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“A COMPREHENSIVE STUDY ON ENVIRONMENTAL ISSUES AND ITS ADVERSE EFFECT ON THE WORLD’S MANKIND.”

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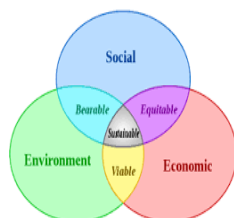
INTRIDUCTIUON

Environment is defined as the surroundings in which the organism lives. The environment may be the physical environment, the chemical environment or the biological environment. Thus, the environment has two components - abiotic and biotic.

The abiotic environment includes the air (atmosphere), water (hydrosphere) and land (lithosphere). The biotic environment includes the plants, animals and the microbes.

Organisms are dependent on the environment to fulfill their needs; man is also constantly interacting with the environment in order to fulfill his needs. These needs include the basic needs of oxygen, food and shelter in addition to the social needs like entertainment, medicines, etc. The things that man requires for his survival and comfort are called the resources. The environment is a reservoir of resources. For survival of man. It is very important environment. Maintaining the natural resources of the environment and their careful use is called conservation. The conservation of environment involves the conservation of the natural resources.

A healthy environment is an absolute necessity for the well-being of all organisms, including man. All our needs, big and small are being met by the environment. However, man having reached the pinnacle of evolution is trying to bring about changes in the environment to suit his convenience. Unfortunately, this convenience is temporary. In the long run, man is losing out on a healthy environment.



ENVIRONMENTAL POLLUTION AND ITS MAJOR EFFECT ON THE MANKIND

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Types of Natural Resources:

The things that man derives from the environment are called natural resources. Natural resources are thus stores of supplies that are needed by man. The resources include the energy, air, soil, water, minerals, microbes, other organisms, etc

Resources: Renewable and Non-Renewable:

The resources that can be replenished by the environment are called the renewable resources. These are also called the inexhaustible resources. These resources are constantly recycled in the environment like water. This also includes resources like the solar energy, air, plants, animals, microbes and some minerals like nitrogen. The rates at which these resources are returned to the environment are different for different resources. The rate at which man uses them also varies.

Difference between Pollution and Pollutant:

Pollution is defined as an 'undesirable change in the physical, chemical or biological characteristics of air, water and land brought about by man's activities that may harmfully affect living organisms and other resources.

Now the paper is trying to define the different types of pollution that has been prevailing in the today's Industrial phenomena and its adverse effect on the Mankind and how the world has to come out of this major challenge. Below is the type of pollution that has been prevailing in the today's era.



Source of Air Pollution:

The major problem that the atmosphere is being subjected to is pollution. In India, about 100 million tons of pollutants are being added to the atmosphere annually. This figure is likely to go up in future. Polluted air is harmful to man and the biosphere on the whole, as well. This problem needs to be tackled urgently. Since all of us contribute to it directly or indirectly, we must study air pollution in detail and discuss the means of controlling and preventing it.

Cause of air pollution:

- 1) Increase in population and traffic.
- 2) Development of industries.
- 3) Development of automobile engineering.
- 4) Thermal and nuclear generation.

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- 5) Development of agriculture etc.

Forms of air pollutions:

- 1) Smoke
- 2) Dust
- 3) Gases
- 4) Particulate matter from industrials, power generation plants, road-way dust. Etc.
- 5) Hydrocarbon- from automobile exhaust
- 6) Sulphur compound
- 7) Nitrogen compound
- 8) Carbon compound
- 9) Fluorine compound
- 10) Chlorine compound

Decreasing and Polluting Fresh Water Resources:

Water pollution is a major problem associated with the developing countries. It severely affects the lives of people. There is an entire village in Karnataka that has been affected by excess of fluoride in the ground water. It causes deformities of the bone. In order to effectively control the pollution, the causes or the sources must be identified and understood. The availability to man of freshwater of high quality is becoming an acute problem in many countries. Water requirements continue to increase with the growth of populations and living standards and the expansion of agriculture and industry. Water is needed for power generation irrigation, navigation and community water supply. Often it is drawn from international rivers or lakes and in many instances international co-operation is needed in the allocation of water and the flanking and technical aspects of water resource development projects. The availability of ground water is most often a local problem but it has international implications in relation to the general effects which a depletion of ground water may have within a larger region.

