

Environmental Degradation: Our Moral Responsibility

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Abstract: All the elements prevailing in the nature together constitute the environment. It takes approximately five hundred years to be formed in the world. It is also assumed that thousands of years ago environment was formed for living in the world. At the early stage people could live in the state of nature using different natural elements. Later they could start to control the nature with the help of technology that ultimately hampers it. Today it is almost clear that different types of pollutants are generated at a large extent due to technology that are somehow mixed with air, water, food etc. Environment, as stated earlier, consists of several elements including human beings all of which are interrelated to each other. The interrelationship indicates the ecosystem where one for its existence somehow depends on another. Unfortunately the entire ecosystem is disturbed now due to many causes. Of course human beings have nothing to do over the natural cause but can't escape the responsibility of those which are introduced by them. After all human beings have no moral right to treat the environment indiscriminately since the existence of all other species of the world depends on it. This paper is a futile attempt to show why we should feel moral responsibility to the environment.

Introduction

The history of nature is prior to the history of animal species. The former provides all the necessary things for the existence of the later. But unfortunately very few of the later treats the former indiscriminately. As a result the former often acts in such way that brings severe consequences. At present the environmental condition reaches at what level that has become a great concern for the animal species and if it goes as it is going the entire ecosystem must be collapsed within few decades. So it can be examined whether we have the moral right to treat the environment indiscriminately, as we do, or not. If not, why do we do this? Undoubtedly any treatment what is done in unjust way never brings better consequences. For example, nowadays it is often seen people are extracting the natural resources at a large extent that are produced under the surface taking hundreds of years. The excessive extraction of such natural resources may cause earthquake, decreasing of land's quality, different types of pollution etc. Likewise almost all other elements of the environment are being degraded now.

Research Methodology

The entire study is a qualitative research which has been conducted on the basis of primary and secondary sources. It emphasizes on the content analysis and text

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synthesis in order to generate knowledge. The article has also been developed through the secondary sources which include different books, research articles and some noted newspapers. A manual search has been carried out to get necessary materials from different libraries and seminars. Online books, articles and papers have been used here which have played a significant role in the development of this paper.

Objectives of the Study

A lot of research works, beyond doubt, have been done on environment each of which has a definite objective. The core objective of this present paper is to address the causes of environmental degradation and remind us to think of other species as morally important component of the environment as we are. It also focuses on why we should feel moral responsibilities to the environment.

Environmental Degradation

Environmental degradation may be characterized as a fact which indicates the deterioration of the environment through depleting or polluting the different elements of it. It is considered as the severe threat to our lives as well as other species. "Environmental degradation may be defined as any change or disturbance to the environment perceived to be deleterious or undesirable" (Swati, Neelam, Rajan 1491). It indicates the deviation of the environment from its original position. The present condition of the environment is not of single day but an output of treating the environment indiscriminately for a long time. Of course man-made cause is not alone responsible for environmental degradation rather the environment is also disturbed due to natural causes. The core man-made causes are air pollution, water pollution, land pollution, sound pollution, deforestation etc though some of them also happen naturally. In fact all these factors when they are in extreme level different disasters originate. In the last few centuries, human beings faced several natural disasters which are the outputs of environmental degradation. For instance, in 1138 a great quake happened in Aleppo of Syria that caused death of approximately 230,000 people, in 2010 the Haiti quake took 316,000 people's lives, in 2004 earthquake and tsunami caused the death of 280,000 people in Indonesia and Sri Lanka. In Bangladesh the Bhola cyclone happened in 1970 took the life of 300,000 people though the place was a part of East Pakistan at that time, in 2007 Sidr terminated the life of 4234 people and in 2009 Aila caused death of 190 people and affected thousands of people. Since the paper focuses on environmental degradation hence it is necessary to explain here the factors which degrade it.

