmosphere. Lovelock states the microorganisms control the carbon level in the atmosphere "in co-operation with the aerobic decomposers of the soil and the sea-bed, together with the anaerobic microflora in the great mud zones of the continental shelves, sea bottom, marshes, and wetlands" (106). Being a scientist, Chaz is knowledgeable of this phenomenon and he deliberately threatens the equilibrium of nature for material benefits.

The materialistic and profit oriented corporate devoid of any ethical or moral concerns can be best illustrated with a cosmetic manufacturer, where Chaz works to assess the poisonous level and harmful contents of their perfumes. The company chooses a person who is not qualified to examine the contents of the cosmetics. "The firm merely needed a presentable face on staff- what serious biologists scornfully refer to as a "biostitute"- who would dutifully attest that its perfume products contained only negligible levels of toxins, acetones, and carcinogens" (Hiaasen 67). Chaz is a post-graduate in marine biology. The company just wants to choose a handsome young man as their staff to attract the attention of young girls to their product. Chaz comments nothing

about the ill effects of the cosmetics. Chaz is provided with a group of hundred mice in a laboratory to verify their product. Most of the mice leave deformed and disabled, leading to a slow death. Chaz's only target is to derive maximum earnings by gratifying the corporate by hiding the toxic nature of their products. Usually animals and poor and helpless people stand as the victim of corporate cruelties. The mice can be considered a "victim to human predatory behaviour" (Garrard 341).

Even if Chaz is a post-graduate in marine biology, he keeps less affinity for aquatic organisms. He even deliberates on extinguishing some creatures that hurt him. Chaz's irreverence to tiny creatures is well echoed while he assists a doctoral fellow studying ocean louse: "He stiffly informed his faculty supervisor that the only sensible purpose for studying sea lice, was to isolate a toxin that would wipe them off the face of the earth" (Hiaasen 66). Irrespective of being a marine biologist who has the responsibility to protect various tiny organisms, Chaz appears to be a cruel and unpleasant person who has a less concern for fellow organisms.

The profit lover in Chaz is revealed well while he works for the project of 'Everglades Restoration. He utilizes the materialistic aspect of nature: "fortune appeared to Chaz in a mystical burst of green light" (Hiaasen 68). He gets paid sixty-two thousand a year for his participation in the project. He threatens the healthy existence of different organisms in the Everglades and causes devastation to their lives. He illegally carries a rifle with him and intends to cause fatal damage to the turtles and alligators in the area. Instead of protecting the disappearing population, he plays a significant role in eliminating the same from the face of the universe. As a marine biologist, Chaz is aware of animal extinction and the vulnerabilities it may supply to the environment. He

possesses an excellent knowledge of the legal obligations of causing damage to an endangered species. On his visit to the Everglades, Chaz carelessly shoots the alligator, one of the endangered species. He informs Tool that “shooting a federally protected species was a crime punishable by heavy fines and prison time” (Hiaasen 228). Tool also supports Chaz in the extinction of biological diversity and recommends hiding the cruel act from the public by eating it. Tool suggests that “the evidence would be gone after supper” (Hiaasen 228). Both Chaz and Tool represent the population that deliberately generates animal extinction and leaves the ecosystem to lose its balance.

The novel can be recognized as a miniature version of a technologically advanced, scientifically educated, and economically well-built capitalist society ruled by the corporate, where the population is so hectic in advancing their daily life through various activities such as the purchase of body parts, consuming expensive health supplements and applying luxurious cosmetics. The developmental activities of these unethical corporate have supplied a lot to the extinction of various species from the face of the universe. They are even leading to the extinction of human beings through the marketing of vitamin supplements which they claim to be taken daily for the smooth functioning of human physiology.

Several incidents of conflicts between nature and technology can be detected from the novel. The protagonist Joey can be regarded as a person who severely suffers the consequence of technology. It is the technology that takes the life of her loved ones- her parents and her husband. Joey loses her parents in an aeroplane crash, while they transport their sick bear back home after consulting a veterinarian at Lake Tahoe (Hiaasen 30). In the case of her husband, “fate intervened in the form of a skydiver who

fell on Benny one sunny afternoon as he practiced fly casting in the backyard” (Hiaasen 32). By employing various technological advancements, human beings try to reach the height of every creation. But some kind of conflict between technology and nature is visible in this attempt. Sometimes, these attempts to win the world defeat humanity with unexpected disasters. Axel Goodbody in *Nature, Technology and Cultural Change in Twentieth-Century German Literature* states: “Shaking our faith in our ability to conquer nature with the aid of technology and reminding us of wider uncertainties inherent in the modern civilization of which we normally suppress awareness, they exemplify the continuing presence of risk and incursion of chance into a world which we had long since thought under our control” (87). The quote echoes the inability of technology to win the natural laws.

