
Environmental Resources Destruction and Pollution: The Role of Non-Governmental Organizations

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ABSTRACT

This paper focuses on the role played by some non-governmental organizations in solving environmental resources destruction and pollution. Some NGOs like World wide fund for nature (WWF), International Union for the Conservation of nature and Natural Resources (IUCN), Green peace and other government agencies like Federal Environmental Protection Agency (FEPA) and Agriculture and forestry resources are closely working together to rescue the environment. Without self understanding we cannot hope for enduring solutions to environmental problems, which are fundamental human problems. As population increases and coastal areas face increasing pressure from development, there is often an inherent conflict between exploitation of resources and the conservation of the environment. No longer can environmental issues be seen in isolation; as our understanding of the environment has increased so has our awareness of the wide impact of the non-governmental organizations on the protection of the natural environment.

INTRODUCTION

For the greater part of the two (2) million years of human existence mankind's need for material was modest and had little impact on the environment. Mankind was living in harmony with the environment. However, over the last 100,000 years or so, human brain has developed to an incredible extent. This has allowed man to become much better at discovering, exploring and creating-invention. The ability to discover, explore and invent has lulled us into a false sense of security by believing that, helped by our technical and scientific discoveries we could expand our population and progress indefinitely.

THE IMPACT OF DISCOVERIES ON THE ENVIRONMENT

It is obvious that with each invention that improves the changes of human survival, the need for materials increase. For instance, the control use of

fire extended human living, space and meant that a wider range of foods could be eaten, but it also created an increased demand for firewood. The development of tools and weapons that improved the efficiency of hunting and gave protection against predators and enemies, created demands for other kinds of materials, the right kind of flint or animal substances.

With the development of agriculture, the need for materials increased considerably. It was no longer necessary for everyone to be involved in food production. Some people take up new occupations. Here one finds that specialization and division of labour were born. The invention of agriculture also led to the development of towns with increasingly elaborated industries. Those industries need large quantities of raw materials such as stone, wood, clay, fibre, hides and skins and metals.

However, the greatest single impact of mankind on the environment is the increasing number of people. Whatever we do to the environment must necessarily be proportional to the total number of human beings on the earth. Before the development of highly organized industries, mankind main effects on the environment were:

- i. Large scale clearing of forest leading to soil erosion.
- ii. Overgrazing of grassland leading to desertification and soil erosion.
- iii. The use of unsuitable cultivation leading to soil loss of fertility.

All these problems or ill-effects on the environment could be reversed given the incentive of sufficient money and technical help in modern times.

However, the changes caused to the environment as a result of the transition from a mainly agricultural society to a society based on industries are much more drastic and far reaching in their effects, and they occur much quicker. This is because of the following reasons:

- i. Industries are based on the use of non-renewable raw materials.
- ii. Industries are geared towards maximum production without much concern being paid to the fate of non-usable end products.
- iii. Industries are geared to the principle of continuous economic expansion.

In simple terms they are linked to the idea that the standard of living should be continually rising. This means increasing the consumption of materials to produce more and more goods and this rapidly depleting the supply of non-renewable resources.

Today, the effects of both population and industries on the environment are devastating, threatening the very existence of man. The environment and

the resources are being destroyed and exhausted at a much faster rate. In some instances the resources are over stretched.

a. Pressure on the Landscape

It is fashionable that many people “live off the land”. Ever since people set foot on the land, they have been continually changing the way of life and surrounding. The land collects and stores our water, grows our food and stores our minerals. However, what people have done has not always been wise.

Jennings (1980) estimates that every single day more than 200km² of land are eaten up by the spread of towns, roads, factories, mining and soil erosion. As population increases, more housing is needed and there are bigger demands for food, water and material goods, all of which produce their effects on the environment.

