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Sustainable Development And Environmental Ethics

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Abstract: The critical transition from unsustainable to sustainable development, driven by the necessity of environmental ethics. Unsustainable development, fuelled by scientific and technological advancements, has led to the overexploitation of natural resources and widespread pollution, threatening a global collapse as suggested by "The Limits to Growth" report. Sustainable development is defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987). Achieving true sustainability requires the **optimum use of resources** with minimal waste and maximum productivity, guided by principles of **inter-generational** and **intra-generational equity**.
Key measures for sustainability include the 3-R approach (Reduce, Reuse, Recycle), using appropriate technology, and utilizing resources within the carrying capacity of supporting ecosystems. The paper emphasizes the role of **Environmental Ethics**, which studies the moral relationship between humans and the environment. This philosophy requires shifting from an **Anthropocentric Worldview** (human-centered) to an **Eco-centric Worldview** (earth-cantered), where humans respect and nurture nature as part of a limited planetary system. Ultimately, achieving sustainable development necessitates obeying effective environmental ethics, eradicating poverty, and fostering global collaboration and ecological balance.

Index Terms – Sustainable Development, Unsustainable Development, Environmental Ethics, Anthropocentric, Eco-centric, Brundtland Report, Carrying Capacity, Equity.

1. Introduction

The conservation of environmental resources refers to management of human use of biosphere so that it yields maximum sustainable benefit to the present generation while maintaining its potential to meet the requirements of the future generations. This newer concept of development has come to be known as “Sustainable Development”, which is defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. This definition was given by the Norwegian Prime Minister, Gro Harlem Brundtland (1987), who was also the Director- General of World Health Organization (WHO) from 1998-2003. She chaired the UN's World Commission for Environment and Development (the Brundtland Commission), published the report 'Our Common Future,' also known as the “Brundtland Report,” in 1987. Influenced by the 1980 'World Conservation Strategy' of the International Union for Conservation of Nature (IUCN) the report defined the principle of sustainable development as described**.** Today sustainable development has become a buzz word and hundreds of programmers have been initiated in the name of sustainable development.

The natural resources are badly exploited by humans due to scientific and technological development. Air, water and food all are polluted and humans are moving towards indiscriminate development by overexploitation of natural resources. If growth continues in the same way, very soon humans will be facing a "doom day", as suggested by Meadows *et al*, (1972) in their world-famous academic report "The Limits to

Growth". This is in fact unsustainable development that will lead to a collapse of the inter-related systems of this planet.

The different aspects of environment, biodiversity and other related issues have already been detailed and described at several angles from time to time by a number of scientists such as Glowka *et al*, (1994), Kaushik *et al*, (2008), Odum (1971), Subba Rao (2001), Chris Maser (2009), Deswal *et al*, (2012) and Verma (2016 and 2017a). Verma A.K. detailed the (a) multiple effects of unsustainable agriculture (2017b), (b) environmental ethics: need to rethink (2017c), (c) necessity of ecological balance for widespread biodiversity (2017d), (d) ecological balance: an indispensable need for human survival (2018a) and (e) unsustainable agriculture, environmental ethics and ecological balance (2018b).

Unsustainable to sustainable development

Unsustainable development occurs when present progress is at the expense of future generations. Irresponsible planning and environmental degradation through exploitation of resources, generation of wastes and pollutants are the same reasons. Such practices are not sustainable in the long term. Global warming, destruction of the ozone shield, acidification of land and water, desertification and soil loss, deforestation and forest decline, diminishing productivity of land and water and extinction of species and populations, demonstrate that human's demand is exceeding the environmental support capacities. The indicators of unsustainable development are the degradation of the environment, bad planning and the indiscriminate exploitation of resources. Excess amounts of wastes and pollutants have deteriorating effects on ecosystem that in turn damage the biodiversity.