Soil Pollution and Erosion:

Soil is an important resource as it is the basis for the growth of plants which are the producers. Without good soil, there cannot be a good crop of food or a thick vegetation cover. The latter is important for maintaining the climate of a region. Land is also a precious resource. Land is needed for agriculture and occupation. Land is under pressure due to increasing population. Land for agriculture has to be fertile in order to be able to support a good crop. The fertility of land lies in the quality of the soil.

The land surface in extensive parts of the world is changing because of the intense agricultural methods necessary to provide for a growing population with an increasing per capita consumption. In many parts of the world, 24 improper land uses has resulted in irreversible degradation of soils and vegetation. Soil erosion by wind and water, leaching of nutrients, Stalinization and extension of arid zones have been caused by such improper land-uses as over grazing in arid zones,

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deforestation in areas with unstable soils and over-use of both surface and ground-water resources.

Usually, these problems are local or regional in nature and are the responsibility of individual governments. However, because similar changes in soil fertility have occurred throughout the world in many nations, a global, multi-governmental approach to the problem is appropriate. Moreover, because the local effects of decreased soil fertility may be very significant, the economy of adjacent regions may also be affected. Extension of arid zones can also induce large-scale climatic changes by allowing considerable amounts of windblown dust to become airborne.

Rising Population:

Population explosion is one of the most serious problems faced by the developing countries. Increase in population has resulted in strain on the resources. More and more land has been brought under cultivation and occupation. This has reduced the forest cover that is important for the water cycle, regulation of climate, maintenance of wildlife, etc.

Global Warning across the Globe:

The addition of certain pollutants like the carbon dioxide gases increases the temperature of the earth. These gases remain close to the surface of earth, forming an insulating layer. The surface becomes hot due to the solar radiations.

Accumulation and Recycling of Waste:

Accumulation of wastes due to its improper disposal is a major problem in our country. The recent Surat plague epidemic is an indication. Population in India has been growing at the rate of 1.7%. With this increase, there has also been an increase in the amount of wastes being produced especially in the cities. It is very important to have good and effective waste management techniques as the waste generated cannot be reduced easily. With increasing population, wastes generated are only going to increase.

Noise Pollution and its adverse effect on the Mankind:

Violent noises may cause temporary or permanent impairment of hearing. Noise is also of the major causes of stress and many of the other human afflictions associated with tension, anxiety, accident proneness, high blood pressure and other diseases. The noise produce in urban area due to industrial activities, increases in traffic etc, cause tension and stressed related disorders.

Common Causes of Noise Pollution:

- 1) It can cause loss of sleep.
- 2) It can increase blood pressure.
- 3) It can cause irritation of mind.
- 4) It can cause digestive disorder.
- 5) It can develop hypertension.
- 6) Sudden loud noise can cause heart failure.

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- 7) The prolong exposure to noise may result into temporal deafness or nervous back down.
- 8) It affects attitude and psychological reaction.
- 9) It can spoil the essence of music and speech.
- 10) It can create uncomfortable living conditions.
- 11) It usually interferes with speech communication.

Effect on the Wildlife and Creation of National Parks:

Wildlife includes the flora and fauna present in the forests. Flora is the collections of plants and fauna, the collection of animals. Precious plants and animals are becoming extinct or endangered as a result of clearing of the forests. The forests are home to many precious species of plants and animals. Creating national parks and wildlife sanctuaries for safe breathing of the endangered and other species. National parks are areas that are permanently reserved for conservation of natural resources. For example, Kanha national park known for tiger, leopards, etc.

Natural Calamities:

Although natural disasters constitute a very important environmental problem, it is not pertinent to include a programme directly related to natural disaster monitoring or warning within the global environmental monitoring system. It is appropriate, however, that the system should provide assistance in reporting phenomena that relate to natural disasters.

Environmental Pollution effect on the Vegetarian Life:

- 1) Plants may be dried up.
- 2) The yield of crop may decrease.
- 3) The quality of crops may decline or may be affected by disease.
- 4) The growth of vegetation may stop and the quality may be inferior or may be affected by disease.
- 5) The quality of fruit may become inferior or the quality may also decrease.
- 6) The forests area may get destroy gradually the growth of trees may become stunted or they may dry up completely.

The Actual Facts and Figure of the UN Report of the Environmental Pollution and Sustainable Growth

27 September 2016 – With some 6.5 million people dying annually from air pollution and 92 per cent of the world's population living in places where levels exceed recommended limits, the United Nations today rolled out its most detailed profile of the scourge ever in a bid to slash the deadly toll.

