Chapter 6- Environmental Violence Made By Man

Nature is respected as the mother of all beings. The foundational base of nature is earth and atmosphere. In the face of the ecological crisis, care and respect for nature has become essential. In this context, the relationship between man and nature assumes greater relevance. Although human beings transcend nature in many respects, they are part of nature. One can even go further and say nature is part of us. One needs to have a rational understanding of nature. A rational understanding can be defined as a critical and evaluative study of all living beings. It also includes mutually interdependent relationships and their foundational connections with the law of nature.

The central question in Environmental Philosophy is — ‘What kind of relationship should there be between Man and Nature?’ Galileo view, in the western world, considers ‘nature as a mechanical system, which can be managed and controlled’. 167

Mill says: “To guide our actions by the analogy of course of nature. No one, either religious or irreligious believes that the hurtful agencies of nature, considered as a whole, promote good purposes, in any other way than by inciting human rational creatures to rise up and struggle against them. All human action whatever, consistsin altering, and all useful action in improving the spontaneous course of nature.”168

In the above Galileo’s view on nature was significant in developing a highly potent science of prediction, while Mill have his own view about


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man and nature relationship where man is the part of nature and should live according to the Laws of nature.

Man is an important part of the biotic component of the environment and also an important factor of the environment. Thus man plays important roles in the natural environmental systems where he is known as biological or physical man, social man, economic man, technological man etc. The role of biological or physical man in the function of the natural environmental system was that of the user of natural resources. Thus he played the role of a factor of the environment. But when he acquired skill and technology, he developed culture. His role towards the natural environment also changed progressively. The role changed from a user though modifier and to a destroyer of the environment. Modern technological man now intoxicated by the highly advanced technologies and the materialistic approach has changed himself and is changing the environment for his vested interests. He has done this to such an extent that the very existence of the human being is threatened.

Nature is the sum total of all things in perpetual motion in Space and Time. But sometimes nature is often viewed as ‘culturally constructed’ because different individuals, times, and societies construct particular versions of nature. They have interpreted it in different ways in and through cultural categories and values. Some thinkers claim that ideas about nature are historically and culturally determined. There is no single essential ‘nature’ which can be recognized by all individuals in all places and times. It cannot access outside the mediations of human culture.

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6.1. Nature of the Environmental Problem

Man cannot be considered in isolation from his environment. An important aspect of men’s survival and growth involves their relationship with ecological environment, so major human environmental problems such as pollution, population density and resource depletion are posing new challenges. The recent happening in Bhopal (India) have raised critical issues concerning “side effect” of technological environment.¹⁷⁰ Throughout the world, the environmental problems are associated with man’s behaviour towards nature so the need for harmony between man and his ecological surrounding would call for a critical assessment of man’s action on other elements in the ecological system.

Both the creation and the recognition of environmental problems depend closely on the way society is organized. Changes on the relationship between man and his physical environment depend on changes in the organization and aims of society. If man want to correct his mistakes, his aim must be to build society which is intrinsically compatible with his environment.

On the whole, environmental problems can only be solved through proper development. Where development implies a change from the existing state of being hopefully towards a better stage, the vision of that ‘better’ stage must include environment as well.¹⁷¹

The present day world is seen as one in which scientific knowledge is flattering. So the world in which the concept of environment and its

¹⁷⁰ Dr. F.M. Sahoo, Dr. P.K.Mishra, Dr. R. S. Pirta — Environment and Behaviour - Ecological Perspectives, Akshat Publications, New Delhi, 1988.P51
¹⁷¹ Edited By S.C Bhatia — The Environmental Concern, Centre For Adult Continuing Education And Extension, University of Delhi,1983. P 112
presentation exist, are in urgent need of redefinition. The modern man as we have pointed out is at his best in exploiting nature. He fails to realize that the growth of all civilization depends primarily upon the materials of nature.

Mankind has adapted to the natural variations of the Earth’s system and its climate. Until very recently in the history of the Earth, humans and their activities have not featured as a significant force in the dynamics of the Earth system. But today, mankind has begun to match and even surpass the forces of nature in changing key Earth system processes. Over the past two centuries, both the human population and the economic wealth of the world have grown rapidly. These two factors have increased resource consumption significantly.

6.2. Human Activities in Environment

Human activity has a major effect on the environment. The ecosystems and the planet as a whole have changed dramatically. These changes are a result of the efforts to support the growing population. Humanity is more than ever threatened by its own actions. So the natural resources are being depleted at an alarming rate human activity is considered as the number one cause of the global climate change. This is the greatest challenge the human race has ever faced in history. And the scientists fear that the outcome cannot be good. So they insist on immediate actions to reduce the human impact on the environment.

Several observations have proved that if the environment is not maintained properly, it will have adverse effects on human beings. Many people are suffering from brain, kidney, liver problems and Cancer diseases. Those people who are eating polluted food will have adverse
effects on their digestive system which will ultimately affect the span of their lives.

Irrespective of the individual’s age, religion, occupation or nationality, every human is connected with the environment. So, it is a very important to understand that a clean environment means a clean life. It also says that proper environment means proper health. Hence, it is essential to study the environment by everybody. So that each can help in maintaining standards for a better future.

Thomas Malthus as is known was among the first to believe that available natural resources could not satisfy the needs of the growing population, and that the fertility of soil was diminishing in relation to the growth of human requirements. ¹⁷² Due to the speedy increase in human population, now there is a need for more land to develop townships and cities. That leads to more urbanization and industrialization. The agricultural land is replacing the forest land. The demand for food, cloth and essential commodities is increasing day by day. Increased pollution is causing the demand for pollution control, sewage and industrial effluents need treatment plants. Now human beings need to understand the effect of natural calamities and should develop various other projects for environment protection.

a. Root of Environmental Crisis

The real crisis is rooted in consumerist trends in modern man. Unless the human being changes his lifestyle, which is rooted in consumerism, no solution to the environmental crisis is possible. For example, if we keep the doors of our house open during a dust storm, the entry of garbage cannot be prevented. So all efforts for cleanliness will be in vain. On the

one hand, human beings are concerned about the pollution of our environment. Human beings are aspiring for commercial gain at the cost of environmental health. These supporting commodities which result in increased pollution such as refrigerators, air-conditioners, large scale industries, nuclear power station etc. are responsible for harming the ozone layer and alarming population increase in the environment.

In the modern world, the concept of development has been identified only with industrial and economic development. But development should be holistic and integral. Modern development comprises both the material and spiritual aspects. For the evaluation of development, both these aspects should be considered.

According Lynn White’s theory, Judaeo-Christian monotheism, which has essentially anthropocentric attitude towards nature is the ideological source of the modern environmental crisis. The modern man after the Age of Reason does not have any respect for the environment. He does not realize that by destroying the environment, he destroys himself. This destruction of environment has led to environmental problems. This problem can be taken as a moral problem which means that there has been a moral crisis with regard to the understanding of the environment. Therefore, there is a need to rethink about the relationship between man and the environment.

If we recognize the authority of man over the environment in an industrialized world, then the real question is —

- “Should the environment be treated as a pure scientific cum economic subject?”

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• “Should the environment be treated as a scientific cum economic cum ethical issue?

Three technological advancements of man were highly detrimental to environment. They are - air which includes lighting of fire, land which includes agricultural production of food, and water which includes industrial revolution. These opened the floodgates of the anthropogenic pollution of air, water and land, thereby threatening the very existence of life on mother earth.

According to Gaia hypothesis, the Earth is alive. Man is the most intelligent life-form of nature, but the misuse and over-use of science and technology has become the potential terminator of mankind and other life-forms. Lovelock frequently used the word Gaia as a shorthand for the hypothesis itself, namely that the biosphere is a self-regulating entity with the capacity to keep our planet healthy by controlling the chemical and physical environment. \(^{174}\) The Gaia theory suggests cooperation between men of different nations for not allowing further pollution and bringing in a cooperative approach for ameliorating the pollutants already accumulated. By cooperation between the nations not by competition, we can avoid and prevent the total annihilation of Mother Earth and its offspring, including the human beings.

Nature supports and sustains human beings. Human beings ought to protect it. But man is so increasingly concerned with himself and his own little selves that he is out of touch with nature. He really knows less about nature, so, the less of nature he can really save. He cannot correctly value and preserve what he does not correctly know.

