



Environmental Menace

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Abstract:

Environment, all of the external factors affecting an organism. These factors may be other living organisms (biotic factors) or nonliving variables (abiotic factors), such as water, soil, climate, light and oxygen. All interacting biotic and abiotic factors together make up an ecosystem. This ecosystem, now a days, has been damaged through certain environmental menaces like destruction of the world's rain forests, global warming, the depletion of the ozone layer etc. If measures are not taken seriously, than global environment collapse is bound to be there. Thus, people have to focus on sustainable development rather than economic expansion in order to keep up the ecosystem. The present article focuses on the certain environment problems and the importance of environment study.

Keywords: *Ecosystem, Environmental Menace, Organism*

1. Introduction

Environment, all of the external factors affecting an organism. These factors may be other living organisms (biotic factors) or nonliving variables (a biotic factors), such as water, soil, climate, light, and oxygen. All interacting biotic and biotic factors together make up an ecosystem. Like all other living beings, humans have clearly changed their environment, but they have done so generally on a grander scale than have other species. Some of these changes-such as the destruction of the world's tropical rain forests to create grazing land for cattle or the drying up of almost three-quarters of the Aral Sea, once the world's fourth-largest freshwater lake, for irrigation purposes-have led to altered climate patterns, which in turn have changed the distribution of species of animals and plants.

Deteriorating environment and loss of natural resources represent one of the main ways in which present generation is creating uncompensated future costs. Hence the conservation of natural resources and the environment is crucial to achieving sustainable development. The importance of combining economic, ecological and environment studies is now increasingly recognized in policy circle world wide. The use of natural resources for ensuring the material well-being on the one hand and for seeking a pleasurable experience on the other has generated several environment problems.

2. Environmental Interaction

The science of ecology is the study of the interactions that determine the abundance and distribution of organisms. In other words, ecology attempts to explain why individuals live where they do and why their populations are the sizes they are. No population, human or otherwise, can grow indefinitely; eventually, some biotic or a biotic variable will begin to limit population growth. Ecologists also have discovered that all species in an ecosystem interact with one another, either directly or indirectly.

3. Prevailing Senario

In November 1992 a document entitled *Warning to Humanity* was released by UNESCO. The document was bold and clear, stating that “human beings and the natural world are on a collision course,” which “may so alter the living world that it will be unable to sustain life in the manner that we know.”

The problems facing the environment are vast and diverse. Destruction of the world’s rain forests, global warming, and the depletion of the ozone layer are just some of the problems that will reach critical proportions in the coming decades. Their rates will be directly affected by the size of the human population.

3.1 Tremendous rise in population

Human population growth may be seen to be at the root of virtually all of the world’s environmental problems. Increasingly large numbers of people are being added to the world every year. As the number of people increases, more pollution is generated, more habitats are destroyed, and more natural resources are used up. Even if new technological advances were able to cut in half the environmental impact that each person had, as soon as the world’s population size doubled, the earth would be no better off than before.

Although it is true that rates of population increase are now much slower in the developed world than in the developing world, it would be a mistake to assume that the population growth problem is primarily a problem of developing countries. In fact, because larger amounts of resources per person are used in the developed nations, each citizen from the developed world has a much greater environmental impact than does a citizen from a developing country. Conservation strategies that would not alter lifestyles but would greatly lessen environmental impact are essential in the developed world.

Evidence now exists suggesting that the most important factors necessary to lower population growth rates in the developing world are democracy and social justice. Studies show that population growth rates have fallen in areas where several social conditions have been met. In these areas, literacy rates have increased, and women are given economic status equal to that of men and thus are able to hold jobs and own property; also, birth control information is more widely available, and women are free to make their own reproductive decisions.

3.2 Global Warming and destruction

Like the glass panes in a greenhouse, certain gases in the earth’s atmosphere permit the sun’s radiation to heat the earth but retard the escape into space of the infrared energy radiated back out by the earth. This process is referred to as the greenhouse effect. These gases, primarily carbon dioxide, methane, nitrous oxide, and water vapor, insulate the earth’s surface, helping to maintain warm temperatures. Without these gases, the earth would be a frozen planet with an average temperature of about -18°C (about 0°F) instead of a comfortable 15°C (59°F). If the concentration of these gases were higher, more heat would be trapped within the atmosphere, and worldwide temperatures would rise.

