

## ETHICAL RESPONSIBILITY TOWARDS ENVIRONMENTAL DEGRADATION

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### Introduction

Degradation of the environment has assumed a global dimension in the present scenario and at the threshold of the twenty first century man has learnt to realise the ill consequences of his conscious and unconscious activities for the fulfillment of his never ending desires possessing instrumental value. The one time cordial man-environmental relationship has been marred due to increased human greed, prominence of materialism, individualism and egoism, ruthless use and misuse of nature, irresponsible attitude of technologically innovative and economic man towards the same. The defilement of the friendly man-environment relationship commenced with the era of enlightenment of renaissance in Europe. It was virtually the beginning of the era of darkness when the concept of 'conquest of nature' encompassed human mind. With the onset of this concept the balance of the ecosystem and therefore the environment was shaken which ultimately led to environment degradation and degradation of environment quality.

Environmental degradation has reached its peak and obviously there is a need of a philosophy of life based on symbiosis i.e. cordiality between man and nature, instead of the Darwinian survival of the fittest. The ultimate solution of all environmental problems is embedded in the conversion of materialistic human society into a humanistic one full of natural and human diversity.

The main objective of this paper is to examine the ethical responsibility

of human being in general and technologically oriented man in particular towards the protection of his environment. In my opinion, ethical response towards environmental degradation in terms of value is ultimate means of bringing down its rapid rate, as neither economic stability, political will or policy, nor judicial law provides an amicable solution to this vital global problem. Before delving into this key issue I would like to analyse the major causes leading to environmental degradation and its disastrous consequences which has transformed the world into a suicidal living system.

## I

Before discussing the issue of environmental degradation the term 'environment' needs to be defined. The word 'environment' is an all-embracing term, which usually refers to a system of physical and biotic elements with a dynamic interaction between them. As C.C. Park remarks: "Environment refers to the sum total of conditions which surround man at a given point in space and time"<sup>1</sup> The 'environment' in fact is composed of all physical, biological and cultural elements, which are constantly and systematically interacting with each other. The physical elements including space, landforms, water bodies, climate, soil, minerals, rock etc. determine the complex character of human habitat, whereas the biosphere is constituted of plants, animals, micro-organisms and man. Barring these, the cultural elements (economic, social and political) are essentially man-made features constituting the cultural environment.

We now come to the key question--- "What is environment degradation or environmental crisis? In a single sentence environmental degradation means lowering of environmental quality on local, regional and global scales by both natural processes and the activities of the species, particularly man, occupying the habitat. Degradation of the environment is initiated due to destabilization of the ecosystem brought about by the natural hazards like earth quakes, volcanic eruption, faulting, cyclonic storm, landslides, avalanches etc. and harmful anthropogenic (man oriented) activities.

It may be pointed out that any change in the environment brought about by physical and biological processes is adequately compensated by

a negative feed back mechanism or a self-regulating system known as 'Homeostatic Mechanism'. Such a mechanism is highly effective in correcting and absorbing the slight changes and disbalances in the environment before they attain a severe proportion. This assimilative capacity of the environment to absorb slight change mainly by natural processes has its limitations. Beyond a specific limit, the aforesaid negative feed back mechanism fails to function which bring about a break down of the life supporting system leading to environmental degradation. It is important to note that this limitation is crossed by modern man himself through his activities.

With the onset of industrial revolution since 1860, modern intelligent man spearheaded by scientific innovative technologies has become the most powerful environmental process capable of transforming and modifying the environment to an extent detrimental not only to all biota but also to his own existence. With the phenomenal increase of human population the finite resources of the world are becoming more and more scarce due to abuse and over exploitation, ultimately bringing about environmental degradation. The quality of the environment is a product of man-environment process and the weakening of this relationship brings about a drastic change in the quality of environment where in the 'natural environment' is substituted by a 'man-made' one.

The present century is marked by economic, scientific, technological and social development of man on one hand, whereas it is plagued by serious environmental problems on the other. The basic reason behind this environmental crisis is the rapid increase in world population which has led to rapacious exploitation of the earth's natural resources and speedy rate of industrialization and urbanization. Estimating the rapid rate of environmental degradation R.F. Dasmann said, "the human race is like an ape with a hand grenade. Nobody can say when he will pull the pin of the grenade and the whole world will be destroyed".<sup>2</sup>

In the following paragraphs I would like to discuss in brief the causes and harmful consequences of the above mentioned environmental crisis.