Chemical contamination is an important issue that can be mapped out in the novel. The profit loving scientist, Chaz, supports the contaminating activities of Hammernut’s farming. Red Hammernut uses an exorbitant amount of toxic pesticides to improve its harvest. “Red Hammernut’s farms were flushing so much fertilizer into the water that it was choking part of the Everglades to death” (Hiaasen 229). Ursula K. Heise considers Lawrence Buell’s notion of chemical contamination in her article “Toxic Bodies, Corporate Poisons” in *Sense of Place and Sense of Planet*. She argues that “chemical pollution is indeed a central issue for American environmentalism, at the same time that it functions as a crucial trope utilizing which writers and filmmakers explore the porous boundaries between body and environment, public and domestic space, and harmful and beneficial technologies” (161). In the case of chemical contaminations, technology stands as a threat to the ecosystem, as it plays a vital role in developing a

substance that causes danger to the ecosystem. The incident reflects the corporates' attempt to threaten the ecosystem for materialistic gain. Hammernut's farm generates an outrageous amount of contamination to the entire ecosystem by using hazardous pesticides to increase its harvest.

There is a close similarity between the geographical region in which a person lives and his personality. Mark Allister in *Refiguring the Map of Sorrow: Nature Writing and Autobiography* discusses the concepts "geography of the land" and the "geography of the spirit" (4). He claims that the geographical region that one lives in affects both positively and negatively a person's character. The fact can be illustrated by the characters of Mick Stranahan and Chaz Perrone. During his lifetime in the city, Mick Stranahan possesses an aggressive type of behaviour, later he lives on a solitary island, which is very close to nature. The calm atmosphere on the island promotes him to become a gentle person who retains sympathy for his fellow beings. Whereas Chaz Perrone is leading a city life and the crookedness and barrenness of the city life can be drawn from his character. He maintains less reverence for human beings and their fellow organisms. The same influence of geography can be found in Corbett Wheeler, who spends his time in New Zealand pastures along with his lambs. The gentleness of the lamb and the quietness of the pastoral region are reflected in his character. When he is away from the place, he feels much isolated and expresses his desire to return to New Zealand repeatedly. The fact can be linked to the "sense of place" that Dreese discusses in his *Ecocriticism: Creating Self and Place in Environmental and American Indian Literatures*. Dreese states: "All human beings develop their own sense of place through life that determines why they love certain regions or feel utterly alien in others. It is not

an uncommon human experience to long for the particularities of a certain place that have had a powerful interior effect on their human psyche” (1). Thus, the pollution and destruction that govern city life may be unbearable to those people who keep an affinity with nature. The fact exposes that the people who engage constantly with nature keep an abhorrence for city life and they strive hard to reinstate nature in their daily routine. Thus, the novels can be considered as illustrations of anthropocentric destructions to nature that incorporate themes of climate change, technological disturbance, extinction of species, and insatiable economic greed of egoistic human beings.

CHAPTER V

CONCLUSION

Nature has always stood as a matter of discussion in various disciplines. Earlier, works of literature embodied nature merely as an object of magnificence with its fresh, serene and aesthetic physiognomies. With ecocriticism, writers contemplated on the realistic aspect of nature, representing its wretchedness, its barrenness, and anthropocentric exploitations. It deliberates nature as an entity that deserves the right to get served with reverence. The same surge of thought can be perceived in the field of science. James Lovelock, through Gaia theory, put forward the premise that Earth is a “super organism” and like any organism, earth deserves veneration from the part of its inhabitants. The conditions of the earth are devised by its inhabitants and they eventually get compensated both positively and negatively conforming to their activities. The thesis endeavours to investigate the apprehensions of science and literature on nature by tracking the common characteristics of the theory of ecocriticism and Gaia.

