

ENVIRONMENTAL DEGRADATION AND HUMAN DISEASES

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Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil the destruction of ecosystems and the extinction of wildlife. It is defined as any change or disturbance to the environment perceived to be undesirable. When natural habitats are destroyed or natural resources are depleted, the environment is degraded. Environmental degradation and pollution is becoming a problem for man's survival that's why it's a wake up call for all the people living near and far from the forest, educated and uneducated do not know the value of nature conservation in their own lives . The goal of conservation must be to maintain the continuity of natural evolution. Forests are disappearing very fast due to the demands of land for housing, industries and other types of commercial purposes. There are two factors that lead to environmental degradation : -

Natural factors :- It includes droughts, storms on sea, Melting polar ice, increasing sea levels, rising temperature; land and deserts such as hurricanes, tornadoes, catrina and volcanic eruptions. These factors lead to land degradation caused by erosion.

Human factors :- It includes deforestation, industrialization and urbanization. This is the century of urban revolution and man is running for hi-tech development. Cities have grown far beyond imagination like-transport, communication, sanitation and other facilities for easy life require more technical devices for improved efficiency. These not only demands huge resources but also create massive problems of waste disposal. These factors lead to water, air, sound and land pollution.

Factors affecting environmental degradation

1. Urbanization - The physical growth of rural or natural land into urban areas as a result of population in migration to an existing urban area. Cities are places where money, services and wealth are centralized. Social mobility and Diversity increases. Greater Economic opportunities are also created. As in order to get luxurious life we forget everything and start doing all things that affect the nature. The use of automobiles increasing day by day which creates the problem of pollutions. Microwave radiation which effects creatures increases due to unnecessary use of mobile. Increases the cost of living, farmers become more mechanized putting labours out of work, reduces soil moisture, more resources are required to meet basic needs and air, water and soil pollution increases. Food supply is threaten by polluted water. Humans waste water by watering lawns and washing vehicles ,Water polluted by chemical waste, pesticides, fertilizers and soil sediments that are being deposited into bodies of water.

2. Industrialization- The setting up of industries in a specific area where it will be close to a source of raw material. Creates new ideas, products and jobs. Creates mass markets of investments Creates commerce and revenue Soil and Land degradation. When fertile land is lost due to the increase of human population. Construction of homes and highways for travel, farming of crops . Creates land that is unsuitable for crops, pasture for animals and forests because the soil is too infertile or shallow to plan. Soil composition is greatly affected. Lost of such minerals like nitrogen and phosphorus that are critical for plant growth increases food shortage.

3. Water Degradation- Industrial and institutional wastes and other harmful or objectionable material in sufficient quantities to result in a measurable degradation of the water quality. The spent or used water from a home, community, farm, or industry that contains dissolved or suspended matter. The presence in water of enough harmful or objectionable material to damage the water's quality. Water is the resource that defines all organism life. "We can't live without it" -Keeps the body hydrated -Essential for life Helps maintain food supply. An air or water pollution incident in a given area caused by a concentration of atmospheric pollutants under meteorological conditions that may result in a significant increase in illnesses or deaths.



4. Deforestation- After the tropical rain forest are cleared, little can grow on the land. Death and diseases can result from localized flooding caused by deforestation ,Over-harvesting of fuel wood . Deforestation occurs for many reasons:- trees or derived charcoal are used as, or sold, for fuel or as a commodity, while cleared land is used as pasture for livestock, plantations of commodities, and settlements. The removal of trees without sufficient reforestation has resulted in damage to habitat, biodiversity loss and aridity. It has adverse impacts on biosequestration of atmospheric carbon dioxide. Deforested regions typically incur significant adverse soil erosion and frequently degrade into wasteland. Disregard or ignorance of intrinsic value, lack of ascribed value, lack of forest management and deficient environmental laws are some of the factors that allow deforestation to occur on a large scale. In many countries, deforestation is an on going issue that is causing extinction, changes to climatic conditions, desertification, and displacement of indigenous people.

5. Population growth- Population growth is the main driving force of adverse impacts on the environment. Increase in the number of people in an area leads to higher pressures on the environment. More people need more space, require more energy, water, and natural resources, which inevitably leads to higher pressure on land, air, water, and natural resources. They also produce more waste, which again has an impact on land, waters, and air. Rising economy and industry also contribute to generating more pressure on the environment.

The rate of population growth is determined by a simple formula: The population size at the beginning of the time period is subtracted from the population size at the end. That number is then divided by the population size at the beginning to yield a fractional answer, which is converted to a percentage.

$$\text{Growth rate} = \frac{(\text{population at end of period} - \text{population at beginning of period})}{\text{population at beginning of period}}$$

HUMAN HEALTH

Noise, air, water pollution occurs, Increase in health problems, Creates dangerous machinery, Creates overpopulation of urban areas that leads to shortage of resources. Rapid increase in disease and human deaths, Prosperity of life will decline, Puts enormous stress on the environment, limits the availability of natural resources for individuals survival. Generates pollution by burning coal and oil that contributes to the release of carbon dioxide into the atmosphere which has increased Global Warming.