### **Population Explosion And Environmental Crisis**

Industrial expansion, modernization of agriculture, urban growth,

expansion of transportational network, scientific and technological development consequent upon alarming rate of population growth through decades is the major cause of environmental degradation. As long as the number of human beings interacting with nature remain within specific limits the ecology is balanced and every thing works well. But when the number increases by geometric proportion and the man-land ratio becomes adverse, as much in the developing countries today, ecological and environmental problems crop up. The global environmental crisis confronted today is partly rooted in rapid population growth in the south and partly in the consumerist culture in the north.

High rate of population growth in the developing countries since 1930 and its resultant pressure on the earth's finite resources has led to over-exploitation of exhaustible resources. Moreover, acceptance of the western mode of advancement with major insistence on mass production and consumption has further accelerated the above-mentioned crisis. As human population increases, its need for food and energy increases, as well as the amount of waste it produces. Feeding the ever-expanding population puts enormous pressure on the earth's ability to regulate its own system. The marginal lands are utilized to hasten agricultural production through the application of chemical fertilizers which pollutes the air, water and land.

Over population in the 3rd world countries has intensified the poverty of man. People flock to the urban centres for environment. The urban centres with limited space is unable to hold the teeming millions which forces them to settle in slums and shanty towns of cities characterized by sub-standard living condition. The towns and cities are highly polluted with industrial and domestic waste. All these lead to human drudgery, deprivation and indignity which is the greatest or of environmental pollution at present.

Population multiplication in the villages has led to large scale deforestation for habitation and agriculture which has resulted in ecological imbalance, soil erosion, desertification, increase of wastelands and devastating floods.

### **Deforestation And Its Impact On Environment**

The utility of forest resource cannot be underestimated. It provides a

natural habitat for millions of animals and micro-organisms, builds up soil rich in organic matter, binds soil through the network of their roots, increases infiltration of water, reduces flood risk, increases precipitation, acts 'natural sink' of carbon di-oxide, provide firewood for millions and timber for industries.

This forest resource, which is the chief component of the biotic community, is mercilessly exploited for the fulfillment of the ever increasing desire of 'modern economic' and 'technological' man, due to which the natural balance of the ecosystem is disturbed inviting severe environmental problems.

Vast tracts of virgin forest areas have been cleared for agricultural purpose and human habitations due to enormous pressure of population on land. The alarming story of deforestation is very much visualized in India and south East Asian countries where population growth is on the verge of explosion. Large expanses of dense forest have been cleared for 'shifting' or 'jhum' cultivation in North Eastern India and parts of south East Asian countries. Mass deforestation takes place due to transformation of forest areas into pastures (as in the case of Mediterranean and temperate regions), overgrazing, forest fires -- whether natural or due to human activities, lumbering for industrial and household purpose and due to several other anthropogenic activities.

The adverse impact of deforestation is highly alarming and a matter of serious global concern. Rampant felling of trees accelerates the rate of soil erosion, increases the load of the river due to heavy siltation thereby increasing the frequency and dimension of floods and reduces soil fertility which hampers agricultural production.

In fact, the most disastrous effect of deforestation is its impact on climate. The amount of precipitation lowers due to reduction in the rate of transpiration by trees and the percentage of green house gas, chiefly di-oxide, increases which induces global warming. Due to destruction of forest the carbon stored in the plants and wood decays, giving off carbon di-oxide, which absorbs more terrestrial radiation accelerating the rate of global warming.

### **Agricultural Practice and Associated Degradation of the Environment**

Environmentalists are of the opinion that technological improvements in agriculture is largely responsible for large scale deterioration of environmental quality. Mass clearing of virgin forest areas for agriculture, expansion of irrigation facilities, immense use of chemical fertilizers, insecticides and pesticides and increased use of high yielding variety of seeds to boost agricultural production for satisfying the hunger of the teeming millions has ended in severe environmental crisis.

Modern man is bewildered, since he has to fulfil the requirements of the ever increasing hungry millions by acceleration of agricultural production through the adoption of scientific techniques on one hand, while on the other hand he has to be conscious about the irreparable environmental damages caused by such techniques.

Massive deforestation for increasing agriculture land in order to augment food supply accelerates the degree of soil erosion, reduces soil fertility, increases the load of the river-- thereby amplifying the possibility, frequency and dimension of flood.

Irreparable loss of bio-diversity, biomes and extinction of several animal species is consequent upon the practice of monoculture in several parts of the world. The conversion of the steppes of U.S.S.R. Prairies of N. America, Pampus of Argentina, Veld of Africa and Downs of Australia into the granaries of the world, virgin Mediterranean woodlands into vineyards and orchards and replacement of forest cover by apple cultivation in the northern part of India, chiefly Himachal Pradesh, adversely affects the balance of the forest eco-system. Such practices have definitely increased productivity, efficiency and yield, but it have also increased ecological vulnerability and instability. If there is a pure strand of wheat, a pathogen or a herbivore may sweep in and decimate the entire eco-system.

