

## ENVIRONMENTAL PROBLEMS AND ITS EFFECT ON HEALTH AND PRODUCTIVITY: A REVIEW

LIPIKAJYOTI DOWARAH

*Assistant Professor, Women's College, Tinsukia, Dibrugarh Assam, India*

(Received 22 April, 2020; accepted 10 June, 2020)

### ABSTRACT

Environment mainly the surrounding acts as an important agent for the well being of the human race. Economic development and the environment are interrelated. For the smooth economic development of a country a healthy and hygienic environment is very much essential. Environment provides beauty and inputs for production process there after assimilates the residues generated during the process of production. In the present day, with the excessive human interference environmental problems are emerging at a speedy rate effecting health and productivity of an individual. Environmental problems impose uncertainty about human health and economic well being by reducing their productivity. In the present research an attempt has been made to study the effects of environmental problems on health and productivity.

**KEY WORDS:** Economic development, Environmental problems, Health, Productivity, Wellbeing

### INTRODUCTION

Economic development is a process whereby the individuals of a particular region utilize the available resources for transforming the negative per capita income into a long term permanent economic growth. It acts as an agent in improving the wellbeing and social conditions of the people by increasing the flow of goods and services. Modern economists identified economic development as a process where the income of the country increases cumulatively over a longer duration and the population of the region are benefitted from the increase in income (Cao Fujii *et al.*, 2015). Environment which in layman's word can be understood as surrounding is one of the precious gifts for all creatures on the Earth whether it's a living or non-living one. Economic development and environment both goes on opposite direction. Development activities generate excessive percentage of negative externalities which is harmful to the environment in long run. Environment provides pleasure for better wellbeing, inputs for production process and

further assimilates all the residues generated during the process of production (Heaviside, 2019).

In the present day, with the exponential growth of human population, socio-economic developments, growing urbanization and increasing standard of living of the common masses environment have been continuously destructed from different corners. Increasing environmental problems creates uncertainty about human health and minimizes economic productivity (Carugno *et al.*, 2016). Problems of the environment mainly depends on the stage at which the development is taking place, the economic structure of an country, various production technologies use in the process of production and also the policies taken to save the environment. Cost of environmental problems on health and economic productivity are rigorous, diversified and consistent (Heaviside, 2019; Cao *et al.*, 2015). Through the present research study an attempt has been made to review the existing literatures on different environmental issues and its effect on human health and economic productivity.

Figure 1 below shows common environmental problems faced globally because of continuous

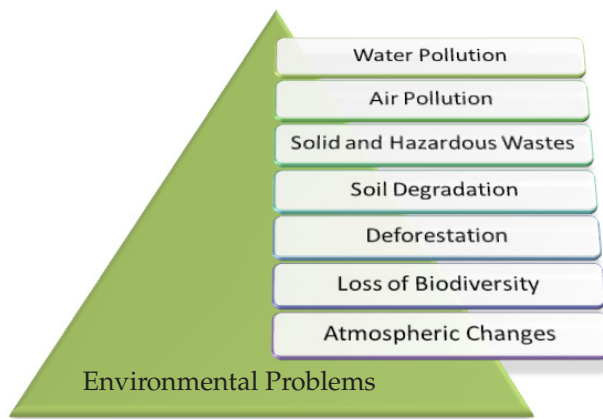


Fig. 1.1. Environmental Problems

human interference on the environment.

### Water Pollution

Domestic sewages and industrial effluents which flows into lakes, rivers, canals and underground water sources are the main sources of pollution of water bodies. Fertilizers, pesticides, chemicals used by increasing population to meet their increasing demands are responsible for pollution of water in the present decade. Cost that humanity has to pay because of rising polluted water is long term and severe. Polluted water has direct effects on human health and economic productivity of a region. Polluted water causes water borne diseases such as diarrheas, gastroenteritis, hepatitis etc. (Cao *et al.*, 2015). According to World Development Report in a year more than 2 million deaths and billions of illness occurs across the world because of polluted water. Both short term and long term health issues are caused with rising water pollution. Water scarcity hampers people from following proper hygiene and sanitation which in turn increase the risk of causing health related issues (Ali and Oliveira, 2018). Polluted water reduces the productivity of marine species. Health issues leads to loss of productivity of workforce in both urban and rural areas. A worker with health issue will produce less output as compared to a healthy person. Municipal corporations cost increases in order to provide safe drinking water to the people. Shortage of water leads to inconveniences and thereafter hinders the economic development of a country.