Today the need of environmental education has arisen. Environmental studies are the systematic study of human interactions with the environment. This includes the natural environment, man-made environment and social environment. Environmental studies do not include only the study of physical and biological features. It is also important to have knowledge in the fields of social, economic, cultural and even political aspects of the environment.

Over the past billion years of ecological history, there have been environmental disasters. Even if humans had been alive throughout those times, there’s nothing we could have done to prevent these catastrophes. They were the result of purely natural causes, beyond human control. But the issue is different with the environmental problems that we face today. They are caused by human. In theory, they are within our power to prevent. It wasn’t until the Industrial Revolution in the 19th century that systematic damage to the environment began worldwide when wide-scale coal mining, steel production, and large factories were developed by man. Newer industries in the 20th and 21st century have made environmental problems even worse.

**b. Need and Importance of Environmental Studies**

To solve environmental problems, environmental education is the only tool. It is important that the individuals and professionals concerned should be given a sufficient amount of knowledge and expertise in handling such issues. Today the need of environmental education arises from the fact that environmental hazards created by rapid development in the world have gone up to alarming levels making it difficult for the authorities to handle it on their own. There is a need to address the problem at the grass root level. The sources of such problems are to be
approached which clearly explains the need for environmental education. If we really want to improve our environment then there should be:

- Awareness (environmental literacy)
- Attitude (problem solving skill)
- Action (decision making)

Thus ultimate aim of environmental education is to develop people’s awareness, attitude, competence and value. This needs an objective orientation of environmental education either in formal system or in non-formal sector, even the role of mass media and various other public institutions cannot be ignored there by.  

Environmental studies do not include only the study of physical and biological features. It is also important to have knowledge in the fields of social, economic, cultural and even political aspects of the environment. Along with this some issues of safe and clean drinking water, hygienic conditions, clean and fresh air, fertile land, healthy food, etc. need to be highlighted.

Environmental studies deal with science as well as to those not related to science. So the study should be made compulsory at all levels of undergraduate studies. Environmental studies are not only to collect information about the environment, but to help decide the way we all should live. Now it is the need to lead more sustainable lifestyles. Now we have to remember the principles of ecology of ‘Earth housekeeping’ which are simple and we are bound by them- we obtain nothing free of charge and in our closed we can throw nothing away, we are mammals,

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creatures of the forest edge, we evolved into a natural ecosystem, and all our sophistication we depend on it for our survival even today.\textsuperscript{176}

c. Need of Environmental Problem Awareness

Environmental awareness is an attitude towards environment which manifests itself in term of awareness towards physical pollution, psychological pollution, social pollution and cultural pollution.\textsuperscript{177} Most of the people are not aware of environmental impact on their bodies and their adverse effects. For example, the general public is unaware of air pollution. Public is not aware of the standard level and the existing levels of CO, SO\textsubscript{2} and other harmful components in the air. In most of the polluted cities, the percentage of haemoglobin in the blood of human beings is decreasing because of the higher levels of CO. This level of CO which forms carboxyl hemoglobin in the blood, which reduces the percentage of haemoglobin, ultimately hits the resistance power of the body. Organ metallic lead eliminated by the exhaust of the I.C. engines has caused general health problems. Similarly, SO\textsubscript{2} and NO\textsubscript{2} cause respiratory problems.

Awareness about the pollution of water is essential. Common man thinks that water which is clear and transparent is of good quality. But this water may contain dissolved salts which are harmful. So it is essential for everyone to know that the required standards of drinking water are to be followed for better survival. Polluted water when used for cultivation of vegetables also causes adverse effects which have been verified by different scientists.

\textsuperscript{177} Edited By Dr. Lingaraj Patro — Environmental Awareness - A Need of the Hour, Discovery Publishing House Pvt Ltd., New Delhi, 2010. P 3
Noise pollution is one of the major problems in crowded cities. It was analyzed that people living in the noise polluted areas are suffering from various hearing, brain and nervous system problems. Other pollutions have also adversely affected our lives. Hence, it is very much important to have awareness in each and every person. For a clean and suitable environment in a better future, the public should be guided. They should also be guided about all the precautions to be taken if emergency situations like MIC leakage in Bhopal arises.

Environmental awareness among the public and policymakers has been growing since the 1960s. It became widely recognized that human activities were having harmful and large-scale effects on the environment. Scientific and engineering research is also playing an increasing role in both understanding and protecting the environment. Research has demonstrated the importance of the environment to human health and well-being, and all economic, social, and aesthetic harm that can stem from poor environmental practices. Research has suggested ways to curb harmful practices without incurring excessive costs. For example, scientific and engineering research has provided cost-effective ways to reduce the pollution in air and water in the world. They have demonstrated the importance of areas, such as wetlands that were once considered of little value to human societies, how to preserve natural ecosystems and the species that inhabit them.

Environment is the physical and biotic habitat that surrounds us. Environmental issues affect, and are affected by all of man’s activities to varying degrees. The need to have a working knowledge of environmental issues is not confined to environmental scientists, engineers, and policy makers. In our society, all educated citizens need to have a working understanding of the fundamental principles involved for
environmentally responsible decision making. The knowledge and understanding of the concepts and connections are required to create interest in a person to think and make decisions coherently about individual and societal behaviour that affect the environment.

The major goals of environmental awareness are to raise consciousness about environmental conditions and environmentally appropriate behaviour. Environmental studies also aims to create an environmental ethic which will create awareness about the ecological inter-dependence of economic, social and political factors in a human community and the environment. Changes in values, attitudes and behaviour towards the environment can ultimately result in a better quality of life.

Everything we need to survive comes from air, water, soil and energy. The greatest challenge we face is to rediscover our place on this planet. Our inventiveness has enabled us to overcome virtually any ecological barrier. So we inhabit and exploit every part of the world. But like an exotic species moving into new areas, we lack the balances which will keep us and our activities in harmony with everything. The quality of our lives depends completely on health where we need strength from the web of living things that cleanses the air and water, creates soil, captures sunlight and provides us with food and resources.

d. Need of Environmental Education

Only environmental education can give a new vision that can meet the challenges of a rapidly changing world. Environmental education is evolving to be the education for sustainable and ethical development, both at a local and global level. It is environmental education that will prepare the next generation to plan appropriate strategies that can address environmental issues. It will still maintain focus on the challenges that
globalization presents at an international level. Knowledge about the environment is not an end, but a beginning. Knowledge about the environment promotes attitudinal and behavioural change. Therefore, environmental education is an agent of change, which will be a step towards community empowerment.

The International Union for Conservation of Nature and Natural Resources (IUCN) defined environmental education as, “the process of recognizing values and clarifying concepts in order to develop the skills and attitudes that are necessary to understand and appreciate the interrelations among man, his culture and his bio-physical surroundings.”

Thus environmental education is aimed at increasing public awareness and knowledge about environmental issues which in turn will provide facts, opinions or the skills to make informed decisions and take environmentally responsible actions. It does not advocate a particular view point or course of action. It teaches individuals how to see various sides of an issue through critical thinking. It will develop their own problem solving skills.

6.3. Environmental Crisis Made by Man

The range of environmental problems that we face today is vast and interconnected. Some issues, though, are more serious than others. The more serious environmental problems go beyond our human sense of beauty and involve harm. Even when some human activity genuinely harms the environment, a distinction must be made. It is based on the scope of its impact, particularly whether it is local or global. A polluted group will typically affect the environment only within its immediate

178 Edited By S.C Bhatia — The Environmental Concern, Centre for Adult Continuing Education and Extension University of Delhi, 1983. P 104
area. Other problems, though, such as global warming, impact much of life across the planet.

The above mentioned environmental problems are universal. They are many but some of them are really serious problem. They constitute the main environmental crisis made by man.

a. Major Universal Environmental Crisis made by Man

   • Waste Disposal

One of the more universal environmental problems is waste disposal. It is the discarding of unwanted objects that have a negative impact on the environment. The garbage that we throw out is the end result of the ever-increasing number of products that we buy in our consumer-driven society. While the sheer quantity of trash is a problem to manage in itself the real environmental damage comes from toxic chemicals in garbage. When this leach into the ground and dumped in landfills, it has released all toxic chemicals into the soil and air.