Ecocriticism is a literary theory that assesses different dimensions of nature embodied in literary works. It scrutinizes how the present ecological circumstances influence the imaginative level of the literary writers. Gaia is a scientific theory that examines how diverse organisms on earth construct or destruct the chemical compositions and habitability of earth and how the earth rebalances itself from the annihilations of any extent.

It has been identified that ecocriticism and Gaia share some correlations in their collaboration with disparate elements, such as gender, spirituality, climate change, and animal extinction. These resemblances connect women with nature and they often stand

for the progress of the mother earth in their attempt to survive in this marginalized world of enslavement and oppression. The process of reproduction associates the female gender with nature and both of them are designated as “mother” which entitles many duties and obligations on them regardless of their inconveniences and sacrifices. Despite these regulations and incapacities, there prevails an inner urge for freedom and self-assertion in them. They strive to free themselves from the clutches of patriarchy to reassert their identity. The Gaia theory attributes a feminine existence to earth by choosing the name “Gaia”, which means “the goddess of earth”. In ecocriticism also, the feminine gender “mother earth” is adopted to denote the earth. Marko Pogacnik in *Daughter of Gaia: Rebirth of the Divine Feminine*, describes three different phases for the development of earth- “the white”, “the red” and “the black” (6). The white phase marks the “wholeness of the earth”, where the earth is a fully developed entity. The red phase specifies different interactions that are taking place on the earth. Different organisms both positively and negatively affect the earth’s atmosphere and tremor its balance. In the Black phase, the earth behaves as a self-regulatory system by rebalancing itself to a favourable condition for lives to survive. The earth’s self-regulation influences the earth’s inhabitants too.

Ecospirituality and deep ecology attribute a spiritual existence to nature, where, nature is recognized as an entity with inner worth. The divinity of nature demands reverence and concern by its organisms. An irreverence caused to nature will be repaid. Nature is considered as a complex whole, where each part is reciprocal and the disorder in one part disturbs the other, too. Each part has a unique function, whereas no part is inferior or superior to the other, as everything works collectively to complete the complex whole. Gaia hypothesis also maintains the same view of the earth. It observes the earth as

a superorganism, which has the potential to take vengeance and rebalance itself. Any negative acts executed against earth will be eventually questioned by the earth. There is a give and take relationship between each organism on earth. The first organisms on earth developed consuming the air, water, and other substances on earth. In return, the organisms offered themselves to the earth at their death. The composition of the earth plays a substantial role in the development of various organisms on earth and in assuring the diversity of the ecosystem. The coordination of each organism is imperative for the smooth functioning of this superorganism.

Climate change and animal extinction are the two important realms of apprehension for both the ecocritics and the proponents of Gaia. Climate change stands as a disastrous factor that carries the power to destruct the diversity and equilibrium of the planet. Thousands of organisms get extinct every year because of the conflicts raised by the adverse climate. Both the followers of Gaia and ecocriticism recognize climate change and animal extinction are provoked by anthropocentric destruction. The irreverent perspective of human beings to accomplish their egoistic needs can be regarded the lone reason for these natural disorders. Human intervention transforms the chemical composition of the earth, inducing it to raise its temperature levels. The expulsion of various toxic gases, deforestation, overexploitation of natural resources, and global warming add to the misery of numerous organisms in the ecosystem. The self-regulating power of the earth attempts to rebalance its chemical configurations and atmospheric levels. In this rebalancing process, some organisms become extinct as a sufficient environment is not found for their survival.

The introduction describes the development of the Gaia hypothesis and the theory of ecocriticism. The fundamental premise of the thesis is to investigate the ecocritical perspective of the novels *Flight Behaviour* by Barbara Kingsolver, *The Year of the Flood* by Margaret Atwood, and *Skinny Dip* by Carl Hiaasen and associate it with the concept of the Gaia hypothesis. The thesis is dealt with the basic concept of the Gaia hypothesis and it seeks to view the hypothesis from a literary perspective by connecting it with ecocriticism. The Introduction traces the development of the theory of ecocriticism and the relevance of the term Gaia in it. It provides a brief introduction to the concept of the Gaia hypothesis, introduces the novelists and offers a gist of the select novels. It also specifies the need for reviewing the select novels from an ecocritical perspective.

