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## GLOBAL ENVIRONMENTAL PROBLEMS

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### Abstract:

*One of the prominent issues of the 1990's has been the concern for the state of the global environment. On account of the growing awareness of the environmental crisis that is happening.*

### INTRODUCTION

These international issues include both pollution related issues such as global warming, acid rain, Ozone depletion, green house deforestation and extinction of species besides other biodiversity issues.

In this chapter, we will look at some of global environmental problem such as

### GLOBAL WARMING

Atmospheric concentration of carbon dioxide and other greenhouse gases released by human activities such as burning of fossil fuel and deforestation are increasing the earth's temperature. The mechanism commonly known as the green house effect is what makes the earth habitable. These gases in the atmosphere act like the glass of green house, letting sunlight in and preventing heat from escaping.

Along with the industrial revolution atmospheric concentrations of carbon dioxide have increased nearly 30% methane concentrations have risen by about 15%. These increases have enhanced the heat trapping capability of earth's atmosphere.

In last, few hundred years there is additional release of carbon dioxide by human activities. fossil fuels burned to run cars and trucks heat homes, businesses and power factories are responsible for about 98% of carbon dioxide emissions, 24% of methane emissions and 18% of nitrous oxide emissions. Increased agriculture deforestation landfills. Industrial production and mining also contribute a significant share of emission. Decreasing forest and natural vegetation.

### GREENHOUSE EFFECT/CLIMATIC CHANGES

#### a. The problem

The rapid increase in the production of pollutants, specially by the industrial units had led to dramatic increase in the levels of concentration of number of greenhouse and ozone depleting gases not only the world's atmosphere but the plants also. Mythologists talk about the nebulous veil of air pollution encircling entire earth. Some has been observed over oceans over the north pole and in their unlikely places. There are range of environmental pollution issues originating largely in developed countries which are of global significance.

The burning of fossil fuels by automobiles and industries are major sources of green house gases other sources include deforestation, animal husbandary, decomposition of wastes and coal mining. A

number of gases including EFCs carbon dioxide has the biggest impact due to its relatively long lifetime in atmosphere and the massive quantities produced globally. In this context the main culprits are industrialized countries of the west. For example, the level of per capita emissions of carbon dioxide in U.S.A. is 19 times higher than the average Africans and 23 times higher than the average Indian's.

#### **b) The effect**

Although there is still scientific uncertainty about the pace and impact of CNG concentration in future. The scientists expect that trapping resulting in global warming. This could in turn result in drier soils in midcontinental areas and substantial rise in sea level. Besides producing physical. Economic and social dislocation on a global level.

Tropical storms could also become more frequent. RamPrasad Sengupta visualise this in these words 'the economic effect of global warming is quite difficult to estimate in view of the vast uncertainties regarding the spatial distribution of the climatic variation. However, agriculture, coastal activities, aquaculture and forestry, sectors would have some direct effect due to the links of these economic activities with the climate and ecosystem's functioning. The rise in sea level would also involve substantive economic loss due to submergence and destruction of life, land and other natural and man-made assets.

### **2. Ozone layer Depletion Risk**

Ozone is different from life-sustaining oxygen having three atoms instead of two. But this third atom is very unstable and is easily eliminatable by chlorine ions.

Though, the ozone layer accounts for less than one millionth part of earth's atmosphere. It is vital to the earth's life as it absorbs the UV-B while allowing the heat-generating infrared rays to reach the earth freely. The heat from infrared rays sustains plants and human lives by keeping the temperature of the planet at a desirable level.

#### **i) The Problem**

Depletion of ozone layer is mainly the result of increasing atmospheric concentrations of chlorine originating from CFCs. The CFCs gas molecules, which neither dissolve in rain nor react with other atmospheric gases, rise very high up in the atmosphere to cause substantive damage/depletion to ozone layer. Due to the depletion of ozone layer, solar ultraviolet radiation received at the earth's surface increases.

#### **ii) Damage/Hazards of Depletion of Ozone layer**

The CFCs indiscriminately used by certain industries are a serious threat to the life support system on the earth. The depletion of ozone layer has led to an increase in skin cancer about 25 per cent and eye disease contracts of about 7 per cent. Increased UV radiation may also affect adversely plant productivity, forestry and natural ecosystems, including disruption of marine or aquatic food chains.

Recommendation of North European conference (1980). It recommended that existing satellite and ground-based ozone observing systems should be integrated through a global ozone observing system. Besides, this, updating of equipment and setting up of more stations for observing the ozone system was also recommended.

Scientists expressed the inability of being equipped to measure the rate of depletion of ozone layer.

This is very unfortunate.

### **3. Acid Rain**

#### **a. Acidification of Environment**

Acidification of environment or acid rain is another major threat to global environment. The rain, mixed with dilute sulphuric acid generated from burning fossil fuels, particularly in power stations, factories and motor vehicles, is known as acid rain. The air in industrial towns, partly cleared by chimneys at factories, which push the pollution high into the air. This has made things better locally but is dispersing/spreading the pollution problems at international compounds, etc. at below thousands

kilometers away which causes acid rains in countries far from their points of origin.

#### **b. The Damage**

a. As acid accelerates corrosion in most materials used in building and other cultural objects. It is damaging some of the world's greatest cultural treasures including Parthenon in Athens, Tajmahal in India. Trajan's Column in Rome and Many others.

b. Acid rain damage forest and croplands kills fishes and water lives and poses a substantial threat to health of people living in the confronted origin.

#### **c. The Solution**

The Stockholm conference (1982) of scientists for reviewing and assessing the impact of acidification on environment, reached to a conclusion.

i) That there is an urgent necessity of research and development in improved ways of energy conservation environmentally appropriate technologies for producing power and heat and techniques for removing sulphur from fossil fuels and gaseous emissions.

ii) It is also necessary to identify the areas affected by acid deposition and susceptible to damage from acidification, as soon as possible.