Some scientists think that by the year 2025 there will be no unused land suitable for farming without the great expense of reclamation and large scale irrigation with scarce water. At the moment, in order to meet the demands for more land by mankind, forests are cut down, marshes are being drained and pond filled. Thus, the remaining wilderness is being destroyed at an alarming rate. The actions of mankind have some irreversible snow-ball effects on the environment as it is outlined below:

i. Habitats Destructions

In the demand for more land mankind had destroyed the habitats. This is apart from the fact that humans have always killed animals for food, for their skins and other animal products such as oil and bone. Animals are also killed by man for fun or sports. As the human population grows, animal and plants face increasing danger. Once animal or plant habitat is destroyed there may be nowhere for it or its off spring to move to and survive.

According to WWF (1990) since 1600AD, about 36 different mammals, and 94 species of birds have become extinct. Similarly, at the present rate of habitats destruction about 280 kinds of mammals, 350 birds' species and not less than 20,000 kinds of plants are in danger of extinction.

Environment is the home of flora and fauna and its destruction upset the food chain of which man is part. Moreover plants have agricultural value, beauty and above all medicinal purposes. For instance morphine used to relieve pain comes from opium poppy, digitations from the foxglove is used in the

treatment of heart diseases. Quinine from the bark of cinchona tree is used to treat malaria. There are a lot more instances of such.

ii. **Modern Farming**

One of the biggest threats to wildlife and natural habitat comes from modern agricultural methods. Presently there is need to produce more food and to do this more land must be farmed intensively. In the course of doing that, forests, scrubs are removed resulting into formation of badlands, soil erosion and or desertification. Marshes are drained and mass irrigation in dry areas resulting into soil desiccation.

To increase yield pesticides and chemical fertilizers are used. A pesticide does not discriminate in what they kill, and so, vast numbers of beneficial animals as well as harmful ones may be wiped out. For instance DDT and agro-chlorine pesticides are dangerous since they persist in the soil, sea and bodies of organisms. DDT and other insecticides have been found in the bloodstream and body fats of penguins and seal in the Antarctica a place where they have never been used.

In the same way, the increasing use of artificial fertilizers also caused problem to wildlife and natural habitats. The use of artificial fertilizers lead to the rapid growth of the crops, but it will be of low quality. Plant tissue will be lush watery, more susceptible to diseases and lacking in proteins. This is aggravated when heavy machines are used which usually damages the soil structure.

b. **Modern Manufacturing Industries**

Agriculture is indispensable for human existence so also is the modern industries. It is obvious that there is no single economic activity that brings enormous benefits to mankind like modern manufacturing industries. Alas like agriculture, modern manufacturing industries are characterized by some problems as it is outlined below:

i. **Air Pollution**

Pollution is the contamination of Earth's environment with materials that interfere with human health, the quality of life, or the natural functioning of *ecosystems* (living organisms and their physical surroundings). Although some environmental pollution is a result of natural causes such as volcanic eruptions, most is caused by human activities (Branigin 2008).

There are two main categories of polluting materials, or pollutants. Biodegradable pollutants are materials, such as sewage, that rapidly decompose by natural processes. These pollutants become a problem when added to the environment faster than they can decompose. Nondegradable pollutants are materials that either do not decompose or decompose slowly in the natural environment. Once contamination occurs, it is difficult or impossible to remove these pollutants from the environment (John 2007).

Nondegradable compounds such as dichlorodiphenyltrichloroethane (DDT), dioxins, polychlorinated biphenyls (PCBs), and radioactive materials can reach dangerous levels of accumulation as they are passed up the food chain into the bodies of progressively larger animals. For example, molecules of toxic compounds may collect on the surface of aquatic plants without doing much damage to the plants. A small fish that grazes on these plants accumulates a high concentration of the toxin. Larger fish or other carnivores that eat the small fish will accumulate even greater, and possibly life-threatening, concentrations of the compound. This process is known as bioaccumulation.

Man in the course of using his machines has been pouring waste into the atmosphere. As the human numbers and industries grow so also is the level of atmospheric pollution. The greatest pollutants arise from the burning of fossil fuels. The products of these substances mainly CO₂ and H₂O and some impurities finally end up in the air. Already air pollution is a chronic problem, affecting human health, buildings, monuments and plants. Major pollutants are sulfur and nitrogen dioxide (from power plants, industries and incinerators); reacting hydrocarbons (from petro-chemicals and plants refineries and vehicles); carbon monoxide (mostly from vehicles); heavy metals (from industries and metal smelters); and organic compounds (generated mostly from the chemical industries).