Intensive cultivation increases agricultural productivity rendering large scale environmental degradation. The 'Green Revolution' launched in India to boost agricultural production since 1960 can be cited as an example. The term 'Green Revolution' signifies increased agricultural production

brought about by modern scientific techniques like increased irrigation facilities, use of high yielding variety of seeds and application of chemical fertilizers, insecticides and pesticides. Adoption of such techniques has undoubtedly doubled or trebled crop production on one hand, but on the other it has increased the magnitude of serious environmental problem.

Large-scale application of synthetic, toxic chemical fertilizers has raised agricultural productions, but huge accumulation of unused chemicals in the soil has increased its toxicity making it unfit and sterile for further cultivation. The eluviations of such accumulated chemicals to groundwater level adulterate ground water used for drinking and irrigational purposes.

Some of the toxic chemicals used as fertilizers in agricultural fields reach the food chain of human beings and animals through vegetables and food grains and endanger life. Nitrates, for example, when consumed indirectly through food matter perform complex chemical reaction within the human body, which increases the possibility of cancer.

The transport of toxic chemicals from the agricultural fields to ponds and lakes through rain and surface run off has led to phenomenal growth of certain plants in the water bodies, known as 'Eutrophication', while it has proved fatal for several valuable species of plants, animals and micro-organisms.

Agricultural production has to be boosted up in order to satisfy the hunger of the multiplied millions, but the adverse consequence of scientific techniques on environment should be kept in mind before adopting such measures.

### **Industrialization and Environmental Crisis**

Rapid pace of industrialization since the dawn of industrial revolution has raised the material standard of living of the people at the cost of the balanced natural environment. The adverse effects of rapid industrialization has led to severe environmental pollution which has ruined man's delicate relationship with nature. Reckless plundering of forest cover, excavation of land for mining, collapse of land for drilling of oil, excessive withdrawal of groundwater for industrial purpose has its fatal effects on the environment. Production of industrial wastes, poisonous gases released

from human volcanoes (industrial chimneys), toxic elements, polluted water, aerosols, smoke and ashes are some of the undesired harmful elements released due to industrialization. Such harmful elements pollute the environment imperiling human health and mind.

The hydrological environment presents a deteriorating scenario where in the stagnant water of the lakes and ponds is contaminated due to the release and dumping of industrial effluents and wastes resulting in the death and disease of aquatic ecosystem. Some of the products of chemical industry, like different types of fertilizer, insecticides and pesticides applied to the crops to hasten and enhance agricultural production reaches the food chain and food web of human and animal population indirectly, bringing about their fatal disease and death.

A world wide experiment on the earth's climatic-control system is being conducted by man in his attempt to transform the natural environment into a man-made one. Intensive burning of fossil fuels and rapacious exploitation of forest cover in the name of industrialization has increased the concentration of carbon-di-oxide content of the atmosphere. As this gas traps much of the terrestrial radiation, a rise in the magnitude of carbon-di-oxide level in the atmosphere leads to global warming which in turn causes major shift in weather patterns, with rainfall increasing in some parts, droughts in another and hurricanes becoming more stronger and frequent. Discharge of several other toxic gases, smoke and aerosols into the atmosphere from human volcanoes pollutes the air we breath bringing about severe environmental problem.

Rapid pace of modernization and industrialization has led to greater utilization of fire extinguishers, refrigerators, air-conditioners and spray can dispensers emitting halons and chloro-fluro-carbons (CFC). Jet planes flying through the stratosphere releases nitrogen oxide. These gases released into the atmosphere are harmful in the sense that they deplete the stratospheric ozone layer which plays a vital role in filtering and absorbing the ultra-violet rays of the sun. The creation and destruction of ozone is a natural process, but when the level of ozone depletion exceeds its creation, chiefly due to the aforesaid anthropogenic activities, global warning results due to more entrance of ultra violate radiation which eventually disturbs

the global radiation balance affecting the overall natural ecosystem. The creation of ozone holes in the industrial hubs increases the incidence of skin cancer chiefly among the white skinned masses. Release of sulphur-di-oxide from the industries brings about 'Acid Rain', which is disastrous to plant, animal and human life.

Noise pollution specially in the vicinity of industrial centres is a serious form of environmental disturbance. It affects the brain, auditory mechanism and sometimes cause hyper tension.