### Air Pollution

Rapid urbanization and increasing industrialization has led to progressive economic growth along with

atmospheric pollution. Increasing vehicles and industrial pollutants are mainly responsible for urban atmospheric pollution. Petroleum refineries, iron and steel industries, chemical industries, non-metallic products industries, paper industries and textile industries bear the cost of polluting the air in order to increase its growth and earn excessive amount of profit (Carugno *et al.*, 2016). People residing in rural areas, slums, shanties use household stoves, wood and coal for cooking purposes which continuously increases the level of polluted air. Thermal power plants, noise of vehicles, construction activities, diesel generation sets, loud speakers etc. also acts as a source of atmospheric pollution. Effects of Air Pollution on human health are severe. Atmospheric pollution has acute and chronic impact on health of living beings (Ali *et al.*, 2018; Izquierdo *et al.*, 2020). Studies observed that nearly 3 to 4 lakh premature deaths annually and chronic coughing among childrens responsible for excessive urban atmospheric pollution. 400 to 700 million women and children in rural areas are affected by indoor air pollution (World Development Report, 1992). Excessive polluted air effects productivity, it restricts usage if vehicles and industrial activity during critical episodes

### Solid and Hazardous Wastes

Uncontrolled solid and hazardous wastes from industries and households causes potential issues on human health. In urban areas burning of municipal solid wastes, crum garbage and clogs drains are responsible for both air and water pollution. Disposal of solid wastes, unregulated urban growth spreads various communicable diseases among living organisms such as dengue, typhoid and cholera. With the rising population worldwide and increasing demand for various consumer goods risk from solid and hazardous wastes are severe and increases at an alarming rate day after day (Chouaki *et al.*, 2019). Productivity of an individual which is directly related with human health falls drastically with the spread of various diseases.

### Soil Degradation

Degradation of soil is one of another problem of the environment which is caused by wind and water. In hilly regions soil erosion is mainly caused by rain and rivers which further leads to floods and landslides. To earn economic benefits people

involved themselves in overgrazing, deforestation and shifting cultivation activities which in turn reduces the fertility of soil and hence causes soil erosion. Intensive farming and water logging on irrigated agricultural areas leads to salination and degradation of the soil. Soil degradation reduces the productivity of the soil because of usage of excessive amount of chemicals and pesticides. It affects health of human and their nutrition through its inauspicious impact on quality and quantity of food production. With the continuous rise in soil degradation agronomic production and crop yield declines at a higher rate leading to food insecurity and thereby causing malnutrition and deficiency of protein among millions of people worldwide (Lal, 2009). Degradation of soil leads to both on-site and off-site costs. On-site costs are mainly paid for the loss of fertility of the land by the farmers. On the other hand off-site costs are generally paid by the society which includes increasing risk of flood, loss of biodiversity and habitat of wildlife, impact on fisheries, destruction of various types of infrastructure such as roads, railways and different other public assets (Panagos *et al.*, 2017).

### **Deforestation**

One challenging environmental issues that the countries over the world are facing currently is the continuous destruction of forest land by humans for commercial purposes. Deforestation is the conversion of area under forest cover to a non-forest land in response to the increasing humans demand. Forests are major source of livelihood for a section of population globally. Forest cover contributes a major portion to the world economy through different pathways. It provides livelihood to a large section of the population worldwide. Clearing of forests destroys the flora and fauna and generates flood in the hilly areas. Forest cover has been continuously depleted by the humans for habitation, setting up of factories, commercial buildings etc. Forests all over the world contain different varieties of medicinal plants which treat human being from deadly diseases and there after increase their life span. Impact of forest on human health may not be visible with naked eyes but indirectly it helps in enhancing both physical and psychological rehabilitation (Karjalainen *et al.*, 2010). Raising deforestation has a greater impact on the health of individuals which further reduces the productivity of the economy as a whole. Forest shows positive growth of an economy in terms of

direct employment, timber production and other goods produced from forest resources. Deforestation eliminates economic gain causing variety of diseases on human health.

### **Loss of Biodiversity**

Earth is endowed with one of the unique feature of existences of diversified life. Biodiversity refers to variety of life inhabits on the Earth. Countries over the world are endowed with agro-ecological and phytogeographical diversity consisting of wide variety of plant and animal species. Human health directly depends upon the products and services provided by the ecosystem. Ecosystem provides two types of services to the humanity namely regulating and provisioning. Regulating service are those that reduces environmental changes such regulation of the climate, disease control etc. Provisioning services on the other hand are those services which are involved on the production of different renewable resources such as fresh water, wood etc. (Cardinal *et al.*, 2012). A significant amount of pharmacological inventions and discoveries are made up through better understanding of the biodiversity. Increasing economic growth leads to extinction of microbiological species, plants, animals and loss of genetic resources because any disturbances in the ecosystem leads to genetic changes, changes in the population of life and also changes in the structural diversity.

### **Atmospheric Changes**

Human activities are major source of change in earth's atmosphere. Cost of atmospheric changes because of human involvement can be visible by increasing frequency of heat waves, forest fire, floods and storms leads to long term impact on health of living species further leading to loss of life and internal injuries. Changes in atmosphere leads to continuous rise in vector borne diseases among humans followed by 3 lakh cases of skin cancer world wide and 1.7 million cases of cataracts a year (Heaviside, 2019). Rise in sea level damages the coastal investment, disrupts the marine food chain and thereafter reduces the agricultural productivity.

