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## 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.