### **4. Desertification**

The process of desertification is caused by over exploitation of dry lands through over cultivation. Poor irrigation practices, overgrazing and deforestation. Server drought makes it bad to worst when drought strikes the overtaxed livelihood systems desertification emerges.

#### **a. The problem**

Densification is today a world wide threat. There is no country where this problem is not affecting today; more than 20 per cent of world's populations live 35 per cent of the earth's surface land consisting of arid. Semi arid and sub humid ozones which is at risk of desertification. Nearly 25 per cent of this area is already at least moderately decertified. Nearly 21 million hectors of agricultural land deteriorates through desertification and makes the land economically unproductive, every year.

#### **b. The damaging Effect**

The most devastating environmental and economic effects of desertification are in the dry lands in the developing countries. In many of these countries sanitization, urban sprawl and sand dune encroachment do reduces the agricultural land. The major impact of desertification are.

i. Global loss in valuable genetic resources, disruption of hydrological cycles and increase of atmospheric dust.

ii. Desertification increase in one part of the world many indirectly induce it on other parts. Which intensities the pressures on marginal dry lands in other food exporting and importing countries alike.

iii. The capacity in important of goods and service decreases

#### **c. The solution/ Strategy**

To check this problem concrete cooperative actions of developed and developing nation is necessary. This can be possible by suffering the allocation of the resources in basis of currently available knowledge.

### **5. Soil loss**

The importance of soil/land is undebtable. The very existence of flora and fauna undoubtedly depends upon soil.

**a. The problem of Soil Degradation**

Soil damage is mainly caused by uncontrolled shifting cultivation. Salinization, water logging or flooding and appropriate chemical use. Weapons testing and caused by patterns of dry land mountain side-cultivation without sufficient arrangements for bounding and terracing to protect the topsoil. Continuous cropping leave little time for soil conservation techniques. Loss of productive capacity of soil is most acute in area affected by erosion drought mineral stress and other related factors.

**ii) Solution**

As the problem is common and its implication is not limited to the boundaries of nations, it is necessary to have mutual policies and strategies concerning land management. For this world soils policy will be appropriate. This soils policy endeavours to enhance international awareness help in formulation of national soil policy to countries help to develop technical and scientific knowledge and collect, compile and disseminate data on the use and management of the worlds soil resources.

**6. Loss of Tropical forests**

The tropical forests are world's riches biological zones and are estimated to contain nearly 40 per cent of all terrestrial species on the planet. They are source of wide range of useful economic products for both developing and developed countries. Not only these undisturbed tropical forests are also home to millions of the worlds tribal peoples.

**a. Depletion of Tropical Forest**

According to FAO and UNEP project. Nearly 12.5 per cent of closed tropic forest will lost by year 2000. In another study, the loss of tropical forest is estimated to 20 million hectares per year.

There are many causes of deforestation for example shifting of cultivation and the conversion of pasture land for cattle ranching. Logging operations over grazing. Over exploitation for fuel wood, fires, insects and diseases, etc. On a world wide basis UEP estimates that removal of charcoal and fuel wood from tropical forests are as much as eight times greater than for industrial wood.

**b. The Effect**

The ecological and economic effects through increased erosion, floods, land slides and silting of hydro-electric facilities, the irrigation systems, reservoirs and harbours are serious concern of environmentalists. The lie and livelihood of half the world's population depends directly on the rational management of water shed forests and eco-system. It also impacts the global climate. There is urgent need of assessment of socio-economic and political implication of possible regional and climatic changes.

**7. Pollution of Worlds Ocean**

As per studies conducted by various agencies it, is cleat that ocean world witd is being polluted by sewage, agricultural, chemicals, oil, metals, inorganic mercury , discharge etc. Rivers do bring many pollutants like iron, copper, zinc, lead etc to the sea offshore oil and gas exploration and dredging for sand and gravel in coastal areas do causes damage to coastal areas.

**The Effect**

The world-wide, increasing developmental in activities will pollute the ocean to greater extent in future. It directly affects the ecosystem and economosphere of the world. It not only damages the upper layer of sea water but also affects the sea floor. Which causes danger to the sea-species?

The improved management of the coastal areas and seas involving close controlling of pollutants dumping and careful monitoring of contaminant levels. May prevent further deterioration of coastal environments. By end of 1982 action plans were in operation in 10 regions involving some 100 coastal states. Coastal and marine national parks and reserves were extended.

### 8. Depletion of Genetic Resources/Loss of Biodiversity

Biological diversity – a composite of genetic information. Species and ecosystems provide material wealth in the form of food, fiber, medicine and inputs into the industrial process. It supplies the raw material that material that may assist human communities to adapt to future and unforeseen environment stress furthermore. Many people value sharing to the earth with numerous others of lives and want to bequeath this heritage to future generation. Lose of biodiversity jeopardizes all this world development. Report estimates the extinction of 25,000 species and more than 10,000 vertebrate species and sub-species. According to some estimates a much as half a million to a million species would be extinguished over the next two decades. This extinction has been/would be caused by human activities.

#### The Effect

Significant species loss could directly affect human health and welfare locally and even nationally in many developing countries. Tourism, largely on wild life is a major source of foreign exchange in some countries. A significant loss of relevant wild species could limit the possibilities for maintaining or increasing the production of major crops like wheat, maize, rice, potatoes and for combating new strains of disease or pests which threaten them

The agricultural productivity, development of bio-medical researcher and many such types of application will get hammered by the loss in biodiversity if not controlled seriously in future. The developing nations may be more affected.

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