Within the last century, the amount of carbon dioxide in the atmosphere has increased dramatically, largely because of the practice of burning fossil fuels—coal and petroleum and its derivatives. Global temperature has also increased 1°C (about 1.8°F) within the past century. Atmospheric scientists have now concluded that at least half of that increase can be attributed to human activity, and they have predicted that unless dramatic action is taken, temperature will continue to rise by between 1° and 3.5°C (between 1.8° and 6.3°F) over the next century. Although this may not seem like a great difference, global temperature was only 2.2°C (4°F) cooler during the last ice age than it is presently.

The consequences of such a modest increase in temperature may well be devastating. Sea levels will rise, completely inundating a number of low-lying island nations and flooding many coastal cities. Many plant and animal species will probably be driven into extinction, agricultural regions will be disrupted, and the frequency of severe hurricanes and droughts is likely to increase.

3.3 Depletion of the Ozone Layer

The ozone layer, a thin band in the stratosphere (a layer in the upper atmosphere), serves to shield the earth from the sun's harmful ultraviolet rays. In the 1970s, scientists discovered that the layer was being attacked by chlorofluorocarbons (CFCs), chemicals used in refrigeration, air-conditioning systems, cleaning solvents, and aerosol sprays. CFCs release chlorine into the atmosphere; chlorine, in turn, breaks ozone down into its constituent parts of oxygen. Because chlorine is not affected by its interaction with ozone, each chlorine molecule has the ability to destroy a large amount of ozone for an extended period of time.

The consequences of the depletion of the ozone layer are dramatic. Increased ultraviolet radiation will lead to a growing number of skin cancers and cataracts and also reduce the ability of people's immune systems to respond to infection. Additionally, the growth rates of the world's oceanic plankton, the base of most marine food chains, will be negatively affected, perhaps leading to increased atmospheric carbon dioxide and thus to global warming. Even if the manufacture of CFCs was immediately banned, the chlorine already released into the atmosphere would continue to destroy the ozone layer for many decades. Additionally, the latest studies suggest that global warming may increase the amount of ozone destroyed.

3.4 Air Pollution

A significant portion of industry and transportation is based on the burning of fossil fuels. As these fuels are burned, chemicals and particulate matter are released into the atmosphere. Although a vast number of substances contribute to air pollution, the most common contain carbon, sulfur, and nitrogen. These chemicals interact with one another and with ultraviolet radiation in sunlight in various dangerous ways. Smog, usually found in urban areas with large numbers of automobiles, is formed when nitrogen oxides react with hydrocarbons in the air to produce organic compounds like aldehydes and ketones. Smog can cause serious health problems. When sulfur dioxide and nitrous oxide are transformed into sulfuric acid and nitric acid in the atmosphere and come back to earth in precipitation, they form acid rain. Acid rain is a serious global problem because few species are capable of surviving in the face of such acidic conditions. Acid rain has made numerous lakes so acidic that they no longer support fish populations. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide.

3.5 Water Pollution

Water pollution may come from point or nonpoint sources. Point sources discharge pollutants at specific locations—from, for example, factories, sewage treatment plants, or oil tankers. The technology exists for point sources of pollution to be monitored and regulated, although political factors may complicate matters. Nonpoint sources—runoff water containing pesticides and fertilizers from acres of agricultural land, for example—are much more difficult to control. Pollution arising from nonpoint sources accounts for a majority of the contaminants in streams and lakes.

With almost 80 percent of the planet covered by oceans, people have long acted as if those bodies of water could serve as a limitless dumping ground for wastes. Raw sewage, garbage, and oil spills have begun to overwhelm the diluting capabilities of the oceans, and most coastal waters are now polluted. Beaches around the world are closed regularly, often because of high amounts of bacteria from sewage disposal, and marine wildlife is beginning to suffer.

3.6 Groundwater Depletion

Water that seeps through porous rocks and is stored beneath the ground is called groundwater. Worldwide, groundwater is 40 times more abundant than fresh water in streams and lakes, and although groundwater is a renewable resource, reserves are replenished relatively slowly. Approximately half the drinking water comes from groundwater. Presently, groundwater is being withdrawn approximately four times faster than it is being naturally replaced. When groundwater is depleted in coastal regions, oceanic salt water commonly intrudes into freshwater supplies. Saltwater intrusion is threatening the drinking water of many areas like coastal regions of Saurashtra.

It is studied that the contamination of ground water increases. Contamination arises from leaking underground storage tanks, poorly designed industrial waste ponds, and seepage from the deep-well injection of hazardous wastes into underground geologic formations. Because groundwater is recharged and flows so slowly, once polluted it will remain contaminated for extended periods.