Air Pollution

Air pollution is the most remarkable one among the factors which play the vital role to degrade the environment. It is characterized as a fact which indicates the presence of some unhealthy elements into the air. "Air pollution can be defined broadly as the introduction of chemicals, particulate matter, or biological materials into the atmosphere that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment" (Hutton 4). We all know that no life can exist without sound air but unfortunately we pollute the air indiscriminately. Air is polluted in many ways some of which are visible and others

invisible. The most contributor factor in polluting air is smoke. Of course it will be unwise to offer arguments from all sides against smoke since we make it in some necessary cases. We stand against the smoke when it is made for those functions which introduce smoke at a large extent. For example, smoke in extreme level comes from burning bricks, melting pitch, vehicles, power house, mills and factories, prairie fire even burning leaves. On the top of many natural incidents like Earthquake, Cyclone, Tornado often happen that make the elements of air imbalanced. For example, volcanic eruption introduces sulfur dioxide, carbon monoxide, hydrogen sulfide etc which pollute the air.

Due to many causes air pollution varies from zone to zone. The straightforward reason for this is that each zone has different nature. The air of few zones consists of proper elements and it lacks of proper elements in some other zones. The presence of lead, for instance, in the air of Dhaka city is higher than that of any other cities in Bangladesh. Excessive presence of lead can cause severe diseases particularly stroke and high blood pressure. “The International Atomic Energy Agency (IAEA) stated in its News Briefs that pollution levels of lead in Bangladesh are among the world’s highest during dry season, according to Bangladesh Atomic Energy Commission (BAEC), with levels falling during periods of medium and heavy rainfall. The volume of poisonous particles in the city air has reached far beyond the permissible level for human body in recent years” (Islam 20). Decreasing of forested area is also responsible to increase carbon dioxide in the air. As a result the air lacks of required Oxygen that also causes climate change, soil erosion, increasing greenhouse gasses which ultimately affect our environment. It is also seen that many industrial factories without maintaining the due codes have been established in many cities of Bangladesh which pollute the air. For instance, most of the mills and factories including tanneries of Dhaka city pollute the air indiscriminately by emitting different pollutants into the air. They also dump the wastages here and there which generate unhealthy gasses. The elements like particulates, carbon monoxide, sulfur dioxide, nitrogen oxides etc are directly mixed with the air. But they are sometimes produced by the reaction between primary pollutants and the normal element of the environment. For instance, ozone forms over urban areas through reactions of primary pollutants, sunlight, and natural atmospheric gases (Botkin 464).

Water Pollution

The most important and necessary component of the environment is water except which no life can exist. Unfortunately this precious constituent component of the environment is polluted nowadays in various ways. The farmers use different types of fertilizers and insecticides in the field to grow crops which are sometimes washed away by the rain and get mixed with the water of pond, canal, river and sea. Mills and factories also pollute the water by discharging the waste materials into the rivers and canals. Water vehicles like streamers, launches pollute the water by throwing burnt oil, food waste and human waste into the rivers and canals. Even it is often seen that people use insanitary latrines on the banks of the river which also pollute the water. Mining companies are notorious for depositing asbestos-contaminated wastes into fresh water sources (Shane 358-61). The said factors also contaminate the underground water. According to a recent government report “incidents ground-

water contamination—by organic chemicals, inorganic chemicals, radionuclides (radioactive wastes), or microorganisms – are being reported with increasing frequency and have now occurred ... in every state in the nation” (Velasquez 278). Besides, many pollutants prevailing in the air somehow affect the water. “Increasing population often results in the introduction of more pollutants into the environment as well as greater demands on finite water resources” (Botkin 400). It is after all alarming that in the long run we will hardly get the surface water as its layer falling down day by day. Even the existing surface water is not now in the expected level. It is reported that “about 40 percent of our surface water today is too polluted to fish or swim in” (Velasquez 276). In fact all the components of the environment depend on water either directly or indirectly. Therefore if the water is polluted the whole environment can’t escape itself from the impact of pollution.