The combination of these primary pollutants in the atmosphere forms secondary contaminations which are even more deadly. For instance when oxides of sulfur and nitrogen mix with sunlight, oxygen and moisture diluted sulfuric and nitric acids are formed which fall as acid rain. In the same way when hydrocarbons react with nitrogen oxides and oxygen in the presence of sunlight ozone and other photochemical oxidants are formed. These so called photochemical oxidants and burning fires depletes the ozone layer leading to

the present global warming or green house effect, as sun reflectivity is trapped in the lower atmosphere.

However, air pollution knows no boundary. For instance in 1986 the nuclear reactor at Chernobyl had two explosions, lighting fire that burned for 10 days releasing several quadrillion of Becquerel of radioactive isotopes. As a result of the fallout from the accident, 31 people died, 135,000 had to be evacuated, permanently. It is also estimated that between 20,000-40,000 people will die of cancer in the former Soviet Union and Europe. The fallout from the accident was carried by wind to Scandinavia and Western Europe in few days forcing them to dispose food crops yet to be harvested and affecting most sheep grazing in the field.

Similarly, in 1984 an insecticide industry exploded in Bhopal, in India killing 2,000 people and injuring 20,000 more. Industrial accidents are becoming a common phenomena and when it happens its effect spread beyond national boundaries.

ii. Industrial Pollution

Despite bringing enormous benefits to man, industries have done much to pollute the environment and drastically affecting the life of animals, and plants. The major pollutants are agricultural chemicals, industrial waste and sewage.

Industries produce large quantities of waste which are dangerous to human health and livestock as well as plants. All over the world more especially industrial areas waste disposal from the industries is already a serious problem. However, in the developed world rivers have always been the dumping ground for man's rubbish. U.N.E.P (1994), estimates that about 8000Km of water ways in Britain is polluted and the Rhine has been termed the "Sewer of Europe". The pollution level is so concentrated that no living thing can survive in the lower reaches. In the same way the river that runs through Cleveland Ohio U.S.A is badly polluted as hundreds of tones of untreated, agricultural chemicals, waste from paper mills, detergents, phenols, ammonia, oil and some poisonous metals have been put into it. It is described as the only water that is fire hazard.

iii. Pollution of Seas

Almost all of the pollution of land, air, rivers and lakes eventually finishes in the sea. This is a part from the vast quantities of pollutants that are put directly into the coastal water dumped overboard from world's shipping.

When considering the effect of pollution on the oceans, phytoplanktous are the most important. Phytoplanktous are the basis of nearly all the food webs in the sea. It also produces between 30 – 60% of all the oxygen in the atmosphere through the process of photosynthesis.

Other major pollutants of the seas are the giant oil tankers. For instance in October 1970 a super tanker “The pacific Glory” cough fire and released thousands of tons of oil into the sea. The case of ‘Amaco Cadiz in 1978 which spills over 220,000 tons of oil into the sea, was also another example. So also the recent (2010) oil spillage from a BP drilling well in America is another example of such sea pollution.

In spite of their vast area life in the seas is in serious danger of destruction by pollution. The BBC TV has a program titled “The encircled sea” focusing on the Mediterranean Sea, showing how aquatic life has been depleted due to pollution. Pollution of the sea also destroys the sea weeds which are used to manufacture cosmetics. This is apart from destroying fish and other numerous sea foods.

THE ROLE OF THE NON-GOVERNMENTAL ORGANIZATION

Over the years, man has polluted the environment, caused widespread soil erosion, replaced stable natural ecosystem with artificial unstable ones, depleting the nonrenewable resources and generally brought enormous problems to the humanity.

However, the picture is not totally gloomy. Non-governmental organizations have created awareness. Man is bestowed with great knowledge and wisdom. Through the awareness brought by NGOs, people have learnt how to use the land, air water and minerals and other natural resources, so that they are not destroyed or over exploited by thoughtless or selfish actions, despite the various demands made upon them by the growing world population. Non-governmental organizations have raised the consciousness of people to realize that the world is finite and most resources found in and on it are in definite quantities.