3.7 Habitat Destruction and Species Extinction

It is difficult to estimate the rate at which humans are driving species extinct because scientists believe that only a small percentage of the earth's species have been described. What is clear is that species are dying out at an unprecedented rate; minimum estimates are at least 4000 species per year, although some scientists believe the number may be as high as 50,000 per year. The leading cause of extinction is habitat destruction, particularly of the world's richest ecosystems—tropical rain forests and coral reefs. At the current rate at which the world's rain forests are being cut down, they may completely disappear by the year 2030. If growing population size puts even more pressure on these habitats, they might well be destroyed sooner. As habitats are destroyed and species lost, the world is increasingly losing threads from the interconnected fabric of life.

3.8 Energy – New strategies

The world cannot continue to rely on the burning of fossil fuels for much of its industrial production and transportation. Fossil fuels are in limited supply; in addition, when burned they contribute to global warming, air pollution, and acid rain. Nuclear energy as an alternative is opposed by many because of the massive devastation an accident can cause.

One reasonable solution is to combine conservation strategies with the increased use of solar energy. The price of solar energy relative to traditional fuels has been dropping steadily, and if environmental concerns were factored into the cost, solar power would already be significantly cheaper. Although it is desirable to have a wider range of energy options, other alternative sources of power (such as wind, geothermal, or hydroelectric) are not likely to provide large-scale solutions in the foreseeable future.

3.9 Deforestation

In recent years' deforestation in the foothills and the Middle Himalayas and overgrazing on the high pastures have led to soil erosion and other environmental problems. Deforestation is a particular concern in the western Himalayas, where increased demand for firewood, extensive tree trimming in order to feed livestock, and construction of roads in the border regions have increased the destruction rate of forests and the number of landslides. Rapid population growth has accelerated pollution, and Himalayan streams that were once clear are now polluted with refuse and sewage. Hill people who use the water for drinking suffer from dysentery; cholera and typhoid epidemics are also common. Large lakes like Dal in Kashmīr and Naini Lake (Nainital) have also become polluted. It means, economic changes and population increases are threatening the ecology of the Himalayas.

4. A Global Approach

The environmental concerns growing in the United States during the late 1960s and early 1970s increased internationally as well. Perhaps the biggest impetus for developing a worldwide effort to monitor and restrict global pollution is the fact that most forms of pollution do not respect national

boundaries. The first major international conference on environmental issues was held in Stockholm, Sweden, in 1972 and was sponsored by the United Nations (UN). This meeting, at which the United States took a leading role, was controversial because many developing countries were fearful that a focus on environmental protection was a means for the developed world to keep the undeveloped world in an economically subservient position. The most important outcome of the conference was the creation of the United Nations Environmental Programme (UNEP).

UNEP was designed to be “the environmental conscience of the United Nations,” and, in an attempt to allay fears of the developing world, it became the first UN agency to be headquartered in a developing country, with offices in Nairobi, Kenya. In addition to attempting to achieve scientific consensus about major environmental issues, a major focus for UNEP has been the study of ways to encourage *sustainable development*—increasing standards of living without destroying the environment. At the time of UNEP’s creation in 1972, only 11 countries had environmental agencies. Ten years later that number had grown to 106, of which 70 were in developing countries.

Twenty years after the Stockholm Conference, the UN Conference on Environment and Development was held in Rio de Janeiro, Brazil, in 1992. Popularly known as the Earth Summit, this meeting was the largest gathering of world leaders in history. The conference produced two major treaties. The first was an agreement to reduce emission of gases leading to global warming, and the second was a pact on biodiversity requiring countries to develop plans to protect endangered species and habitats. At the insistence of the United States, however, the final version of the global warming treaty was dramatically scaled back. The United States was also one of the very few countries that refused to sign the biodiversity treaty. United States representatives objected to a part of the treaty that specified that money to come from the use of natural resources from protected ecosystems, such as rain forests, should be shared equally between the source country and the corporation or institution removing the materials.

5. Conclusions

Global environmental collapse is not inevitable. But the developed world must work with the developing world to ensure that new industrialized economies do not add to the world’s environmental problems. Politicians must think of sustainable development rather than economic expansion. Conservation strategies have to become more widely accepted, and people must learn that energy use can be dramatically diminished without sacrificing comfort. In short, with the technology that currently exists, the years of global environmental mistreatment can begin to be reversed.

Theoretically environmental policy can be defined as the sum of objectives and measures designed to regulate societies’ interactions with the environment as a natural system. It comprises aspects of environmental conservation, restoration and management.

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