Effect on human health

Environmental Degradation affects on human health “In the United States and Worldwide, we have serious environmental resource problems of water, land and energy, and these are now coming to bear on food production, malnutrition and the incidence of diseases.”

Environmental Change and Human health, a special section of World Resources 1998-99 in this report describes how preventable illnesses and premature deaths are still occurring in very large numbers. If vast improvements are made in human health, millions of people will be living longer, healthier lives than ever before. In these poorest regions of the world an estimated 11 million children, or about one in five, will not live to see their fifth birthday, primarily because of environment related diseases.

Increases in diseases associated with diminishing quality of water, air and soil resources provide evidence of a declining standard of living. About 40 % of deaths worldwide are caused by water, air and land pollution. Such environmental degradation, coupled with the growth in world population, are major causes behind the rapid increase in human diseases. Intestinal parasites introduced into humans through contaminated food, water, and soil, impact health by reducing intake of nutrients in various ways, including the rapid loss of nutrients through diarrhea or dysentery, alteration of appetite and blood loss. Hookworms for example can remove up to 30 cc of blood from a person in a single day, leaving the person weak and susceptible to other diseases.

Diseases Associated with Environmental Degradation :-

Air pollution :- Air pollution in the form of particulate matter or sulphur-di-oxide ,ozone,NO₂, has a serious impact on health. AP is estimated to cause approximately 2 million premature deaths world wide per year more than half of this burden is born by in developing countries. Almost 4 million children worldwide die each year of acute respiratory infections that are linked to air pollution that is due to industrialization. Asthma is rising dramatically due to environmental allergies and overcrowding of homes. Air pollution from smoke and various chemicals kills 3 million people a year. Toxic chemicals are released into the environment—contributing to cancer, birth defects, immune system defects and many other serious health problems.

Water pollution:- Untreated sewage, factories ,refineries, oil industries discharge there affluent into a river, stream, sea in many parts of the world that causes huge damage sewage is the liquid waste containing some solids produce by human which typically consist of washing water faces, urine, laundry wastes and other material which goes down in drains and toilets from house holds and industries ,sewage water is a complex matrix with many distinuictive chemical characterstics .Therefore the oxygen demands and bacterial pollution are increasing day by day this is mainly responsible for water born disease as well as degradation of water. About 2.5 million children worldwide die each year of diarrhea diseases that are linked to contaminated water and soil. Agriculture degradation of water comes in the form of manure runoff from farming causing damage to local water quality by overloading it with nutrients, particularly phosphates. The manure contains pathogens to which humans are vulnerable. These pathogens can lead to acute short-term memory loss, asthma like symptoms, liver and kidney dysfunctions and blurred vision and vomitting.

It is estimated that worldwide 1.2 billion people lack clean water. Therefore, waterborne infections account for 80 percent of all infectious diseases. Water pollution creates breeding grounds for malaria-carrying mosquitoes and West Nile virus carrying mosquitoes.

Urbanization:- It caused overcrowding of urban areas to create conditions that are unsanitary. Therefore, more people have been exposed to such diseases as measles and flu. Soil and land Soil is contaminated by many chemicals and pathogens which are passed on to humans through direct contact or via food and water. Pesticides are a type of pathogen that pass on their harmful toxic chemicals through food and water. The long- term effects of pesticides include elevated cancer risks, and disruptions of the body's reproductive, immune, endocrine and nervous system. Approximately 10,000 deaths occur each year due to pesticide poisonings. Studies have shown that pesticides have been linked to certain types of cancer.

Atmospheric Pollution:- For over 150 years, the growth of our industrial society has been fueled by cheap energy, much of it is obtained by burning of fossil fuels (such as coal, oil and gas) which release large amounts of carbon dioxide into the atmosphere. The carbon dioxide creates what has become known as the greenhouse effect where radiant energy from the sun is prevented from radiating into space. Therefore, the temperature of our atmosphere is rising.

Global warming:- It is predicted to have a major effect on rainfall patterns. Areas that have already been experiencing droughts are seeing water shortages. Climatic changes has caused catastrophic hurricanes and tornadoes. Global warming together with changes in biological diversity, influence parasite evolution and the ability of exotic species to invade new areas have resulted in diseases such as tuberculosis influenza re-emerging as major threats. New disease such as West Nile Virus and Lyme disease have been linked to environmental.

CONCLUSION

As public health moves more toward examining how both ecologic and social processes affect disease transmission, and more specifically toward examining the fundamental role of environmental change in creating the landscape of human disease, a systems theory framework is needed from which to integrate and analyze data obtained from the disparate but relevant fields of study involved. As the review of contemporary frameworks suggests, the inherent multidimensionality of these problems precludes the use of

standard analytic approaches. A plan for stormwater discharge that includes erosion prevention measures and sediment controls that, when implemented, will decrease soil erosion on a parcel of land decrease off-site non point pollution. If the size of a population decreases over time, it is called negative population growth. A population may also experience no growth, though it is unlikely for the environment.

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