### **Urbanization and Associated Pollution**

The level of urbanization is very much related to socio-economic development. Rapid pace of socio-economic development, mainly in the form of industrialization, has led to unplanned and mushroom growth of urban centers. A series of serious environmental and ecological problems consequent upon the rapidity of the twin process of urbanization-industrialization has emerged. Air and water pollution, overcrowding and growth of slums and energy crisis are some of the vital environmental problems arising from urbanization.

Huge accumulation of wealth and ample job opportunities in the urban centers have attracted population from the surrounding rural areas. Consequently, the quality rural population is drained, the rural traditional industries are ruined and the agroindustrial base is crushed.

Overcrowding and congestion of population in the towns and cities due to continuing rural migration and natural growth process has created a situation where the number of people penetrating the labour market exceeds the available job opportunities. Shortage of housing, mushroom growth of slums and *bustees* with substandard and insanitary living condition, large-scale unemployment and poverty are the adverse consequences of overcrowding of population in the urban centers.

The twin processes of urbanization-industrialization has led to havoc increase in the number of vehicles (emitting carbon monoxide, sulphur dioxide and hydrocarbons). buildings, roads and streets, urban waste, sewage, aerosols, smoke and dust. Sewage water, if not treated scientifically, flow though the city and drain into the rivers, bringing about

contamination of fresh water used for drinking and other domestic purpose.

Huge amount of poisonous aerosols emitted from the chimneys of 'human volcanoes' results in the occurrence of 'pollution domes' over the industrial cities. The air quality thus deteriorates, bringing about serious health hazards. The deadly 'urban smog' formed due to the mixing of smoke and sulphur- di-oxide spreads over the industrial city centers imperiling human life.

Reduction in the rate of infiltration of water consequent upon increased construction of 'pucca' structures leads to increased run-off which in turn increases the frequency and dimension of flood. Increased withdrawal of ground water for domestic and industrial purpose in the congested urban centers leads to formation of huge cavities, which ultimately bring about collapse of ground surface. Improper disposal and unscientific treatment of urban solid and industrial waste degrades the environment to a great extent.

## II

So far we have examined the causes and effects of environmental degradation. We have seen in the course of our discussion that any from of developmental process (viz, industrialization, urbanization) directly or indirectly invites environmental crisis as it inclines to disproportionate the ecological balance originated by nature. Should we then say that environmental development is ethically intolerable? The answer may be dubious. If we say, yes, then the question is; should we employ environmental development process, which invited environmental crisis which results in the ultimate destruction of mankind in general? On the contrary, if we say, no, then the question is: What is wrong with environmental development? How the needs and demands of human beings can be carried out or conformed with by forfeiting or ignoring the process of environmental development? What is wrong with the environmental development process if it will run or abide by the policies and laws taken by the government for meeting the needs and demands of the society in general? So there always underlies an apparent dilemma. The dilemma can be formulated in this manner.

If development process will be taken up, environmental crisis will crop up and if development process will not be taken up, then the needs and demands of human beings will not be consummated.

Either development process will be taken up or development process will not be taken up.

So, either environmental crisis will crop up or the needs and demands of human beings will not be consummated.

The question, then is: how the dilemma can be overcome? Arguably we should not or even perhaps cannot cut off ourselves from the participation of globally needed development process as this is supposed to be the only means through which the unbounded needs and demands of scientifically oriented society can be satisfied. There should not be any question of doubt. That is why the rapid development process is being employed or taken up. However, the moral question is: Ought we to run the development process by any means? If development process involves ultimate threat to our own existence as observed above, should we then adopt development process? Ought we to employ development process at the expense of other's basic rights (animate or non-animate)? Ought we to kill or extinct other non-human beings or species for our own mere happiness? This is where the relevance of environmental ethics is embedded in. These are the questions we propose to sort out in this sequel.

We have seen how far environmental degradation is detrimental to human mankind as it ultimately runs towards destruction of human existence. Global warming is a case of point. So keeping its adverse consequences in mind, should we employ environmental development programme, which brings environmental crisis and thereby causes the total destruction of mankind? Here the question of preferability comes into consideration. It is a matter of rational and ethical decision, what we call '*man of wisdom*', to select whether instrumental value is preferable to non-instrumental value, whether intrinsic value is preferable to non-intrinsic value, whether anthropocentrism is preferable to non-anthropocentrism. We the human beings, the only decision making body, should come forward and thereby decide whether human existence in general is preferable to human

happiness. If we rely on non-anthropocentrism which echoes non-instrumental value, then we have to take care of nature by minimizing environmental degradation. If we realise that all living beings have an intrinsic value, then we will be particularly careful about how we treat them, especially as this treatment not only has implications for them, but for our own state of existence in the life and the future.