Sometimes waste is defined in its strictest sense as non-use, spoilage, loss or destruction of either matter or energy that is usable by man or other living creatures sources of solid waste are - Domestic wastes, Agriculture waste, Mineral waste, Industrial waste. A few of the main offenders are batteries, automobile oil, electronic appliances, cleaning agents, and fluorescent bulbs. Even discarded organic material creates problems, and decomposed matter in landfills is responsible for creating 1/3 of the human-related methane gas emissions. Human beings should take recycling efforts to reuse these materials. They should cut back on the release of toxins and also conserve energy.

• Air And Water Pollution

Pollution in environmental context may be defined as man induced changes leading to deterioration in quality of natural environment. It is an ‘unfavorable alteration of our surrounding wholly or largely as a byproduct of man’s actions through direct or indirect effects of changes in energy pattern, radiation levels, chemical and physical constitution and the abundance of organism’. 180 Connected with the problem of waste disposal is air and water pollution. This is typically associated with byproducts of the major industries. The chemical solvents used in factories, drainage from mining operations, smoke from coal-powered electrical plants, oil spills, agricultural fertilizers, insecticides and herbicides are responsible for air and water pollution.

Another worse product is the radioactive material from nuclear power plants, which poses a double threat. The first is the problem of the safe disposal of radioactive waste, which remains hazardous to humans and animals for a million years. There is no way to destroy it. There is no foolproof way to store without harming it for long periods of time. The next is the problem of radioactive fallout from a nuclear core meltdown.

• Growing Human Population and Industrialization

Another set of problems involves the shrinking of ecosystems from the growing human population and industrialization. Habitat destruction occurs when an area is no longer able to support the plants and animals. Agricultural expansion and new road construction are the primary causes of deforestation. The most serious consequence of habitat destruction is species extinction where we encroach more on ecosystems and risk

180 D. N. Singh, J. Singh — An Introduction to our Earth and Environment, Environment and Development Study Centre (EDSC), Varanasi 1988, P 171
driving species out of existence even more. This is particularly so with
the rainforests, which contain an especially high percentage of plant and
animal species.

The growth of population demands more resource consumption, it differs
from country to country (developed, developing and underdeveloped),
where technology also plays important role in it. A following formula
will be useful to understand this.  

Resource consumption = Population x consumption of good per person =
environmental impact in terms of quantity of goods consumed.

• Loss of Genetic Diversity

Genetic diversity is critical for the continuation of any ecosystem. In it,
species are mutually dependent upon each other as specialized food
sources. Eliminating a few critical links in the food chain can have
widespread consequences. Genetic diversity is also important for
enabling the species to survive when environments go through radical
changes in temperature and rain fall. While some species may not survive
in these natural changes, others may be adapted to do so. The greater the
species’ diversity, the more the chances for the odds to survive during
periods of radical environmental change.

More than half the species that are in danger of extinction today are on
the list of endangered species because their forest habitats have been
destroyed. A majority of these species are from the tropics, where human

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181 Edited By S.C Bhatia — The Environmental Concern, Centre for Adult Continuing Education and Extension University of Delhi, 1983. P 96

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population growth has been most explosive and habitats have been destroyed most rapidly.\(^{182}\)

- **The Depletion of the Earth’s Ozone Layer**

One of the more potentially catastrophic areas of environmental damage is the depletion of the earth’s ozone layer. The ozone surrounding the earth is not all compressed into a single region. It is dispersed within an area between 10 and 50 miles above its surface. The ozone layer plays a critical role in absorbing over 97% of the sun’s ultraviolet rays.

The main cause of global warming is ozone depletion in outer atmosphere because of following reasons:\(^{183}\)

- Ozone layer is depleting by gases such as CFCS, which is used in spray cans, refrigerators, air conditioners, foam producing equipment, etc.
- Deforestation is also major problem.

During the last few decades the ozone layer has been thinning. The ozone layer depletion manifests in two forms:- first - an overall thinning of the atmospheric ozone concentration everywhere; second - the creation of an ozone hole above Antarctica. International agreements have been made to phase out CFCs, although some countries continue their use.

- **Global Warming**

Greenhouse effect is an aspect of gaseous air pollution, it is a heat trapping process which is also known as Atmospheric Effect, which increase the temperature of the earth surface. This is called global

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warming. It is the biggest environmental issue today. In the past 100 years, the global temperature has risen by one degree. It is projected that it will continue to rise. Scientists uniformly agree that global warming is principally a human-caused phenomenon. It results from the burning of fossil fuels which produce excess carbon dioxide. Carbon dioxide then turn traps heat from the sun and causes temperature to continually rise. The cycle begins with burning materials such as oil, gas and coal, which are chemically composed of carbon. In their solid or liquid forms these carbon-based substances pose no risk. Even natural gas can do no damage to the atmosphere. However, once it gets burned, all these carbon-based fuels chemically transform into carbon dioxide gas. They are released into the atmosphere and only some of these carbon fuels are renewable and can be naturally replaced with an equal amount of carbon in solid form.

Another critical cause of global warming, then, is burning with non-renewable fuels. Human being have no other alternative energy source of energy because even hydroelectricity requires a large and elevated water source. Wind power also requires a constant source of moving air and solar electric panels are too costly and inefficient.

b. Disasters as a Crisis

- Dictionary defines a disaster as a ‘grave occurrence having ruinous results’.
- WHO defines disaster ‘as any occurrence that causes damage, economic destruction, loss of human life and deterioration in health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area’.

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So, disasters are extreme events that result in widespread social disruption, trauma, damage and loss of life. Any sudden, severe, unexpected happening causing great damage to life and property can be described as a disaster. It is a well-known fact that natural disasters strike countries that are both developed and developing. It causes enormous destruction, human suffering and produces negative impacts on national economies.

Due to the diverse geo-climatic conditions and different types of natural disasters like floods, droughts, earthquakes, cyclones; landslides, volcanic eruptions, etc. taking place, human beings have been at the mercy of natural disasters since the beginning of time. It consistently reminds human beings of how vulnerable they are in front of nature. Disasters continue to grow in number, and destroy human population, and their economic and social status.

Today, the term ‘Disaster’ is commonly used to denote any extreme event. It can be natural or man-made. It brings loss to life, property, infrastructure, essential services and means of livelihood. It goes on to an extent that it becomes difficult to cope with the situation. It is beyond the normal capacity to control and affects humans as well as other beings.

Disasters are events that cause widespread damage, destruction and human sufferings. These require immediate, coordinated and effective response by the government, community, volunteers and corporate organizations.

Environmental hazards are extreme events, either natural or man-made, which exceed the tolerable size within or beyond certain time limits. It makes adjustments difficult, and results in sudden great losses of property, income and lives.
Types of Disasters

Disasters fall into two major categories. These include manmade and natural disasters. There is a major difference between these two. It is important to learn more about the same in order to increase our knowledge about the occurrence and causes of each.

Natural disasters are brought about by change in natural phenomenon. Sometimes it is known as acts of God. The extent of loss experienced is dependent on the vulnerability of the population. As such, this means that this can only occur in areas that are susceptible to vulnerability. On the other hand, manmade disasters are influenced by humans. They are often a result of negligence and human error among other factors.

- Natural disasters: Natural disasters include things such as floods, volcanic eruptions, earthquakes, floods, tornadoes, landslides and hurricanes.
- Man-made disasters: These can be divided into different categories and they include technological hazards, sociological hazards and transportation hazards among others.

Despite the difference between these two, it is ideal to note that they can cause reversed damage, so we have to put the right measures around to avoid them. This is needed for the controlling disasters’ effect. There are several sources that provide useful resources to make it possible to meet this end.

In both instances, casualties should be treated immediately. The best way to meet this end is placing the necessary measures in a place that counteract this. However, one must consider that the costs associated with the handling of the manmade and natural disasters run to billions of rupees every year, which negatively affects the economy.
Man-made Disasters

Manmade disasters are also known as anthropogenic disasters. They are the result of human intent, error and as a result of failed systems. As mentioned earlier, these are broken down into several categories where there are some manmade disasters that cause more pronounced damage when compared to others. The following are good examples of manmade disasters:

- Transportation which includes aviation, rail, road and space among others.
- Nuclear Bomb which alternatively ends up with major defects as long term injuries.
- Chemical Spill, Oil Spill — these are some technological hazards which include power outages, structural collapse, industrial hazards and fire.
- Fires which includes bush fires, mine, wild and fire storms. One of the most famous manmade disasters in the form of fire was the Pennsylvania fire which was recorded in 1962.

