

Chapter IV

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Space, Place and Ecology

Einstein says that man finds himself separated from the rest of the world because of his misunderstanding of himself and his surroundings. Instead of doubting everything, he must start to feel and embrace the beautiful life and support everything around him. Einstein wants man to live in perfect harmony with nature than to live in an illusion.

A human being is a part of the whole called by us Universe, a part limited in time and space. He experiences himself, his thoughts and feeling as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.

(Einstein, Albert. 1950, "The New York Times", 29 Mar. 1972.)

Environment is the natural condition around the living being. It includes both the living and the non-living things in the world. It is the physical and biological surroundings of human species. Man is the most dynamic element in the ecosystem.

The world is intrinsically dynamic, with an interconnected web of relations. There are no absolute entities and no absolute dividing lines between the living and the non-living. All living beings are interconnected. Everything in the world is inter-related. Man, women, culture and nature are all inter connected. Interconnections are the true nature of all beings. Man is not only connected to other people but also with the environment. Breaking these

interconnections means death for all beings. It can also be termed self-destruction. So these connections need to be symbiotic. Man needs to develop nature as it has its ability to recover. But if nature is developed beyond its ability to recover, all beings might be destroyed. Over development of nature may seem beneficial to humans for a short term, but eventually it would show long term consequences that will harm humans.

Due to the growing awareness that humans destroyed other inhabitants of the earth, multinational corporations and grassroots activists have stressed the urgency for a change in behaviour. They also have stressed the need for a serious change in attitudes and values. Ecofeminism attempts to focus on various symptoms of oppression. Theorists have begun analyzing the connections between woman and nature and offering alternative conceptions of how to live in the world. Whether theoretical, practical, or spiritual, eco-feminists demand a major shift in values.

Eco-feminists believe that it is immediately important to change perspectives of man and society from being death-oriented to life-oriented. Eco-feminists envisions a re-examination of the relationship between man and animals. Eco-feminist theory, not only analyzes the joint oppression of women and nature, but also reports the oppression of the nonhuman animals. The role of women and animals in postindustrial society is to serve or to be served up. Whether created as ideological icons to justify and preserve the superiority of men or captured as servants to provide for and comfort, the connection that women and animals share is present in both theory and practice.

By examining this connection and the way it withstands the constructed reality of patriarchal society, those struggling for the liberation of women and animals may be better able to reconstruct thought and action in a more balanced, less destructive way.

Ecofeminism does not only point out the problems but also shares some remedies. The connection between women and animals and a renewed understanding of theories that supports their liberation can enhance strategies of action for change. Kingsolver strongly believes in change, and it is visible in all her works. Not only does she exhibit the problems of the society, she also directs her readers to see the problem solving options available from inside.

Nature, man and woman should have lived in harmony but all of a sudden an evolutionary shift has happened sometime after the origin, with the emergence of hunting behavior. The hunter's destructive, competitive, and violent activity could have directed man towards his prey that distinguished man from animal and thus culture from nature. This Myth of Man the Hunter was created by the mid-twentieth-century Western minds, influenced by post-World War II political conflicts. The creation, use, and continuing development of nuclear weapons and increased consumption were aimed at making the Western societies advanced. It is a coincidence that the act of killing became the reason for establishing the superiority of man over animal and the value of such behavior was accepted and considered noble then. The myth thus serves not only to suggest an essential difference between man and animal but also to raise man because of his ability to systematically destroy animals.

Women's non-participation is conceived as naturally inferior. The human social evolution establishes the submissive status of woman and animals. As a result of an increased demand for laborers, women came to be thought of as breeders of a workforce. In *The Bean Trees* the Native American child, Turtle faces a hard situation of abuse.

“The Indian child was a girl. A girl, poor thing. That fact had already burdened her short life with a kind of misery I could not imagine. I thought I know about every ugly thing that one person does to another, but I had never even thought about such things being done to a baby girl.” (TBT 31)

The violence against women is commonly rape, which is forced upon the small child with the only reason of for being a female child. Nature is often described in feminine and sexual terms as nature is raped, mastered, conquered, controlled and mined. The child, just because it was a female, has faced such an ugly situation. The dominations of women child and nature are explained thus, just because it is a freely given nature and the child a girl, they are forced into oppression by man.

Man also violated animals by making them slaves. In taking them in and feeding them, man first made friends with animals and then killed them. Man began manipulating the reproduction of animals. The keeping of animals would have set a model for the enslavement of humans. In the form of developing civilizations man exploited women captives for breeding and labor. Agricultural practices made man believe that the natural world could be controlled and manipulated.