In this regard, we should follow up the remarks of Dalai Lama who once said, "The Earth, our mother is telling us to behave. All around, signs of nature's limitations abound .... By protecting the natural environment .... We show respect for Earth's human descendants ... as well as for natural right to life of all Earth's living things".<sup>3</sup>

So it is the moral responsibility of human beings in general and modern man in particular not to think of the question: how we can develop but to rationalize himself along the line of thinking: how we ought to develop? If development process is eyed in terms of ought then only in such a way the adverse impact of environmental crisis can be minimized. This is the question of morality in which the relevance of environmental ethics hinges on. But what is an environmental ethics? Environmental ethics is a kind of ethics, Singer echoed, in which the extinction of species by human actions is morally condemned. This might be the basic principle in environmental ethics. We have seen in the course of our discussion that environmental development, viz. modernization, industrialization, etc., tends to bring about environmental crisis by ignoring or denying the basic rights of non-human species. For example, if mining goes on in Kakadu, a national park in Australia, it will certainly involve cutting down trees and destroying other plants as well. Consequently, it will cause death of some animals and impair, if not destroy, wetland ecosystems. In this process the ecological richness of the wetlands can be deteriorated. Consequently, the members of the next kin will miss out the chance of particular recreational or aesthetic enjoyment.

So far we have been trying to find out the ethical relevance or response towards environmental degradation. We have seen in what sense ethical consciousness is useful in minimizing environmental crises. We think that any environmental degradation which is the outcome of environmental development is directly or indirectly related to the extinction of species

which ultimately disproportionate the ecological balance. We have seen in what senses rapid population growth is linked with industrial development, agricultural and scientific upliftment which are very much rooted to the imperilling of species. An environmental ethicist appears to conceive that the extinction of species is bad considered in itself quite apart from any consequences it might have. It is important to be noted here that ethics can be split into a number of theories each of which adopt a different approach to the environment and issues related to it. However, let us pass on to examine how the major ethical theories respond to issues arising from the topic of environmental degradation of crisis.

### **Egoism**

Egoism is an ethical theory which tells us to live for our own interests. Baier says, "Typical egoists ....are self-centered, inconsiderate, unfeeling, unprincipled, ruthless, self-aggrandizers, pursuers of the good things in life whatever the cost to others, people who think only about themselves or, if about others, then merely as means to their own ends,"<sup>5</sup> The above definition gives rise to the true nature of an egoist. This theory, it appears, runs with idea that we will always behave in such a way which is beneficial to us. For an egoist, benefit is always the key motivating our own action. An egoist thus compares variety of moral choices and thereby chooses the right one which he thinks is most likely to produce the benefit for himself. Accordingly, this theory is purely subjective as it can vary from situation to situation, from person to person. Even in the same situation the moral choice of different egoists might be different. If individual choices or preferences are thought to be the sole criterion on which the theory of egoism is based, then it may be the case that the benefit of one egoist may be the drawback of somebody else. An egoist will do what is in his best interest. Hobbes was a proponent of egoism who conceived that the moral choices of people should be determined on their own desire, personal benefit, safety and glory.

The question then is : if egoism holds the view cited above, then what will be its response towards environmental degradation? It is true to say that by seeking mere pleasure, an egoist establishes himself to be very selfish. An egoist being a selfish may accept environmental crisis, say for

example, global warming if he thinks that the adverse effect of global warming is lesser to him alone than the outcome of pleasure. For example, if he conceives that mining in *Kakadu* is more profitable than the reduction of ecological richness of the wetlands, then he may advocate mining in *Kakadu*. He would say, if climate change results from his actions then that is acceptable provided that such climate change does not ultimately have negative consequences for him alone. This makes sense to say that even environmental crisis may be accepted on the line of egoism if it will produce maximum pleasure to an egoist. For example, if an egoist appears to conceive that using aerosols is more likely to increase the risk of skin cancer, he may forego the relatively small benefits of the former for the greater risk of the later.