The extent of damage caused by manmade disasters varies greatly. It has to be noted that it has notably high costs when compared to others. This is especially true when it comes down to responding and recovering. When we carry out a basic search, we will come across several resources that highlight these costs. So this will give us a clearer glimpse of what damage is caused by such occurrences.

Additionally, there are different factors which influence the costs such as location. For instance, if this were to occur in densely populated but wealthy countries, the end result could be huge. However, if the same
were in densely populated but poor countries, the after-effect costs might be lower.

The death toll caused by manmade disasters will also vary depending on the geographical location. Here, the poorer countries are the hardest hit. The reason could probably be that the richer countries can implement the proper safety measures needed. Modern technology plays a very important part in the way we respond and prepare for disasters. With financial resources, it seems easy. But, the poorer countries have no resources or assets to respond with and this could point at several resources that categorically highlight the casualties in such incidences. It is always advisable to be better informed. Five key elements of disaster management are prevention, mitigation, preparedness, response and relief as well as rehabilitation. The need of hour is to chuck out multipronged strategy for total risk management comprising prevention, preparedness, response and recovery in one hand and initiate development effort aimed towards risk reduction and mitigation on the other hand to proceed forward towards sustainable development. ¹⁸⁵

Though, all kinds of disasters require more or less similar skill-sets and rescue- efforts at least a few days after the event, it is important to understand them. Depending upon the actual nature of disaster, the immediate reaction needs to be different.

6.4. Environmental Ethics and Environmental Crisis

Environmental ethics as a part of applied ethics examines the moral basis of our responsibility towards the environment. It raised some fundamental questions which are as follows:

What are the obligations of the whole of mankind towards the natural world?

How can the benefits and charges deriving from the respect of these obligations be allocated?

What policies and institutional structures should be established to implement them?

To the first question, the answer may be that we have obligations toward the natural world which impose quantitative and qualitative limits to our exploitation of nature.

To the second question, the argument is that of international justice and equity. We say that the developing countries are entitled to compensation because they are exploited of their natural resources in terms of products and waste disposal by industrialized countries.

Other points are the distribution of the means of future charges (burden-sharing), for instance, with regard to the reduction in greenhouse gases emissions, the property of genetic resources and of the benefits of biotechnology. The present environmental crises are the result of the activity of man himself. It clearly expresses the social character of human beings. Certain features of the crisis maybe endangered by difficulties linked with problems of growth. These crises are also the result of man’s interaction with his habitat, uncontrolled in the conditions of the developed world. The energy crisis and raw materials crisis are known, so also the population crisis, food crisis, ecological crisis, and so on. Again, there are the crises of the material kind. In addition to them, we also speak of crisis affecting man’s psychological and spiritual world.

The ecological situation in the modern world is not uniform. There can be an essential difference between countries due to the uneven economic and
social development. These dissimilarities can be attributed to the
demographic factors and the varying availability of natural resources. The
essence of the problem, however, is determined by the socio-cultural
systems within which they arise. Modern technology has constructed
production processes and for this it has not only converted a part of
nature, but also polluted the environment. Motivated by the profit motive,
such modern technology’s rapacious exploitation of natural wealth and
uncontrolled development are the main causes of the alarming situation
built up in the developing countries consequently effecting a negative
impact on the environment of the rest of the globe.

A selfish interest of the modern human being is recklessly polluting the
earth’s atmosphere and surface, rivers, lakes and oceans with harmful
wastes. The aim of exploitation of natural resources is a ruthless blind
belief of a progressive development of mankind. Today the global
ecological problem has to be recognized.

At the same time, the interaction of nature and society can no longer be
limited to our planet. Now follows the development of astronauts which
are building of space vehicles for exploring and mastering outer space
and earth. Some scientists analyzing the origin of the ecological crisis in
the world have been disclosing its inner connection with Capitalism’s
laws of development. The key to a cardinal solution of ecological
problem lies in a reconstruction of modern civilization which is directed
by modern technology.

**Man’s Place in Nature**

What is nature? What is man’s place in nature? How should the human
relationship with nature be? If environmental preservation is possible,
how then? With the advancement of science and modern concept of
development, the discussions and answers to these questions are very important. Again, nature can be understood as a totality of things. Nature is like a living and growing organism with life and intelligence. Some regard nature as a pure machine directed by divine intelligence while others say nature is neither permeated by mind nor a mechanism in the hands of its mechanic. But nature is a self-transforming system. Its development is best understood through the analogies of biological or human history.

Man is a part and parcel of nature which emphasizes on the continuity of human life with the animal, organic and inorganic worlds. With behavioural help in cooperative investigation, it will be effective in studying other domains of nature. Contemporary man has anxiously started thinking about environmental issues, with various dimensions. But with the effects of rapid and often uncontrolled industrialization, man has shifted from the study of nature to a desire to preserve it.

Why should man try to preserve his environment? The answer goes far beyond desire to preserve the beauty of natural areas. An important explanation is that man needs to preserve the balance in nature. If this balance is destroyed, man will have no place to go. So this explanation is important to people irrespective of whether they are biologists, culturalists, anesthetists or educationalists.

The, earth is not common heritage to all humankind, but it is almost the ultimate source of life. By over-exploiting its resources, human beings will damage the very basis of life. All around we find destruction caused by human activity thus showing degradation in nature. Therefore, the protection and conservation of the earth is not a question of morality but a
question of our survival. How we respond to this challenge will affect not only this generation but also many more.

Destruction of natural resources results from ignorance, lack of respect for the Earth’s living things, and greed. Conservation of the Earth is now a global issue. Tackling of this problem is the key factor in the human mind. In order to change the external situation on the Earth, man must first change himself. If man wants to solve this problem then he must have a proper imaginary vision. Only then can that idea be implemented.

In the first place, human beings must strive to overcome this state of mind, by developing an awareness of the interdependent nature of all phenomena. There must be an attitude of wishing not to harm other living creatures. Even if one develops an understanding to cultivate compassion for earth’s living things, we cannot hope to solve the multifarious problems with a one-sided or self-centered attitude. What we must have is a vision of nature being all the more interdependent. History shows us how often in the past people have failed to cooperate. Our failures are the result of ignorance of this interdependent nature. This calls for a holistic approach towards problems, which will have a combined and genuine sense of universal responsibility based on love and compassion.

**Environmental Crisis and Man’s Responsibility**

Nature is beautiful and created as a harmony. Undeniably, there has always been the fear in man to fight it in order to survive. To the effect that nature is now threatened by man who is so detached from it. Technology has endowed humans with a geological power which acts on a continental or a planetary scale. e.g. acid rain, photochemical smog, radioactive contamination, stratospheric ozone depletion, climate change are the best examples.
These manmade environmental problems cannot all be solved by
technology alone. Changes in human behaviour and codes of conduct
based on the ethics of the environment are required which could
reconsider the relationship between man and nature.

What is nature, what is the environment? Nature is the whole of the
physical world, and what exists outside of any human action. Man is in
nature but since he acts upon it, he is a part and yet apart from nature. The
environment has been defined in many different ways, from Einstein’s
definition ‘everything that is not us’. In fact, the notion of the
environment always includes nature and culture. The environment may be
viewed as an emerging property of the man—nature relation. It is a field
of transformation that reciprocates the human by the natural; and of the
natural by the human.

So as a member of this environment it is moral responsibility of human
beings to protect our environment. In 1976 through the constitution 42nd
Amendment Act environmental protection was introduce in the
Constitution of India as - Fundamental Duties’ Article 51A (g) which
says — 51 A — Fundamental Duties — It shall be the duty of every
citizen of India —

(g) to protect and improve the natural environment including forest, lakes,
rivers and wild life and to have compassion for living creatures.\textsuperscript{186}

6.5. Environmental Crisis in Hinduism, Buddhism and Jainism

Tackling and combating ecological problems is not just a scientific and
technological matter. The ecological problem has become the most
important cultural, psychological and ethical issue of today. The needs of

\textsuperscript{186} Edited By S.C Bhatia - The Environmental Concern, Centre for Adult Continuing Education
and Extension, University of Delhi, 1983. P 88
modern man have multiplied and they can be satisfied only by spending more and more energy. It is an alarm to the world that human beings will be without much in less than hundred years.