The rise of agriculture served as a source for separating man from woman and animals. Droughts, storms, and other natural conditions led to the damage of crops that caused much suffering. Thus, nature was simultaneously the source of great fear and also the means of survival. Woman was likened to the earth because of her ability to bring forth life. Domination and the obligation of order were formalized through the detachment and distance that was created between man, woman, and nature. Separation of man from animal and man from woman practically inform that they are incidents of

everyday life. Hunting is one example for his separation from the nature and the animals that he made use of once. Kingsolver shows this part of man who has turned against the eco-system through the character of Deanna in her novel *Prodigal Summer*. As Deanna says, hunting coyote: "*It's not just one death. It's a piece of the world turned upside down. (PS 106)*"

In the name of scientific progress, animals are killed in laboratories every year. Under the guise of scientific inquiry, dogs, cats, monkeys, mice, rats, pigs, and other animals are routinely suffocated, starved, shocked, blinded, burned, beaten, frozen, electrocuted, and eventually killed. A majority of the experiments are conducted to satisfy curiosity rather than to improve anyone's health. Money and countless animal lives have been spent in duplicative, often painful, and generally insignificant animal experiments. Reducing animals to objects without showing any feelings, desires, and interests is a common consequence of the scientific mindset by which those engaged in experimentation distance themselves from their subjects. Many animal experiments are designed to establish essential differences between men and women. Thus, current scientific practices motivate the cultivation of continued detachment.

All living beings hold a place in the food chain, structured around the transfer of life-sustaining energy through an ecosystem. Because this energy transfer involves members of the food chain interacting with one another and their environment in a complex, interlocking ecological system, extinction of one species affect others. When a predatory species becomes threatened or extinct, this removes a check and balance in the food chain on the population of prey, previously consumed by that predator. Consequently, the prey population can explode. Endangerment or extinction of one species can threaten the possibility of another species.

Overall ecosystem instability due to reduced biodiversity ranks among the consequences of species extinctions. Extinction of animal or bird species in the food chain may alter the physical environment.

Many birds are important in plant reproduction through their services as pollinators or seed dispersers. Some birds are considered key-species as their presence in or disappearance from an ecosystem affects other species indirectly. Woodpeckers create cavities that are then used by many other species. After the extinction of the dodo, it was discovered that a tree whose fruits had been a primary food item of the dodo was unable to reproduce without its seeds passing through the dodos' digestive tracts, which process scarified the seed coat and enabled germination.

Extinction also happens due to deforestation, hunting, pollution and climate change. Deforestation is the large-scale removal of trees in forests. Trees are usually removed to make way for agriculture, roads, and urban development. Deforestation has had serious environmental effects. In *Prodigal Summer* Garnett Walker toils to revive the American chestnut tree, made extinct by loggers and fungal blight. Kingsolver, a former biologist and journalist, has a rare ability to communicate as a scientist, and this novel warns against hunting predators, and against pesticides that boost pest populations by killing off the bugs that prey on them. The ecosystem reestablishing itself in the protected forest is seen as a common habitat, not a wilderness to be kept at bay from the farmland.

Inter relatedness is firmly explained in Kingsolver's novels. Environment plays a major role in all her works. The novel *Prodigal Summer* links all the three main characters together at the end, though they are all from different situations. Links gradually emerge, in a tiny community of six hundred people and as one confused

newcomer remarks: "Everybody within 16 miles of here is uncle or cousin to you someways." (AD 254) The same way, the birds and animals are of different variety, they all have some important role to perform in the eco-systems. This makes them unique in the food chain, and if one species is lost the rest of the species too suffer the after effects of it.

In the novel, Deanna as a wildlife conservationist, tries to protect the survival of coyote's family. She fights for the survival of that endangered species. She respects all the non-human beings and adds a moral value to the fact that on earth all living things are countable and they all are interdependent and interconnected to each other in the ecosystem. Deanna's story reflects that everything in life is interconnected with each other and every living being has an equal right to live. She shows her concern for the endangered species and works for their survival in the Zebulon National Forest. She firmly asserts her respect for non-human animal "I don't love animals as individuals, I guess that's the way to put it," she further said. "I love them as whole species. I feel like they should have the right to persist in their own ways." (PS177).

Coyote is one of the keystone species and its absence in wildlife can drastically change the ecosystem, so every species has significance in the natural world. The characters in this novel are deeply influenced by these beautiful creatures in their delightful surrounding. These characters are environmental friendly and conscious about their natural surroundings. In *Prodigal Summer*, Kingsolver creatively portrays the environmental problems such as deforestation, harmful effects of pesticide and herbicide, and extinction of endangered species which directly affects all living beings in entire ecosystem. As the effect of eliminating a predator from a biotic community will create harmful environmental catastrophe in nature. Deanna's relationship with the land and its inhabitants especially coyote as a predator and an

endangered species shows her ethical approach to the non-human animal and highlights the status of a predator's role and its huge impact in ecosystem.

The second protagonist Lusa struggles to maintain family relationships and her close relationship with the land, especially farm life which is different from her city life. Eventually, she feels connected with her surroundings. Lusa gradually understands her ethical relationship with the natural environment. The third character tells about the ongoing awareness about the deforestation and the harmful effects of pesticides. Barbara Kingsolver's *Prodigal Summer* is an eco-conscience novel which deals with present environmental catastrophe and environmental ethical values which concerns human beings' ethical relationship with nature. So, Kingsolver through these main characters reveals environmental ethical concern towards their natural environment.

