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Environmental Degradation: An Overview

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Abstract

These days the environmental crisis is a terrific problem for the world. Environmental degradation is a change that causes the destruction of our climate and hence affecting all of us. We are living at high risk because of environmental degradation. Rapid industrialization, unplanned urbanization, expanding population, exploitation of fossil fuels, use of harmful chemicals in agriculture, and our lifestyles are the main reason for environmental degradation. There should be a sustainable relationship between environment and development. Environmental degradation includes ecological imbalances, depletion of natural resources, water crisis, chronic diseases, and pollution caused by human activities. The changes have been marked in the ecosystem, geographic, economic, cultural and other vital system of the environment. Many pollutants like radioactive materials are so toxic that their minute amounts can cause health hazards such as cancer and infertility etc. Hazardous chemicals can cause damage to the body and this also lead to many diseases, shortened lactation, and dysfunctional immune systems. Nature is very powerful, and it has its own way to teach the limits of consumption to human beings. Therefore, environmental ethics and environmental education are required for man, and environmental ethics is the only way to control the problems. Many researchers and aware people are trying to find long term solutions to these vexing environmental and resource problems. Environmental education is indeed the instrument with man, which can help him to solve problems like maintenance of renewable resources, conservation of nonrenewable resources, reducing the effect of natural disasters and abating pollution by man, etc. The role of a teacher and parents is very important to give environmental education to our future generation.

Keywords: Environmental Education, Air Pollution, Water Pollution, Soil Pollution.

Introduction

The natural beauty always attracts the man for adventures, recreation and exploitation of the natural resources. Nature's beauty should be looked as capital resource and it should be conserved for the future generation. The human desire to conquer nature has led to ever increasing environmental problems from the depth of the sea to the heights of mountains. Man-made pollutants cause severe environmental hazards since some of these are extremely stable and persist for a long period of time [Ramachandran, R, 1989].

Aim of the Study

As we are reaching in the era of 21st century, environmental issues are threatening the survival of mankind. The aim of present study is to bring the attention of people towards eco-friendly development along with environmental ethics.

Review of Literature

Emergence of E -waste is another big problem. The composition of e-waste involves various chemicals some of them are very hazardous [Santhanam Needhidasan et al, 2014]. A number of artificial materials like Plastic, rubber, sponge, electrical and electronic chip after burning releases hazardous wastes in the atmosphere lead to chemical poisoning of the water, air and soil system. The electronic gadgets and equipments like computers, mobile phones etc contain some of the deadliest chemicals including Antimony, Arsenic, Lead, Mercury, Cadmium, Brominated Poly-Vinyl Chloride, Poly-Chlorinated Biphenyls etc are all toxic for living things and human beings [Petrosino V. et al, 2018]. These toxic chemicals when enters the body creates body burden and it can cause damage to the

various internal organs like liver, lungs, bones, kidney, blood, brain, and nerves. It also leads to cancer, high blood pressure and many other deadliest diseases. [Mushina Abdul Rehman, 2011]. Some chemicals directly attack and damage cells in the body while others can attack the genetic material which may affect next generation also. The chemical nature of such pollutants may be of various kinds. The water contamination due to human activities like industrial wastes and agricultural by products includes many harmful chemicals [S. Sherma et al 2017]. These may be oxides of carbon, sulphur, nitrogen, polycyclic aromatic hydrocarbons, photo-chemicals oxidants, detergents, metals, fertilizers, fungicides, pesticides, industrial solvents, sewage effluents and radioactive substances etc [Prasad, D. et al, 1995]. Now this is a time when everyone should be strongly devoted to collaborate in finding long term solutions to these environmental challenges and resource problems. It has been realized that the environmental issues like global warming, ozone depletion, acid rain and biodiversities not only the national issues but are global and must be tackled with international efforts. There must be balance development between the man and his environment. The far reaching consequences of the problem can only be solved by making the people environmentally conscious to develop a sustainable society. We have to build up a strong faith and values towards our mother nature, and for this environmental studies and values based education system has to be developed. One who has faith in honesty will be honest. One who realized his duty towards nature as his family will always be dutiful and so that we could save our environment.

Major Environmental Issues

Our environment is continuously changing. Everything around us is our environment. It includes living and nonliving things such as humans, plants, animals, water, soil, air and other things. Environmental degradation is a change that causes the destruction of our climate and hence affecting all of us. The relationship between environment and development should be sustainable. Pollution level is alarming the critical point for the survival of healthy life on Earth. We need the development that leads to a better life for all now and in the future. In nature, everything is connected. Our planet is facing severe environmental issues; some of them are as follows:

Pollution

Environmental pollution means unfavorable changes in our surrounding, and it is largely due to human activities [Prabhat K Rai, 2016]. Change in air, water, soil and our climatetic conditions threaten the health. Survival of humans and other living organisms. We are facing many problems related to air, water, and soil pollution since a long time. Industrial waste, plastic, heavy metals are toxic chemicals responsible for pollution [Campanale C. et al, 2020]. Water pollution is caused by acid rain, oil spill, harmful chemical discharged from factories and the combustion of fossil fuels. Sulphur groups of gases are even more harmful and this gas is also released from the burning of fossil fuels. Air pollution is due to smoke and various gases released by industries and from the combustion of fuels. Leather industries give out a high amount of carbon dioxide, nitrogen oxide, sulphur dioxide, lead oxide, dust and fumes in the air. These waste materials when discharged in the atmosphere mixes in the air which is taken by the humans and living things to respire. Thus air pollution can cause death in humans and it is not good for the health of a plant also [Sumitra Giri et al, 2013)]. Depositing of waste materials in the soil is known as soil pollution. Industries deposit waste material in the form of metallic waste, slag and fly ash which causes soil pollution. Industrial effluents that deprives soil from essentials nutrients increase the soil pollution [Mary Jane Incorvia Mattina, et al, 2003] . This leads to disintegration of soil affecting the soil profile. In urban areas, noise pollution and excessive use of electronic home appliances are also responsible for producing electronic wastes and radiation.