In the western model, man’s needs are artificially created. With that mandate, multinationals and other big companies are making profit by exploiting nature and labour. It is assumed that there is no end to man’s needs. These needs are fulfilled by exploiting resources that nature has created over billions of years. Western civilization has always been characterized by its high level of industrialization and technology. Its attitude towards the world, man and life in general, has created a philosophy of life which emphasizes one aspect -he economic development which has brought into prominence the manipulation of nature with the construction of an artificial world. This relentless manipulation has created an unhealthy atmosphere in the world. Thus, the socio-ethical control of science and technology is becoming an urgent necessity of time.

Role of Religion in the Current Environmental Crisis

For many people, an environmental crisis of this complexity and scope is not only the result of certain economic, political, and social factors, but also a moral and spiritual crisis. This will require broader philosophical and religious understandings of the human being as a creature of nature who is a part of natural life cycles and is dependent on ecosystems.

For this purpose, religion needs to be re-examined in the light of the current environmental crisis. This is because religions will help shape human beings’ attitudes toward nature in both conscious and unconscious ways. Religion provides basic interpretive questions such as

- Who are we?
• What is nature is?
• Where have we come from?
• Where are we going?
• How should we treat other humans?
• How should we relate to nature?

This comprises a world view of a society. These values make up the ethical orientation of a society. Religions generate principles which underlie fundamental attitudes and values of different cultures and societies. The well-known historian Arnold Toynbee maintains that religion played a major role in the foundation of man’s attitude toward the natural environment. According to him, monotheism form of Judaism, Christianity or Islam religion treats man as the nature which God has given him in perpetual use so that he can live on and prosper, which he consider the basic factors of the ecological crisis.¹⁸⁷ Now today human beings have lost appreciation for intricate nature. The feeling of alienation in the modern period has extended beyond the human community, especially prevalent in technologically sophisticated societies, the human being has forgotten his recognition of his dependence on nature. So the human being no longer has respect for the earth as sacred.

One of the greatest challenges to contemporary religions is how to respond to the environmental crisis. A crisis arises because of the enormous inroads made by unrestrained materialism, secularization, and industrialization. Indeed, there are some who suggest that the division of religion from secular life may be a major cause of this crisis.

Our behaviour and policies with regard to nature and the environment should be guided by a code of ethics, derived from basic principles and it should be based on a pragmatic consideration of the issues at stake. The man—nature relationship has always been ambiguous. Nature can be considered as both a provider and an enemy.

**a. Hinduism and Environmental Crisis**

Our present environmental crisis is in essence a spiritual crisis. The current deplorable environmental crisis demands a spiritual response. A fundamental reorientation of human consciousness, accompanied by action that is born out of inner commitment, is absolutely needed. One of the measures that could be of significant help to fulfill this need is to regenerate and rejuvenate the basic values of Hindu culture and propagate them.

When dealing with the environmental crisis, many scholars have focused on discovering the various texts, rituals, and philosophies across the different Hindu traditions to excavate perspectives and possible approaches. A deeper look at the challenges perceived may help to facilitate a more effective interreligious ecological dialogue.

Hinduism is a complex religion. Even the word ‘Hinduism’ offers its own set of complexities, for as Christopher Key Chapple observes, “Hindu is inherently anon-Indian construct, those persons living on the other side of the Indus River,” 188

Hinduism has often been coined as an ‘environmental friendly’ religion. Hindus regard everything around them as pervaded by a subtle divine presence, may it be rivers, mountains, lakes, animals, flora, the mineral

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world, as well as the stars and planets. It is believed so because the Divine reality is present as a Prana energy, power, in every electron, atom, cell, and in every manifestation of matter.

**The Puranic Approach to the Environmental Crisis**

In Hinduism, the *Purānas* to a large extent, reflect a tribal ethos. The *Purānic* world-view has been based on empirical knowledge and traditional values, and not on any scientifically conducted investigations and experimentation as is seen in modern societies. It mainly reflects a pragmatic approach towards the existing environmental issues and problems, seeking solutions in religious beliefs and the everyday ritual observances. Hinduism accept nature as divinity and as such various trees and plants are used in the religious ceremony and worship. Trees and plants are considered sacred as follows: 189

- In Narsinha Purana, the tree has been personified as God (Brahman).  *Narsinha Purana 15:7*

- In *AtharvaVeda* considers the Peepal tree as the abode of various Gods.  *AtharvaVeda 19.39.6*

- In Varah Purana which advocates regular plantation as a means to achieve heaven.  *Varah Purana 172:39*

The significant feature of most *Purānas* is an awareness and appreciation of the existing natural environment, particularly the need to preserve and harness the beautiful natural resources that exist. Whole sections are devoted to detailed descriptions of mountains, rivers, forests. The extensive geographic knowledge displayed by *Purāna* composers reveals an awareness of the natural surroundings, physical features. It also

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highlights the major environmental issues that need to be addressed, especially those related to the wild exploitation and destruction of land, air, water, flora, and fauna.

However, there seem to be a few basic tenets, which, serve as the foundation of a cosmological framework held in common among almost all Hindus. These basic tenets include:

- the belief in a cyclical nature of existence (*Samsāra*),
- the belief in an infinite and divine universal order, which is manifested in this finite world, and to which all of our lives are intrinsically bound (*dharma*),
- the belief that there is a purpose underlying everything that happens, and therefore a consequence to every action (*Karma*),

*Samsāra*

To know more about the concept of the cyclical nature of existence, across the spectrum of Hindu traditions, it is fundamentally and strictly held that “being cannot come out of nothing.” As such we find that a key feature of Hindu cosmology is the notion of repeated creation and dissolution. The idea of reincarnation arises from this theological foundation. Not only is the entire universe (created and dissolved and created again in repeating cycles of birth and death, but so also do all beings move through these same cycles of birth and death and rebirth. This never-beginning/never-ending cycle of existence is referred to as *Samsāra*.

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Dharma

A moral concept that permeated the Hindu religious thought throughout and which must have been instrumental in protecting natural environment has been dharma, mostly interpreted by the sense of duty or obligation. It has comprehended with its purview not only a person's responsibility to his or her family and community but also to his or her entire world, of which the environment constitutes an integral part.

The dharma concept finds a more palpable expression in the form of the five debts or Pañcarāna theory, which has received vehement exposition in the Purānas. This postulate is based on the assumption that human beings owe certain obligations to their fellow beings including their ancestors, to gods and all living creatures. The most inclusive declaration of the interdependence is found in the notion of Rta.

The Hinduism has prescribed four debts, in which Manush Rta or Debt - the debt towards human beings and society at large, and this debt is discharged through the fifth mahāyajña, and by serving visiting guests and other needy persons as a part of the Atithiyajña.

The Purānas composers are found to lay greater emphasis on the concept of Ahimsā in general, particular towards animals. Thus through constant and diligent application, the Rta theory has been meant to be instrumental in making people more aware of the need to sustain and nurture all manifestations of nature, animate and inanimate; in other words, become conscious of their duty towards the natural environment.

In Hinduism, the theory of Karma, we are each morally responsible for the good or evil thoughts or actions toward the environment that we are freely choosing during this life. From the perspective of Karma theory, we are totally responsible for both our impulses towards the environment
and about the way we act or not act on those impulses. So we alone are therefore responsible for the condition we will create for the future. In this regard, everyone’s karmic responsibility is both individual and cosmic.

*Karma* theory provides a strong and clear environmental ethic from Hinduism. Its twin thrusts of human continuity with all forms of life and moral responsibility for one’s impulses and actions provide a sound basis for natural reverences.

In Hinduism, relationship with the nature and animals is not that of dominion and subjugation but rather a relationship of mutual respect and kindness.\(^{191}\)

**b. Buddhism and Environmental Crisis**

Environmental pollution is a problem of the modern age, and a product of the industrial revolution unheard of during the time of the *Buddha* in the 6th century B. C. in India. But a number of *Pāli* discoveries reveal the close link between man’s morals and the natural resources available to him.