The first chapter furnishes a theoretical framework of the thesis. It examines varied ecocritical concepts and attempts to associate them with the Gaia hypothesis. The chapter scrutinizes the basis of ecocriticism and elaborates on the elements of ecocriticism, such as ecospirituality, ecofeminism, climate change, animal extinction, scientific and technological advancements, and developmental activities. It inspects the view of Gaia and ecocriticism in these realms.

The second chapter, "Conspiring Nature as a Feminist Space" explores the ecofeminist perspective of the select novels. The select novels depict the subjugations and dominations suffered by nature and women in a patriarchal society. The women characters in the select novels and the nature portrayed in them display the features of ecofeminism. Both of them are regarded as mere products of a consumerist society. The selected novels illustrate the three different phases of ecofeminism elaborated by Marko Pogacnik in *The Daughter of Gaia: Towards a Divine Feminine*.

The Year of the Flood depicts a post-apocalyptic world where people are striving to sustain in an ecologically uncertain place. Atwood endeavors to render the disintegrated life experienced by the planet and the female characters in a patriarchal system. The novel demonstrates the protagonist Toby's survival in a disparaged society. The novel describes the three phases in her life "the white", "the red", and "the black" (Pogacnik 6). Toby's life with her parents represents the first stage of her life, where she enjoys maximum freedom and receives ardent support from her family to improve herself. Toby and her parents are forced to leave their homeland because of the activities of the corporates. The work with the 'HelthWyzer' makes Toby's mother diseased, and it eventually drives them to debts. The struggle for survival from the disease subsequently leads to the death of Toby's parents. There begins the second phase of her life. Toby's search for a place for survival takes her to a small rented room. In the region, she witnesses many merciless and brutal acts against the animals, specifically the endangered species. Life in the area adds mental suffering for Toby. As a way of escape from the region, Toby finds a job at the 'SecretBurgers', where she is deliberated merely as an object of sexual satisfaction. Blanco, the owner of the restaurant, torments her both sexually and psychologically. Toby leaves with the gardeners and the life with the Gardeners represents the third phase of her life, where nature serves in redefining her position in society. This period can be regarded as a period of transformation for Toby. She gains her new identity as a gardener and the circumstance encourages her to operate her knowledge of herbal medicine. The helpless, subjective, and marginalized Toby gets transformed into a strong woman who has great aspirations in her life. She uses this opportunity to question patriarchy for its prejudiced treatment.

The nature presented in the novel also illustrates the three different phases of its existence. The nature in Toby's childhood stands for the first phase of its existence, which is characterized by biodiversity and experiences less pollution. The second phase of nature resembles the second phase of Toby's life, where a lot of unethical events occur challenging the equilibrium of nature. Corporate activities shatter natural boundaries and diversity by approaching it as a resource. Many nefarious acts, such as the slaughter of endangered species, animal extinction, and the use of chemical pesticides, dominate this phase. During this phase, nature appears barren, devoid of any biodiversity. In the third phase, the gardeners strive for the betterment of nature and restore its position. During this phase, nature develops into a vigorous entity that has the strength of transmuting the lives of herself and others. Nature withstands a total transformations in this phase and imperils the life of its exploiters through a waterless flood and with an unnamed disease. The sole survivors after these incidents are the people who keep an affinity with nature.

The novel describes the concept of the commodification of women in a patriarchal society. Most of the female characters in the novel such as Toby, Ren, Lucerne and Rebecca are considered sufferers of mental, physical and sexual persecution from the authoritative male members of patriarchal society. The voices of these deprived and deserted women are quietened by the economic and physical power of these elite groups. Blanco, Lucerne's husband and the management of the sex club are regarded as the representatives of this system.

The female characters in the novel are aware of the ecological degradation that is advancing in their environment. Lucerne sacrifices her comfortable life with her husband to join the God's Gardeners. Her affinity towards nature assists her in surmounting the

materialistic outlook of metropolitan culture. Toby's character is also strengthened by her association with nature. Toby gets opportunities to practice her knowledge of herbal medicines through her connection with nature. The waterless flood plays a decisive role in bringing justice to the lives of different female characters. The flood intimidates the existence of different agents of patriarchy and establishes a secure life for women and nature.