It is as a result of the current activities of the NGOs that the United Nations created an agency that is mainly concerned with the environment. That is the United Nation Environmental Programme (UNEP) with headquarters in Kenya, carries out series of campaigns on the environmental conservation. The

body produces videos, posters, pictures, simulation games and magazines etc on the environment which are distributed worldwide.

Governments worldwide have realized the relevance of Non-governmental Organizations and they have been giving them support financially and in some instances enacting laws. Some governments even went further to establish agencies that work hand in hand with the NGOs, for instance in Nigeria, there is the Federal Environmental Protection Agency (FEPA). The work of this agency is to protect and conserve the environment. Governments worldwide also sponsor T.V programs about the environment. However, the NGOs whose activities are felt much worldwide as far as environmental protection is concerned includes: WWF, IUCN, Living Earth, Friend of the Earth and Green Peace.

The world wildlife fund (WWF) for instance takes care of special areas and in some instances mount rescue operation for species that are in danger of extinction. WWF works actively by educating people in the benefits of an urgent need, for conservation. The body sometimes removes plants and animals that are in danger from the natural habitat and breed them in captivity under controlled conditions. Sometimes the body carries out the fencing of areas of endangered species more especially of plants. The body also has a lot of literatures published on environment; this is apart from postal, video and games. Moreover, the body tries to convince governments worldwide to give legal protection to plants and animals that are in danger of extinction.

The International Union for the Conservation of nature and Natural Resources (IUCN) is mainly concerned with scientific study of rare species and their preservation. IUCN collect information about rare and endangered species and compile them into a book called "RED DATA BOOK", which provide details of the changing fortunes of the world endangered species. The organization also identifies sites of natural history interest, together with recommendations as to what action should be taken.

There are numerous NGOs that are working for the environment and wildlife, such as the Royal Society for the protection of birds, the wild fowl trust, the society for the protection of nature and conservation, Green peace etc. All these NGOs work round the clock to achieve environmental conservation. The Living Earth and Friends of the Earth are NGOs that are mainly concerned with industrial pollution, acid rain, global warming, soil erosion/dereliction as well as deforestation and conservation. These NGOs have produced a lot of

videos, postal, and pamphlets on the environmental degradation, destruction and exploitation.

Through the activities of the NGOs some success stories have been achieved in some areas. For instance the Thames River that transverse London was virtually dead in the 1950s, but it was reactivated. In the U.S.A in 1950s the pest control was experimented on screw – worm flies which lay her eggs in any open wound on a warm-blooded animal. The effect of such infestation in cattle and other livestock have cost the USA as much as \$40 million in a single year. Millions of male screw – worm flies were reared in captivity and sterilized by exposing them to radiation. Over a period of 17 months beginning in 1957, about 3.5billion sterilized male screw – worm flies were released. The sterilized male screw – worm flies when mated with normal flies lays infertile eggs. So that by 1959, there was no single screw – worm fly seen. This is a biological control that has been achieved without any harmful effect to other species and the environment.

There was also the success story of the Saiga, a clumsy – looking animal that grazes in Eurasia steppe. The Saiga is about the size of a sheep and the horns are believed to have medicinal values, so whole herds are attacked and killed. However by the end of World War I, legal protection was given to a Saiga which helped them from being extinct. Sometimes, the success is a result of the actions of the government, prompted by individuals and private organizations mainly the NGOs.

CONCLUSION

Over the years the environment has been exploited and degraded resources depleted. However, the NGOs have raised the consciousness of governments and politicians worldwide about the need to preserve and utilize the environmental resources rationally. The NGOs have convinced many governments around the world to give legal protection to certain species of animals or plants i.e. to stop them from being extinct. The bodies have also carried out series of campaigns against abuse of the environment e.g. using chemical fertilizers, insecticides, exhaust from vehicle and waste from industries as well as fighting a war against habitat destruction, deforestation and desertification. Through the activities of the NGOs, it is obvious that some of our wrong policies and actions could be reversed all what is needed is understanding and money to pay the work.

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