Kingsolver's novel *Flight Behavior* is an example for the destruction of deforestation. Going through with the logging will result in the same devastation that caused the monarchs to shift their migration paths in the first place. The butterflies have no home to go to anymore because of logging. Preston makes a friend in school, Josefina, whose family had to move from the monarchs' old home. Dellarobia had done "some looking on the Internet about the town in Mexico where Preston's little friend [Josephina] and her family lost their home, and logging was a part of it. They had clear-cut the mountainside above the town, and that was said to have caused the mudslide and floods when a hard rain came" (FB137-138). Josephina's family's displacement, is considered different because they are a minority in the Tennessee town, and mimics the displaced butterflies. The mudslide, in fact, took out houses as well. Humans, trees, and butterflies were all affected by the human decision to deforest the mountain. Now Josefina's family and the butterflies have

to relocate. Man does not make trouble only for others but for himself also unknowingly. This novel explains how man's destruction of forest, known as deforestation has caused the deluge and mudslide that affected the lives of butterflies and of humans.

While forests still make up 30 percent of the Earth, each year an estimated 18 million acres or 7.3 million hectares of forest are lost to deforestation practices. This has caused land and soil damage while also displacing plants and animals that rely on the ecosystem created by forests. Since the industrial age, about half of world's original forests have been destroyed and millions of animals and living things have been endangered. Despite the improvements in education, information and general awareness of the importance of forests, deforestation has not reduced much, and there are still many communities and individuals who destroy forest lands for personal gains.

Humans cause extinction of certain species, through overharvesting, pollution, habitat destruction, introduction of invasive species, such as new predators and food competitors, overhunting, and other influences. Explosive human population growth is an essential cause of the extinction crisis. Pollution disturbs the ecosystem and the balance maintained in the environment. Modernization and development pollution has reached its peak, giving rise to global warming and human illness. Pollution occurs in different forms such as in air, water, soil, radioactive, noise, thermal and light.

Air pollution is the most prominent and dangerous form of pollution. It occurs due to excessive burning of fuel for cooking, driving and other industrial activities. Water pollution affects all the surviving species of the earth. Almost 60% of the rivers and other water bodies cause an imbalance in the water leading to its severe contamination and death of aquatic species. Also spraying insecticides, pesticides like DDT on plants

pollutes the ground water system and oil spills in the oceans have caused irreparable damage to the water bodies. Eutrophication is another big source. It occurs due to daily activities like washing clothes, utensils near lakes, ponds or rivers; this forces detergents to go into water which blocks sunlight from penetrating, thus reducing oxygen and making it inhabitable. Water pollution in terms of Oil spill may lead to death of several wildlife species.

Kingsolver's *Animal Dreams* is the novel that explains the issues of water pollution and contamination. Codi the protagonist of the novel, introduced as a stranger, helps the people of Grace to overcome their problems. Due to the contaminated water the trees and plants of Grace do not grow and when Codi tests the water unintentionally, she finds that the water is contaminated and not safe. The reason for this pollution is the Black mountain mining private company that works day and night at the top of their mountain using their water source. The women of Grace, who do not know anything of these incidents, are proud of their tradition and they gather as group in the name of the Stitch and Bitch Club.

The Stitch and Bitch Club has a meeting about the river, at which Codi is Viola's guest speaker. Codi explains the chemical aspect of the pollution. To Codi's surprise, the women ask her if there is any way to recover the river water. Codi admits that if Black Mountain stopped dumping chemicals into the water, it would eventually return to being safe. After Doña Althea translates Codi's speech into Spanish, the women begin to discuss immediate measures. Officially, they plan mass demonstrations to start the next morning and unofficially support vandalism of the mining company's equipment. With the help of Codi the women of Grace start a protest to stop the injustice happening around them.

Soil pollution occurs due to incorporation of unwanted chemicals in the soil because of the human activities. Use of insecticides and pesticides absorbs the nitrogen compounds from the soil making it unfit for plants to derive nutrition. Release of industrial waste, mining and deforestation also exploits the soil. Since plants cannot grow properly, they cannot hold the soil and this leads to soil erosion. Radioactive pollution is highly dangerous when it occurs. It can occur due to nuclear plant malfunctions, improper nuclear waste disposal and accidents. It causes cancer, infertility, blindness, and defects at the time of birth. Thermal or heat pollution is due to the excess heat in the environment creating unwanted changes over long time periods due to huge number of industrial plants, deforestation and air pollution. It increases the earth's temperature, causing drastic climatic changes and extinction of wildlife.

Due to constant use of insecticides and pesticides, the soil may become infertile. Plants may not be able to grow properly. Various forms of chemicals produced from industrial waste are released into the flowing water affects the quality of soil. Pollution affects humans by destroying their respiratory, cardiovascular and neurological systems. Garnet Walker in *Prodigal Summer* lost her daughter to Down's syndrome. It happened because of the chemical fertilizers that they used in their garden. So Nannie insists that those chemical pesticides should not be used around her organic orchard. It also affects the nature, plants, fruits, vegetables, rivers, ponds, forests, and animals on which they are highly dependent for survival. It is essential to control pollution as the nature, wildlife and human life are precious gifts to the mankind.