Barbara Kingsolver's *Flight Behaviour* illustrates the suppressions and dominations suffered by women and nature in a patriarchal society. Many instances of natural degradation and the exploitation of the female gender can be discovered from the novel. The novel progresses through the life of the protagonist Dellarobia Turnbow. The incidents depicted in the novel also offer an ecofeminist reaction. Three phases of nature and the protagonist can be explored in the novel. Dellarobia maintains a peaceful childhood with her parents. She gets access to educational facilities and possesses great aspirations in her life. Childhood suggests the first phase of her life, where she stands as a self-confident and aspiring woman. The premature marriage brings her transformation from the first phase to the second "the red phase". She is perceived merely as an object of reproduction and a mother and wife figure in this phase. She sacrifices her dreams and aspirations for the smooth functioning of her family life. She gets suffocated in a demanding family atmosphere. Even if Dellarobia is not highly educated or experienced, she keeps a great affinity and appreciation for her surroundings. She notes down even a slight change in the atmosphere. She travels to the Appalachian Mountains as a way of escape. The journey to the mountains brings the transformation of her life to the third phase. The sudden revelation that she receives from nature stands as a determining force

in redefining her position in society. She changes to a stronger and socially responsible individual after the incident. She empowers herself with education and strives for the justice of nature. It is the connection with nature that drives Dellarobia get acquainted with the scientist, Ovid Byron, and enlarges her horizons of knowledge, and transforms her into an independent and self-reliant woman through a modest career.

The same three-phase journey can be detected in nature that the novel deals with. At the beginning of the novel, the Appalachian Mountains symbolizes the sanctity of nature and its diversity. The wilderness in the mountains fascinates the Monarch butterflies who are compelled to migrate from Mexico because of unprecedented climate change and global warming. The second phase of the mountain's life experiences a disequilibrium. Landslide and heavy rain occur in the region because of logging and other developmental activities of the greedy human beings. In this phase, the entire region appears as a heap of waste with plastics and other man-made things. The landslide and heavy rainfall that the region experiences disturb the life of both the human and the non-human organisms in the neighbourhood. In the third phase, nature rebalances itself and makes a suitable condition for the survival of other organisms especially, the monarch butterflies. The monarch butterflies also represent an element of nature that experiences this three-phase journey of its life. The Mexican climate threatens the life of the monarchs, where they experience a loss of life and a huge decline in their species' population. As a matter of survival, they migrate to the Appalachian Mountains. Their survival in the region is also interrogated by the intolerable climate. Later, Dr Ovid and Dellarobia deport them to an atmosphere conducive for their survival. The new region

offers a new beginning for their lives. The flight of the butterflies and Dellarobia's flight in career reflects a sense of freedom and their attempt to reclaim their lost position.

The supporters of ecofeminism consider women as more environmentally sensible and apprehensive about any transformation that occurs in the environment. The female characters in the novel such as Hester and Dellarobia seem so much anxious about the climate change that is transpiring in their surroundings. A gender-based response towards the migration of the monarch butterflies is visible in the novel. While the female characters, Hester and Dellarobia strive for protecting the monarch butterflies, the male characters such as Cub, Bear Turnbow and Mr Norwood deliberate the appearance of the monarch butterflies a curse as it urges them to suspend the plan of logging in the area. The female characters in the novel are bothered about the security of their fellow organisms, whereas the male characters are only apprehensive about their material benefits.

Kingsolver examines the marginalized condition experienced by the animals, similar to the female gender. Both the animals and the female gender encounter the same subordination in society. As the female characters in the novel are necessitated to sacrifice their dreams and aspirations for the progress of their family, the non-human beings in the area are compelled to change the course of their life and adapt to a new scenario set by the egoistic human beings. The sheep in Dellarobia's farm are forced to stay in a contaminated surrounding, restricting their movements. The monarch butterflies are also urged to leave their regular habitats in Mexico due to landslide and global warming that appeared in the region because of logging and bulldozing done by the materialistic human beings.