Pollution is a serious problem, which affects every egoist. Accordingly, every egoist. Realizes that any activity which is polluting the planet would eventually cause him harm. However, there underlies different opinions on the part of different egoists. As far as pollution is concerned, some may adopt a long-term measure than other. The objective of an egoist, who thinks about himself alone, may be different from an egoist who thinks about himself along with his next generation. For example, an egoist with children realizes that it is his best interests to minimize or control pollution because it might have adverse consequences for his children after his death. He may think so as he realises that his children are after all his future. However, a childless egoist may be thinking the other way round. So whatever an egoist thinks is confined within himself or within his family, he is not interested about making in general. An egoist would give little regard to the use of earth's resources as well. He does not bother about the happiness of others as he fails to realise that the utilization of the finite resources of the earth is very much related to its sustenance. As he is thinking about himself, he does not bother about the adverse consequences to be faced by his next kin. He may not be the sufferer of his own activities, but the future faces the adverse consequences of his activity for which he is not concerned.

### **Utilitarianism**

Unlike egoism, we conceive an altogether different approach in

utilitarianism. We think environmental degradation can be minimized to some extent if we employ the maxim of utilitarianism. In this regard utilitarianism is far better than egoism. Mill, a leading proponent of utilitarianism says, that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the opposite of happiness. Bentham, the other leading proponent of utilitarianism, echoes that the greatest happiness of the greatest number is the foundation of morals and legislation. Bentham's remark is very much significant in rationalizing environmental degradation as unlike an egoist, he conceives that an action is supposed to be right if it benefits many people as opposed to just one person. For him any action is accepted as good if it goes along with the principle of maximization: 'greatest happiness of the greatest numbers.' However, in order to satisfy the principle of maximization, we have to follow rule-utilitarianism instead of act-utilitarianism. Rule-utilitarianism is the only view which goes along with the principle of maximization. An act-utilitarian is very much an egoist as he confines himself within the outcome of action resulting in his own benefit alone.

Let us pass on to examine the responses of utilitarianism towards environmental degradation. Utilitarianism is much more concerned about the problems relating to climate change. According to this theory any action, viz, industrialization or modernization etc, is morally acceptable if it will benefit the majority at the expense of a few. If we take care of the face value of the sentence 'benefit the majority at the expense of a few', we may think that utilitarianism invites environmental development, which involves environmental degradation. Thus the vital question is: In what sense the benefit of the greatest numbers in terms of an action, viz. industrialization, should be taken care of? Should we evaluate the utilitarian maxim 'greatest happiness of the greater numbers' only in the context of present generation? What do we think about the next generation who will be the victims of the adverse consequences of the action of the present generation? Should or should not the utilitarian principle of maximization count the benefit of all animate as well as non-animate species in the context of long term? If an action will produce the benefit of the greatest numbers of the present generation, but is harmful to the greatest numbers of the next kin, then should we morally accept such an action by following

utilitarianism? A utilitarian certainly takes the view that the benefits of actions which potentially cause climate change or disproportionate ecological balance cannot be morally taken care of even though the results of such actions benefit the greatest happiness of the greatest numbers. This is simply for the fact that unlike egoism, a utilitarian might find it necessary to take the longer-term view. Surely he will like to say that any action which constantly indulges potential climate change would be detrimental to the next generation even though the benefit of such an action goes along with the principle of satisfying the greatest happiness of the greatest numbers for the present generation. There underlies no question of doubt in the present context that the burning of fossil fuels has immense instrumental value as it greatly benefits every single human on Earth today. Unquestionably, the use of fossil fuels satisfies the utilitarian principle: greatest happiness of the greatest numbers. However, if such uses were to cause global warming, in fact it is likely to be the case, then the negative impact of today's pleasure would be detrimental for the generations to come. Importantly, such generations will outnumber the present generation of the earth. So if we think of the happiness of the next generation along with the present generation, then the benefit to the use of fossil fuels begs question in terms of satisfying the greatest happiness of the greatest numbers. The utilitarian therefore might reject actions, which indulge potentially global warming.

In protecting pollution, the utilitarian must adopt similar standpoint, as has been taken in the case of global warming. A utilitarian may prefer adopting polluting activities if he is very much in a position to evaluate that the results of such activities benefit many at the expense of few; and not the other way round. This makes sense to say that a utilitarian may accept a certain amount of pollution for the benefits derived from certain activities inviting pollution. So he always rationalises himself in taking any decision, which is familiarised with increasing pollution. He must consider the utility and the benefits of an action not in terms of the present generation; but in terms of the future generation as well. That is to say that he has to adopt his maxim not in terms of individual happiness, not in terms of the happiness of the present generation, not in terms of the animate species in particular, but in terms of all, animate-inanimate existing in the present as well as will