- “Fast action to tackle air pollution can't come soon enough,” top UN World Health Organization (WHO) environmental official Maria Neira said of the new air quality model,

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which includes interactive maps maps that highlight areas within countries exceeding WHO limits. The world's population reached 7.35 billion last year, according to UN figures

- “Solutions exist with sustainable transport in cities, solid waste management, access to clean household fuels and cook-stoves, as well as renewable energies and industrial emissions reductions,” Dr. Neira added.
- Nearly 90 per cent of the deaths occur in low- and middle-income countries, with nearly two out of three occurring in the South-east Asia and Western Pacific regions.
- “Air pollution continues take a toll on the health of the most vulnerable populations – women, children and the older adults,” WHO’s Assistant Director General Flavia Bustreo said. “For people to be healthy, they must breathe clean air from their first breath to their last,” she added.
- Major sources of air pollution include inefficient modes of transport, household fuel and waste burning, coal-fired power plants, and industrial activities. But not all air pollution originates from human activity. For example, air quality can also be influenced by dust storms, particularly in regions close to deserts.
- The new WHO model shows countries where the air pollution danger spots are, and provides a baseline for monitoring progress in combating it,” Dr. Bustreo said.
- Developed in collaboration with the University of Bath, United Kingdom, it represents WHO’s most detailed outdoor air pollution-related health data ever, based on satellite measurements, air transport models and ground station monitors for more than 3,000 locations, both rural and urban.
- Some three million deaths a year are linked to exposure to outdoor air pollution. Indoor air pollution can be just as deadly. In 2012, an estimated 6.5 million deaths (11.6 per cent of all global deaths) were associated with indoor and outdoor air pollution together.
- Ninety-four per cent of the deaths are due to non-communicable diseases – notably cardiovascular diseases, stroke, chronic obstructive pulmonary disease and lung cancer. Air pollution also increases the risks for acute respiratory infections.
- “This new model is a big step forward towards even more confident estimates of the huge global burden of more than six million deaths – one in nine of total global deaths – from exposure to indoor and outdoor air pollution,” said Dr. Neira, who is WHO Director, Department of Public Health, Environmental and Social Determinants of Health.
- WHO’s Ambient Air quality guidelines limit annual mean exposure to particulate matter with a diameter of less than 2.5 micro meters (PM2.5), such as sulfate, nitrates and black carbon, which penetrate deep into the lungs and cardiovascular system, posing the greatest health risks.

(Sources: UN and WTO official website)

- Around 30 percent of the worlds freshwater are stored underground in the form of groundwater (shallow and deep groundwater basins up to 2 000 meters, soil moisture, swamp water and permafrost). This constitutes about 97 percent of all the freshwater that is potentially available for human use.

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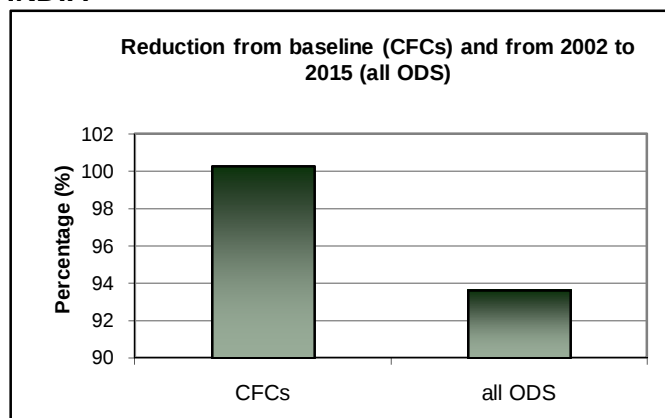
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- The total volume of water on Earth is about 1.4 billion km³. The volume of freshwater resources is around 35 million km³, or about 2.5 percent of the total volume. Of these freshwater resources, about 24 million km³ or 70 percent is in the form of ice and permanent snow cover in mountainous regions, the Antarctic and Arctic regions.
- In developing countries, 70 percent of industrial waste is dumped untreated into waters where they pollute the usable water supply.
- The food sector contributes respectively 40 and 54 percent to the production of organic water pollutants in high-income and low-income countries.
- Projected increases in fertilizer use for food production and in wastewater effluents over the next three decades suggest there will be a 10-20 percent global increase in river nitrogen flows to coastal ecosystems.
- Half of the world's wetlands have been lost since 1900.
- Every day, 2 million tons of human wastes are disposed of in water courses.
- Many industries – some of them known to be heavily polluting (such as leather and chemicals) – are moving from high-income countries to emerging market economies. Despite improvements in some regions, water pollution is on the rise globally.
- Up to 90 % of wastewater in developing countries flows untreated into rivers, lakes and highly productive coastal zones, threatening health, food security and access to safe drinking and bathing water.
- Over 80 per cent of wastewater worldwide is not collected or treated, and urban settlements are the main source of pollution.