Buddhist texts formulate the general principles that should be followed by men when they are trying to earn their living. In the process of producing material goods man should not hoard wealth for the sake of wealth by exploiting natural resources extensively thus producing harmful effects on nature’s creations. Apart from this, *Buddha* presented a way of life called the Middle Path of which *Sammā ajīva*- the Right Livelihood is very important in the evaluation of man’s economical activities. This refers to how we earn our living in society. Right Livelihood is an

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extension of the two other factors - Right Speech and Right Action - which refer to the respect for truth, life, property and personal relationships. Human actions (kamma, kaama or Karma) in the Buddhist frame work were judged based on both the intention or motive (Chetanaa) and the consequences (Vikalpa) of actions.  

The madness of greed, for possessions and power, points a finger not towards perfection but towards self-destruction. Buddhism teaches that the basis of all life, the main spring, as it were, of the vital principle of living beings is craving or Tanhā. The facts of biological evolution most strikingly confirm this. According to Buddhism, the source of suffering and dissatisfaction is called craving or Tanhā. Craving is a fire which burns in all being. Every activity is motivated by desire. They range from the simple physical desires of animals to the complex and often artificially stimulated desires of civilized man. To satisfy desire, animals prey upon one another and human beings fight, kill, onset, lie and perform various forms of unwholesome deeds. Craving is a powerful mental force present in all forms of life and is the chief of the all bad things uncontrolled and all the good things brought under rational control.

**Man’s Attitude towards Nature**

The Pāli words which comes closest to nature are, Yathabhuta, Loka and Lujjahti-loko which means constantly undergoing changes and where man is expected to understand the reality of himself (Yatha Bhuta) as a part and parcel of nature and his environment, the world (Loka).  

According to Buddhism, man cannot and must not exercise all power over nature unconditionally. He should not forget that there are objective

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192 Arvind Dwivedi — Buddhist Philosophy, Abhijeet Publications, New Delhi, 2012. P 68  
limits to our action on nature. Both material production and society as a
whole do not function independently but as components of the biosphere
outside which human life is inconceivable. The two components of
nature, organism' and 'environment' are not only much complex and
dynamics but also inter dependents, mutually reactive and interrelated. 194

Protection of the environment is one of the most pressing problems today.
We have reached critical points in several areas of man’s effect on nature.
The ecological situation as it exists in our day is unique as regards both
its significance for humanity as a whole and the character of the tasks it is
raising before society.

What is the basic motive behind our actions regardless of how we
actually conduct ourselves? We conceive ourselves to be small weak
organisms struggling against an environment which is always actually or
potentially hostile towards us. We must always think that nature was not
created by anybody for the ruthless exploitation of man’s insatiable
craving, which according to Buddhism is the basic and most common
quality of the human mind.

Today our civilization is motivated by greed. Man has been so enchanted
by scientific and technological progress that he is misled into believing
that he has almost completed the conquest of nature and has control over
it. 1-le also believes that with this triumph, all problems will be solved
and heaven will be established on earth. But he is not aware that nature
that he thinks he has conquered is not the whole of it but only a part of it -
possibly a half of it, that is the external material world limited mostly to
our own planet. The other half is within ourselves, the nature of man or
the man as a part of nature, which he may never even fathom.

194 Edited by Prof. Y. Sudarshan Rao, Dr. G Bhandru Naik- Buddhist and Modern Society, Deep
and Deep Publication Pvt. Ltd., New Delhi 2008 P.181
In the process of struggle to conquer the material world of nature, man even often neglects his responsibility to master the inner nature within himself and tends to lose control over it. Conversely this inner nature, which is craving or Tanhā has grown stronger and stronger and has taken much control over man. Thus, in looking outside with a pride that he has conquered nature man has unconsciously been conquered by the nature inside himself and come obediently under its control. It is this uncontrolled controlling nature within man that has frustrated all his hopes of turning the earth into a paradise.

The progressive development and very existence of modern civilization depend on a constructive solution of the problem of man’s relation with his habitat. All kinds of industrial products have been made for profit, hence this insoluble combination of technology and profit motive may have become the chief driving force of technology and industrialization, which has most certainly lead to ecological problems that have been unheard of in the history of mankind, before the advent of industrial revolution.

Modern man is proud that he has a scientific attitude towards all things. However, it is a pity that his attitude to science and technology is less scientific than it should be. He does not know science and technology as they really are and could be. Thus man cannot deal with them in a scientific way. This also implies that his knowledge of nature is still inadequate. So he cannot maintain the right and proper relationship with nature and his habitat. The science and technology in the modern world are being wielded by both the subjective sensuality and objective sensuality.
The Buddhist ethical theory propounded in the *Ambaiatthika Rahulovada Sutta* of the *Majjhima Nikaya* helps us in the comprehension and evaluation of the concept of development and industrialization in the board sense of integrated human life. The Buddha on this discourse established the moral criterion by which to determine a good or a benevolent action and the bad or malevolent action. It is from the benevolent or malevolent effects of thought, word and action upon both the doer or individual and the other or society, that we are to distinguish between good and bad.

In other words, Buddhism judges any action or word by its results on the individual and society. If we examine the motives and consequences of our production and industrialization, its drastic and harmful effects upon the environment and equilibrium of biosphere stand out conspicuously. Therefore, it must be concluded that such development activities are unskillful and dangerous and therefore should be avoided.

**Buddhist Approach to Environmental Crisis**

_Tathāgata Buddha_ viewed humanity as part of nature, and if nature is encroached upon or destroyed, humanity cannot exist, and by making an effort to disrupt the ecological balance, human being harm themselves.\(^{195}\)

Buddhism teaches that if we wish to save the environment, we must first analyze our lives to determine how our self-deification is destroying the world by depleting, overpopulating, and polluting the environment.

The Buddhist approach to solving the ecological crisis then includes:

1. Compassion is the basis for a balanced view of the whole world and of the environment.

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\(^{195}\) *Edited By Prof. Y. Sudershan Rao, Dr. G. Bhadru Naik — Buddhism and Modern Society, Deep and Deep Publications Pvt Ltd., New Delhi, 2008. P 182*
2. The use of the ‘save and not waste’ approach means that nothing in nature is spoiled or wasted. Wanton destruction upsets the vital balance of life.

3. Ecology is rebuilt through the philosophy of Sarvodaya (uplift of all), which is based on loving, kindness, compassionate action, and altruistic joy.

To make this world a better place to live and prosper, Buddha emphasized in Karaniyamatha Sutta, 196 that all living beings whether small or big, medium or tiny, small like molecule, seen or unseen (with eyes), far or near, born or yet to born, all the beings should live happily by neither saying ill nor insulting each other. 197

The current affluent life style with a goal to amass wealth and consumerism has caused all the evils of modern life and has resulted in a disastrous damage to the ecosystem. Present day scientific and technological advancement poses a serious problem regarding man’s wellbeing and his very survival. However, we can’t just blame technology. What about the people who invent, operate or own technology? Change comes about; it will do so because people learn to behave differently. Whatever our analysis of the causes of the crisis, this challenge cannot be ignored. In the end, the question is, how do we motivate people to change? How do we motivate ourselves to change?

Change is the central purpose of the Buddha’s teachings. So perhaps it would be more fruitful to think not of a Buddhist environmentalism, but of Buddhism as environmentalism. It will not be another ideological

196 Gath No. 4-7
197 Edited By Prof. Y. Sudershan Rao, Dr. C. Bhadru Naik — Buddhism and Modern Society, Deep and Deep Publications Pvt Ltd., New Delhi, 2008. P 183
position, nor a political platform. It will be — a path, or journey of transformation that involves every part of our body, heart and mind.

According to Prof. Angaraj Chaudhari, if we follow the social ethics preached by Buddha and even if we observe the first precept of abstaining from killing in both its negative and positive aspects [not killing beings is the negative aspect; developing kindness and compassion for them is the positive aspect, we will reduce our craving and aversion which will enable us to save our environment and ecology. 198

c. Jainism and Environmental Crisis

A development can be sustainable only if the exploitation of resources is limited to their carrying capacity and renewability. Ignorance of mankind has put the whole living community in the crisis of existence. Now the peak time has come, so it is compulsory to step forward to save the earth. The global ecological crisis cannot be solved until this spiritual relationship is established. This relation should be established in humanity as a whole and its natural environment.