A comparative study can be made between the nature reproduced and the protagonist of the novel *Skinny Dip* by Carl Hiaasen. A struggle for fetching an end to the sufferings of nature and her sufferings can be traced from the protagonist Joey Perrone's portrayal. This novel also moves through the three distinct phases of the female protagonist and nature. Being a well-educated woman with good fortune, Joey retains a high prestige in society. She is presented as an independent and self-reliant woman in the first phase of her development. Her faulty marriage with Chaz Peronne leaves her in a devastating state leading her to the second phase of her existence. Chaz treats Joey purely as an object to satisfy his sexual needs. During this phase, her life passes through impositions and restrictions. Chaz's murder attempts assist Joey to get transformed into the third phase of her developmental stage. She realizes her strength and efforts to prove it to her husband through revenge.

Nature in the novel can be represented through the Florida Everglades. Florida Everglades symbolizes a sacred ecology with biodiversity and the repository of freshwater. The Everglade's freshwater storage is threatened by the use of pesticides and other poisonous chemicals such as phosphorous. Chaz also impends the lives of various aquatic organisms in the Everglades. He injures its biodiversity by killing the organisms for fun and eating purposes. The hostile activities of Red Hammernut are revealed at the end and the Everglades rebalances itself with the death of the profit-loving chemist, Chaz Perrone.

There are many incidents in the novel that reflect the emotional and sensual connection that exists between women and other non-human organisms in nature. Joey was partially blind when she reached the island. But she deciphers the presence of a

Doberman there. The incident reflects Joey's ability to formulate a sensual bond between various organisms in nature. Joey's concern for non-human beings is revealed on another occasion, where she takes efforts to feed the fish in her home, even if she arrives there in a dangerous situation. The Doberman's attempt to console Joey through various bodily movements exposes the power of animals to perceive the female psyche.

The third chapter discusses the concept of ecospirituality, where nature maintains "an intrinsic worth". It relates the concept of Gaia-"earth behaves like a living organism" (Lovelock) to the ecospiritual concept of nature as an entity with "intrinsic worth". The characters in *The Year of the Flood*, such as Toby, Ren, Pilar, Nuala, and Adam One, trust in the inner worth of nature and regard it as something divine. There is a community named God's Gardeners operating in the story. The activities of the community can be associated to the spiritual dimension of nature. They celebrate various days to show reverence to nature and different tiny organisms in nature. Saint Euell's week is associated with the collection of all kinds of tiny creatures of germination and storage of different eatable food materials for emergency times. The gardeners observe Mole Day to highlight the role of each organism in retaining the balance of the ecosystem by keeping an encouraging climate and assisting in gas exchange. Creation day is celebrated to preach the obligations of human beings towards nature.

The gardeners trust in the healing capacity of nature, prepare herbal medicines, and follow natural ways of treatment for diseases. They consider honey as a divine medicine, which has magical powers for curing diseases. They gather many medicinal objects, including mushrooms, honey, roses, and poppy plants in the storerooms of their Ararat. They list out the therapeutic benefit of some creatures - the antibiotic property of

the maggots and moulds, the healing power of the honey, and the ability of the spider's web to stop the blood flow from a wound. The incidents illustrate the concept of the therapeutic power of nature.

The notion that nothing is a waste rules over the entire novel. God's gardeners value everything and they resort to various eco-friendly ways of promoting nature, such as recycling. Tree of Creatures arranged by the gardener children from plastic wastes emphasizes how ugly things can be set to expert uses. The primary intention of the Tree of Life Natural Materials Exchange is to stress the scope of recycling in the ecosystem. The exchange is conducted in an ancient house built of all-natural materials like clay, sand, and straw. All the materials offered for sale here comprise waste materials. God's gardeners take an ardent effort to collect various waste materials and scraps from public places and abandoned areas. They make the optimum use of these materials and turn them later into various useful objects. On the whole, the novel follows an ecospiritual cult throughout the development of the plot.

Barbara Kingsolver's *Flight Behaviour* also keeps the cult of ecospirituality throughout the progress of the story. The ecospiritual dimension of the novel is revealed through the characters such as Dellarobia, Hester, Ovid Byron, and Bobby Oggle. Dellarobia believes in the revelation of nature. Nature, especially wilderness, plays a significant role in altering her life's course. Her life initiates a complete transformation with the exposure that she receives from the Appalachian Mountains. Wilderness stands as a force that has the power to regenerate and enlighten an individual. The Appalachian Mountains offer her a kind of consolation and provide a temporary escape from the miseries of her life. Dellarobia discovers the cause of her existence to find the reason