Deforestation

The concept of forest, beyond doubt, is closely related to the civilization but the nature and development of both are in different position. The later has been developed a lot while the level of former has been degraded. From the very beginning of the civilization people would use wood for homestead, furniture, fuel, wagon and so on. Even today, nearly half the people in the world depend on wood for cooking, and in many developing nations wood remains the primary heating fuel (Botkin 238). Of course there was a balance in the past between cutting and planting trees. But nowadays few morally deviated people are cutting trees indiscriminately to earn money without considering its consequence. Even to extend the agricultural land people often cut trees. As a result the forested area is declining rapidly and carbon dioxide is increasing pandemic. Not only carbon dioxide but many other pollutants emerge in the environment due to decreasing forested area. Of course it can’t be denied the overpopulation is also responsible for increasing carbon dioxide. To fulfill the demand of wood based needs of this large number of people trees are cut down at large extent. As a result it is assumed that “the forested area per person worldwide is projected to shrink from 0.56 hectares today to 0.38 hectares in 2050...” (Velasquez 268). Not only the above problems but deforestation encourages global warming introducing greenhouse gases in the environment.

All the animal species depend on trees for oxygen which the trees breathe out. But deforestation increases carbon dioxide that is threat for all animal species. After all, those species including wildlife use trees as habitats can be extinguished in future. In fact the entire environment will be collapsed if the trees are cut down at large extent. So to save all the animal species as well as the environment it is necessary to plant trees more in proportion to cutting trees.

Population Growth

It is necessary to know what the term population indicates before explaining how it affects the environment. “A population is a group of individuals of the same species living in the same area or interbreeding and sharing genetic information” (Botkin 61). It is apparent from the above definition that any group of living species can be called population. But here the term population has been used to denote merely the human species. In the last few centuries population of the world has been increased

remarkably that is expected to reach at 8 billion in 2021. The population of the world was 1 billion in 1980 but reached 6 billion in 1999 and today's figure approximately 7.8 billion though its annual growth rate has been declining since 1980. Now the question is how does human population affect the environment? The straightforward answer to this question may be the earth has no capacity to carry such volume of population because of which the entire environment is becoming degraded day by day. Not only above problems over population also affects the environment using technology to lead advanced life. But it is "implausible that population growth causes the environmental problems associated with high technology" (Attfield 129). We are supposed to use the technology for welfare but we often misuse the technology the consequence of which is nothing but threat for living species as well as the environment. For example if fire is used to burn the forest in order to extend the agricultural land it will obviously affect the environment as it lacks of oxygen due to the absence of trees. And the effect of the technology is now global.

In fact the environmental problem increases as fast as the population increases. "The simplest way to characterize the total impact of the human population on the environment is to multiply the average impact of an individual by the total number of the individuals, or $T = P * I$ Where P is the population size – the number of people – and I is the average environmental impact per person" (Botkin 73). Of course the impact of each individual on the environment can vary from zone to zone since they are not equally developed by the technology. Besides the above issues population growth affects the environment in many ways. Its effect is more severe in the Third World than the First World. Population growth contributes to global warming, for poor people consume more energy in cooking a meal than those who can afford efficient cookers or microwaves (Attfield 129). It also encourages people to build habitats in the agricultural and forested land. Today it is also seen that people dump waste here and there, animal species are hunted for food, withdrawing and using of fossil fuel causes the air pollution, water pollution, acid rain even global warming that are incompatible with environmental integrity.

Ozone Layer Depletion

Existence of Ozone never indicates that it is harmful for animal species as well as the environment rather its effect depends on whether it exists in the troposphere or stratosphere. It implies its connotation is of two types like positive and negative. Its effect is positive when it is in stratosphere functioning as a preventer in saving all life from detrimental ultraviolet radiations. In fact, the chlorofluorocarbons hamper the ozone layer. The hypothesis that ozone in the stratosphere is being depleted by chlorofluorocarbons (CFCs) was first suggested in 1974 by Mairo Molina and F. Sherwood Rowland (Molina 810-12). Of course at that time scientists and researchers debated on this matter whether the earlier explanation is right or not. Now the question is how does the chlorofluorocarbon originate? How does it affect the environment? Chlorofluorocarbon is composed of carbon, fluorine and chlorine and when the hydrogen gas is mixed with it then it is termed as hydro chlorofluorocarbons. Chlorofluorocarbon is used in aerosol, refrigerators, inhalers, air conditioners, foam, fire extinguishers etc. It takes few years to reach in the stratosphere after mixing with the air. And reaching in the stratosphere it destroys the