Jainism is a loyal and committed protector of nature which is based on the Jain faith from the beginning. Jainism is known as the religion of nature. It understands nature’s utility and the essential nature of all creatures such as plants, worms, and animals. These creatures have their own importance for maintaining ecological balance. Jainism therefore insists on the function of human souls as help to one another.

Jainism presents its philosophy on the man and nature relationship. Jainism accepts that every soul whether of a man or a mono-sensed insect is independent. It believes in the presence of the soul not only in animate

ones like human beings, animal, insects but also in inanimate things which are deemed as non-living by others like water, airy, fire, earth. Jainism asserts that there is a beginning-less coexistence of soul and matter. This philosophy of Jainism will make people behave sensitively not only with living beings but with materialistic things as well.

The Jain tradition is based on the philosophy of ecological harmony and non-violence. *Ahimsā* is one of the core ethical values in Jainism, as expressed in the oft-quoted phrase “*Ahimsā Paramo Dharamah*” means non-violence is the supreme form of religious conduct. Padmanabha S. Jaini has observed that within Jainism there is a “preoccupation with *Ahimsā*,” for no other religious tradition has carried it to the extreme of the Jainas. 199

It formed a vital part in mainstream ancient Indian life. Jainism has contributed greatly to its philosophical, artistic and political heritage. During certain periods of Indian history, many ruling elites as well as large sections of the population were following Jainism.

Jain avoid vocations that entail injury to living beings such as trading in animal by products, work involving burning of forests, trading in alcohol etc. This principle has relevance in the context of ecological balance.

The ecological philosophy of Jainism flows from its spiritual quest. It has always been central to its ethics, aesthetics, art, literature, economics and politics. It is represented in all its glory by the 24 *Tirthankaras*. In the Jain perspective, reverence for life in all forms was the basic commitment of the progress of human civilization. It is based on the preservation of the natural environment.

199 Edited By Peter Flugel — Studies in Jaina History and Culture, Dispute and Dialogues, Routledge Taylor and Francis Group, New York, 2006. P 442
Jain Ecology is based on Non-Violence

The doctrine of six life forms is of great social relevance in the context of ecological balance and global environmental preservation. From the standpoint of Jainism it is clear that earth bodies, air bodies, fire bodies, water bodies are living entities and they perform various life supporting activities. The practical consequence of the doctrine of six kinds of life forms is that violence towards them should be avoided.

Jain ecology is based on spirituality and equality. Each life form, plant, or animal has an existence and so each must be respected. Within Jainism is the term ecology also known as Sarvodayā vāda which means the concern for lifting up all life forms. Social equality is based on the belief that the entire human world is one because of the interconnectedness of different aspects of the human community. Seeing other people as connected with oneself develops the spiritual perspective through which all life takes on sanctity that can and must be protected by observing the principles of ecology.

The Jain ecological philosophy is virtually synonymous with the principle of non-violence - which runs through the Jain tradition like a golden thread. Non-violence is the supreme religion for Jainism. The basic Jain teachings of peace, harmony and renunciation, were taught two centuries ago by the Tirthankara Parshva. Mahāvīra threw new light on the perennial quest of the soul with the truth and discipline of non-violence.

Spirituality is essentially an individual endeavor. Individuals create collectivity on the basis of discipline and practice. Every basic reality of the universe is integral. Jainism reconciled the parts of reality with the whole by means of the relativistic approach. Spiritual relationships, from
an ecological perspective, can be understood with the help of some of the basic tenets of Jainism:

1. Injure no creatures,
2. Do not command any creature;
3. Do not own any creature; and
4. Do not employ one as the servant

Non-violence is a principle that Jain teach and practise not only towards human beings but towards all nature. The teaching of non-violence refers not only to wars and visible physical acts of violence but to violence in the hearts and minds of human beings. It also refers to human beings’ lack of concern and compassion for their fellow humans. The ancient Jain texts explain that violence is not defined by actual harm which is unintentional, but it is the intention to harm, the absence of compassion, that makes action violent. Without violent thought there can be no violent actions.

Jain cosmology recognizes the fundamental natural phenomenon of mutual dependence, which forms the basis of the modern day science of ecology. The ancient Jain scriptural aphorism explain that the function of worldly beings is to assist each other where all life is bound together by mutual support and interdependence.²⁰⁰

It is refreshingly contemporary in its premise and perspective. Defining the scope of modern ecology, it means that all aspects of nature belong together and are bound in a physical as well as a metaphysical relationship. Life is viewed as a gift of togetherness, accommodation and assistance in a universe teeming with interdependent constituents.

²⁰⁰ * परस्परोपप्रहोजीवनाम् || Tattvārtha Sūtra5.21.*
The concept of universal interdependence underpins the Jain theory of knowledge, known as Anekantavada. Anekantavada describes the world as a multifaceted, ever changing reality. It depends on the time, place, nature and state of the one who is the viewer and that which is being viewed. This leads to the doctrine of Syadvada or relativity, which states that truth is relative to different viewpoints. What is true from one point of view is open to question from another. Absolute truth cannot be grasped from any particular viewpoint alone because absolute truth is the sum total of all the different viewpoints that make up the universe.

With the doctrines of Anekantavada and Syadvada, Jainism does not look upon the universe from an anthropocentric, ethnocentric or egocentric viewpoint. It takes into account the viewpoints of other species, other communities and nations and other human beings.

The discipline of non-violence is recognized as universal interdependence. It inspires the equanimity towards both Jīva which means animate beings and Ajīva which means inanimate substances and objects. It encourages an attitude of ‘give and take’ and of ‘live and let live’. It offers a pragmatic peace plan which is based on the domination of nature, nations or other people. It is an equanimity of mind which is devoted to the preservation of the balance of the universe.

Although the term non-violence’ is stated in the negative, it is rooted in a host of positive aims and actions. It has a great relevance to the contemporary environmental concerns. Non-violence is an aspect of dayā which means compassion, empathy and charity. Jīvadayā means caring for and sharing with all living beings, tending, protecting and serving them. It implies universal friendliness, universal forgiveness and universal fearlessness.
Jains therefore affirm with prayers and sincerely, that human beings’ hearts should be filled with forgiveness for all living beings. They should crave the friendship of all beings. There should not be slightest feeling of enmity in their heart for anyone or anything. Jainism is based on forgiveness and friendliness and believes that all living beings should cherish each other.

This nature of religion has been discussed in Jain scriptures in various ways, in the form of non-violence. That Ahimsā can be summarized: Aspire for yourself. Do not aspire for others. This is the fundamental principle of Jainism. Jainism does not permit anyone to exploit even the non-living beings. The theory of non-violence involves the avoidance of violence in any form through word or deed, not only to human beings but to all nature. It requires reverence and compassion for all living beings at every step in daily life.

**Environmental Conservation through Living Jainism**

Non-violence creates an identity between self and self. Therefore Mahāvīra says that we should not kill any creature. Non-violence doesn’t pertain just to the physical aspect, it looks the mental aspect also. In fact it insists more on mental aspect. Jainism believes that violence should not be even in the heart, mind and brain. Non-violence should not only be practised, but should be present in the mind and thought which will only be filled with concern and compassion towards all life in nature.

In addition to non-violence, there are other tenets of Jainism from which inspiration can be derived for preservation and conservation of environment. It includes vegetarianism, controlling the way of life and the concept of Aparigraha. These tenets form a basic for the conservation of nature. Practice of these principles leads the practitioners
to the conservation of the earth. Environmental degeneration due to too much spread of consumeristic way of life can be checked only the self-imposed discipline of limited desires and limited possessions.\textsuperscript{201} The Jainas are particularly well-suited to reconsider their tradition in an ecological light which is based on their history of advocacy against meat eating and animal sacrifice.

Non-violence, the humanistic element, is based on the principles of equality and equanimity. Jainism tries to shape our attitude towards nature and non-violent approaches to everyday behavior. Jainism has always inspired its followers to look at the ecological perspective.