In fact, sustainable development is not a new concept. It simply means living in harmony with the nature in full recognition of the needs of all other species. This is not just 'survival of the fittest', humans must help even the weakest of the species to survive because each species has a role to play that is ultimately beneficial to the earth and all its human population. The needs of the people in different parts of the globe may vary but dependence on the nature is similar. The most important thing to remember is that there is only one earth and if we destroy it by our actions, our children will not have a place to live. Therefore, harmonious co- existence of all living creatures with the environment in a balanced manner is an indispensable need of today.

The true sustainable development is the optimum use of natural resources with high degree of reusability, minimum wastage, least generation of toxic byproducts and maximum productivity. The sustainable development has multi-dimensional concept incorporating the interactions among society, economy and environment. It also looks at the equity between gender and ages, races and classes, countries and continents. It includes social development and economic opportunity on one hand and the requirements of environment on the other. It is based on improving the quality of life for all, especially the poor and deprived within the carrying capacity of the supporting ecosystems. It is a process which leads to a better quality of life while reducing the impact on the environment.

The sustainable development has both inter- generational and intra-generational equities as following:

(i) Inter-generational equity: This type of equity represents the preservation of natural resources and the environment for the benefit of future generations. It expects minimum adverse impacts on resources and environment for future generations *i.e.* we should hand over a safe, healthy and resourceful environment to our future generations. This is possible only when we (a) stop over-exploitation of resources
(b) reduce waste discharge and emissions (c) maintain ecological balance.

(ii) Intra-generational equity: It deals with the equality among the same generation in terms of utilization of resources. It includes fair utilization of global resources among the human beings of the present generation at global level. The concept of intra-generational equity provides rights and duties to every person of a single generation to use and take care of the renewable and non-renewable resources moderately among the members of the generation. It emphasizes that the development processes should seek to minimize the wealth gaps within and between the nations. The technological development related to developing countries will support the economic growth of the poor countries and help in narrowing the wealth gap and lead to sustainability

Sustainable Development Indicators (SDI) are the various statistical values that collectively measure the capacity to meet present and future needs. SDI will provide information crucial to decisions of national policy and to the general public. Some important measures for sustainable development are as following:

(a) Using Appropriate Technology: Such technology is one which is locally adaptable, eco-friendly, resource efficient and culturally suitable. It mostly involves local resources and local labour. Indigenous technologies are more useful, cost-effective and sustainable. The technology should use less of resources and should produce minimum waste.

(b) **Reduce, Reuse and Recycle Approach:** This 3-R approach emphasizing the minimization of resource use, using them again and again instead of passing it on to the waste stream and recycling the materials goes a long way in achieving the goals of sustainability. It reduces pressure on our resources as well as reduces waste generation and pollution

(c) Promoting Environmental Education and Awareness: The environmental education will greatly help in changing the thinking pattern and attitude of people towards our earth and the environment. Introducing subject right from the school stage will develop a positive and caring feeling to earth in small children. 'Earth thinking' will gradually get incorporated in our mind and action which will greatly help in transforming our lifestyles to sustainable ones

(d) Improving Social, Cultural and Economic Dimensions: Development should not focus just on one-section of already affluent people. Rather it should include sharing of benefits between the rich and the poor. The tribal, ethnic people and their cultural heritage should also be conserved. Strong community participation should be there in policy and practice. Population growth should be stabilized.

(e) Resource Utilization as per Carrying Capacity: Any system can sustain a limited number of organisms on a long-term basis which is known as its carrying capacity. But human beings not only need food to live, but also need so many other things to maintain the quality of life. Sustainability of a system depends largely upon the carrying capacity of the system. If the carrying capacity of a system is crossed by over exploitation of a resource, environmental degradation starts and continues till it reaches a point of no return.

Environmental ethics

Environmental ethics is a form of philosophy which deals with the study of relation of human beings and the environment. It includes a moral consideration of human approach to natural resources and believes that human as well as other living creatures as parts of society. Morality refers to the concept of human ethics related with 'right or wrong', used in three contexts *namely* individual conscience, principles and judgments. These three collectively constitute the moral values. Moral principles that try to define one's responsibility towards the environment are called 'environmental ethics' or 'environmental philosophy' which considers the ethical relationship between human beings and the natural environment.

