

UNDERSTANDING APPROACHES TO ECOLOGY

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12.0 OBJECTIVES

- To understand the meaning of Ecology
- To know various approaches to study ecology
- To understand the evolution of various concepts related to environmental ethics.

12.1 INTRODUCTION

Although there is a common understanding about the nature and environment around us, the perception of the same differs in large extent. Religious perception towards nature and environment may be spiritual, economic perception may be resource oriented while the society may see to its utility. Similarly an academician may see to it purely in terms of its structure, functioning and system. These approaches to learn ecology, nature or environment may not be wrong; but they are certainly not cohesive and complete. It is, therefore, worth to understand ecology in different perspective in order to get it's cohesive and complete depiction.

12.2 ECOLOGY

Ecology is the study of interrelation between abiotic and biotic things in the given region. Ecology has hierarchical setup. It can be studied at micro as well as macro level. In fact, micro ecology becomes a part of macro ecology. e.g. one single tree has its own ecosystem; while the same tree becomes a part of larger ecosystem of the forest in which it is situated.

12.3 STUDY OF AN ECOSYSTEM

Scientists studying ecosystem are called ecologists. Ecologists study the interrelations between the biotic and abiotic factors and try to understand the degree of this relationship. They also study the problems and the issues related to functioning and survival of ecosystems. Ecologists are concerned with land, sea and water ecologies. They work at different levels like community level, population level, and biome level. Ecologists may also focus on specific ecosystem like forest ecosystem, grass-land ecosystem, pond ecosystem, marine ecosystem and alike.

There are different approaches to study the ecosystem and ecologists divide widely in their focus and approaches. In fact, the philosophical development in the field of ecology has put forth the diverse view points in the study of ecosystem /ecology.

There are predominantly five dimensions or approaches to the study ecology. Every approach has its own perspectives. Their different perspectives make the concept ecology sufficiently rich to adopt its best at the end.

Five approaches to understand ecology are:

- Anthropocentrism
- Biocentrism
- Eco-centrism
- Eco-feminism
- Deep ecology.

12.4 ANTHROPOCENTRISM

Anthropocentrism is a _human centric _approach. Ecologists, particularly in western world, adopting this approach, keep human race at the center. It is like of the humans, by the humans and for the humans' ideology of dealing with ecology. Here, ecological existence is considered in terms of its utility to humans.

Important features of this approach are,

1. Human beings are considered to be at center or most significant in the universe.
2. Many western philosophers consider humans as the separate and superior entity in nature.
3. Other resources (animals, plant, minerals etc) may be justifiably exploited by humans -not just as a chance, but as a right- for the benefit of mankind.

This approach, however, is not acceptable on number of counts.

Main critics on this approach are:

1. This approach is formulated from human perspective only and this may not be the only reality.
2. Ecology cannot be considered only in terms of its usefulness to humans. It's rather a selfish attitude.
3. This approach ignores the value of every aspect of ecology/ universe.
4. Perspective to understand ecology and its very purpose of existence beyond human perception is ignored.

However, there is also one view that threat perceived due to humans' actions and projections of damage made by humans are not realistic. It is also believed that there is nothing wrong to consider human at center as humans only, with their ability and technological assistance, have a capacity to restore ecological damages. Humans can restore not only the ecology of the earth, but also can understand the universe in wider perspective.

12.5 BIOCENTRISM

Humans are a part of environment, and not apart from environment. This is a key view behind the term biocentrism. Biocentrism stands in contrast to anthropocentrism. The modern thinking now deviates from the human centric anthropocentrism. In fact, the affinity, awareness and better understanding of nature by man have led to new approach to study ecosystem as biocentrism. In biocentrism, the entire 'nature' is respected and inherent worth of each and every species, including human, regardless of its uses and hierarchy is valued. Biocentrism does not believe in any order or hierarchy of organism and humans are considered as par with other species. Biocentrism denies the so called moral and ethical superiority of human. Biocentrism further states that each organism- small or big- has a purpose and a reason for its existence. Every organism plays some or other role which is good, valuable, essential and inevitable.

This approach is well received by many ecologists. The very concepts of the conservation of nature, preservation of the biodiversity; animal rights and environmental protection have emerged from the acceptance of biocentrism.

Important features of this approach are,

1. It is nature/earth centered.
2. It extends values to the plants and animal species, natural
3. resources, ecosystem and process of the nature beyond their relevance or importance to mankind.
4. Humans are members of a community of life on equal terms with all other species in ecology.
5. There is interdependence between all members of species.
6. Every organism has a purpose and a reason for being, which is inherently —good —or —valuable||

Humans are not superior to other species.

12.6 ECO- CENTRISM

This approach to understand ecology is also 'nature' centered. Eco-centrism believes that there is hardly any difference/division between human and nonhuman. It further believes in equality among human and non human organism with their internal association. But it does not agree on equal value of all organisms.