exist in the future. This is the single way through which the utilitarian must think about in fulfilling his maxim: the greatest happiness of the greatest numbers. There is no question of doubt that for longer perspective, the use of nuclear weapon is worse than the benefits it will give rise to as its costs and potential drawbacks will long outlast the benefits now. If the utilitarian were to count all living species in his own way of thinking, then this too will affect his views. It is true to say that the adverse effect alone of pollution does not only touch the minds of humans alone, it equally touches other species as well, even though the only real benefits are usually enjoyed by human beings. At times it appears that the adverse impact of pollution is more detrimental to non-human beings in comparison to human beings. Human beings can take their own decisions; they can protect themselves by their innovative means unlike non-human species. In this regard, non-human beings at times would be the most sufferers. Thus, if it is the human beings who are mostly benefited by his polluting activities and on the other hand, the non-human beings are the sufferers of the polluting activities generated by the conscious human beings. So if we think and there by adopt the standpoint of rule-utilitarianism, then we have to consider the benefit of all and in this sense human as well as non-human species should be included within the maxim of the greatest happiness of the greatest numbers. As rule-utilitarianism is a kind of utilitarianism in which the maxim is itself a rule, it is always claimed to be universalizable. That is, in fulfilling such a maxim one has to act in such a way so that the result of that action benefits all animate and inanimate existing presently and will also exist in future.

As far as the utilization of the planetary resources are concerned the utilitarian should adopt a rational decision. He has to think of the stock of materials which are much needed for maintaining happy life. Thus the question of equal distribution of the planetary resources comes into point. He has to rationalize himself how to continue the use of the planetary resources through the ages by which the next kin will be benefited. If the principle of maximization is apprehended in terms of the benefit of all, then we have to rationalize its use in our own case. If we do not bother about the exhaustibility of planetary resources and continue its rapacious exploitation there will be acute shortage of such resources within a short

span of time and the future generation will get least benefit from it. Such callous approach will bring more suffering rather than happiness to the future kin. So the utilization of the planetary resource policy should be framed in such a way that the principle of the greatest happiness of the greatest numbers must be fulfilled in the context of the present as well as future generation.

### **Altruism**

After elucidating the standpoint of egoism and utilitarianism, let us pass on to spell out the response of altruism towards environmental degradations. This approach assumes the view that when making ethical decisions we should take into account the wants and needs of others before our own. We think that this approach is quite phenomenal in minimizing or preventing environmental degradation. It has a very close proximity with utilitarian approach and is very much in contradiction with egoism. If we are always conscious about the pros and cons of others before taking any action, say for example, industrialization, then there always remains a chance of preserving holistic environmental dignity which we call more specifically 'ecological balance'. The beauty of this approach is that if everyone takes into account the wants and needs of others before his own, then this logically guarantees that someone else would always have our best interest in mind. In such a way everybody's own interest is being sustained without forfeiting the benefit of others.

Regarding global warming the altruist standpoint is very clear. He holds that the causes of global warming may be beneficial for others now, but the effects may not be so pleasurable. So an altruist suggests that either we should adopt global warming, fix it or take preventive action. In this way none of these would be harmful for others. Like global warming, pollution is always a great concern to the altruist. As pollution is harmful, an altruist is much conscious about his actions resulting in pollution. He must control his own activities relating to higher pollution. His action even may be more guarded if he thinks of non-human beings, which are the silent victims of pollution. Finally, an altruist wants to ensure that others should not be ill by the natural resources. Being an altruist, nobody should indulge himself in mass deforestation because it ultimately brings about

extinction of species whereby the diversity and balance of natural ecosystem is destroyed. This is all about the holistic approach of altruism, which we think by far to be the best approach of protecting environmental degradation (crisis).

### III

It is apparent from the aforesaid discussion that ethical responsibility or responses of individuals towards nature is the sole solution in minimizing environmental and ecological problems. We are now in a position to answer the question; how we ought to develop? Development process has to continue for the welfare of human beings at large, but not in terms of egoism or utilitarianism in general but in conformity with rule-utilitarianism or altruism. We ought to develop in such a way so that the consequences of such process satisfy the 'greatest happiness of the greatest numbers', not in terms of present generation only, but in terms of future generation as well. Moreover, a development procedure can be adopted only if it fulfils the demand of all --- whether animate or inanimate. This is where the principle of rule-utilitarianism or altruism is justified.