Global Warming

The majority of the globe are substantially covered with snow and ice all year round. More than 80% of the worldwide energy demand is supplied by fossil fuels coal, oil and gas. As a result of the emission of green house gases that lead to a rise in the temperature of the surface of the Earth and this results in global warming. Global warming reflects the increase in temperature of our atmosphere near the earth's surface that results in climate changes, therefore our planet is facing problems like the melting of polar ice and the rise in sea level [Report on climate change, 2020]. The cause of global warming is increased emissions of green house gases due to mankind. It is a big question today what happens if the earth's surface temperature rises continuously? Most of the land will become hotter and drier and energy imbalance will result in violent weather conditions that will increase droughts, floods, heavier rain fall and the threat of heat waves. The eastern and central regions of the Himalayas show glacial melt at an accelerated rate. The rainfall pattern and monsoon of India are influenced by the Himalayan ranges and our natural vegetation is also affected by climate. We depend on rivers like Ganges etc for irrigation and drinking water. Himalayan glacial, which is the resources of water is under increasing stress. Rapid increase in atmospheric temperature due to black carbon could accelerate the snow melting process and glacier retreat, thus it will rise the sea level. The Himalayan glaciers are sources of Asia's biggest rivers could disappear by 2035 if the temperatures rise continued with the present day. Scientists have warned in their reports that most of the glaciers will disappear within a period of 15 to 25 years if the rise in temperature will be continued. It will create problems of drinking water and food grains

Ozone Depletion and Climate Change

The stratosphere of Earth's atmosphere has ozone gas and decrease in concentration of ozone is referred as ozone depletion [Sivasakthivel Thangavel et al, 2011]**.** The ozone layer is the protective layer around the Earth that protects us from the harmful UV rays of the Sun. These UV rays are responsible of the skin cancer, tumors etc. Ozone depletion is due to the release of harmful gases chloro-fluoro carbons (CFC)

cause a hole in the ozone layer which is responsible for global warming and climate change [Brenna H. et al, 2019]. Climate change is very crucial problem of our environment that involves a change in seasons, disasters of floods, and occurrence of new diseases. Biodiversity plays very important role in proper functioning of various ecosystems and change in the environment affects our ecosystem. Change in climate may also cause a change in characteristics of habitat which affects the species living in that habitat.

The resources of some medicinal plants are disappearing due to climate change and over exploitation of natural resources. Extinction of many species are the results of high losses of biodiversity in India [Sherma, S et al, 2014]. Changes in weather conditions affect our water resources, agricultural production and loss of ecosystems also occurs. Many species are adapted to a particular habitat like cold or hot conditions. There may be heavy loss of sensitive ecosystems which we could not recover. Marine life ecosystem especially corals are greatly damaged by climate change [Jeremy, B.C. Jackson, 2008].

Need to develop Environmental Ethics, Education and Values

We need to educate citizens about environmental ethics and the responsibility to make a pollution-free world. Each individual should be aware and responsive of the protecting environment. Effective measures are required to control pollution which includes the cooperation of every person and different agencies because the lifestyle of the people affects the environment [Ghosh, G.K, 2011]. Socioeconomic status and health expectancy are strongly linked. Global public health aims at improving health on a population level. Due to human activities, many natural things are disturbed. This entire activity in the name of progress, advancement and development causes great damage to our environment which has made the situation quite grave for human survival. It is not only the responsibility of the scientists and government but also the entire community who are exploring comfort life on earth. We should love and respect nature and need to develop environmental ethics. [Renugadevi, R, 2012]. In India, our tradition always worships nature and the Vedic Era was governed by protection and respect of natural elements [George M. et al, 1975]. Indian philosophy believes that we are made up of five natural elements "Panchtatava" namely earth, water, land, air and Agni (fire). We are in the stage of development based on demands but rising consumption and aspirations of growth should not involve inhuman behavior towards our environment. Some practices like eco- friendly technologies must be promoted. The government incorporated many rules and measures to save our environment. Today we need environmental studies and awareness of the people to protect our natural resources for the future. Environment belongs to people and the communities; hence environmental education program demands the participation, support and contribution of all people for achieving success [Asthana, B.B., et al, 1990]. It is an action-oriented program that aimed at protection, improvement, preservation, and enrichment of the environment. Each person has to be educated and trained in environmental management. It is essential and integral components of environmental planning, evaluation, environmental status, environmental impact assessment, environmental legislation and environmental education and training [Ahluwalia S.P. et al, 2008]. To save our nature we should educate our future generations and give them value-based education [Bains, H.S. 1982]. For value-oriented education, it would be the first requirement that the values which are to be developed must be defined. It should be decided what we want to make a child- a better man, a better citizen, or a better professional man or all combined in one.

Conclusion

For the development of society, a healthy environment is very important. Everybody wants to be healthy, but a lot of us decline to act in healthy ways. The protection and conservation of the environment with the help of new acts and laws is not sufficient. It is the duty of every person to take care of nature and behave friendly. Consumers should reduce the consumption of some goods and we should not use non-biodegradable materials like plastic bags and avoid chemical fertilizers. Responsible consumers can ask before buying goods about its disposal. Besides all these things our education should be value-based. Values are neither skills nor a piece of knowledge; they are basically faith and conviction. It is something related to the making of the mind and not acquiring something. It is the psychological built-up of the individual. It pertains to the formation of attitudes and habits and become a way of life. Ancient India was full of knowledge and nature-loving. Today the whole world needs spirituality in our education system to show gratitude towards our environment.

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