behind the appearance of the Monarch butterflies. Hester can be considered as a person who trusts everything that is happening in nature has the power to teach us something new. She reverences the revelation that Dellarobia receives from nature. Nature stands as a force in eliminating the hatred that she kept for Dellarobia, her daughter-in-law. The Monarch butterflies mentioned in the novel also carry the heavenly spirit in them. The characters view the butterflies as “God’s messengers”. Bobby Oggle preaches on the importance of natural revelation in the Sunday mass. He considers nature as an influential medium to transfer the light of divinity to the world population. Despite being a scientist, Ovid Byron also has faith in the divinity of nature and values the lives of the Monarch butterflies. He takes significant efforts to travel a long distance to salvage the lives of the Monarch butterflies. The novel can be viewed a piece of literature, which carries the element of ecospirituality in it.

Similar ecospiritual elements can be drawn from Carl Hiaasen’s *Skinny Dip*. Characters such as Joey Perrone, Mick Stranahan, Corbett Wheeler, Rolvaag, and Maureen explain the perception of ecospirituality. Belief in the therapeutic power of nature can be delineated by Maureen and Mick Stranahan. Nature plays a dynamic role in determining the destiny of the protagonist Joey’s life. The unusual alteration in the weather and sea bring an alternative course to her life, which might have otherwise ended in the cruel hands of her husband. The quest for justice for herself and nature executes a significant role in transforming the life of Joey into an independent woman. Nature stands as an inspirational force behind Corbett Wheeler’s personality development. His trust in the intrinsic worth of nature and love for wilderness and pasture lands can be delineated from the plot. He keeps an affinity toward different creations and attempts to derive a

kind of solace by interacting with innocent beings. He wholeheartedly chooses the profession of sheep husbandry and leaves his homeland for New Zealand. The farming profession and the association with nature rescue Corbett Wheeler from the hopelessness and bleakness of his life. The transformation of his life reflects the power of pasture lands and non-human organisms to transcend the human mind.

The investigator Rolvaag also carries ecospirituality within him. He venerates the worth of the existence of all organisms in the universe. Rolvaag's habit of feeding pythons represents this cult. Regardless of the treacherous aspect or the instrumental value of the pythons, Rolvaag retains an affinity with them, appreciating their inner worth and their role in complementing the entire ecosystem. The character Maureen also detects a kind of solace in nature. She admires nature and acclaims the glory of God in keeping everything in order. Various manifestations in nature function as an analgesic against her incorrigible disease.

The Fourth chapter deliberates various ecological crises such as climate change, global warming, animal extinction, the spread of an unnamed disease, scientific and technological disturbances, and the ill effects of developmental activities. *The Year of the Flood* portrays a post-apocalyptic world, where the people live in continuous fear of the outbreak of some natural calamities like a waterless flood and the spread of an unnamed disease. Animal extinction and the destruction of natural landscapes are some problems caused by corporates. The scientific community depicted in the novel is so busy creating various genetically modified organisms, questioning the law of nature and the spread of various diseases through the distribution of health supplements.

The climate imagined in the novel *Flight Behaviour* is affected by life-threatening forces such as global warming, heavy rain, landslide, and the spread of various incurable diseases like cancer. Various progressive undertakings instigated by the corporate community destruct the novel's environment. The logging and mining activities contribute to the extinction of various tiny organisms in the environment, especially the monarch butterflies. The accomplishments also transform the landscape of Mexico, contributing to serious threats to the existence of both human and non-human organisms. Human beings in the area are suffering from various serious diseases. The novel can be viewed the best illustration of how human intervention can lead to the destruction of the entire planet.

The annihilation of the Florida Everglades because of anthropocentric activities can be analyzed as the central theme of Carl Hiaasen's *Skinny Dip*. Corporates and scientists shatter the equilibrium of the Florida Everglades. The corporate named Hammernut causes the pollution of the freshwater reservoir in the everglades through pesticides. The greedy chemist Chaz Perrone also bolsters the corporate to disguise the high phosphorous composition in the water. Chaz Perrone indulges in the slaughter of different extinct organisms in the everglades such as freshwater fish, crocodiles, and turtles. On the whole, the fourth chapter illustrates the flaws of anthropocentric intervention in the environment.