ozone layer and remains there a long time. As a result the ultraviolet rays fall on surface and hampers all the animal species and plants. “Ozone depletion damages some food chains on land and in the oceans and is dangerous to people, increasing the incidence of skin cancer and cataracts and suppressing immune system” (Kerr 797-98). It is assumed that the ultraviolet radiations can destroy the two – third crops of the surface. The most alarming matter is that the case will be more severe if it goes as it is going. On the top of the chlorofluorocarbon that already remained in the stratosphere can affect all the species as well as the environment till the running century. Recent estimates note that even if the production of CFCs remains limited according to the protocol signed in Montreal in 1987 for the protection of the ozone layer, the abundance of active chlorine is expected to reach 6 to 7 parts per billion by 2050, or a 300 percent increase (Kormondy 472).

As the necessary step that can be taken to protect the ozone layer is the origination and use of ozone depleting chemicals should be stopped. In fact it is the problem for the ordinary people who are neither scientists nor researchers since they hardly understand the presence of CFC. Of course there are some ordinary techniques to understand the matter like when the shadow of mine is greater than I am then the ultraviolet exposure is relatively low and it can be reversely.

Urbanization

It is not unnecessary to know the entire history of urbanization since the main focus here is to show how the urbanization affects the global environment. Once human actions affected the environment of natural landscapes before introducing urbanization but today the world as global domain is affected. History indicates “the first cities emerged on the landscape thousands of years ago, during the New Stone Age, with the development of agriculture, which provided enough food to sustain a city” (Botkin 505). It is apparent from the history that people have more interest to dwell in urban area than any other area due to facilities. “According to the United Nations Environmental Programs, in 1950 fewer than a third of the people of the world lived in a town or city, while today almost half of the world’s population is urban, and the forecasts are that in just 20 years – by 2030 – almost two-third of the people will live in cities and towns” (Botkin 499). It is estimated that in future the village may extinct and human beings together may dwell in the one world where they all will be entitled to enjoy the same facilities. Today in every country of the world more or less cities have been introduced though they vary in terms of size, nature and facilities. For instance, “in 1950 the world had only two: the New York City and nearby urban New Jersey metropolitan area (12.2 million residents altogether) and greater London (12.4 million) By 1975, Mexico City, Los Angeles, Tokyo, Shanghai and Sao Paulo, Brazil, had joined this list” (Botkin 499) Now the key question is how does the urbanization affect the environment?

In fact a large number of people dwell in the cities to enjoy more facilities. It needs huge particulates to make the facilities which directly or indirectly produce different pollutants. The use of such unhealthy materials is comparatively high in the cities. For example, vehicles emit smoke which pollutes the urban air. On the top of that mills and factories also emit nitrogen oxide, carbon monoxide, sulfur dioxide and many other toxic elements which are somehow mixed with the urban air. “The

primary source of particulate air pollution – which consists of smoke, soot, and tiny particles formed from emissions of sulfur dioxide and volatile organic compounds – are older, coal-burning power plants, industrial boilers, and gas- and diesel-powered vehicles” (Ford 350-59) Not only that people are also destroying forested and agricultural area for making city. As a result the balance of environment is hampered and several pollutants emerge.