Prodigal Summer is a novel with serious and intense observation of the natural world that reveals an unexpected beauty of life. Sustainability is a concept commonly

used to refer to the various human actions meant to utilize the available natural resources to satisfy their necessities Sustainability comprises of different aspects including biodiversity, interdependence, ecosystem, personal, and social responsibility. Hence, sustainable growth becomes a common goal for all human beings on the planet.

The next damage that the world faces is Climate change, also called global warming, refers to the rise in average surface temperatures on Earth. The awareness about ecology helps people to explore their mutual relationships with the earth's resources, wildlife, and other people. This deep connection with the natural environment has been demonstrated in Barbara Kingsolver's novels. Kingsolver uses the main protagonists of her story to show interdependence between the natural environment and its living inhabitants, as well as human beings and the relationship they have with the natural ecosystem.

Kingsolver's *Flight Behavior* is set in a rural mountain community of Appalachia. Climate change plays a vital role in this novel. The arrival of the butterflies, at their Mexican winter habitat was because of the change in climate. Climate-change induced flood and mudslides. The entomologist Ovid Byron, is an acclaimed expert on monarch butterflies. He camps in the Turnbow farm, studying the reasons for their change in flight behaviour. Because of the flood triggered by climate change in their Mexican hometown, the butterflies had stopped coming. The little girl Josefina explains that her father was a tourist guide for those who wanted to see the roosting *monarcas*. Dellarobia questioned her regarding the incidents at her residence.

'Do you mean the butterflies stopped coming?' she asked. *"Or just the tourists stopped coming?'*

'Everything is gone!' the girl cried, in obvious distress.

'The water was coming and the mud was coming on everything...

Un diluvio.'

Just before a harsh winter creeps over Feathertown and the gorgeous monarchs are threatened by extinction a doleful Ovid asks Dellarobia,

"What was the use of saving a world that has no soul left in it?" (PS 213)

Man does not realize the extent of his evil activities, till he faces its consequences. The flood in this novel is not by nature, it is induced due to climate change that is caused by the human beings. Kingsolver explains the theme of sustainability by demonstrating the social responsibility of people to preserve the natural world from the threat of extinction that would risk the survival of future generations. It extends the sustainability literature regarding the natural environment, economic, and social aspects of the ideology.

Barbara Kingsolver's *Prodigal Summer* comprised three interwoven stories that are correlated through a complex network of relationships. The events of the story unfold in a small society living in Southern Appalachia, which doubles as the author's residence in both fiction and reality. Each of the stories revolves around one of the three main characters of the *Prodigal Summer*. The three characters discover a complex network of relationships between each other. They also notice their mutual connection with the natural ecosystem environment they dwell in. Loss of bio-diversity is also a threat to the environment. This threat is focused in this novel and the three characters discover their communal circles and social relationships rooted in understanding, the realities of small-

scale farming, and the biodiversity of the region. Through these sequential events, Kingsolver's *Prodigal Summer* demonstrates the theme of sustainability for the survival of future generations.

Kingsolver describes a vibrant mountain ecosystem in *Prodigal Summer*, comprising of wild animals and forest plants. Deanna is described as an environmentalist who is a conservative wildlife agent in one of the outposts of the mountain. She had a great passion for conserving the wildlife and protecting the ecosystem from destruction by human economic activities. She chose to abandon the small city life to lead a life of solitude in the forest and protect the wildlife from poachers. The love for biodiversity is an explicit indication and expression of the mutual relationship between human beings and the natural world. A disruption in the natural coexistence between small insects, animals, and plants can have severe implications for the planet and threaten the existence of some endangered species of flora and fauna. Man should understand the need to protect the environment from the cruelty of mankind and to preserve the endangered species for the future generations.

At the beginning of the novel's plot, a den of coyotes had just migrated to the Appalachian region following the favorable climatic conditions in the area that promoted the survivability of the animals. Deanna was determined to protect the natural world from the threat of destruction by human economic activities. Once she meets with a hunter, Eddie Bondo, carrying a gun and the meeting ended up in a fierce quarrel. Deanna says "I believe we're on National Forest land, inside of a game-protection area where there's no hunting" (PS 5). Deanna saw hunting as a great threat to the ecosystem to which she was entirely devoted to protecting out of her passion. All these events are used to advance

the author's concept of sustainability for a better ecosystem balance and protection of certain species from extinction. Disruptions in the environmental dynamics due to ferocious human activities can significantly affect the survivability of some plant and animal species. Consequently, the future of Sustainability in Barbara Kingsolver's *Prodigal Summer* sustainable life of the human generation would be threatened when some of the natural resources become scarce.

Barbara Kingsolver's *Prodigal Summer* also extends the knowledge of sustainability through the facts that include around Lusa Landowski. Lusa is used to illustrating how various farming practices can affect the environment and influence the survivability of future human generations. For instance, activities that can lead to the death of some insects may have adverse effects on human economic activities such as agriculture.