**The Ecological Consciousness of the Jain**

According to Jainism, separation between humanity and the rest of nature is the cardinal human error. This is the delusion on which is based a false way of living that leads to the pollution of air, water, and climatic disruption. In the ecological and spiritual context, humanity’s present relationship to nature is a dysfunctional, exploitative relationship that has disrupted the Earth’s ecosystems. It has threatened the human being’s quality of life. This relationship is based on an illusion of superiority and domination. It is a misuse of our intelligence, a lack of awareness. It is based on a failure to recognise the human being’s limitations of power and destructive abilities, as well as creativity and potential.

The series of environmental disasters that together point towards ecological crisis arise from a misunderstanding of the nature of power, confusing it with domination and force, and competition and exploitation. This in turn also insists on the lack of co-operation and solidarity with nature.

\textsuperscript{201} Kamala Jain- Aparigraha- The Humane Solution, Parsvanath Vidyapitha Varanasi 1998 P 92
The Jains understood through inquiry and deduction that the universe is teeming with life. From this, it follows that there are subtle connections between living systems of which we must be constantly aware, if we wish to live in balance with ourselves and our world. The Jains became aware that energy can neither be created nor destroyed, many centuries before western physics.

Jainism makes an explicit connection between the exploitative relationships of all types. It is among human beings and other species. This is relegated to a system of resources to be ‘conquered’ and consumed. The principle of interconnection informs the Five Vows undertaken by Jain. They use them as guidelines on which to base their lives. There are references to the Vows in many Jain texts, but are explored in particular detail in the Ācārāṅga Sūtra and Tattvārtha Sūtra. A vow is a resolution adopted voluntarily with the intention of improving one’s quality of life. The Vows in Jain ethics are as follows:

- ‘Ahimsā’: Non-violence; abstention or minimisation of anything that causes injury to life, human or non-human;
- ‘Asteya’: Abstention from theft; avoidance of exploitative relationships of all kinds;
- ‘Satya’: Truth; the understanding of what is real, as opposed to illusory attachment;
- ‘Brahmacarya’: Chastity; avoidance of promiscuity, sexual exploitation and the objectification of fellow-humans (male or female);
- ‘Aparigraha’: non-possessiveness; reduction of consumption; reduction of ‘carbon footprint’.

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* हिसा ज्ञातस्यायामपरिपूर्वकेस्यविविष्ठितत्तरत्वम् || Tattvārtha Sūtra 7.1.
The *Vratas* provide a framework for ecological living as they acknowledge that consumerism and materialism are forms of ‘*himsa*’. They will do harm to humanity and nature, but above all to the inner self. The *Vratas* connect all forms of exploitation — ecological, economic and sexual. They point the human beings towards non-exploitative forms of living. So the Jain understanding that all life is interconnected, and that ‘right livelihood’ means sustainable living is grounded in a spiritual perspective.

From the Jain standpoint, the basic unit of life is the *Jīva*. The spiritual quest is therefore the journey of the *Jīva* back to its point of origin: pure consciousness. The ultimate aim is to achieve ‘*Mokṣa*’, or liberation from all physical constraints, within another universe. Jains seek ultimate liberation from all natural processes, as well as the false materialistic world view that leads to the exploitation of nature.

In Jainism, human beings are special only in that they possess a type of intelligence that can lead them to spiritual liberation. Human intelligence gives responsibilities to fellow humans and all beings, without which any idea of rights becomes meaningless. The Jain way of life aims as far as possible to reflect these deep ecological concerns. So we can say that Jain were well aware of the problem of ecological balance and they made certain restrictions to avoid this and to maintain ecological equilibrium for it is based on their supreme principle of non-violence.203

The fact that asceticism is seen as the highest stage of human development enables lay men and women to put all their material concerns and narrow personal ambitions into perspective. And a sense of perspective is arguably the first step towards ecological living. Jain

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203 Prof. Sagarmal Jam — *An Introduction to Jaina Sadhana, Parsvanatha Vidyapitha Publishers, Varanasi, 1995. P 84*
*dharma* extends the concept of society to include fellow creatures, plants and the various ecosystems of the planet that support life. The better starting point is to believe in a more balanced relationship between the rest of nature and humankind.

**Some Jain Guidelines to Meet the Ecological Crisis**

Jain ethics will be helpful in the current crisis of environmental degradation. The Jain principles that can be applied to help cultivate ecologically friendly behavior are:

- Do not kill. Do not let others kill. Find whatever means possible to protect life.
- Always speak truthfully and constructively. Resist injustice even if it may threaten your own safety.
- Make every effort to reconcile and resolve all conflicts, big or small, peacefully and by consensus.
- Do not make the accumulation of wealth an aim of your life. Live simply and share time, energy and material resources with those who are in need.
- There is no absolute truth, doctrine, theory or ideology that is perfect.
- Practise non-attachment to views. Remain open to receive others’ viewpoints. Do not force others to adopt your views.
- Do not lose awareness of the existence of suffering in the world. Find ways to be with those who are suffering.
- Do not maintain anger and hatred. As soon as they arise, concentrate on your breathing.

According to Jainism, if human beings grow these ideas in their behavior, then they will be taking an important step toward controlling greed and
pride. This behavior will lead them to a disregard for their own. Acarya Bhiksu has said that non-violence is restraint towards living beings. Compassion is the feeling of friendliness towards living beings and a trembling in the heart that comes in association with their being afflicted. Without compassion Ahimsā is not possible and without Ahimsā compassion is not possible. \(^{204}\) So, observing non-violence will reduce hatred and increase compassion for others. Being open to the suffering of others will allow ones to develop compassion. Jainism can perhaps provide an example for living lightly on the planet Earth.

**6.6. Need for a Holistic Approach**

The universe is eternal, constantly renewing itself and passing through upward and downward cycles. Now there is a significant need for a holistic approach. Some ways to press towards that is we have to realize the world we live in is now not paradise. It is a damaged or fractured world. Therefore we should not be shocked when disasters happen. We see them as being a normal part of living in a damaged world. We also understand that there is such a thing as human evil and sin which accounts for a great number of disasters.

Once the human being realizes that he is a part of nature, he will not treat nature and the non-human world as having merely an instrumental world. He will allow things to flourish in their own right and use them only when necessary. If one really expands oneself to include other people and species and nature itself, the large world becomes part of our own interests. It is seen as a world of potentials helping one to increase one’s own self-realization. The awareness that the birds, mountains, animals, insects, their business and play in the world, their unique relationships to

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\(^{204}\) Edited By Peter Flugel - Studies In Jaina History And Culture, Dispute And Dialogues, Routledge Taylor And Francis Group New York 2006. P 446
each other, each took billion years of evolution to shape the first step in the practice of spiritual ecology. So we can learn from specific simple things by examining, appreciating and recognizing their defining relations with other things.

If we see the ecosystem as a part of ourselves and if we see ourselves as intricately related to the ecosystem, only then can we see the needs of the ecosystem as our own needs. So there will be no conflict of interests. Ironically, we see that ecosystem as a tool, as the realization of the fullness of life. We should never use nature as a means. Nature should be valued as being independent of us and of our valuing. Nature can be compared to our friends. If we misuse our friends we tend to lose them. The same is true for nature.

The holistic approach includes the term ‘self-realization’. It indicates a kind of perfection. Self-realization includes personal and community self-realization. It is conceived also to refer to an unfolding of reality as a totality. By doing so, the mysteries of the universe will slowly unfold themselves. A man will see more and more interconnectedness in the universe. Self-realization involves not only one’s own progress but also the progress of others. Human beings’ progress will be linked up with the progress of others because of this interconnection.

This self-realization has been referred to as the universal self. In this process of self-realization we need not repress ourselves, but we ought to develop our own self. Increasing maturity would relate more of our personality to more of the environment. This would make us act as a whole and therefore act more consistently. This would be more meaningful and desirable.

Norms and values enunciated in Hinduism, Buddhism and Jainism may also be drawn and international environmental ethics should be developed to save the humanity as a whole from present environmental crisis. Because in the final analysis, it is our values, beliefs and attitudes which will either help us to live in harmony with nature or to destroy it with our greed. These values, beliefs and attitudes are shaped by our existing religious norms and culture. The time has come when such norms and values drawn from various religions should be enshrined in society to achieve a complete environmental protection.