The ordinary people may argue here the polluted air of urban area only affects the city dwellers not the people worldwide. Of course, in real the pollutants introduced in the urban area affect the world environment since the pollutants spread out getting mixed with the air. So it will be unwise to say that the urban air can't affect the world environment. In fact “we cannot fiddle in the wilderness while our Romes burn from sulfur dioxide and nitrogen oxide pollution.” (Botkin 499)

Resource Depletion

Natural resource has a great influence on the environment. It is used in almost all the necessary matters that we use everyday. Of course its use has been increased due to rising population growth. After that it can't be denied we have lack of proper plan and management in using natural resources. The key focus here is to show how the depletion of natural resources affects the environment. Natural resources mainly include fossil fuels and minerals. Fossils fuels are generated from dead organic components that are partially oxidized. Of course the dead organic components take long time to be converted into fossil fuels by chemical reactions. They are mainly converted to oil, gas and coal. On the top of “biological and geologic processes in various parts of the geologic cycle produce the sedimentary rocks in which we find these fossil fuels. (Alektett 10-12)

It is assumed that the fossil fuels will be exhausted in short time as it is extracted. “Estimated world resources of coal would be depleted in about 100 years, estimated world reserves of oil would be exhausted in about 40 years, and estimated reserves of natural gas would be last only about 25 years.” (Velasquez 284) The extraction of fossil fuels can bring severe consequence for the environment as well as human beings. In real where the fossil fuel is extracted the environment of that area can be disturbed at a large extent. It is even difficult to reclaim the land since it is deviated from its original position. In fact the excessive use and extraction of fossil fuels hamper all the animal species as well as the environment. As a result of the depletion of fossil fuels the probable consequences are the decreasing of agricultural land, increasing pollutants in the air, degradation of environmental aesthetics, damage of biological resources and the damage of other constituent elements of the environment.

As stated earlier the necessary things what we use everyday either come from minerals or produced in association with minerals. For instance, the foods, medicines and goods used in daily life contain minerals. But the total volume of minerals of the world will be exhausted within short time as it is going on. “The study, undertaken by Robert B. Gordon and others, indicates that the rate of extraction of the world's copper will rise rapidly over the next 100 years, peak in about 2100, and then slowly decline. Rich copper ores will be exhausted by about 2070.” (Velasquez 286)

Mono Culture

Each species has an individual significance in the nature. Its existence depends on some elements of the nature the degradation of which can extinct it. It is apparent from the incidents happened in different times that the culture of single entity can hamper the existence of other entities. For instance, if the cultivation of paddy goes alone the species who depend on other crops can extinct due to food crisis. Likewise if the trees of a certain species are planted then obviously the species who depend on these can lead the life comfortably but those who depend on other trees must face of existence crisis. As a result the environment can go over crisis since the above factors make it imbalanced. In fact, all the elements of the environment together keep it sound. The extinction of one can disturb the entire environment severely since the effects can run by rotation. Besides the above factors climate change, marine pollution, species extinction, over fishing etc are also responsible for environmental degradation.

Moral Responsibilities

What actions affect the environment can be examined in terms of morality. Of course it doesn't mean that nothing can be done with the environment. It should be taken into cognizance if the environment collapses all the animal species must suffer. So it is the responsibility of all beings not to destroy the integrity of the environment since the interest of all lies in it. Of course human beings are accused of treating the environment indiscriminately at a large scale. They do this not only for sheer necessity but for developing their economic condition ignoring all laws and principles. But they never think of the consequences of their actions what affect all. Therefore the questions come before us do we have any right to treat the environment roughly? Obvious answer is in the negative. It implies, if so, we have some responsibilities to protect the environment from all pollutions and unnecessary consumptions. In what reasons we need protect the environment can be presented below.

Firstly, the entity which provides all the necessary things for the existence of other species can't be disturbed by them, if so it will be morally wrong. The anthropocentric view here, of course, claims only the human beings are morally considerable since they have intrinsic value. But the non-anthropocentrism holds that the environment including all other species are morally considerable since they have intrinsic value. The flourishing of non-human life on earth has as much intrinsic value as the flourishing of human life. (Naess 29) The inherent value of one can't be sacrificed for the development of another. Although human beings have the tendency to mistreat the environment but such tendency has no moral justification.