Killing the predators may result in uncontrollable populations of pests. The result of such actions would include lowered quality and productivity of agricultural farms due to massive destruction of plants by pests beyond human control. The increasing number of pests through prey-predator interactions may also propagate disease spread. The plot of *Prodigal Summer* revolves around farming practices that might be detrimental to the future sustainability of the environment and the entire human generation.

Lusa utilises the organic methods of farming to maintain a balanced ecosystem and prevent deaths of the endangered species of living organisms from extinction. Her neighbouring farmers practice an artificial control of pests by the use of pesticides. This is seen to have irritated Lusa to the point of arguing with the neighbours and condemning spraying as a method of pest control. She explains the benefits of organic

farming methods including a sustainable ecosystem for the future sustainability of the human race. Lusa states “Can you believe people spray insecticide all over their fields?” she continues “Look at all the beautiful creatures that die. It’s like dropping a bomb on a city just to get rid of a couple of bad guys” (PS 299).

Old Chestnut trees are the environmental issue of the use of pesticide and herbicide Kingsolver portrays this through the character Garnett Walker, an old man who attempts to revive the American chestnut trees. He uses pesticides and herbicides to keep his land tidy and protect his saplings. Because of his using of chemicals, Garnett often had disputes with his neighbour, Nannie Rawley, who is a devotee of cultivating organic fruits and vegetables. Nannie cultivated organic apples in the nearby orchard. She believed doing gardening in an organic way quite opposite to the way of Garnett Walker, who completely trusted the pesticide and herbicide to protect his old chestnut trees where diminishing day by day and he believed in spraying pesticide to protect his chestnut seedlings.

Kingsolver expresses the concept of sustainability through these events by showing the risks associated with inorganic farming practices. Consequently, this may result in an imbalance in the ecosystem thus endangering the future of agriculture and economic sustainability of the future human generations. Garnett, the old man, is the character afflicted with the negative effects of human activities. In essence, extinction of some species of plants and living organisms may have significant effects on the ecological balance of the planet. The death of predatory animals due to pesticides may cause an uncontrolled breeding of the prey, and persistent re-nesting of the population to overcome the challenge.

The consequence of this is that the prey may compete for the available food in the natural environment eventually leading to its scarcity. Therefore, the survivability of

the entire population of the animals may be threatened to the extent of their death and thus causing an ecological imbalance. Kingsolver demonstrates this fact through Garnet's campaigns against the extinction of the Chestnut tree, "He was haunted by the ghosts of these old chestnuts, by the great emptiness their extinction had left in the world" (PS 128). He criticizes the unregulated human activities leading to the reduction or destruction of the tree family. Kingsolver attempts to explain the threat to the sustainability of the future generations as trees and the size of forests gradually decrease. The situation could possibly lead to global warming and the related consequences such as a rise in the sea level.

Sustainability is a goal to be achieved by the human race in expectation of the social well-being of future generations. Mankind should consider their efforts to ensure for better lives for the future generations. Such factors include the environmental, economic, and social aspects of the ecosystem. Sustainable growth involves a set of environmental conservation and protection strategies to minimize the destruction caused by some of the human economic activities. Mutual connection between people and the ecosystem has been comprehensively demonstrated in Barbara Kingsolver's *Prodigal Summer*.

Kingsolver expresses the mutual love for preserving the natural environment through her protagonists in the literature. In so doing, she illustrates the interdependence between plants, small insects, animals, as well as human beings for the survivability of each other. She also shows the importance of protecting each element of the ecosystem to prevent the endangered species from extinction. Barbara Kingsolver emphasizes the issue of the protection of the ecological balance through her novels. These conservation practices are meant to make sure that the future human generations will adequately meet their needs using the available natural resources. In the 21st century, mankind faces many

environmental crises on the earth such as depletion of resources of air, water, soil, leading to a destruction of the entire ecosystem and wildlife extinction.

Environmental degradation such as natural hazards, drastic climate changes, global warming and many significant environmental issues changes earth's ecosystem. The planet needs serious attention and concern to preserve and protect the natural surroundings. Environmental ethics deals with the relationship between humans and environment. It involves human beings' moral relationship with the natural environment.

Kingsolver's novels deal with this environmental ethics and the contemporary topics of biodiversity, wildlife extinction, ecological preservation, natural sustainability, flora and fauna, conservation of species, and environmental justice. In the present time, men's requirements are becoming a primary focus at the cost of nature's destruction of natural resources on earth. Industrial company, factories, capitalist technologies and marketing business are busy fulfilling people's needs and their comfort. Because of this anthropocentric attitude, the ecosystem is drastically changing. Climate change and global warming is the result of imbalance and loss of biodiversity in nature.

Awareness about preservation of natural resources is one of the current environmental issues. People's anthropocentric attitude towards nature causes unavoidable consequences of climate change, species extinction and depletion of natural resources. Nature cannot satisfy the greed of man. People need to maintain the balance of Nature's ecosystem cycle and conscious about giving equal importance to non-human beings, wildlife, flora and fauna. In ecosystem or biosphere, every living creature is equally a part of the nature. Harmony in nature is not possible without giving equal importance to non-human beings.