Thus, the thesis endeavours to expose the relevance of addressing nature from an interdisciplinary perspective. It attempts to stress the importance of science, religion, gender, politics, and economics in defining the destiny of nature. It can be concluded that the present environmental disasters can be resolved successfully with an effective

intervention of all people irrespective of the scientific or environmental understanding they possess. The novels claim the need for admiration and reverence for nature to keep it in balance. They also interrogate the problem of gender inequality in society. Like nature requires an escape from the clutches of anthropocentrism, women need to define their position in society by liberating themselves from the stereotypical views of patriarchy. Literature and science must be more biocentric, giving sufficient place for the concern of nature in it. Human beings have to initiate satisfactory measures to restrict the unbearable fluctuations in climate by setting an end to those developments and innovations that intimidate the law of nature. The issues of climate change, animal extinction, and global warming should be eradicated with wholehearted collaboration from people belonging to various realms of knowledge and culture. Different innovations and developments in the field of science, such as genetically modified organisms, the production of pesticides, and the invention of medicines, should consider the balance of the environment at their disposal. All developmental activities should be sculpted in an eco-friendly manner.

The present study attempts to explore the different perspectives on ecocriticism, such as ecofeminism, ecospirituality, global destructions, and ecological crises and attempts to associate it with the theory of Gaia. Yet, many substantial areas of concern under ecocriticism remain unexplored. Further research can be conducted based on the untouched areas of this realm, such as Ecotoxicology, Biosemiotic Criticism, Migration and Human Ecology, Geocriticism, and Artificial Intelligence.

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RECOMMENDATIONS

The thesis endeavours to discover the different perceptions of ecocriticism, such as ecofeminism, ecospirituality, climate change, global destructions, and ecological crises and efforts to associate it with the theory of Gaia. Yet, many substantial areas of concern under ecocriticism remain unexplored. Further research can be conducted based on the untouched areas of this realm, such as Ecotoxicology, Biosemiotic Criticism, Migration and Human Ecology, Geocriticism, and Geopolitics.

Ecotoxicology is the study of the consequences of poisonous chemicals on living organisms. It investigates the pollution that a toxic substance generates, its effect on the ecosystem, biodiversity and various ecosystem services. The novels offer an experimental platform to investigate the impact of toxic chemicals on its atmosphere. There are instances in *The Skinny Dip* that illustrate the pollution generated in the Florida Everglades due to the expulsion of toxic chemicals that contain high phosphorous level. *The Year of the Flood* depicts the reaction of poisonous chemical substances containing in the vitamin supplements marketed by the “HelthWyzer” lab. *Flight Behaviour* discusses various instances that illustrate the aftereffects of chemical pesticides on the life of the monarch butterflies. It also describes the emergence of certain fatal diseases like cancer and crop failure occurs in the agricultural region in response to excessive pesticide usage.

Biosemiotics is a branch of science that inspects sign processes, implications and message transmissions that occur among various organisms in the ecosystem. Biosemiotic criticism examines the sign processes that is portrayed in various literary and cultural aspects of human existence. Different organisms depicted in the novels including

the human and the non-humans employ different signals to communicate with their fellow organisms. For instance, the honey bees, the poppy plants and the mushrooms in *The Year of the Flood* employ different signals to communicate with their surroundings. The Doberman in *The Skinny Dip* uses diverse symbols to express its concern towards Joey. In *Flight Behaviour*, The sheep, the monarch butterflies and the trees in the Appalachian Mountains also use signals as a way of communication.

Select novels offer an opportunity to examine the relationship between migration and human ecology. The novel *Flight Behaviour* depicts the large scale migration of the monarch butterflies towards the Appalachian region due to the intolerable ecosystem of their usual habitat. Another migration event that happens in the novel is that of the large scale population of Mexico because of the adverse changes in the ecosystem due to landslide, flood and heavy rain. In *The Year of the Flood*, Margaret Atwood also discusses the exile of a vast population from a particular region due to a waterless flood and an unnamed disease.

The novels also extend a scope to analyse them from the dimensions of Geocriticism. Geocriticism establishes space as a valid topic for literary analysis. The novels depict the development and devastation of various characters depending on the space. Space in many forms appear in the novels such as sea, island, wetlands, mountains, garden and farm. All these spatial elements play a crucial role in the progress of the plot.