Secondly, it is the tendency of human beings to be remembered by either social activities or future generations. The former includes building school, college, university, welfare associations and community etc the cardinal purpose of which is to serve the entire society. Thus the founders remain immortal as the beneficiaries of the said institutions remember them age after age. The later indicates we expect generations in this sense that we will be remembered by them. And in this sense we can't destroy the environment since our future generations will exist under the same environment. On the top of that we remember and honor the past generations due to providing us the habitable environment likewise we will be remembered by the next

generation doing the same. In fact, “if there is any obligation whatever to honor and respect those whose past activities have given us what we have, that respect would appear to rule out placing at risk the totality of their contribution.” (James 53) So it is our moral responsibility to keep the environment sound and healthy for the future generation since we desire to be remembered by them as the past generation did for us. Of course the opponents of this view can claim that there is no reason in showing responsibility to future generation since they don’t yet exist. Rather responsibility should be directed to those who exist. Stearns here points out that “why should there be obligation to future generation? We have no commitments to them. We have entered no social compacts with them. And ... it is hard to account for an obligation to increase the well-being of persons who do not yet exist and who, but for our reproducing ourselves, would not exist. Under any moral theory, why should there be obligations to nonexistent persons ?” (Stearns 613) But the proponents of the view may reply here that although the future generation doesn’t exist yet thereafter our moral responsibility is to have a habitable environment for them as the past generation did for us.

Thirdly, all the species have right to life. No species can hamper the environment for its own interest in the sense that if the environment is hampered all the species must be affected. For instance, if human beings wish to cut trees indiscriminately to earn money definitely it will affect the existence of birds as well as those whose existence depends on trees. Therefore human beings have no moral right to destroy the environment since its destruction can destroy other species. Of course the anthropocentric view here can claim that only the human beings have right to life since they alone are morally considerable and others including the environment are used as means for their interest. But the non-anthropocentric view claims that the nature including all the species need to be considered morally for their intrinsic value. Mistreating any of them is morally wrong. So it is necessary to protect the environment in order to protect the right to life of other species.

“Abusing and mistreating animals for any form of human entertaining is wrong.” (Jardins 118) It is also noticed that animals are imprisoned at home and zoo just for the entertainment of human beings. In fact all the animals have right to life that can’t be disturbed due to our activities.

Fourthly, the above points indicate that the human beings are morally responsible for the environment degradation since they consume the natural resources. Of course all nations are not equally responsible since they don’t consume the natural resources equally. “The United States is the world’s richest nation and the highest consumer of energy. The 6 percent of the world’s population that lives within the United States consumes 35 percent of the world’s annual energy supplies, whereas the 50 percent of the world’s people who inhabit less developed nations must get along with about 8 percent of its energy supplies.” (Velasquez 314) It implies that few nations are more responsible who consume the resources more even they consume what resources like energy, minerals, fossil fuels etc are produced and extracted by the less developed nations where the pollutants emerge. So it is the moral responsibility of the rich nations to minimize the consumption of natural resources since the consequences of their consumption affect the world environment as whole.

Conclusion

The activities which degrade the environment are justified neither from moral viewpoint nor legal viewpoint. We as the sentient beings have moral obligations to nonhumans as well as the nature. This obligation reminds us not to pollute the elements of environment, not to deplete the natural resources, not to affect those who are not real polluters. It is the tendency of human beings to consider the natural goods as free goods that also encourages them to contribute to the environmental degradation. But it should be kept in our mind that nothing is insignificant in the nature rather each component of it plays a significant role to keep it sound. In fact pollution problem is not originated from single source rather introduced from several sources though human beings contaminate it at a large extent. Being a part of the ecology human beings can't have moral right to disturb all others who are also the parts of it. It should be the responsibility of human beings to protect the welfare of nonhumans including the nature. As the human beings claim that they have moral right to the environment likewise the other animals can claim that they have moral right to the environment. So it is morally wrong to destroy the environment since its destruction can affect all the parts of the entire ecology.

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