Modern technologically innovative man is quite conscious about the fatal environmental consequences of his actions. However, by virtue of his instinctive nature of enjoying happiness he is reluctant to sacrifice the benefits of his environmentally harmful activities. This is where the relevance of environmental ethics --- an ethics which makes a distinction between the right and the wrong and thereby translates values into options for action --- hinges on. It is man --- the only decision making body --- who should choose the correct option not only in terms of instrumental value but in terms of non-instrumental value as well. Environmental ethics deals with the values and laws of nature and the transgression of these ethical values and principles invites only social disapproval instead of punishment. Not being guided by institutionalised law, the ethical laws and principles are therefore never perfectly realised by human society at large. However, what is important to note here is that no society can deserve stability or orderly progress unless its members adhere to ethical provisions which substantially ensure environmental stability. A vast social space, not governed by institutionalised law, still remains void, and it is the ethical and

moral values, which guide people in this space. Therefore, the prime concern of environmental ethics is to ensure the moral and ethical code of behavior, which plays an important role in regulating cordial man-nature relationship.

Environmental degradation, to a large extent, can therefore be controlled, if society at large abides by the ethical code of conduct. Since human existence is very much associated with nature, he ought to use nature only to that extent which ensures his peaceful survival. Man, being the most intelligent of all living species, perceives and thinks before he acts. This perception and thought of human beings ought to be guided by ethical values and principles and his action in accordance with the above mentioned values is bound to bring about a judicious balance between ecology and environmental development.

The scientific awakening of man since the mid 19th century has dwindled the ethical values that one ensured peaceful co-existence of man with nature. As already discussed, the impact of modernization with more emphasis on individualism, materialism and scientific advancement and with little concern for humanism and spiritualism has brought about a series of environmental problems detrimental to mankind. Certainly, this calls for reversal of the current trend. Should we then recall the principle of 'Sarvodaya' advocated by Gandhiji, which preached about the welfare of all? This dictum of 'Sarvodaya' i.e., 'welfare of all' is very much in conformity with the principle of altruism which takes the same standpoint. Gandhiji conceived that there is enough in the world to fulfil everyone's need but not everyone's greed. He strongly affirmed that there must be a full stop to human needs and wants, because beyond certain stage it becomes totally selfish and meaningless. He further advocated that this sense of discipline could be inculcated in human minds only through self-realization. The relevance, we think, of Gandhian concept in the present context is controversial, but the humanitarian and spiritual values and moral embedded in 'Sarvodaya' has utmost significance in our present day life.

The faulty style of development and modernization undertaken by mankind is gradually making the world ecologically unstable, socially alienated and economically nonviable. The enormous pressure on the earth's finite resources to meet the basic needs of food, shelter and clothing of the

poor on the one hand, and an equally growing demand for meeting the ever-escalating greed of the rich on the other, have adverse effects on the environmental. The first results from rapid growth of population and the second from the so-called modern civilization. Whatever be the cause, the process of development has to continue, but not at the cost of our future generation, nor at the cost of the inanimate species. The developmental process should therefore be guided by ethical values which play an important role in curbing human abuses of nature. Large-scale deforestation, as we have already discussed, invites global warming, hydrological change and other adverse impact on the environment. Should we then say that deforestation is unethical or should we refrain ourselves from this activity as it will minimize environmental crisis? Certainly not. Deforestation has to be carried out owing to enormous population pressure but the magnitude of such activity has to be given a second thought. Progress of the society through the adoption of scientific techniques has to continue but without any antagonism between science and technology on the one hand and environmental on the other. Scientific improvement of the society should not be in terms of egoism, instrumental value or anthropocentrism but in accordance with the ethical principles of altruism, non-instrumentalism and non-anthropocentrism by means of which 'the greatest happiness of the greatest numbers' can be achieved. If human beings have to reside on the earth, forests have to be cleared to a certain extent and the earth's finite resources also have to be utilized. But how? The aforesaid activities should be carried out in such a manner so that the nature's delicate balance is maintained. Environmental crisis, in fact, can be tackled in two ways --- firstly, through the adoption of eco-friendly technologies and secondly, through limitation of human wants and desires which will automatically reduce or minimize the extent of adoption of the environmentally harmful scientific technologies. This approach must be backed by an ethical code of conduct.

As said earlier, there is no inherent conflict between science and technology on the one hand and environmental on the other. What is mostly required is a moral and ethical awakening of scientists and enhancement of scientific outlook of the spiritualists to resolve this conflict. This antagonism is not real as it appears to be. It is, in fact, an outcome of disjunction

between science and humanity or spirituality. Thus, the final answer to our original question: how we ought to develop should be framed in the following manner: we ought to develop in such a manner that the consequences of such developmental process are beneficial to mankind in general. This indirectly needs to be backed by the first formulation of categorical imperative given by Kant, "Act only on that maxim through which you can at the same time will that it should become a universal law."<sup>6</sup>

#### NOTES

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