### **Policy measures**

Environmental protection for the wellbeing of the human has been recognized at the global level. The environment has profound impact on health of living species and economic productivity either through direct associations or through indirect

pathways. The adverse effect of environmental problems on wellbeing, human health and productivity can be alleviated through proper strategies involving protection of the environment and taking care of the already existing natural resources at a global level keeping in view different sectorial growth of the economy. Increasing global pollution of all types have both short term and long term effects on health of human and life of aquatic species (Heaviside, 2019). Efforts should be taken at the global, national and regional level to minimize the cost of environmental problems with the anticipated advancement in technologies.

Rigorous and consistent environmental policies should be strictly enforced so that the households and the industries limit the environmental pollution thereby reducing the costs arising out of environmental problems. Solid wastes released from household and industries are serious health hazard causing spread of various infectious diseases (Cao, and Fujii, *et al.*, 2015). Proper policies should be undertaken so that released of solid and hazardous wastes are controlled so that the damage to the environment is restricted. Improper disposals and irregular management of waste products should be checked so that all type of environmental problems leading to various health issues can be controlled and solved at correct time. Life threatening diseases caused from damaged environment can be eliminated and health of individual could be improved if serious measures are taken by the local governments, world bodies and environmentalist to protect the environment (Zanuwa *et al.*, 2018).

Rising environmental problems at the global level will lower the long term economic growth of an economy. Sustainability of the environment and soil are important factors essential for human health. Increasing environmental problems, rising competition among humans and continuous depletion of natural resources have been related in direct and indirect ways with malnutrition of humans and other public health issues which thereafter leads to fall in their productivity (Cao and Fujii *et al.*, 2015). Keeping in view the costs of environmental damages judiciously managed and ecologically accepted policies should be enrolled at the global level, so that the population of the present generation along with the future gets to enjoy the benefits of the environment equally (Ali and Oliveira, 2018).

In recent years, the rate at which area under

forest land is declining if not checked at correct time in near future it will poses a direct threat to the humanity. At the global level policies, workshops, seminars including awareness programmes should be introduced for the better management and rational use of forest resources along with the ways to prevent the destruction of forest on a large scale. Impact of biodiversity loss might be large for revival therefore such measures should be implemented and exhibited so that the life and shelter of all species present might be protected (Cardinal *et al.*, 2012). At the time of framing policies policy makers should not only focus on rising GDP and aiming positive economic growth but also measures should be suggested to protect the environment and minimize the cost arising from its problems. Appropriate environmental protection measures should be introduced keeping in sight economic growth and environment side by side.

## CONCLUSION

The outcome of the study reflects that protection of the environment is very much essential for the smooth functioning and disease free human life. Rapidly growing environmental problems have adverse long term impact on human health along with all other living species. Poorer health reduces productivity an individual as they can work for lesser hours compared to a disease free person. Environmental costs are severe and long lasting if not checked at correct time chances of global economic loss and negative growth is very higher.

## REFERENCES

- Ali, S. H. and Oliveira, J. A. P. 2018. Pollution and economic development: an empirical research review. *Environmental Research Letters*. 16.
- Cao, H. and Fujii, H. 2015. A productivity analysis considering environmental pollution and diseases in China. *Journal of Economic Structures*. 4(4): 1-19.
- Cardinal, B. J. and Duffy, J. E. 2012. Biodiversity loss and its impact on Humanity. *Research Review*. 486 : 59-67.
- Carugno, M. and Consonni, D. 2016. Air pollution exposure, cause-specific deaths and hospitalization in a highly polluted Italian region. *Environmental Research*. 147 : 415-424.
- Chouaki, S. M. and Derridj, A. 2019. A study on Municipal Solid Waste on some Soil Physico-chemical Properties: The case of Landfill of Ain-El-Hammam Municipality, Algeria. *Applied and Environmental Social Science*. 1-8.

- Heaviside, C. 2019. Understanding the impact of Climate change on Health to better manage adaption action. *Atmosphere*. 10(119) : 2- 6.
- Izquierdo, R. and Santos, S. G. D. 2020. Health impact assessment by the implementation of Madrid city air quality plan in 2020. *Environmental Research*. 183: 1-13.
- Karjalainen, E. and Sarjala, T. 2010. Promoting human health through forests: Overview and major challenges. *Environment Health and Preventive Medicine*. 15(1).
- Lal, R. 2009. Soil degradation as a reason for inadequate human nutrition. *Food Security*. 45-47.
- Panagos, P. and Standardi, G. 2017. Cost of Agricultural productivity loss due to soil erosion in the European Union: From direct cost evaluation approaches to the use of macroeconomic models. *Wiley*. 29 : 471-487.
- Singh, P. 2013. Impact of Solid Waste on Human Health: A case study of Varanasi city. *International Journal of Scientific & Engineering Research*. 4 (11) : 1840-1842.
- Vattanapruteep, N. 2020. Noise Pollution and its impact on human health in Thailand: A review. *Pollution Research*. 39 : S15-S19.
- Zanuwa. M. A., Adamu. M. K. 2018. Effects of Deforestation on Human Health in Yelwa Forest of Doma local Government area of Nasarawa state Nigeria. *International Journal of Research and Innovation in Social Science*. 2(7).
-