In nature surrounding one species' life is connected with other species. So everything is interconnected in the ecosystem. Nature depicts beautiful picture of flora and fauna, wilderness and the beauty of natural environment, mountains, landscapes, valleys and the natural beauty of the forest. Kingsolver's women characters are isolated individuals who have unique and strong views about their natural surroundings and they observe nature very carefully. Their respect toward natural surrounding and its inhabitants is reflected in their daily lives. Throughout the novel, their lives change drastically and they realize that they, like other creatures, they are not solitary. They are a part of a complex web that connects all living beings together. They also gain a deep knowledge of the people and ecology of the surroundings. Eddie as a hunter comes to that valley looking for coyote but eventually gets friendly with the lonely Deanna. Later she tried to make him understand that a predator also has a significant role in ecosystem.

In ecology, the concept of keystone species is one of the important factors in maintaining a larger community structure. Keystone species is a species that has an immense influence in environment. They have an important role to play in the ecosystem by maintaining an ecological community. Their extinction makes a big difference to the entire ecosystem. Coyote is one of the Keystone species that has a very less population now than the earlier times. Their extinction can bring drastic changes in environment and will cause loss of biodiversity. Deanna as a forest ranger observes carefully the diversity in forest transition radically.

Deanna is watching it here in her own beloved mountains, where North America's richest biological home was losing its richness one after another, of plants and birds, fish, mammals, moths and stoneflies. There were hundreds of reasons for each death or pesticide's

runoff, silt from tilling, and cattle in the creek. But for Deanna each one was also a piece in the puzzle she had spent years working out. Deanna's environmental consciousness shows her ethical relationship with the non-human animals. As human beings are parts of the society, plant and non-human animals are also an integral part of their lives. In an ethical point of view they also have the right to live and exist. Lusa showed her ethical sense towards natural surroundings. After the death of her husband, she was in a dilemma whether to stay back and live on the farm or go back to the city Kentucky. But she stayed in the farm at her husband's house trying to accept her new environment, she became closer to nature and she started to observe and appreciate it delightfully.

Lusa had a unique sense of love for moths and insects she was also very much aware of the value of non-human beings. Her love for natural environment and her environmental awareness to preserve and protect is reflected in her words, "I will not cut down those trees. I don't care if there's a hundred thousand dollars' worth of lumber on the back of this farm, I'm not selling it. It's what I love best about this place." (FB 123) She began to love "The trees, the moths. The foxes, all the wild things that live-up there" (FB 123).

Lusa believed in living in healthy environment, hence her refusal to plant tobacco on her farm. She ultimately found her own way to live peacefully and started rejoicing in natural surrounding and observed nature's wonder closely. Her newly found way of life showed her ethical concern towards environment. Like American conservationist Rachel Carson, Kingsolver also criticizes the use of insecticides through the story of Garnett Walker, an old man who attempts to revive the American chestnut trees. Garnett uses pesticides and herbicides to keep his land tidy and protect his saplings. But he is not aware about the deadly consequences of its effects.

Nannie's environmental awareness shows in her organic way of living. She has a special kind of admiration for living creatures. She gives respect to the non-human creature. Once a month at Grandy's bait store she used to buy lizards from the tank and set them all free behind her orchard. She claimed that "there were ten or fifteen kinds of salamanders in Zebulon that were endangered species, and said she was doing her part to save the environment" (PS 138). At the end of the novel *Prodigal Summer*, Kingsolver shows in this three stories different environmental issues and problems associated with their lives.

Genetically modified crops are plants that are used in agriculture, and the DNA of these crops have been modified using genetic engineering methods. The aim of these GM foods is to introduce a new trait to the plant that does not occur naturally in the species. Genetically modified foods, often classified as GMOs, have changed the way that people view their food. Although genetic modifications have occurred throughout history with selective breeding and growing methods, scientific advances have allowed this practice to advance to the genetic level. In the modern GMO, plants can be resistant to specific pesticides and herbicides while becoming adaptive to changing environmental conditions. These foods are prone to allergic reaction. They have the low nutritional values and also they release toxins from their modified DNA into the land or soil. This could harm the soil and there might not be any chance to regrow any natural breed then. Disruption of biodiversity is also a problem to be noted.

Women and children are the first victims to these GM foods. Tumors and cancers are identified in women who use them. Children are three to four times more prone to allergies than adults, when they consume these types of foods. Infants below two years

are at greatest risk. They have the highest incidence of reactions, especially to new allergens encountered in the diet. Nature, women and children are the initially exploited victims of such strange inventions of man.

Ecofeminists challenge dualistic constructions and, in so doing, attempt to establish a different system of values in which the normative category is re-evaluated. By recognizing that the exploitation that occurs as a result of establishing power over one group is unlikely to be confined to that group only, ecofeminists are committed to a reexamination and rejection of all forms of domination.