(Sources: UN Report published in September 2015)

Reduction of CFC and Ozone Depleting Substance:

INDIA

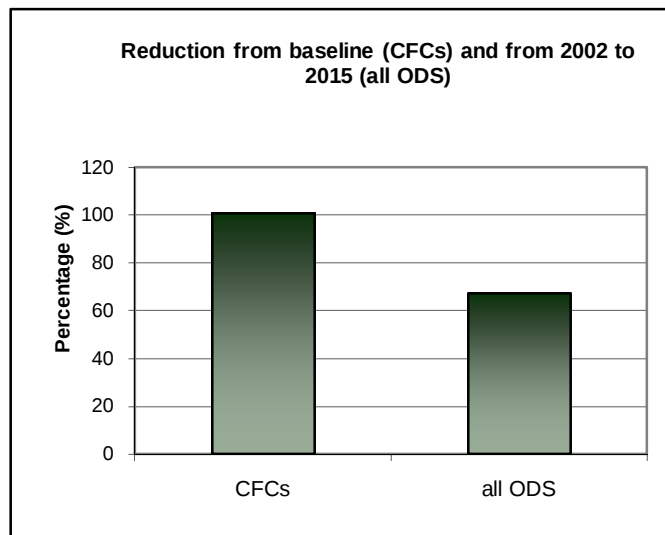


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CHINA



(Sources: UN Report Published in 2015 about the INDIA and CHINA about Ozone usage)

- More than 80% of people living in urban areas that monitor air pollution are exposed to air quality levels that exceed the World Health Organization (WHO) limits. While all regions of the world are affected, populations in low-income cities are the most impacted.
- According to the latest urban air quality database, 98% of cities in low- and middle income countries with more than 100 000 inhabitants do not meet WHO air quality guidelines. However, in high-income countries, that percentage decreases to 56%.
- In the past two years, the database – now covering 3000 cities in 103 countries – has nearly doubled, with more cities measuring air pollution levels and recognizing the associated health impacts.

(Sources: WTO Report Published on Public health, Environmental and Social Determinants of health, in the year 2016.)

BRICS Initiative to Control the Environmental Pollution and Sustainable Development:

Environment ministers of BRICS countries on Friday agreed on a memorandum of understanding and announced the setting up of a joint working group institutionalizing their co-operation on environment-related issues, an official said.

"The ministerial declaration highlights key arrangements which were adopted with mutual consensus. The areas agreed for mutual co-operation are abatement and control of air and water pollution, efficient management of liquid and solid waste,

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climate change and conservation of biodiversity," said a statement on Friday after a two-day conclave of BRICS environment ministers at a South Goa resort at September, 2016.

The BRICS countries resolved to set up a platform for innovations, knowledge sharing and capacity building, a common website, network of technical institutions and undertake joint projects in areas of mutual interest," the statement said while also adding that ministers from the BRICS countries also re-affirmed their commitment to the principles of the Rio Declaration on environment and development.

CONCLUSION

For resolving the increasing stress on the environment and resources, and also responding to the ever-increasing demands of the citizens for environmental quality protection and improvement in ecological environment, the Environmental Protection Bureau (DSPA) conducted the environmental master planning of INDIA, in order to realize the vision of "Building a Low Carbon INDIA, Creating Green Living Together".

On the basis of coordinating with other related planning and analyzing the current challenges in the environment, the present Environmental Planning has proposed the planning vision and objectives, together with a preliminary scheme for environmental functional districts and environmental functional district management. Under the three principal themes of "Optimizing the Environment Suitable for Living and Tourism", "Promoting a Conservation and Recycling-oriented Society" and "Integrating into the Green and Quality Region", this planning has also established green indicators for the Environmental Planning, proposed areas of concern and their strategic direction, formulated various major actions, and established the implementation and supervision mechanisms, in order to enhance the environmental management capability of the INDIA. Government and guarantee the execution of the planning. In the meantime, this planning, based on the requirements in the vision of "Building a Low Carbon INDIA like initiation taken by the China government, Creating Green Living Together" has also proposed a demand for coordinating the regional environment, taking into consideration of the integrated development in the environment, building jointly a quality-living area.

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