The environmental ethics therefore study the relation of human beings and the environment and how ethics play a role in this. Environmental ethics believe that humans are a part of society as well as other living creatures, which includes plants and animals. The need of environmental ethics has aroused as a result of the

(1) new effects on nature, (2) new knowledge about nature and (3) expanding moral concerns

Issues of Environmental Ethics

These include water and air pollution, the depletion of natural resources, loss of biodiversity, destruction of ecosystems, and global climate change. Ethical debates impact our ability to solve environmental problems because individuals have different viewpoints. Ozone depletion, greenhouse effect, global warming, desertification, deforestation, loss of biodiversity and disposal of wastes are the major global environmental problems. In order to save the earth and natural environment, we should follow some guidelines at species, ecosystem and personal or individual levels as given below:

Species level:

1. Each and every species has a right to exist and to utilize the natural resources.
2. Humans, being highly evolved product of evolution should work to preserve the earth's genetic variety as it is the raw material for all future evolution.

Ecosystem level:

1. The best way to protect species is to protect the ecosystem in which they live.
2. Humans should work with nature to sustain the ecological integrity, biodiversity and adaptability.

Individual level:

1. We should not deplete or degrade the earth's physical, chemical or biological assets, which support all life activities.
2. When there is an utmost need to alter nature, we should choose methods that do the least possible harm to us and other living things.
3. Before we alter nature, we should assured ourselves that our action will cause short term small environmental effects.
4. Love and honour for the earth.
5. No right to drive other species to extinction.
6. Be respectful to plants and animals which provide food and other things to us.
7. Limit the human population.
8. Avoid the wastage of natural resources.
9. Consumption of natural resources in moderate amount so that all may share this treasure.
10. Promotion of future generation to live in clean and safe environment.

Anthropocentric worldview

The environmental ethics refer to the issues, principles and guidelines relating to human interactions with their environment. It is rightly said, "The environmental crisis is an outward manifestation of the crisis of mind and spirit". It all depends on how do we think and act. If we think "Man is all powerful and the supreme creature on this earth and man is the master of nature and can harness it at his will", it reflects our human-centric thinking or anthropocentric worldview.

The anthropocentric or human centric worldview has following guiding principles:

1. It puts human beings in the center giving them the highest status.
2. It considers man to be the most capable for managing the planet earth.
3. This view realizes that man is the planet's most important species and is the in-charge of the rest of nature.
4. It emphasizes that earth has unlimited resources for humans only and a healthy environment depends upon a healthy economy.
5. It considers that success of mankind depends upon how good managers we are for deriving the benefits for us from the nature.

Eco-centric worldview

The eco-centric worldview states that the earth resources are limited and belong to all the species that exist in nature. Nature has provided us with all the resources for leading a beautiful life and she nourishes us like a mother; humans should respect and nurture her. Though humans have right to draw their requirements from the environment but certainly not the extent that degrades the environment and harms other species and living beings. This eco-centric worldview is therefore based on earth-wisdom and urges us to live on this earth as a part of it, like any other creature of nature and live sustainably. This view has following principles:

1. Existence of Nature is not only for humans but for all living beings.
2. Development should be inclusive incorporating the welfare of all living creatures.
3. Our economic growth should encourage the earth- sustaining development.

1. The earth resources are limited and have to meet the needs of all.
2. A healthy economy depends upon a healthy environment (healthy environment does not depend upon a healthy economy).
3. It considers that the success of mankind depends upon how best we can co-operate with the rest of nature while seeking the use of resources for our benefit.

2 Conclusion

In order to achieve the sustainable development, humans should (a) obey the effective environmental ethics, (b) minimize the harmful anthropogenic activities, (c) eradicate poverty and hunger, (d) provide water, sanitation, sustainable energy and healthy life to all, (e) promote inclusive education and development, care for earth, environment and biodiversity and (g) facilitate the collaboration between different social stakeholders to create an environment of peace and harmony with equity between genders and ages, races and classes, countries and continents across the globe.

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