Revealing and respecting the value of the inferior is one of the ways that ecofeminists have attempted to eliminate hierarchies and undo the logic of domination. Constructing, and then naturalizing, hierarchies has been one of the more insidious justifying mechanisms for the oppression of both women and animals. Ecofeminists thus focus on the elimination of all institutionalized hierarchy as another principle force for ending oppression. Life on earth is an interconnected web, not a hierarchy. There is no natural hierarchy, human hierarchy is projected on to nature and then used to justify social domination. Therefore, ecofeminist theory seeks to show the connections between all forms of domination, including the domination of nonhuman nature, and ecofeminist practice is necessarily anti-hierarchical.

Kingsolver's protagonists are mostly female and are often related in some way. Although seemingly unrelated at the beginning of the novel, *Prodigal Summer's* Lusa, Deanna and Nannie are gradually revealed as family with environmental ties. Such tangled points of interrelatedness include the revelation that Deanna is Nannie's stepdaughter, Lusa shares an ecological mindset with Nannie, and Lusa has adopted

Nannie's neighbour's grandchildren. Although Kingsolver's characters take personal decisions that lead them into very different situations, the same political interrelatedness is always learned, whether by children living in the colonial Congo, a teacher learning to herd goats in Appalachia, or a woman who decides to drive across America until her car breaks down.

Kingsolver links other books into her narratives to illuminate her characters and the reasons for their relationships. The things that attach people are embedded in her themes and narrative choices. In *Prodigal Summer*, Lusa's book about moths explains her education in biology and its description of moth love is a metaphor for her impulsive, primal love for Cole. This inter-text emphasizes the ecological webs that attach people. Kingsolver's themes and most issues seem, at first sight, to engage with the things that drive people apart rather than bring them together, but later the characters are found connected and inter linked.

In linking the exploitation of the environment to a patriarchal tradition of controlling women, *Prodigal Summer* explores a number of eco-feminist ideas, although Kingsolver does not depict environmental degradation only in gendered terms. Just as deep ecology and ecofeminism focus on the fight against pollution and resource depletion, so *Prodigal Summer* highlights the effects of environmental pollution on the lives of women and animals through issues of disease and fertility. Nannie makes the link between Garnett's herbicide spraying and Ellen's cancer explicit, emphasizing on the negative part of controlling nature.

Ecofeminism is against all kinds of oppressions on earth but the most dominant social structures of Western societies are based on oppression. The current environmental

problem of the world arises from these established social structures like patriarchy and capitalism which are based on dualistic worldviews and domination. Eco-feminists suggest that with the equalization of genders, the progress towards the betterment of the environment becomes easier. Because of the dichotomies which are dominant in Western ideology, nonhuman life, nature and women are denied an equal or just place in their relationships with the human and man. Carolyn Merchant suggests in her work *Earthcare: Women and the Environment* that, “[a] partnership ethic calls for a new balance in which both humans and nonhuman nature are equal partners, neither having the upper hand, yet cooperating with each other” (218).

As the fast growing environmental crisis especially in the United States is apparent, eco critics have started to question the dominant system and begun to think of solutions for the crisis. Besides ecocritics, ecofeminists also propose to solve the current crisis of the environment through cooperation for the recovery of nature. The partnership ethic is applicable for all the organisms on earth. The equality of man and woman should be maintained. The interconnectedness of everything on earth should be accepted and respected. In this way the errors of patriarchy can be corrected and the crisis can be solved. Women and men are equal in terms of caring for environment, and the harm human beings do to nature should be cut down immediately. Integration of all these solutions will lessen the gradual deterioration of nature according to ecofeminists. To save the future of the earth depends on the destruction of hierarchies and this is supported by ecofeminists idea of partnership.

Biodiversity and climate change regulation help construct nature and culture as separate categories and give rise to the notion that a natural state is worth protecting from human intrusion. In biodiversity and climate change regulation, the concept of the nature

portrays the idea of untouched nature as desirable, whereas human agency is questionable, representing both destruction and restoration. Human agency threatens the desirable state, by interfering with the climate system and destroying habitat. Defining humans as separate from natural systems implies that humans and everything they do, by definition, are non-natural. The notion of human agency is deeply ambiguous, because humans have the power and skill to protect and even recreate natural nature, by restoring or creating wetlands and so-called wildlife corridors, and by establishing protected areas.

By treating humans and nature as inter-related, discussions of environmental protection and social justice could focus on how to reduce human vulnerability and accomplish sustainable living conditions, instead of being caught in unsuccessful negotiations around how to define and distinguish natural and human impacts. Many wildlife species survive in urban areas, but their presence and persistence depend on how specific their food and shelter needs are, how they respond to disturbances, and the quality and quantity of other green spaces in the landscape. For larger animals, such as birds and mammals, a home garden could become a stepping stone across an otherwise hostile urban landscape. For smaller animals, such as insects, it could be the center of their home range.