Eco centrism argued that humans were important beyond doubts but more than that the ecosphere as a whole is more significant, inclusive and integrated. Eco centrism express that overall ecosphere is vast beyond the imagination of human. Eco-centrism is also wider concept and goes beyond the biocentrism. It believes that human are part and partial of entire organic and inorganic i.e. biotic/abiotic nature. The concept eco-centrism states that all species on the earth are the part of the common and only process of evolution and there lifecycle are interrelated. Eco-centrism lacks the Faith in modern technology and red-tape attitude of managing ecology. Egocentrism argues that nature has its own processes and products.

Important features of this approach are,

1. Nature is of prime importance and it is a nature centered system of values.
2. Entire ecosystem is very vast beyond the comprehension of human.
3. There is equity among all organism and humans are part of it.
4. It is described as fundamental shift in values of human beings to planet earth.
5. It targets human for his contribution to environmental degradation.
6. It states that all species including humans are the product of long evolutionary process and are interrelated in their life processes.
7. Eco-centrism strives to maintain ecosystem composition and ecological processes.

Eco centric view does not support the traditional consumptive and resourcefulness of the nature. Eco-centrism states that environmental health is beyond the comparison with

economic gain. However, critics of egocentrism believe that this approach is totally anti- human.

12.7 ECO-FEMINISM

This approach has a root in feminist movement. Feminism believes that the mentality, psychology and attitude towards both oppression of women and abuse of the environment are same. Therefore the principle philosophy behind eco-feminism states that male dominant culture make the assessment of nature, trees, animal and land only by its economic value and contribution to GDP. Further, eco-feminism believes that degradation of nature (in any region) leads to degradation of women.

It is claimed that women have better knowledge of the ecological processes and hence have a deep connection with the environment due to regular interaction while fetching several resources including water. Eco-feminism also believes that consumption of the resources like the food, wood, minerals that has travelled thousands of kilometers is not tenable on any count. This is abuse of ability as well as robbery of ecology. Similarly, development of landscape gardens and eco-tourism lead to ecological destruction.

Important features of this approach are,

1. It is believed that caring nature and women are synonymous actions. The more you care and treat women equally, the more you protect nature.
2. Women acquire the knowledge of land\soil conditions, water and other environmental features in much better way than male counterpart.
3. Women are excluded from policy decisions of development despite their better understanding of the nature.

4. Eco-feminist insists on cooperation, mutual benefits, respect, love and care as the foundation of ecological just, fair and sustainable alternatives.
5. Women are responsible for the production and reproduction of life and therefore needs to be directly concerned with preserving environmental integrity to ensure food security, water safety along with healthy environment for their children and family.
6. Eco-feminist holds industrialization responsible for toxicities of land and water bodies that directly affect women health.
7. As social movement they have involved in social struggle against mega dam projects (e.g. Narmada bachaoandolan), nuclear power plants (e.g. Jaitapur), agro business, deforestation (e.g. Chipko movement) and toxic waste dumps.

Eco-feminism is criticized by the view that if this approach is one sided and partial to women. Critics believe that analogy of women with nature is too idealist to accept and thus deviates from the realistic conditions. It is also argued that very gender equality is ignored by eco-feminism which is otherwise a common expectation in normal circumstance. It is further expected that gender (equality) is relevant factor in accessing and controlling natural resources for social justice.

2.8 DEEP ECOLOGY

Deep ecology states that every organism in the living environment has the same right to live and flourish. The very concept of deep ecology is related to answering deeper questions like, how should we live. Why is the environmental protection must? What is the level interdependence among biotic and abiotic factors of ecology? Where does human stand in the biotic community? etc.

Deep ecology concept focuses on the deep commitment to the environment. Deep ecology provides guidelines for human activities.

Important features of this approach are,

1. The wellbeing and flourishing of human and nonhuman life of earth is interrelated. Further the infinite value of both human and nonhuman is independent of their usefulness to each other.
2. Planet earth has a rich diversity of plants and animals living in different habitats and they depend on each other for their survival. Richness and diversity of the life forms contribute to the recognition of these values.
3. Deep ecology concentrates on causes of the environmental problems rather than simply responding to the symptoms of the problems.
4. Humans have no right to reduce this richness and diversity except to satisfy vital human needs.
5. The flourishing of the human life and cultures is well matched with the substantial decrease of the human population. The flourishing of nonhuman life also requires such population control.
6. Present human interference with the non human world is excessive and the situation is rapidly worsening.
7. Policies affecting the basic economic, technological and ideological structures must be changed. The resulting state of affairs will be deeply different from the present.

8. The ideological change is mainly that of the appreciating life quality rather than adhering to an increasingly higher standard of living.

12.9 SUMMARY

From the above discussion, it is clear that ecology as a whole is the very base and foundation not only for the mankind, but also for the entire system. It is a huge concept even beyond humans' comprehension. And hence ecology must be cherished beyond human's interest.