In urban areas, where space is often limited, gardening with pollinators in mind is a simple way to encourage biodiversity in the backyard. And, depending on the surrounding landscape, habitat for pollinators will also be habitat for other animals. Butterflies are important pollinators in backyards. The structure and design of a garden can determine what wildlife species will visit or make a home. Small plants and shrubs provide good shelter for insects and very small birds, while larger trees will attract visits from more movable birds and mammals.

Large trees with rough or shedding bark that creates lots of cracks and gaps are excellent shelter for insects and small lizards. It can be difficult to build all of this into small gardens, but many pollinator insects will have home ranges of a few hundred meters, while birds and mammals can travel much further. So landscape composition can also influence the wildlife potential of an individual garden. A high proportion of surfaced areas can reduce the number of bees and birds in the neighborhood. Like any ecosystem, gardens involve an intricate web of life, from the soil microbes underground to the birds in the trees. Many of the animals and plants that are considered as a backyard trouble often provide services that people do not see.

Limiting synthetic chemical use is one of the easiest and cheapest ways to enhance wildlife in gardens. Insecticides can kill beneficial insects, or affect them indirectly by disrupting their metabolism or reproductive cycles. Managing gardens as a collective landscape, rather than individual gardens, can keep wildlife happy while also enhancing neighborhood communication.

In fact, nature is capable of healing itself of many ills, yet its ability to do so is limited. Humans continue to push nature's self-healing abilities by producing and consuming ever-more products. Further, fixing the problematic Western treatment of nature, as Plumwood's statement suggests, will require a multifaceted approach including, likely, continued efforts in politics, science, and public information campaigns. Plumwood's *Feminism and the Mastery of Nature* published in 1993 comment grants nature its agency to behave and act as it will in spite of man's apparent will to dominate and control it (37). *Flight Behavior* demonstrates this idea through examining climate change and the effects climate

change can have on people. If humans are so self-involved that they will ignore the plight of animals and nature, then hopefully humans will work to preserve their own existence.

Dellarobia's status as housewife is reconstructed as a pseudo-scientist. The affective power of the environmental movement is mocked through those who descend upon the Appalachian region to save the butterflies. There is hope for remediation. From her perspective as a farmer and author who lives in southern Appalachia, Kingsolver feels particularly equipped to discuss the environmental problems of the region. She says in an interview with *Time Magazine* as,

Our agriculture here has gone through one disaster year after another, so climate change is not some kind of abstract future threat here. It is literally killing our farm economy. We've had record heat years. We've had record drought years. So the people most affected by climate change already are people among whom I live: rural conservative farmers. And it strikes me that these are the same people who are least prepared to understand and believe in climate change and its causes. Our local politicians are quite deliberately misinforming us and fighting every kind of environmental regulation that could possibly slow down the release of carbon for the very obvious reason that they're beholden to the big player in this region, which are the coal companies. Here we are, caught between the devil and the deep blue sea. What can I do but write a novel? (2)

Kingsolver uses her writing to expose the problems related to the society. It also reaches the people effectively, and to rethink of their activities. As man finds his own place in the world, nature too should be provided with its place and identity. As man

started to see the possibilities of science and growth, he gradually forgot his role as a protector of nature and women. When he started to use and abuse nature, he also showed his domination over women through hard labor and physical abuse. Kingsolver's *Bean Trees* is an example of man abusing the girl child. He is consumed of being happy, without considering his place in the nature.

Accusing the ideology of science and modernity cannot help or change anything that had taken place. But mankind has to take up the responsibility for the current environmental crises or the nature of patriarchal domination, as their roots go way back in history. Because they allowed the unprecedented acceleration of abusive practices that have now intensified into a holocaust against creation. Vandana Shiva described the current situation in these disturbing terms: "*The earth is rapidly dying: her forests are dying, her soils are dying, her water is dying and her air is dying*" (1989). It is this situation of destruction, which these ideologies have caused, that has compelled her, and many others, to look for alternative approaches to life. Through the differences shown, the motive is not to bring the separation but to have the clear view to help one another. If given the due place and respect women and nature would flourish for the welfare of the mankind. The space for every living being has to be maintained. Eco-feminism plays an important role in focusing all these domination and degradation. It also brings-out the essential place and space that the nature and women need for the betterment of the future generation.

Nature plays a vital role in the world. Mankind is also important in the ecology. Animals and birds have their own place in it. All of nature and environment are connected in the web of life if any single part of it is lost the entire eco-system gets affected. So the eco-system needs its own place. Nature and environment need not be

disturbed anymore, if did so then the consequences would be greater than that is shown in these novels of Kingsolver. Mankind and nature need one another mutually. There should be the due space, given with their own place for them to flourish, which would make environment healthy.

The next chapter is the summation of the previous chapters. It brings the struggle for survival of both, the women and nature together. Eco-feminism is analyzed and focused in Barbara Kingsolver's novels highlighting her symbols, style, themes, and vision for a better future. This shows Kingsolver's commitment in writing for the welfare of the society and her greatness as a contemporary American novelist who not only cares for human beings but as an eco-feminist writer also for the life of nature.